Lifelong learning for pharmacists – An exploratory study to devise a framework that supports planning, delivery and evaluation of learning events

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Abstract

The pharmacist workforce has many emerging roles and there is an increasing global population who require access to medication and pharmacy services due to the increase in older population and prevalence of long-term conditions. Pharmacists in Great Britain (GB) and globally, along with other healthcare professionals need to complete mandatory learning, in the form of Continuing Professional Development (CPD) or Continuing Education (CE). However, even where mandatory requirements are not in place, lifelong learning is an essential part of the life of a professional, and participation in lifelong learning compliments mandatory requirements. Lifelong learning achieved through participation at learning events does not always have quality assurance, as there are multiple providers, and does not always support application of learning into practice. Currently, there is also limited evaluation of change of practice after participation at events.

The aim of this research was to develop and validate a framework to support the organisation and delivery of lifelong learning events to support consistency of experience, regardless of provider.

It is clear from a systematic review that there is no clear or standardised lifelong learning structure for pharmacists globally, with no clear consistent format. Although an increasing amount of technology is being used for learning, face-to-face is still preferred. Interactive learning supports achievement of learning outcomes, and topic and the opportunity to apply knowledge were noted as considerations for planning learning events.

Pharmacists and their teams in South London were the main target audience, using convenience sampling to evaluate face-to-face learning events attended as part of Pharmacy Education South London (PESL) and to get experiences from end users. This was followed up through surveys and interviews to determine preferences for learning and motivators and barriers for participation in learning. Using a local sample population allowed easy access to participants and collection of data.

With the knowledge that the structure of lifelong learning events differ globally and the fact that pharmacists need to work collaboratively with other healthcare professionals, the current reality and preferences for lifelong learning of other healthcare professionals in GB and pharmacists globally were investigated.

The main findings identified that motivators and enablers for engaging in lifelong learning include regularly planned events, with an engaging topic, which is applicable to practice and has a national or local relevance. Timing and length of event were found to be important for increasing participation with advertising being needed, to increase awareness. For application of learning into practice, participants wanted tools such as a copy of the slides or a handout, case studies and follow up assessments. From interviews with other healthcare professionals in GB, it was identified that different tools are used in learning events but case studies and evaluation forms are commonplace. All professions, including pharmacists, were positive about a blended approach to learning, to enable the best fit learning modality for a topic. Personal preferences did affect participation in various activities with face-to-face learning being the most common globally. Across all stakeholders, online learning was deemed to provide flexibility and overcome barriers such as distance and time constraints, whereas face-to-face has the benefit of participants being able to share ideas and network.

The findings from all previous chapters were translated to create the PRACTICE framework, consisting of 51 statements to support the planning, delivery and evaluation of a learning event. The framework was validated using a four stage process. This included face validation to ensure the viability of the concept, content validity to check relevancy of each statement, a think aloud process to ensure clarity of each statement and finally a pilot of a face-to-face event delivered in accordance with the framework to ensure usability in practice using pharmacists as the target audience. The validation included input from end users and experts involved in organisation of training, to ensure their views were taken into account. Whilst the PRACTICE framework was not validated using an online event, it was designed with end users in mind, ensuring engagement, application of knowledge and evaluation. Critique of the statements reveals that they are applicable to face-to-face or online learning events. The framework was also designed to be flexible and applicable to the wider population, in whatever setting.

Limitations include the majority of the work using the sample population from South London and their experience of lifelong learning provision. Future work will include further dissemination and usage of the framework to support lifelong learning of pharmacists and other healthcare professionals in GB and globally.

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Publications and conferences related to the PhD

Article

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Micallef, Ricarda and Kayyali, Reem (2020) Why we should create uniform pharmacy education requirements across different countries: A review of current requirements and the need for global regulator input. *Curr Pharm Teach Learn*. 12(5).499-503 https://doi.org/10.1016/j.cptl.2020.01.004 *(This study covers information from chapter 1 and 2)*

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Correspondence article

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Conference or Workshop Item

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Article

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List of abbreviations

ACP: Average congruency percentage

ACPE: Accreditation Council for Pharmacy Education

ALF: Advanced Level Framework

APC: Australian Pharmacy Council

APF: Advanced pharmacy framework

APTUK: Association of Pharmacy Technicians United Kingdom

BEME: Best Evidence Medical Education Collaboration

BMA: British Medical Association

BMJ: British Medical Journal

BOPA: British oncology pharmacists association

BPharm: Bachelor of Pharmacy

BPSA: British pharmacy students association

CCG: Clinical commissioning group

CE: Continuing education

CEPN: Community education provider network

CFWI: Centre for Workforce Intelligence

CIPD: Chartered institute of professional development

CIPP: Context, input, process, product

CIRO: Context, input, reaction, outcome

CoDEG: Competency Development and Evaluation Group

COPD: Chronic Obstucture Pulmonary Disease

CPCF: Community pharmacy contractual framework

CPD: Continuing Professional Development

CPPE: Centre for Pharmacy Postgraduate Education

CVI: Content Validity Index

DipGPP: Diploma in General Pharmacy Practice

DOAC: direct oral anticoagulant

DPharm: Doctorate in Pharmacy

DSP: Distance selling pharmacy

EHC: emergency hormonal contraception

EPS: Electronic transfer of prescriptions

ESPLPS: Essential Small Pharmacy Local Pharmaceutical Services

FIP: The International Pharmaceutical Federation

GB: Great Britain

GDC: General Dental Council

GLF: General level framework

GMC: General Medical Council

GPhC: General Pharmaceutical Council

HC: Health champion

HCP: Healthcare professional

HCPC: Health and care professions council

HEE: Health Education England

HEEAG: Health Education England Advisory Group

HERE: Health Education Research and Evaluation

HESL: Health Education South London

HLP: Healthy Living Pharmacy

IIOP: Irish Institute of Pharmacy

IPE: Interprofessional Education

IPL: Interprofessional learning

IPO: Input, process, output

JPB: Joint programme board

LETB: Local Education and Training Board

LPC: Local Pharmaceutical Committee

LPET: London Pharmacy Education and Training

LPF: Local Practice Forum

LPS: Local Pharmaceutical service

MPharm: Masters of Pharmacy

MsC: Master of Science

MUR: Medicines usage review

NABP: National Association of Boards of Pharmacy

NCS: National competency standards

NHS: National Health Service

NICE: National Institute for Clinical Excellence

NMC: Nursing and Midwifery Council

NMS: new medicines service

NOAC: Novel oral anticoagulant

NPA: National Pharmacy Association

NPSA: National Patient Safety Agency

PCN: Primary Care Network

PCNZ: Pharmacy Council New Zealand

PCPA: Primary care pharmacy association

PESL: Pharmacy Education South London

PharmD: Doctor of Pharmacy

PM: Pharmacy Management

PNA: Pharmaceutical needs assessment

POM: Pharmacy only medicine

PRISMA: Preferred Reporting Items of Systematic Reviews and Meta-Analyses

PSNZ: Pharmaceutical Society New Zealand

RCN: Royal College of Nursing

RPS: Royal Pharmaceutical Society

SCR: Summary Care Record

SL: South London

STEP: Structured Training and Experience for Pharmacists

TCE: Transforming Community Equipment

UAE: United Arab Emirates

UK: United Kingdom

UKCPA: United Kingdom *Clin Pharm* Association

USA: United States of America

WHO: World Health Organisation

WPAG: Workforce Planning Advisory group

Chapter 1: The optimum model for lifelong learning of Pharmacy Professionals

1.1 The Pharmacy profession

Pharmacists are experts in medicines.[1] The current pharmacy workforce in Great Britain (GB) is made up of approximately 150,000 people.[2] As of 31st March 2020, this included 57651 registered pharmacists, 23705 registered technicians plus unregistered support staff including dispensing and medicines counter assistants.[3] The minimum training and qualification requirements for this workforce is set out by the General Pharmaceutical Council (GPhC), the independent regulator for pharmacists, pharmacy technicians and pharmacy premises in GB.[4]

The Pharmacy Order in 2010[5] paved the way for a split of the previous regulator of pharmacists, the Royal Pharmaceutical Society of Great Britain (RPSGB) to create a new regulator, the GPhC, along with a new professional support body, the Royal Pharmaceutical Society (RPS). The new bodies came into existence in March 2011, giving the GPhC greater regulatory powers.

Regulatory standards of the GPhC[6] are set out in three main areas:

1. Setting and promoting standards for the safe and effective practice of pharmacy at registered pharmacies;
2. Promoting the safe and effective practice of pharmacy by pharmacists and pharmacy technicians;
3. Setting standards and requirements for education, training, acquisition of experience and continuing professional development (CPD) that is necessary for registrants to achieve.

The GPhC holds registers of pharmacy premises in GB, along with pharmacists and pharmacy technicians. In GB, both ‘pharmacist’ and ‘pharmacy technician’ are protected titles and can only be used by those people who are named on the GPhC register.

1.2 Main sectors of pharmacy

The GPhC 2013 registrant survey[7] identified that 60.4% of pharmacists were female. It also identified that 72% of pharmacists worked in community, working within independently owned or national chain pharmacies, 23% worked in hospital, either in a rotational post, covering wards and dispensing, or in other departments, for example medicines information, 6% worked in primary care (mainly in GP surgeries or Clinical Commissioning Groups (CCGs)), and 3% in industry, working on drug discovery, testing or evaluation, 3% in other sectors of pharmacy including prison and veterinary pharmacy and the remaining 2% in education, working in an academic setting, teaching on an accredited Master of Pharmacy (MPharm) course or post-graduate higher education qualification.[2] In 2019, an updated GPhC registrant survey[8] identified a shift in roles, with an increase in emerging roles in new settings such as GP surgeries, care homes and Accident and Emergency (A and E) departments after it was identified that the pharmacy profession has potential to support the integrated care system.[9] In addition, it was suggested by Lord Carter that an investment of £1 into clinical pharmacy can produce an overall saving of £5 in health costs.[10] Lord Carter also suggested that there should be an increase in pharmacist prescribers. As of 2019, there was an increase in female pharmacists to 64%, with a decrease of pharmacists working in community pharmacy to 61% as their primary role. The survey identified 22% working in secondary care settings, such as hospital, with 1% in urgent care, 11% in primary care,[11] 9% of which are working primarily in general practice thus accounting for over 1000 pharmacists working in this setting. Other emerging primary care settings are those in primary care networks (PCNs), supporting integration of community services and patient care.[12,13] The remaining pharmacists were split as follows, with 4% of in commissioning, 3% in research evaluation and training and 2% in industry. Prison accounted for 1% and ‘other’ for 2%. Other roles listed included pharmacists working in hospices, ambulance services, armed forced and online prescribing. In 2019, 17% of pharmacists were prescribers compared to 12% in 2013 and 14% held two or more jobs.

When looking to support pharmacists to move into new and emerging roles, money was allocated for education and training through the pharmacy integration fund.[14,15] The pharmacy integration fund began in 2016 and ran until March 2020.[16] The aim of the fund was to support development of the required knowledge, clinical skills and

attributes for patient outcomes. A number of courses are available[15] offered by a number of different university providers, which are flexible, allowing pharmacists to work at their own pace. The courses available differ, with various topics being covered, e.g. managing long term conditions, minor ailments and public health.

1.3 Pharmacy education in Great Britain

To register as a pharmacist in GB, the registrant must have undertaken a four-year MPharm degree at one of the 32 universities accredited by the GPhC to deliver this.[17] This is followed by an additional one-year pre-registration placement in a registered pharmacy prior to a final assessment and competency sign off. A limited number of five-year courses with integrated pre-registration are also available. Current specification for undergraduates and pre-registration training are stated in the GPhC document, 'Future Pharmacists Standards for the initial education and training of pharmacists.'[18] The document outlines 10 standards that must be met during the MPharm course. These standards are examined during accreditation visits by the GPhC. The 10 standards address provision at the university along with standard 10, which outlines the indicative syllabus that should be included in the course. Miller's triangle[19] (figure 1.1) forms the basis to assess learning of the outlined syllabus during the pharmacy undergraduate and pre-registration journey. Updates on pre-registration will be discussed in section 1.5.4.

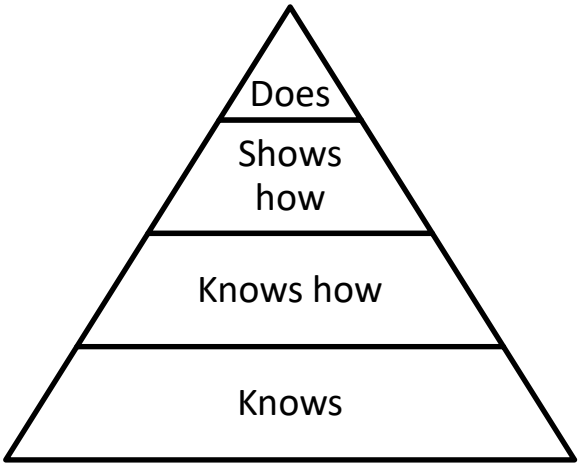


Figure 1.1: Miller's Triangle[19]

1.4 Undergraduate training globally

Looking at different countries individually to understand their undergraduate education and training, it became apparent that some have greater published information than

others. Across the globe, multiple degree pathways exist that lead to pharmacist qualification. These include a BSc, Masters level degree or an increasing number of Doctor of Pharmacy (PharmD) degrees. Some countries including India, Bangladesh and China provide a variety of qualifications from the range above, whereas the PharmD is the graduate degree in the United States of America (USA).

Table 1.1 summarises pharmacy degrees available globally, as outlined in research papers, with time required for degree completion. The table excludes any training time required before registration or licensure, such as pre-registration training placement, and also does not represent all information regarding pre-requisite requirements. Pre-requisite requirements vary, for example two years of prior study are required in Lebanon and Yemen.

Degree type 2019	**Examples of Countries with this degree**
Bachelor of Pharmacy (BSc) (BPharm)	Australia[20] (4 years) Bangladesh[21] (4-5 years) Canada[22] (5 years) China[23] (4-5 years) Cuba[24] (5 years) Lebanon [25] (5 years) Oman[26] (5 years) Singapore[27] (4 years) Vietnam[28] (5 years) Yemen[29] (5 years)
Master of Pharmacy (MPharm)	China[23] (3 years if BSc or up to 7) United Kingdom (UK)[30] (4 years)
Doctor of Pharmacy (PharmD)	Bangladesh[21] (5 years) Canada[22] (5 years) France[31] (6-9 years) India[32] (6 years) Jordan[33] Lebanon[25] (6 years) Qatar[34] Saudi Arabia[33] South Korea[26] Thailand[35] The United States of America[36]

Table 1.1: Global pharmacy degree information. If listed in the literature the time taken for University based education is included.

When reviewing the literature to establish any differences in outcomes from the various degrees, PharmD degrees offered in the USA,[36] Canada[22] and Bangladesh[21] show more emphasis on clinical pharmacy, and patient facing experiences throughout

the course. In Thailand,[35] a five-year BPharm was extended to a six-year PharmD to ensure competency in healthcare systems. As an example, in a bid to support global harmonisation, and consistency of experience, the Accreditation Council for Pharmacy Education (ACPE) quality assures all PharmD programs in the USA, as well as professional degree certification globally, including in countries such as Lebanon, India and Saudi Arabia. This, however, is not the case in other countries. It is also seen that, despite variety in degrees in countries, pharmacists can still practice if they hold one of these degrees.[32] In addition, in India, the entry point for completion of the professional doctorate in pharmacy (DPharm), BPharm and PharmD, is that 12 years of formal science education at school level should have been completed.

Although currently not researched, different degrees may confuse the public and may give variable experiences. Furthermore, perceptions may differ due to the title, leading to different status in society. Looking at this information, this poses the question as to whether patients understand the differences in education, or recognise differences in experience, dependent on who is treating them. The emphasis on patient care seen in PharmD degrees should be ensured in all degree programmes. Currently, pharmacy degrees typically are not portable to other countries, as standards cannot be guaranteed, which limits the free movement of qualified pharmacists. Regulators globally need to work together to share current expected outcomes, define the criteria required, and a level of delivery for a pharmacy degree. The International Pharmaceutical Federation (FIP) could support a global report, based on the acquired information, identifying the expected skills, professional attributes and knowledge expected from the various degrees available. This will support consistency of experience globally for students and the public alike, thus reducing public confusion and supporting portability of degrees.

1.4.1 Post-registration internship and assessment globally

Similar to GB, at least 25 out of 94 countries globally (27%) support a post-degree pre-registration internship system of 6-12 months.[37] The FIP global report on workforce intelligence[38] showed that 31 out of the 66 countries surveyed had a licensing or registration exam.

1.5 Post-registration lifelong learning requirements and opportunities in GB

1.5.1 Continuing Professional development

CPD is the regulatory requirement, set out by the GPhC, for registered pharmacy professionals in GB, to demonstrate knowledge and competence upkeep post-registration. CPD has been mentioned in pharmacy since the early 2000s, both in the USA and GB.[39,40] CPD is the requirement for pharmacists to keep their knowledge up to date and relevant to their area of practice, to ensure optimal patient care and is an essential part of lifelong learning. CPD is self-directed, and supports the maintenance of knowledge, skills and behaviours required for effective personal practice.[40] With increasing new roles for pharmacists and other healthcare professionals, pharmacists need to be trained to ensure service provision and competence, wherever they work.[41] This knowledge needs to be updated regularly to keep up to date with the changing role, with better critical thinking and collaboration.[42] When completing CPD it is important for the healthcare professional to recognise not just the 'how,' but also the 'why.' [43,44]

In GB, CPD for pharmacists has been a professional obligation since January 2005, replacing a requirement to complete 30 hours of Continuing Education (CE) annually.[45] Until 2018, the previously used CPD cycle had four elements: reflection, preparation, action and evaluation.

- Reflection: Identifying what you want to learn and why
- Planning: Identifying potential options to achieve your learning and prioritising these
- Action: What action was taken, how and when, and what was learnt
- Evaluation: How the learning will affect present and future practice and identification of further learning needs

The CPD regulations require registrants to demonstrate that they are keeping their knowledge up to date. The compliance with the GPhC CPD regulation until the end of 2017, required the completion of a minimum of nine CPD cycles per year.[46]

Prior to 2018, although the GPhC assessed registrants CPD records every 5 years, there was no other measure of fitness to practise, with registrants only completing a self-declaration annually declaring they are fit to practice. In 2018, revalidation was introduced. The GPhC describe revalidation as 'what a future framework of assurance should look like.'[47]

In the new system, 4 CPD entries are required, with a minimum of two being planned learning activities.

The new cycle is easier to complete with 3 questions for planned learning events and 2 for unplanned:
Planned:

- Q1: What are you planning to learn?
- Q2: How are you planning to learn it?
- Q3: Give an example of how this learning has benefited the people using your services.

Unplanned:

- Q1: Describe an unplanned event or activity that enabled you to learn something new or refresh your knowledge or skills
- Q2: Give an example of how this learning benefited the people using your services.

Building on the original CPD requirements, pharmacy professionals are also required to complete a self-reflection on one of the nine GPhC Standards for Pharmacy Professionals,[48] that registrants must abide by, as set out in legislation, plus undertake a peer review conversation to reflect on an area of practice. All entries under the revalidation model must be submitted annually. The standards say that pharmacy professionals must: provide person-centred care; work in partnership with others; communicate effectively; maintain, develop and use their professional knowledge and skills; use professional judgement; behave in a professional manner; respect and maintain the person's confidentiality and privacy; speak up when they have concerns of when things go wrong and demonstrate leadership.

Certain populations, for example pre-registration tutors need to demonstrate that a minimum of two cycles of CPD per year are completed on their tutoring skills or tutoring requirements. This is crucial as tutors are pivotal to the ongoing development of future professionals. Other specific population driven requirements include superintendent pharmacists or pharmacist prescribers.

Linking back to the Miller's triangle, through the CPD cycle pharmacists must demonstrate 'does' through description of activities carried out, and to ensure self-reflection on how successful 'does' was. Examples of how it has been used in practice are crucial to the successful completion of a cycle. Activities may be linked to personal learning preference.[49] This does however rely on accurate self-reporting of the participant, as Donyai *et al.*[50] in 2013 noted that CPD cannot replace objective assessment of outcomes.

Whereas the undergraduate and pre-registration training period is highly structured, in a Blog in May 2018, Bruce Warner, an advisor to the Chief Pharmaceutical Office, National Health Service (NHS) England, noted that pharmacist postgraduate education and training remains largely unstructured.[51] However, the RPS are trying to structure education throughout the life of a pharmacist. In the proposed model they have dubbed the initial standards of education and training for pharmacists, including their practise experience to be the 'pre-foundation' stage.[52]

1.5.2 National structure for healthcare learning, including education and training

Health Education England (HEE) came into existence in June 2012, as a Special Health Authority. On the 1st April 2015, it became a Non-Departmental Public Body (NDPB) as part of the NHS structure.[53] The remit of HEE is to ensure ongoing learning of the health workforce locally, to commission and deliver appropriate provision of training locally and to ensure the best outcomes for patients.[54,55] HEE delegates its power to Local Education and Training Boards (LETBs). To support local delivery of the HEE strategy, 13 LETBs were established in 2013. In April 2015, this was reduced to four.[56] The local LETBs are made up of board members and membership councils, representing all professions working within health care plus the voluntary sector. The

mandate for the creation of HEE was set out in a Department of Health document in 2012 entitled 'Liberating the NHS: Developing the Healthcare Workforce, From Design to Delivery.'[57] The Centre for workforce intelligence (CFWI) feeds into the work of HEE and the LETBs, to ensure correct data is being utilised. HEE has six specific advisory groups (HEEAGs), one of which represents the interests of pharmacy.[58] Pharmacy specific, HEE have created a report looking at the needs of the pharmacy workforce in 2040.[59] This report shows that planning for the future is crucial.

1.5.3 Current status of pharmacy education drivers

NHS England's 'Call to Action' in 2014,[60] the RPS's commission on future models of care: 'Now or never: Shaping pharmacy for the future,'[61] and its later follow up independent review, 'Now more than ever'[62] are driving the way pharmacy services should be delivered in the future.

The Darzi report in 2008[63] was the first document to mention multi professional integrated working and planning, to achieve the overall aim of patient care. This was echoed and supported by the Francis and Berwick reports in 2013,[64,65] as well as the NHS Five year forward view in 2014.[66] Francis[64] focused on a need for strong attention to education and training and the need to integrate essential shared values, with Berwick[65] saying that patient safety should play a part in the initial, and lifelong learning of healthcare professionals. In addition, in 2012 the 'FIP Global Pharmacy Workforce report'[67] was released. The 2015 document from HEE: investing in people and healthcare[68] is the current document driving workforce planning in the NHS. The RPS issued their 'Transforming the pharmacy workforce - the RPS vision for GB' document in 2015.[69] The GPhC also recognise the importance of workforce planning as they held a conference in November 2015, entitled 'Meeting our healthcare challenges: educating the future pharmacy team.'[70]

All the documents outlined above concluded that the way in which lifelong learning events are delivered has to change in order to support different ways of working.

Future services are likely to include the whole pharmacy team, as can be seen in the Healthy Living Pharmacy (HLP) initiative.[71] In HLPs, Healthy Living champions (HLCs), otherwise known as Health Champions (HCs), are identified to undertake

training and take this back to the pharmacy team. The champions are predominantly medicines counter and dispensing assistants. HLPs were piloted in Portsmouth in 2010. Evaluation has shown positive impact on staff motivation and service provision for patients.[72,73] There are currently over 1000 pharmacies registered as HLPs.[74] However, HCs can also be found in pharmacies that are not registered as HLPs.

1.5.4. Faculty Programme

For pharmacists, the RPS launched its Faculty programme in 2013, using the Advanced Pharmacy Framework (APF)[75] and later the Foundation programme in 2019,[76] allowing pharmacists to map their skills to a competency framework, building on the Competency Development and Evaluation Group (CoDEG) General Level Framework (GLF). This was to support structured post-registration education and training and provide accreditation. The CoDEG GLF or the Advanced Level Framework (ALF) or APF are voluntary frameworks designed to support achievement and recording of activities. CoDEG is a collaborative network of specialist and academic pharmacists, developers, researchers and practitioners with an aim to undertake research and evaluation in order to help develop and support pharmacy practitioners and ensure their fitness to practise at all levels.[77] The frameworks allow self-reflection of skills to see where pharmacists currently are, and allow self-reflection to incorporate activities into development to move up the framework from foundation skills to mastery.

The APF allows pharmacists to map 34 competencies across six areas: Expert Professional Practice, Collaborative Working Relationships, Leadership, Management, Education, Training and Development and Research and Evaluation. Using the framework, pharmacists can identify where they currently sit according to three stages of development, from Advanced stage 1, Advanced stage 2 through to Mastery where they are a recognised leader in their specific role. These stages are designed to be generic so they can fit pharmacists working in all roles and sectors.

The Faculty was introduced to try and bring structure. In principle, planning education and training interventions could be accredited to map to the Faculty and support pharmacists' future development.[78,79] After completing pre-foundation, the intention is that qualified pharmacists should be further supported through their first three years

of qualified practice, completing a foundation programme, based on nine identified attributes in the foundation practice framework (figure 1.2).[76] This is in parallel to the HEE review from 2018 'Advancing pharmacy education and training: a review'[80] which introduced the idea of a national foundation programme for pharmacists, to support the NHS long term plan.[81] The foundation programme aligns with the APF to allow transition from foundation into advanced practice and then mastery. In July 2020, because of the Covid-19 pandemic, the decision was made by the chief pharmaceutical officers in GB that the foundation programme would be brought forward, to replace the pre-registration year, and act as year five of the undergraduate journey, rather than start after registration. The proposed curriculum should be live from March 2021 to roll out to graduates in summer 2021.[82,83]

Figure 1.2: The nine attributes of the Foundation Pharmacist Framework[76]

Frameworks, such as the APF and Foundation and Faculty, are useful to support finding gaps in knowledge or competence and are being used by various organisations to aid self-reflection and identification of current level of practice, in order to support individual personal development.

1.5.5 Formalised education and training opportunities

Formalised education and training opportunities have increased in previous years. Previously formalised education and training opportunities were very much restricted predominantly to those pharmacists working in the hospital setting, but increasingly

those working in the community sector have also participated. The pharmacy integration fund was mentioned in section 1.2.1. From the pharmacy integration fund, formal qualifications for supporting the underpinning knowledge prior to becoming an independent prescriber, are also available such as a clinical certificate, clinical diploma or Master of Science (MSc). The clinical diploma and training to become an independent prescriber are the most common formal qualifications available. As an employer, obligatory training is also required, such as annual completion of health and safety training.

Formalised learning opportunities are outside the remit of this thesis. Also outside of the remit of this study, NHS employers, including hospital trusts and primary care pharmacists work with academic partners to provide formal post-graduate opportunities to their employees. Structured policies ensure that learning opportunities are consistently applied, and that training matches the needs of individuals as well as the organisation. In London, East and the South East of England a joint programme board (JPB) is in place.[84] This is a collaboration between the hospital trusts and local Schools of Pharmacy to provide diploma and post graduate qualifications to pharmacists to ensure they are 'fit to practice' and provide the best possible patient care. Unfortunately, this training is not extended to community teams.

1.6 Current providers for post-registration lifelong learning opportunities for pharmacists in GB

When describing lifelong learning opportunities, the terminology is different from different sources. The Cambridge Dictionary defines lifelong learning as 'the process of gaining knowledge and skills throughout your life, often to help you do your job properly.'[85] A large proportion of lifelong learning for pharmacists in GB is undertaken under the label of CPD, as mandated activity.[86] Professional development activities would also include CPD and CE.[87] However, learning is integral to the profession of pharmacy, even where mandatory requirements are not in place, so lifelong learning extends beyond the mandated requirements, which is the remit of this thesis. In GB, as CPD is regulated, all learning opportunities would contribute towards lifelong learning, but pharmacist may also choose to learn outside of mandatory requirements. For ease, hereon in, lifelong learning opportunities, which include education and training events, will be referred to as lifelong learning or learning events. Pharmacists

may choose to use one of these providers to support the achievement of their CPD. There are multiple providers of post-registration lifelong learning opportunities, including education and training, in GB.

1.6.1 The Centre for Pharmacy Postgraduate Education (CPPE)

The Centre for Pharmacy Postgraduate Education (CPPE) is funded through the National Health Service (NHS) multi-professional Education and Training Fund from HEE to provide CPD to all registered pharmacists and pharmacy technicians providing NHS services in England. CPPE is established as part of Manchester School of Pharmacy and has been in existence since 1991.[88] Upon registration with the GPhC, there is automatic enrolment to CPPE services, with access also permitted at pre-registration level, although they are not currently available to undergraduate students. There is no additional registration fee for registrants and learning is free at the point of contact. The number of registrants listed in the annual report 2018-2019 was 46694 pharmacists and 19508 pharmacy technicians. In addition, they noted 3549 pre-registration trainees.[89]

CPPE say that 95% of all newly qualified pharmacists will use them during their foundation years.[88] Currently the offer from CPPE includes portable digital format (PDF) distance learning packages, online assessments, online e-courses supported by a tutor, e-learning, e-workshops, focal point face-to-face learning events, self-study guides and workshops. Optimise events, which are designed to be interactive and last about 45 minutes, are also used widely in the hospital and primary care setting.

Participation in CPPE activity is voluntary although certain initiatives are posted to all registrants, for example a communication skills initiative was launched in 2014.[90] Other learning initiatives sent to all registrants included antibiotic resistance [91], acute kidney injury and polypharmacy.[92] Learning offered by CPPE is organised into three levels, to help participants pick the learning appropriate to their needs. Level 1 indicates core learning showing limited expectation of prior knowledge, level 2 assumes some prior learning so is about application of knowledge and level 3 is learning to support specialties, either directly or through signposting to another organisation. CPPE fund local tutors who work to produce material, build local relationships and run training sessions. The tutors can also act as a mentor if registrants require further support or

assistance with any of the available material. It is stated that in the first 21 years of existence, 8.5 million hours of learning was delivered with over half a million distance learning packages sent out and over 500 workshops running a year. Over 350 self-study learning options are available for pharmacy professionals.[88]

Although funded by HEE, CPPE do not externally publish any evaluation on their learning interventions, so there is limited information available as to the evidence that is behind the creation of their programmes, and the learning styles of pharmacy registrants, although from the selection on offer it appears they aim to reach every learning style. CPPE state that their expenditure during 2016/2017 was £4,012,169.[93] By 2018-2019 expenditure had been reduced to £3,257,552. An annual report for 2019-2020 has not been released as at October 2020. However, it is unclear how much of this is spent on evaluation of learning and application into practice, as this is not stated in the annual report.[89]

1.6.2 Other providers

In addition to CPPE, which is a national provider for all, other organisations exist to support pharmacists.

1.6.2.1 The Royal Pharmaceutical Society (RPS)

As stated earlier, the RPS is the professional membership organisation for pharmacists in GB. Joining the RPS is not mandatory. Centrally, learning events are organised by the RPS which members and non-members can attend, the latter usually at a fee.[94] The RPS has a national network of Local Practice Forums (LPFs), which represent and support their members locally, including the organisation of learning events, mostly in the evenings. In 2015, there were a total of 48 LPFs across England, Wales, Scotland and the Channel Islands. All RPS members are eligible to join one or more LPFs, and participate in organised activities as they see fit. LPFs are run by RPS members who volunteer to attend committee meetings and organise local activities. Facilitators, employed by the RPS support these committees and act as points of contact and support for the steering groups. Steering groups have development days allowing networking across groups, and local collaborative working is also seen. LPFs traditionally organise evening meetings for members, inviting a specialist speaker. This allows an opportunity to network with colleagues across sectors and undertake learning in a supportive environment.[95] Some also organise day long conferences.

Attendance at events is voluntary and normally free for members. Topics for LPF events are wide and varied, either focusing on a local initiative or a clinical topic with an expert speaker. However, pharmacists do recognise LPFs are supporting their CPD.[96] At the time of writing this chapter, LPFs were in existence, so these will still be referred to in this chapter. In 2018, these transitioned to be called RPS locals. As of August 2020 there were 31 RPS locals.[97]

1.6.2.2 Local Pharmaceutical Committees (LPCs)

LPCs are the focus for all community pharmacists and are independent and representative groups for a locality. There are around 80 in England.[98] The LPC works locally with NHS England Area Teams, CCGs, Local Authorities and other healthcare professionals to help plan healthcare services. The role of the LPC is to negotiate and discuss pharmacy services with commissioners. It also offers advice to community pharmacy contractors. LPCs tend to organise evening meetings to give information to their members around services or contractual updates.

1.6.2.3 The National Pharmaceutical Association (NPA)

The NPA is a trade association, which represents independent pharmacies and independent multiples.[99] Pharmacies pay a membership fee to join. The NPA provides a range of services to its members and aims to ensure community pharmacies can succeed professionally and commercially.[100] National multiples can still use NPA services, but are not represented by them. The NPA offers a wide range of learning courses for all members of the pharmacy team, both face-to-face and via distance learning. A CPD hub also allows access to clinical and research articles, along with associated learning records.[101]

1.6.2.4 Pharmacy management (PM)

PM is an organisation which produces national and regional conferences. It has also produced a journal using the same name since 1985, focusing on commissioning of medicines and creating best practice in pharmacy services and the delivery of medicines. It is supported by NHS pharmacists who test programmes prior to roll out.[102] PM have also been accredited by the RPS faculty as a training provider.[103]

1.6.2.5 London Pharmacy Education and Training (LPET)

LPET was an NHS service that provided a range of training events to support the achievement of NHS objectives and professional requirements.[104] In addition to supporting pre-registration tutors and pre-registration managers, they also provided training to pre-registration trainee pharmacists. LPET was disbanded in July 2016 due to HEE changes, where London joined with the South East.[105]

1.6.2.6 Specialist organisations

Specialist organisations, as listed on the GPhC website,[106] are also available for pharmacists or others to join, to access support, conferences and advice in a specialist area. Examples from the many specialist organisations for pharmacists include the following:

1.6.2.6a BOPA (British Oncology Pharmacy Association)

BOPA is a registered charity which grew out of the United Kingdom Clinical Pharmacy Association (UKCPA) in 1996, with 500 members. It aims to promote excellence in the pharmaceutical care of cancer patients. Learning is delivered through study days, webinars, e-learning centre and annual events.[107]

1.6.2.6b PCPA (Primary Care Pharmacy Association)

The PCPA was established in 1999 to support pharmacists working in primary care. The PCPA supports pharmacists by sharing best practice, providing help and resources and providing networking and learning events. Membership is free for pharmacists.[108]

1.6.2.6c Other specialist organisations

Others include British Pharmaceutical Nutrition Group, European Society of Clinical Pharmacy, HIV Pharmacy Association, NHS Pharmaceutical Aseptic Services Group, Palliative Care Pharmacist Network, Primary and Community Care Pharmacy Network, United Kingdom Ophthalmic Pharmacy Group, UK Renal Pharmacy Group, College of Mental Health Pharmacy, Guild of Healthcare Pharmacists, Pharmaceutical Aseptic Services Group, Primary Care Pharmacists Association, UK Medicines Information and UK Radiopharmacy Group.

1.6.2.7 Employers

Community pharmacy employers utilise in-house training programmes for career and business development or have commissioned learning materials from other recognised national pharmacy and business education organisations. Those offered tend to vary depending on the individual's own or business training needs, in-house company targets, developments or services and available funding. Training provided by hospital trusts is described in section 1.5.5.

1.6.2.8 Self-directed study

Multiple journals are available to pharmacists, often containing articles on clinical and other issues, designed to support a reader's CPD. More detail on these will be covered in section 4.1.1.3.

1.7 Accreditation of learning

In GB, there is currently no set structure to assess quality for post-registration pharmacist learning activities across the board for pharmacy providers, although internal processes do exist for providers such as CPPE. In addition, frameworks can be followed, such as the APF or ALF. The RPS do also accredit learning providers for quality assurance, but this must be applied for, so does not apply to all providers.[109] Although work is undertaken by the FIP, currently no internationally consistently followed approaches exist. International processes will be further explored in chapter 5 as the absence of a set structure could lead to inconsistent experiences from providers.

1.8 Application of learning into practice

After attendance at a learning event, knowledge should be transferred to practice. The review of learning and application into practice has been investigated over a large period. Ebbinghaus first described his forgetting curve in 1880.[110] He then sought to understand retention at different time periods. Studies have tried to replicate this curve, with results showing similar results to the original studies with retention jumping at 1 day then fading over time.[111] It has been seen that long-term retention of information benefits from spaced retrieval as this produces better results.[112] Initial learning takes place through repetition of information resulting in the learning curve. This then moves through stages described by Dreyfus and Dreyfus[113] as novice,

advanced beginner, competent, proficient and expert. It is useful for initial learning to move up the stages, although the curve is often described as ‘steep’ in the initial time period. However, 84% of individuals interpret steep to mean difficult, so this terminology may cause confusion. The forgetting theory has also been tested over longer periods by Custers,[114] who looked at basic science knowledge in doctors after graduation. During the study it was seen that little knowledge is lost one and a half to two years after last use, but then retention is negatively accelerated to a retention of 15-20% at 25 years.

These findings remind us that a one-off learning event may be insufficient to embed new learning into practice, so activities prior to and after the event are useful in helping to enable pharmacists to retain learning and apply them into practice.

1.9 Evaluation of learning

The most commonly used evaluation model in practice is the Kirkpatrick model, which looks at four levels of evaluation.[115] These four levels evaluate the initial reaction to the training (satisfaction), the learning acquired from the training, the behavioural change from the training (transfer), and finally the benefits seen in practice for an organisation. These levels were initially introduced in the 1950s.[116] However, limitations of the model have been identified, and additions have been offered. Various authors have also outlined limitations of the model, such as the assumption of causal linkages, the assumption of incremental importance of going up the levels and the ethical obligation to use the most up-to-date research available.[117]

Alternative models for evaluation include the input, process, output (IPO) model, Brinkerhoff’s six-stage evaluation model, the context, input, process and product (CIPP) model, the context, input, reaction, and outcome (CIRO) model, Kaufman and Keller’s five levels of evaluation, Swanson’s performance improvement evaluation model, and Holtons’ three level evaluation and research model.[116]

Brinkerhoff (1987)[118] echoes Kirkpatrick for stages 3-6, but has an additional two introductory levels, identifying goals of training, along with evaluation of the planning.

The IPO model, introduced by Bushnell in 1990[119] adds that the elements prior to the training, and the training itself impact the evaluation, and that effectiveness of training also relies on elements such as the trainer and their experience and competence, along with materials, and logistics of training, such as venue and activities. Design and delivery are also included in this model. The IPO model combined Brinkerhoff and Kirkpatrick.

CIPP[120] focuses on program outcomes, along with consideration for continuous evaluation and improvement, along with costs and training needs.

CIRO[121] includes context evaluation, looking at current situations to determine learning needs, whereas input evaluation focuses on the learning material. Reaction evaluation gathers data on initial reaction to the learning and then outcomes gather information about the resulting outcomes of the learning programme.

In 1994, Kaufman and Keller[122] suggested that evaluating transfer and benefits is wider than the initial model, and that both internal and external consequences and compounding factors, such as quality of resources, evaluation as part of a needs assessment and measurement of desired or expected results, should be considered.

The Swanson[123] evaluation model, introduced in 1994 focuses on performance improvement and performance learning satisfaction. The evaluation covers three levels: organisation, process and individual, with focus on five elements at each level: mission, goal, systems design, capacity, motivation and expertise.

The Holton model introduced in 1996[124] is amongst the most critical of Kirkpatrick, stating that Kirkpatrick does not focus on the relationship between the four outlined levels. Holton, in his model, focuses on three outcomes of training: learning, individual performance and organisational results. Reaction is excluded as Holton believes that positive reactions to training are not necessarily related to learning.

More recently, in 2008, Ooms and Garfield[125] developed and validated an evaluation model which includes four components: engagement, perceived value and satisfaction, impact on attitudes, knowledge, skills and practice and sustainability.

1.10 Current issues

In terms of pharmacists' post-registration lifelong learning events to support CPD, a number of challenges pose themselves based on the aforementioned. Different providers can have conflicting objectives and therefore different outcomes.

It is evident that there are multiple approaches for pharmacists to learn post-registration in GB, offered by a wide number of organisations. CPPE and LPFs are open to all pharmacists, with NPA and LPCs targeting community pharmacists and UKCPA targeting hospital pharmacists. No published evaluation of current learning interventions is currently available, so no data is accessible outlining the success or outcomes of these events. Furthermore, how topics are selected could not be ascertained in the literature. The current structure of multiple providers using multiple formats leads to various challenges which will now be explored.

1.10.1 Consistency

Throughout GB, there are multiple different providers of post-registration learning, which have been introduced in this chapter. These providers currently create, develop and deliver material in many different ways and there is no set structure to ensure uniformity or consistency throughout providers or across professions. This can lead to variable experiences. Evaluation forms may be completed after sessions but tend to only be looked at by the provider and are not used for research purposes. Due to the varied nature of traditional pharmacy training, the scalability of the evaluation collected may limit the ability to draw any conclusions into the suitability and efficiency of local interventions.

Providing a structure to support lifelong learning events, whether these are part of a mandated system, or not, will help to provide consistency, quality and measurable outcomes for patients, with well-trained pharmacists being able to offer public health services more proactively.[126] Learning should also be seen as part of a structured career development pathway, with pharmacy professionals empowered to manage their own learning and development needs,[127,128] to support contractual regulations,[129] ongoing competence[130] and personal needs.[131] The lack of a comprehensive published framework to support the development, planning and delivery of a learning event has led to the variety currently seen. When Farrell *et al*.[132] in 2012 implemented

a CE programme for Canadian pharmacists, they acknowledged the lessons learnt to support future planning of learning programmes. The lessons learnt included: ensuring adequate funding; working with partner associations; using principles of collaboration; using distance learning expertise and best practices; using a systematic process for development; planning for the future; including willing pilot participants, conducting a pilot and evaluating the pilot. They also acknowledged that created educational programs is a fluid process. Whilst all of these are all important, they do not provide detail or a checklist to cover all elements of delivery of a session, and they do not provide detail of evaluation of the event itself.

1.10.2 Limited evaluation of impact into practice

Various formats for lifelong learning opportunities exist, including face-to face and using technology. These will be explored in more detail in chapter 3. However, although the event may have been enjoyable or interesting, it is not truly successful unless learning has been translated into practice. As previously stated, limited evaluation currently occurs, so application into practice is not always measured. Understanding the mechanisms for translating learning into behavioural change and practice outcomes is crucial to help pharmacists maintain their development.[130,133] This can be achieved through measuring all aspects of implementation, from barriers and facilitators, through to strategies for implementation and outcome measures.[134] It is seen that, although live lectures were the preferred format of learning in a 2003 study by Stancic *et al.*,[135] these resulted in the lowest level of behavioural change, whereas a 2009 Cochrane Review found that interactive workshops are more likely to show improvements in health care.[136] However, in medical education, Lacoursiere[137] in 2001 concluded that interactive education, for example workshops, is not always more effective than lectures or other didactic methods. After completing a learning intervention, for implementation of learning to be successful, managers and peers need to support change.[138-141] Opportunities for hands on application will allow for practice improvement.[142] Fisher and Ford[143] in 1998 saw that time spent on a task predicted knowledge learning outcomes, and that perceived mental workload and the use of examples during learning predicted application of learning. This is also shown by Tsingos *et al.*[144] who noted that students preferred to process information through

reflection were more likely to achieve higher grades. With regards to gender they also found females scoring higher marks than males.

Multiple studies have investigated the most successful format to be used to ensure positive interactions and improved attitudes. Studies have suggested that learning outcomes need to be defined.[145] Bloom's taxonomy is one such way of linking learning outcomes to complexity and specificity.[146] Bloom outlines six elements: remember, understand, apply, analyse, evaluate and create. They also suggested that learning does not need to take place in the classroom to be successful[147] and can be easily integrated into clinical practice.[148] Furthermore, there is the identification that Interprofessional Education and work place learning do overlap.[149] Learning which is based on clinical work and practical experience will have greater impacts on patient outcomes.[150] However, it is seen that assessment is difficult.[145]

Therefore, it is seen, that there is no one size fits all when planning a learning event, so events need to adapt to the audience, in order to achieve desired learning outcomes and ensure translation of learning into practice.

1.10.3 Limited quality

Studies have shown that topic selection is central to effective engagement and influences participation and attendance.[151] As stated above, aims of the learning should be able to correlate to tangible actions after the event supporting application of learning into day-to-day practice. Funding also needs to be considered. Planning of topics needs to consider local and national drivers to ensure the workforce has appropriate skills and knowledge. Prior to attendance publicising the event should include the speaker's credentials, and the aims of the events allowing participants to see how this learning can be relevant to their practice. A review completed by Alhaqan *et al*.[87] in 2020, looking at factors that influenced participation in pharmacy professional development activities concluded that workforce development strategies should be based on needs-based education in conjunction with systems of support and appropriate professional polices. It is acknowledged that CPD is integral to workforce development.[152]

Topics chosen by each education provider to deliver locally have often been duplicated across the same geographical area, wasting resources and creating confusion amongst pharmacy professionals and their teams as to which is the optimal. Costs that pharmacy teams need to consider include travel to and from the event, their personal time in attending, usefulness of networking opportunity, learning support, impact on their business or workplace as well as their personal professional interest. CPD learning interventions for pharmacists are wide and varied. However, until recently, the majority of interventions tended to be face-to-face evening events, but now multiple opportunities exist, with increased use of distance learning and technology. Again, limited evaluation takes place, so there is little evidence of how adhoc learning shows an impact on practice.

It is interesting to note that in 2008, when describing pharmacy education in the UK, Sosabowski[30] stated that in the future all pharmacy students would cover all the material necessary for supplementary and independent prescribing. Although aspirational at the time, this is still currently not the case ten years on, but GPhC work on new initial education and training standards may bring this to reality.

When CPD was introduced it was noted that partnerships are required to help ensure success of learning.[153] Co-production of educational events would allow pharmacy professionals and their wider teams to have confidence in knowing that each of the educational events they attend are directly linked to their day job, are accredited, and are consistent with local NHS priorities, and with input from local commissioners. Through co-production the element of doubt over which learning to participate in would be removed, and it would be clearer for individuals to know what the benefits of the learning are. Cost benefits could also be achieved by reduced administration for multiple events, and money could be used in a more efficient way. However, currently, cost effectiveness of continuing development events cannot be seen.[154]

1.11 Aim and objectives

The aim of this thesis is to develop and validate a framework to support the organisation and delivery of lifelong learning events. This will ensure consistency of experience, regardless of provider, through understanding of experiences of

pharmacists locally and internationally, along with learning from other healthcare professionals.

Objectives:

- To identify current pharmacy lifelong learning providers
- To identify current models of pharmacy lifelong learning interventions from current providers
- To identify the primary drivers for attendance at lifelong learning events contributing to lifelong learning
- To identify the barriers to attendance at lifelong learning events contributing to lifelong learning
- To identify the primary factors affecting participation in lifelong learning events
- To identify current reality about the provision of lifelong learning events
- To identify current best practice for delivery of lifelong learning events from local, national and international sources
- To evaluate a trial of delivery of learning events being run in South London (SL)
- To determine the actions completed as a result of a learning event
- To use accumulated findings to propose a framework to support the planning of learning events
- To validate each statement of the created framework through expert and end user validations using an agile and iterative validation approach
- To validate the entire framework with experts and end users using a think aloud approach
- To run a learning event in practice using the developed framework and gain views of attendees

1.12 Overview of thesis

This thesis will consist of eight chapters that will be used to achieve the objectives. Further details of the individual objectives, and how they will be achieved can be seen in table 1.2.

This chapter, chapter one, provided an overview of the pharmacy profession and pharmacy education in GB. It also introduced CPD and the main providers used for

pharmacists in GB, along with current models of quality assurance. It further identified a gap in the literature and therefore the rationale for this thesis.

Chapter two provides further insight into the variances seen in lifelong learning for pharmacists globally, and the need for a consistent approach. It then provides a systematic literature review of the models used to support CE and CPD for pharmacists globally, looking at preferences of pharmacists regarding the approach.

Chapter three evaluates a trial of a model used for pharmacy CPD delivery, the Pharmacy Education South London (PESL) model. This chapter explores the factors that influence the perceived success of a face-to-face event, using evaluation forms and follow up interviews. The chapter aims to identify key elements that affect engagement in events, along with barriers and drivers for attendance and participation.

Chapter four provides results from a survey and interviews that aimed to establish current participation in CPD, along with preferences for format and providers, along with further investigation into barriers and drivers for attendance and participation. This chapter also explores the tools that are desired to support application of learning into practice.

Chapter five investigates the current reality of CPD for other healthcare professionals in GB, in terms of provision, participation and attitudes. This chapter explores the similarities and differences seen, through looking at regulator requirements, and asking for experiences of registered professionals, to identify any best practice in other professions.

Chapter six investigates the current reality of CPD provision, participation and attitudes for practising pharmacists globally, to again, identify any best practice that could be replicated.

Chapter seven brings together the findings from all previous chapters to develop and validate the PRACTICE framework for organising and delivering a learning event. After initial development, the chapter outlines the stages of the framework validation, along with the evaluation of an event run according to the framework.

Chapter eight will summarise the thesis, outlining key findings and results, and will draw final conclusions and recommend future steps for disseminating the findings of this research.

1.13 Methodology for the thesis

A triangulation method was used to ensure a mixture of qualitative and quantitative data, with a multifaceted approach to collection of data being used to gain the information required to answer the research aims. Table 1.2 provides an overall summary of methodologies used in each chapter of the thesis, and the rationale for these. Methods for each chapter will be explained in more detail in individual chapters. In addition to quantitative and qualitative approaches, a systematic literature review was completed to review models used globally for CE/CPD, along with the creation and validation of a framework, utilising previously validated methods.

Multiple approaches to collecting data were used in this thesis. Data collection through evaluation forms and surveys allows data to be collected from a large number of individuals and gives quantitative data. Interviews allowed extrapolation of findings from the quantitative data and allowed a better understanding of face-to-face learning interventions and application into practice through real life examples. Using a mixed audience of participants throughout the thesis also allowed various viewpoints and individuals to be heard to ensure findings can be extrapolated across studies. All data collection instruments underwent face validation to allow experts to give feedback on whether the tools is fit for purpose to gain the outcomes desired,[155,156] with a range of opinions being sought.[157] Finally, creating and then validating and trialling a framework brings together all studies of the thesis. Validation shows that the instrument can be used for the intended purpose,[155] and trialling it allows learnings to be captured to support ongoing work.

Multiple approaches were also taken when analysing data in this thesis. Quantitative data was analysed inferentially using chi-square tests to identify any associations between responses as the data was non-normally distributed and ordinal in nature. Total quantities of responses were calculated for tick box responses to allow comparison between answers for different options. Calculating the mean of Likert

scale responses allows a visual representation of views for each question, to see variance across questions in a quantitative way.

For qualitative data, thematic and content analysis were the main approaches taken. Thematic analysis,[158] was used following an inductive thematic framework approach: familiarisation of the data, generating initial codes, searching for themes, reviewing the themes and defining and naming the themes. Content analysis allows the valid inference from text to support the context of its use.[159] Inductive content analysis was used to combine data gathered through interview to give a general statement. Working with qualitative data, content analysis allows the integrity of the narrative to be maintained, through the use of a summary along with supporting excerpts.[160] Word counts were also used as a form of content analysis, to highlight the most common topics or words given during answers.[161]

For validation of the final framework various stages were used including content validity, and think aloud interviews. Content validity allowed a score to be given for validity of the framework to check viability. This used validated tools used in previous studies.[162] The think aloud process focuses on verbalisation, therefore avoiding interpretation by the subject, and allows verbal protocols to be used as data. Think aloud allows people to verbalise their thoughts, thus giving feedback on a topic or subject.[163] It was used to check clarity by ensuring statements were transparent, understandable and applicable into practice. In addition, it allowed any gaps or duplications to be identified. Using peers in this process supports the testing of validity as it challenges the researcher's assumptions and questions methods and interpretations.[12] Repeating the process of think aloud and using an agile development process[164] using an iterative approach of updating after each discussion, allows thoughts to be clarified throughout the process, and allows any thoughts that have previously been missed to be verbalised, as it is reported that sometimes verbalisation does not keep up with the cognitive process.[163] Completing a think aloud also supports content validity, to ensure all elements are present in the framework that are needed.[155] Piloting the framework by organising, delivering and evaluating an event was used to check usability.

Aim(s) and objective(s) of chapter	Methodologies used to collect data	Methodologies used to analyse the data	Rationale for methodologies used
Chapter 2: CPD for pharmacists globally – a literature review The aim of this chapter was to identify the differing formats or models used by pharmacists for CE/CPD globally. The secondary aim was to identify preferences of pharmacists, in relation to the variety of formats or models used to fulfil mandatory requirements, in order to support future planning of lifelong learning events. Objectives: • To identify current pharmacy further lifelong learning providers • To identify current models of pharmacy lifelong learning interventions from current providers • To identify preferences for learning format • To identify current best practice for delivery of lifelong learning events from local, national and international sources	Preferred Reporting Items of Systematic Reviews and Meta-Analyses (PRISMA).[165]	The Best Evidence Medical Education Collaboration (BEME). [166]	PRISMA is the validated evidence-based tool to support authors carrying out systematic reviews to ensure that a transparent and complete report of the process is followed. The BEME gives guidance on ranking articles, according to strength and importance. [166] This supports identification of the validity and relevance of papers.

Aim(s) and objective(s) of chapter	Methodologies used to collect data	Methodologies used to analyse the data	Rationale for methodologies used
Chapter 3: Pharmacy Education South London (PESL) evaluation The aim of this chapter was to identify factors that influence the perceived success of a face-to-face supplementary lifelong learning event from the perspective of attendees. Objectives: • To evaluate a trial of delivery being run in SL (PESL project) • To identify the primary drivers for attendance at lifelong learning events • To identify the barriers to attendance at lifelong learning events • To determine the actions completed as a result of a learning event	Evaluation forms of 37 events (n=600 forms): 14 questions utilising tick box responses, 4-point Likert scale, free text responses. Postcode was asked for at sign in. Collected in person at event. Follow up interviews (n=11): 7 semi structured interview questions. Follow up questionnaire (n=122): 15 questions utilising tick box responses, free text responses. Follow up questionnaire put onto SurveyMonkey®. Link circulated through RPS, SL training newsletter, and in person at events.	Evaluation forms and follow up questionnaire: Raw data was entered from the evaluation forms and follow up questionnaire into Microsoft excel for analysis. Descriptive statistics including Chi square analysis. Statistical significance was assumed where $P \leq 0.05$. Words clouds and word counts used for qualitative data using wordle.net. Postcode analysis using batchgeo software. Inductive thematic analysis.[158]	A mixed method approach allowed collection of quantitative and qualitative data. Interviews allowed extrapolation of findings from the evaluation form and allowed a better understanding of face-to-face learning interventions and application into practice through real life examples. The follow up questionnaire supports understanding of application into practice. 4-point Likert scale, using questions previously used in LPF events, intentionally omitted the middle point to capture definitive opinions. Word counts were used as a form of content analysis, to highlight the most common topics or words given during answers.[161] Chi-squared analysis was used to identify any associations between responses. During registration at events the postcode for attendee's place of work and home was captured to identify if any trends were apparent for choice of venue, but also to map if there are any areas in SL that are not attracting participants. Due to ethical issues and to protect individuals only the first half of the postcode was captured. Questions from the initial evaluation form were used in the follow up questionnaire to see if the intended outcomes that were stated to be completed after training, had been completed, with new outcomes added of competing an MUR/NMS consultation. Using batchgeo technology allowed identification of distance from a specified location, so could be used to easily identify distances from venues in a systematic way. A visual representation could also be achieved using this technology. Thematic analysis,[158] using an inductive thematic framework approach: familiarisation of the data, generating initial codes, searching for themes, reviewing the themes and defining and naming the themes. This used a validated approach to ensure that appropriate themes were identified, in a systematic way.

Aim(s) and objective(s) of chapter	Methodologies used to collect data	Methodologies used to analyse the data	Rationale for methodologies used
Chapter 4: Current reality and preferences for lifelong learning of pharmacists in SL The aim of this chapter was to establish current participation in and preferences of pharmacists in terms of format and provider, plus motivators and barriers, for participation in CPD activity in GB, and support needed for application of learning. Objectives: • To identify current pharmacy further lifelong learning providers • To identify current models of pharmacy lifelong learning interventions from current providers • To identify the primary drivers for attendance at lifelong learning events • To identify the barriers to attendance at lifelong learning g events • To identify current best practice for delivery of lifelong learning events from local, national and international sources	Questionnaire survey: (n=338) 26 questions utilising a 5-point Likert scale, tick box multiple choice and free text response, in 7 parts. Interview: (n=19) 16 semi structured questions.	Questionnaires: Raw data was exported from SurveyMonkey® to Microsoft Excel to be analysed. Chi-square tests and Mann Whitney U tests were used. Statistical significance was assumed where $P \leq 0.05$. for tick box responses, total number of responses per element were calculated. Preferences for learning formats were ranked according to 1st, 2nd and 3rd preferences expressed. These preferences were added to gain an overall preference score. For open ended questions word counts were used, represented in word clouds using wordle.net. Weighted averages were used for Likert scale responses (mean Likert Scale score). Interviews: Inductive thematic analysis.[158]	A mixed method approach allowed collection of quantitative and qualitative data. Interviews allowed extrapolation of findings from the evaluation form and allowed a better understanding of face-to-face learning interventions and application into practice through real life examples. As the data was non-normally distributed and ordinal in nature, chi-square tests and Mann Whitney U tests were used to identify any associations between responses. Sub analyses were performed to identify potential variances by gender, sector, age and working hours. Total quantities of responses were calculated for tick box responses to allow comparison between answers for different options. Preferencing allows differences to be seen in option choices, asking participants to only choose their top 3 choices from a list, rather than scoring all choices, to give further clarity to other responses. Word counts were used as a form of content analysis, to highlight the most common topics or words given during answers. [161] 5-point Likert scales were used to allow a breadth of responses to be observed and allow participants a neutral stance. Calculating the mean of Likert scale responses allows a visual representation of views for each question, to see variance across questions in a quantitative way. Thematic analysis,[158] using an inductive thematic framework approach: familiarisation of the data, generating initial codes, searching for themes, reviewing the themes and defining and naming the themes. This used a validated approach to ensure that appropriate themes were identified, in a systematic way.

Aim(s) and objective(s) of chapter	Methodologies used to collect data	Methodologies used to analyse the data	Rationale for methodologies used
Chapter 5: Learning from other healthcare professionals in GB The aim of this chapter was to investigate current reality in GB for regulatory lifelong learning requirements of healthcare professionals and healthcare regulators or support bodies, in terms of provision, uptake and attitudes, in order to identify similarities and differences. **Chapter 6: Learning from other pharmacists globally** The aim of this chapter was to identify current practice of lifelong learning including mandatory CE/CPD globally, and explore views of the various models in place. Objectives for chapters 5 and 6: • To identify primary factors affecting participation in lifelong learning events • To identify current reality about the provision of lifelong learning events • To identify current best practice for delivery of lifelong learning events from local, national and international sources • Compare mandatory lifelong learning requirements between different GB healthcare professions and global pharmacists	Interviews: 18 semi-structured questions. n=11 for GB healthcare professionals. n = 14 for pharmacists globally. Snowballing sampling strategy to capture representatives.	Interviews: Content analysis.[159-161]	A snowballing sampling strategy was used to gather expertise that may not otherwise have been identified, through using contacts of experts previously identified. Interviews were used to allow exploration of ideas and gain specific information on issues. Interviews were also used to target specific information from different professions or countries. Content analysis allows the valid inference from text to support the context of its use.[159] Inductive content analysis was used to combine data gathered through interview and combine to give a general statement. Working with qualitative data, content analysis allows the integrity of the narrative to be maintained, through the use of a summary along with supporting excerpts. [160]

Aim(s) and objective(s) of chapter	Methodologies used to collect data	Methodologies used to analyse the data	Rationale for methodologies used
Chapter 7: The PRACTICE Framework for organising and delivering a learning event The aim of this chapter was to present the development of the PRACTICE framework informed by previous empirical studies, including surveys and interviews, plus the evidence from the literature. Objectives: • Use accumulated findings to propose a framework to support the planning, delivery and evaluation of learning events • Validate each statement of the created framework through expert and end user validation using an agile and iterative validation approach • Validate the entire framework with experts and end users using a think aloud approach • Test the framework in practice •	An iterative agile development process was used.[164] Face validation: (n=20) using questions designed to gain feedback on the PRACTICE framework overall and elements including usability. Content validity:[167] (n=6 involved in pharmacy learning and n=6 healthcare professionals) utilising scoring of individual elements of the PRACTICE framework for relevance. Think aloud:[163] (n=7) utilising verbalisation of the PRACTICE framework statements. Organising and delivering an event including evaluation form at event (n=16):13 questions including Likert scale, tick box and free text responses, plus demographics and follow up survey (n=8): 7 questions including Likert scale, tick box and free text responses, plus demographics.	Feedback from the face validation was reviewed for any feedback on specific elements that may be missing or where amends were suggested, and overall feedback was reviewed to see whether this PRACTICE framework would be used in practice. Content validity index: [167] item content validity index (I/CVI) and scale content validity index (S/CVI) scores were calculated along with an average congruency percentage (ACP). During the think aloud[163] interviews notes were made by the researcher and the framework was updated iteratively. The PRACTICE framework was updated at every stage of the planning and delivery, plus follow up of the planned event, noting date of completion. Evaluation forms and follow up survey were analysed through tabulation of results and themes being identified from free text responses.	Face validation – Face validity allows experts to express their opinions as to whether the designed instrument is able to be used to measure the desired outcome.[155,156] Content validity – calculating the I/CVI and ACP allowed a score to be given for validity of the framework to check viability. The think aloud process focuses on verbalisation, therefore avoiding interpretation by the subject, and allows verbal protocols to be used as data. Think aloud allows people to verbalise their thoughts, thus giving feedback on a topic or subject. [163] It was used to check clarity, ensuring statements were transparent, understandable and applicable into practice. In addition, it allowed any gaps or duplications to be identified. Using peers in this process supports the testing of validity as it challenges the researcher's assumptions and questions methods and interpretations. [12] By repeating the process of think aloud and using an iterative approach of updating after each discussion, it allows thoughts to be clarified throughout the process, and allows any thoughts that have previously been missed to be verbalised, as it is reported that sometimes verbalisation does not keep up with the cognitive process.[163] Completing a think aloud also supports content validity, to ensure all elements are present in the framework that are needed.[155] Organising and delivering an event according to the PRACTICE framework – the framework was used in practice to ensure that the finished article was usable in practice, and that the time scales given were valid. Completing the framework supported validation of the tool.[155,168] evaluation forms and follow up survey were part of the framework, so supported validation and understanding of whether elements of the PRACTICE framework had contributed to an event that the participants perceived as relevant and worthwhile for their practice. Due to limited number of responses, analysis of evaluation forms and follow up questionnaire was tabulation of quantitative results to see trends, and identification of key themes mentioned in free text responses. Free text responses were used to gain feedback, on real life elements, rather than giving prescriptive responses through tick boxes. Free text allows participants to articulate their thoughts and feelings as they seem fit.

Table 1.2: Methodologies used for individual chapter

1.13.1 Area of study: South London (SL)

Convenience sampling is used throughout this thesis, using SL as the target area. Through the researcher's local work with the RPS LPF in SL and the formation of PESL plus the fact that the researcher was also a council member on the SL LETB, Health Education South London (HESL) when it was in existence from 2013-2016, SL was the pilot site for capturing data, and for trialling interventions identified.

1.13.1.1 South London pharmacy demographic

SL consists of 12 Boroughs and five LPCs: Kingston, Twickenham and Richmond LPC, Merton, Sutton and Wandsworth LPC, Croydon LPC, Bexley, Bromley and Greenwich LPC and Lambeth, Southwark and Lewisham LPC. According to the Pharmaceutical Needs Assessments (PNAs)[169] for SL, in April 2015 there were ten NHS hospital trusts (table 1.3) and 644 community pharmacies (table 1.4) as well as two higher education institutions offering an MPharm degree course: Kingston University and King's College London. The PNAs were updated in 2018, and this identified that seven community pharmacies had closed in three years, although the population had risen by 89,000. In 2018 only one Local Pharmaceutical Service (LPS) pharmacy remained. The number of distance selling (internet) pharmacies (DSP) had risen from two in 2015 to ten in 2018. The criteria for opening new pharmacies is based on the local PNA. The purpose of a PNA is to outline the pharmaceutical needs of a locality in order to identify where pharmacies are needed, and what services should be provided.[169] Further information on pharmacy contracts determining the opening of new pharmacies can be found in appendix 1.

Acute trusts	**Mental health trusts**
• Guys and St Thomas' NHS Foundation Trust • King's College Hospital Foundation Trust • Lewisham and Greenwich NHS Trust • Croydon University Hospital • Epson and St Helier University Hospital • Kingston Hospital NHS Trust • St Georges Healthcare Trust	• Oxleas NHS Foundation Trust • South London and Maudsley Foundation Trust • South West London and St Georges Mental Health NHS Trust

Table 1.3: Table showing the hospitals in SL, based on the SL 2014/2015 Workforce plan[170] Accessed 12/04/2015

	Number of community pharmacies (excluding DSP)	**Population (000)s**	**Pharmacies per (000)s population (London average 21.1)**	**Independent Contractors (chains with 5 or less pharmacies)**	**Multiple Contractors (chains with 6 or more pharmacies)**	**No. of LSP***	**No. of 100 hour ***	**No. of DSP***	**No. of DAC***
Bexley [171,172]	45	244 (237)	18.8 (19)	28	17	0 (2)	1 (0)	1 (0)	
Bromley [173,174]	60	331 (320)	18.5 (19)	26	34		4		
Croydon [175,176]	74 (75)	382 (377)	20.1 (20)	41	33	1 (2)	4	3 (1)	0 (1)
Greenwich [177,178]	62	280 (276)	22 (24)	43	18		7 (8)		
Kingston [179,180]	31 (32)	173 (170)	19.1 (20)	17	14	0 (2)	1	2 (1)	1 (0)
Lambeth [181,182]	66 (64)	327 (310)	20.1 (22)	39	27 (25)		5 (0)	1	
Lewisham [183,184]	55 (57)	306 (284)	18.3 (21)	35 (37)	20		3		1 (0)
Merton [185,186]	40	206 (202)	19.4	26	14			1 (0)	
Richmond [187,188]	45	195 (191)	23 (24)	30	15			1 (0)	
Southwark [189,190]	62	293	22	35	27		3		
Sutton [191,192]	43	202 (194)	21	48	35		2	1	1
Wandsworth [193,194]	60 (61)	324 (308)	19.1 (20)	34 (35)	26				
Total for SL	643 (646)	3263 (3162)	241 (251)	402 (405)	280 (278)	1 (6)	30 (8)	10 (2)	3 (1)
Average figure	54 (54)	272 (264)	20 (21)	34	23 (23)	0.08 (0.5)	2.5 (0.7)	0.8 (0.2)	0.25 (0.08)

Table 1.4: Overview of Community pharmacy provision in SL

Table compiled from information on PNAs in 2018. (Information given with 2015 data in brackets for comparison where there are changes).
***- see Appendix 1 for descriptions.**

Chapter 2 – CPD for pharmacists globally – a literature review

2.1 Introduction

2.1.1 Post-registration professional development standards

CE has been around longer than CPD globally and is still the mainstay of post-qualification mandated professional development in many places. Whilst both ensure that learning is completed and recorded, CE has a focus on pure participation at education or training events and recording hours of education received.[195] CPD, however, is a cyclical process allowing the participant to reflect on their needs, plan the learning then take action by completing the learning and then evaluating the impact of this on their practice.[196] Completing CPD therefore incorporates more elements than CE. Some may perceive this as a barrier, as it can require more time involvement.[197] CPD requires more effort from the learner, including documentation, which should be concise to show progress over a time period.[198] In addition, CPD requires application of learning into practice, and evaluation and reflection of this, all of which must be documented to demonstrate the implementation of learning, so CPD portfolios should be designed as tools of support, not burdens to complete.[198] Barriers for completion of CPD include time, resource issues and system constraints.[199] A representation of the differences between CPD and CE can be seen in figure 2.1

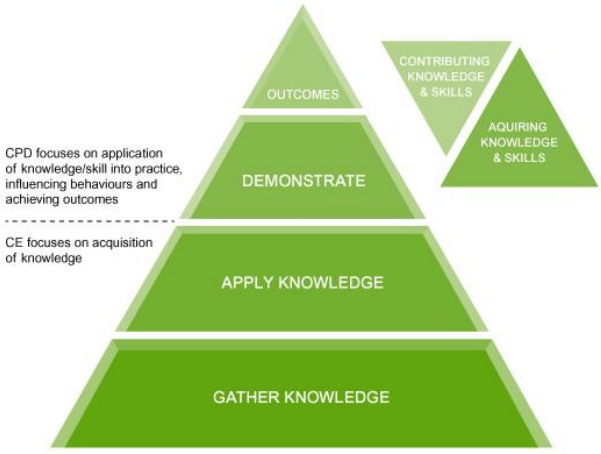


Figure 2.1: Representation of the difference between CPD and CE. Copied from the Irish Institute of Pharmacy[200]

Globally there is inconsistency in the use of the terms CE and CPD as identified previously; lifelong learning is another term that could be used. Both CE and CPD contribute to lifelong learning, which is essential throughout the life of any professional, ensuring they are up to date with current practices, including skills and knowledge. Whilst CE and CPD are mandated for professional development, learning is expected whether these are mandated or not, so lifelong learning is being used for this thesis as the remit goes beyond just any learning that is mandated. Therefore, both CE and CPD should focus on health priorities and needs identified at individual, organisation or national levels, as a quality assurance measure.[201] Participation in mandatory lifelong learning activities should deliver a quality assurance that knowledge, skills and behaviours are being maintained to demonstrate competence.[197,198]

The literature demonstrates that CPD has proven practice benefits when compared to CE.[142] Participation in CE events contributes to CPD, with CPD allowing reflection of learning and application into practice. Participation in CPD shows a more significant impact on perceptions of practice, compared to participation in CE, with increased contextualisation of knowledge on practice.[201] Therefore, including CPD as part of CE provision will aid the movement towards a learner led, needs-based model, rather than a time based model motivated by providers.[198] Reflection on learning or demonstration of outcomes from learning can provide a support mechanism for the workforce to expand their skills. Nevertheless, the need to complete CPD, or CE post-qualification, is hugely varied, with no harmonised global model. There is a need to share requirements globally and learn best practice from each other, to ensure pharmacists can be prepared to support changing healthcare needs.

2.1.2 Reports on global CE/CPD

Various reports have been published to investigate CE/CPD requirements globally. The Pharmacy Society of Ireland (PSI) conducted an international review of CPD models in 2010[202] and Tran *et al.*[203] reviewed models of CE/CPD in 2014. When FIP reviewed CE/CPD in Pharmacy globally in 2014,[196] 66 countries were investigated and only 33 had CE/CPD requirements in place in order to maintain registration, showing CE and CPD are used but are not widespread. Of those countries where CE/CPD was

present, 76% used a ‘credit system’ with 33.3% using a portfolio system. Further information about individual countries will be shared in chapter 6.

The FIP 2014 CE/CPD report[196] quoted that ‘collectively studies of CPD and its components have demonstrated that pharmacists using CPD practices, compared to CE models, have better self-reported outcomes in terms of the quality of their learning, leading to improved self-assessment of learning needs and overall pharmacy practice.’

2.1.3 Moving forward

While undergraduate pharmacy education is regulated in individual countries, there is limited uniformity or portability of degrees between countries. In addition, post-licensure or qualification, a significant variance is seen in CE and CPD requirements. While it is hard to say that pharmacists in those countries without mandatory lifelong learning (CE/CPD) requirements in place don’t maintain skills and performance, a quality assurance process allows the public to have confidence in their healthcare providers. In countries without mandatory systems in place, there is no quality assurance process, potentially creating a limited mind-set to keep up to date. Pharmacists are often still motivated to learn and continue their education, but this may be varied. While standards exist at undergraduate level, these should be shared and collated globally, along with standards for lifelong learning to support other countries. This will enable learning from each other, and sharing best practice and resources, such as guidance documents or frameworks for learning standards and expected skills and attributes.

There is a need for pharmacists to utilise their skills to the best ability. Internationally pharmacists are underutilised in patient care and public health, and could be used more for clinical management or diagnosis.[41] With increased movement of the global population, including pharmacists, lifelong learning for pharmacists is vital to ensure patients receive a consistent level of clinical care wherever they practice. This could also serve as the foundation to solve pharmacist under-utilisation and advancement of medication management services.

Looking at the various models in place for both undergraduate and lifelong learning provision, it is clear that the variety seen allows for variable experience. Bruno *et al.*[204]

identify that improvement of patient health is the key driver for all healthcare practitioners, despite differences. However, due to the differences seen globally, improvement in patient health cannot always be quantified, considering the varied educational experience pharmacists receive at training or post qualification.

In 2014, FIP introduced a global framework to try and support consistency of education models.[205] This built on previous work by Alsharif,[206] and the FIP 2014 CE/CPD report[196] that highlighted important elements for supporting globalisation of pharmacy education. In 2016, the global framework was followed with emphasis placed on global education, training and development principles. The framework set out that a future workforce requires flexibility, transparency and training that should be practice based, with support given for educators, and assessments available for all pharmacists to maintain their competence.[207] Since these reports, no further reports on education of pharmacists have been released by FIP.

Therefore, although aspirations exist, there is currently no global model for undergraduate education as seen in chapter 1, let alone lifelong learning, and the latter is wide and varied, not just globally, but also within countries. All countries should be united in the need to provide consistent patient-centred care and ensure the care and treatments that pharmacists provide are evidence-based and up to date. In a world of global travel, patients should have confidence that the knowledge of a pharmacist anywhere in the world is up-to-date. Streamlining education, both pre and post qualification, to the highest possible standard, can only continue to support the profession further.

Internationally, uniformity of lifelong learning should be encouraged, to benefit the profession, and those under its care. Building a global platform to share learnings from regulators with systems in place for lifelong learning would support pharmacists in countries where no mandatory system is in place. Various documents describe numerous platforms to support pharmacists' lifelong learning, but arguably this is hard to disseminate to the average pharmacist, unless they go and look for it, if this is not supported by regulators.

2.1.4 Rationale

To our knowledge, there is no published systematic review of peer reviewed research evaluating the various models used or the format of CE and CPD interventions globally. This is important considering global partnerships and movement of individuals who will be required to keep up to date wherever they work.

2.1.5 Aims

The aim of this chapter was to identify the differing formats or models used by pharmacists for CE/CPD globally. The secondary aim was to identify preferences of pharmacists, in relation to the variety of formats or models used to fulfil mandatory requirements, in order to support future planning of lifelong learning events.

2.2 Materials and Methods

2.2.1 Design of Study

The methodology used for completion of the systematic review followed the recommendations made from the Preferred Reporting Items of Systematic Reviews and Meta-Analyses (PRISMA).[165]

2.2.2 Search Strategy

The review was carried out between April and May 2018 to identify any papers published between 1995 and the end of March 2018. PubMed, Science Direct and Web of Science were used for gaining papers. Additional studies were also identified from found paper references. In addition, articles were identified using Google Scholar, and the university library search engine. Search terms included pharmacist (Title/Abstract); continuing professional development (Title/Abstract); continuing education (Title/Abstract); lifelong learning (Title/Abstract); education and training (Title/Abstract); model (Title/Abstract); framework (Title/Abstract); content (Title/Abstract). Table 2.1 outlines the Boolean searches used to carry out the search. Exclusion criteria is captured in table 2.2.

Keyword(s)	BOOLEAN	Keyword(s)	BOOLEAN	Keyword(s)
Pharmacist	AND	continuing professional development OR CPD		
Pharmacist	AND	Model OR framework OR content		
Pharmacist	AND	lifelong learning		
Pharmacist	AND	continuing education OR CE		
Pharmacist	AND	education and training		
Pharmacist	AND	continuing professional development OR CPD OR Continuing education OR lifelong learning OR CE OR education and training	AND	Model OR framework OR content

Table 2.1: Boolean criteria for literature search

2.2.3 Data extraction

Studies were identified that would be looked at further if their title suggested they focused on the aims of the study. Titles were removed if they fulfilled any of the exclusion criteria. No grey literature was included in this particular review, which may have resulted in some literature being missed. Any systematic reviews found were screened for relevant papers for inclusion.

Inclusion criteria	Exclusion criteria
• Published between 1995 and the end of March 2018 • Full length article including results • Primary objectives of the paper include investigating models or formats of CPD or CE of pharmacists and/or • Primary objectives of the paper include investigating pharmacist preferences for learning	Initial search: • Not being available in the English language • Not available as a full-length article • Not dealing with human subjects • Studies not focusing on registered pharmacists, such as studies including undergraduate students, pre-registration trainees or pharmacy technicians Screening: • No results present • Studies looking at beliefs, motivators and barriers to learning as their primary objectives were excluded due to being the focus of a previous review.[199] • Course or tool evaluations

Table 2.2: Exclusion criteria

2.2.4 Quality Assessment

The best Evidence Medical Education Collaboration (BEME) gives guidance on ranking articles, according to strength and importance,[166] which was utilised. The BEME proposes five levels of strength: (1) no clear conclusions can be drawn; not strong,

(2) results ambiguous; there seems to be a trend, (3) conclusions can probably be based on the results, (4) results are clear and very likely to be true, and (5) results are unequivocal.

The BEME levels of importance are: level 1: participation – covers learners' views on the learning experience, its organisation, presentation, content, teaching methods, aspects of the instructional organisation, materials, and quality of instruction; level 2a: modification of attitudes or perceptions – outcomes at this level relate to changes in the reciprocal attitudes or perceptions between participant groups toward intervention or simulation; level 2b: modification of knowledge and skills – for knowledge, this relates to the acquisition of concepts, procedures, and principles and for skills, this relates to the acquisition of thinking and problem solving and psychomotor and social skills; level 3: behavioural change – documents the transfer of learning to the workplace or willingness of learners to apply new knowledge and skills; level 4a: change in organisational practice – wider changes in the organisation or delivery of care, attributable to an educational program; and level 4b: benefits to patient or clients – any improvement in the health and well-being of patients and clients as a direct result of an educational program.

2.2.5 Ethics

Due to this study being a systematic review of previously published papers, ethical approval was not required.

2.3 Results

Using the criteria for the initial search identified 4561 papers. In total, this resulted in 74 studies being identified for further screening with 19 remaining that were subsequently included in this systematic review. Figure 2.2 shows the full process of the search.

A summary of the studies found was made capturing author and year of publication, demographics of the study, method used for data collection, objectives of the study and key findings (table 2.3). Comments were also then made by the lead researcher to emphasise the importance of the study, prior to ranking according to BEME criteria. Ranking scores for each of the papers are also included in table 2.3.

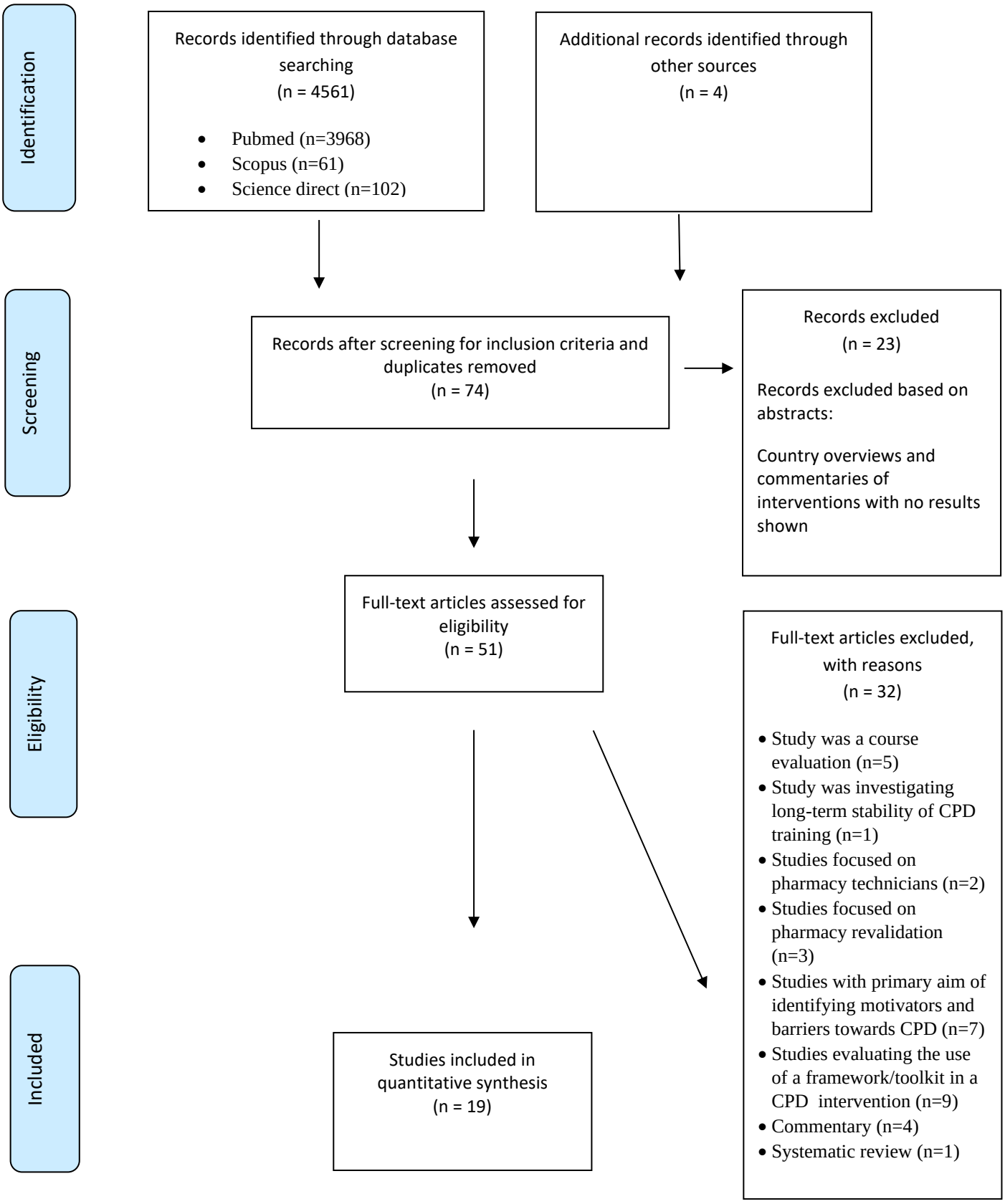


Figure 2.2: Flowchart of search strategy and article selection

Table 2.3: Summary of studies showing formats used to support CPD or CE or pharmacist preferences

Study author and year research completed	Study demographic	Method of data collection	Objectives of study	Key findings	Comments on importance of the study	BEME score
Austin *et al.* 2005[208]	42 pharmacists; Ontario, Canada	Focus group (2003)	Examine pharmacists attitudes, behaviours and preferences towards CPD	Four themes identified supporting definitions and evolution of CE to CPD supported by workplace learning and peers	The study supports the shift from CE to CPD, supported by peer mentors	Strength 2 Importance 2a and 3
Austin *et al*, 2006[209]	47 pharmacists who had completed peer assessment but had not met satisfactory standards; Ontario, Canada	Self-assessment and course evaluation (2002)	To develop a professional skills enhancement workshop, to support and maintain competence	Over 90% were positive that the workshop supported current standards of pharmacy practice. When developing CPD programmes needs of the practitioners need to be identified	The study confirms the need for needs-assessment prior to creation and running of a course, along with clear expectation of what is needed to meet professional standards	Strength 3 Importance 2a and 3
Swallow *et al.* 2006[210]	9 hospital pharmacists; Durham and Tees, UK	Interview (2003)	To analyse knowledge gain through the use of a portfolio and the use of this knowledge in informing clinical decision making and practical services	"Socialised learning" and "learning amplification", were key themes and the findings emphasised the importance of recognising the advantages/disadvantages of work based (socialised) learning approaches	The study identifies that external factors can affect knowledge utilisation	Strength 1 Importance 1
Driesen *et al.* 2007[211]	39 community pharmacists; Belgium	Focus group (2004)	To examine how current CE courses can be optimised, determine interest in distance learning, and identify what pharmacists think about mandatory CE	Live courses are supported by good speakers, extensive course notes and focus on topics relevant to practice. Interest in using distance learning was limited. For non-attenders a formal requirement of engagement is needed, although live courses are preferred	The study identifies that face-to-face learning is preferred, and motivation and incentives are needed for some to engage	Strength Importance 2a and 4a

Table 2.3: (Continued).

Study author and year research completed	Study demographic	Method of data collection	Objectives of study	Key findings	Comments on importance of the study	BEME score
Driesen 2008[212]	1032 community pharmacists; Belgium	Survey (2003)	To profile pharmacists based on their preferences for CE formats, and association with motivation to attend courses, preferences for topics and demographic traits	Older men had the greatest interest in distance learning, did not prefer lectures and were motivated by material incentives. Those pharmacists who preferred lectures as well as workshops showed the highest intrinsic motivation to engage in CE. Pharmacists preferring lectures but not workshops were more likely to be women and showed a dislike for active involvement in CE	The study identified that different demographics may have different preferences, but there is not a one size fits all model	Strength 4 Importance 3
Sweet *et al.* 2009[213]	29 hospital pharmacists; Michigan, USA	MCQ pre and post-tests of online modules (2006)	To evaluate the use of a web-based CE programme, in terms of knowledge and favourability	Positive feedback was received, and positive outcomes were demonstrated, so the programme was extended	The study identifies that short online interventions are positively received and can be incorporated into the working day for CE completion	Strength 3 Importance 2b
Hasan 2009[214]	132 pharmacists; UAE	Survey (2009)	To determine the type and format of CE pharmacists prefer to attend and effectiveness	Interactive workshops were recognized as the most favourable format for CE with computer and internet-based formats also ranking highly, followed by live-in person and printed material-based programs. Pharmacy practice and disease management were preferred topics	The study showed that face-to-face is preferred with topics relevant to practice being preferred	Strength 2 Importance 2a
Mc Namara *et al.* 2009[215]	15 community pharmacists; Australia	Teleconference focus group (date not given for intervention)	To identify learning preferences for CE and identify issues with the integration of these preferences into contemporary models of CE delivery	Interactive and multidisciplinary CE were preferred, linking to adult learning principles using problem-based learning. Engaging in CPD was valuable to promote reflective learning	The study identified that principles of adult learning need to be taken into account, along with the ability to work with peers	Strength 3 Importance 3

Table 2.3: (Continued).

Study author and year research completed	Study demographic	Method of data collection	Objectives of study	Key findings	Comments on importance of the study	BEME score
Wilbur 2010[34]	134 pharmacists: Qatar	Online survey (2008)	To determine CE needs, preferences and attitudes prior to implementation of the first country-wide CPD programme	In the past two years, 25% had not attended any live local educational programmes with barriers including poor timing and excessive workload. Most pharmacists preferred interactive CE programme formats. A third preferred delivery in Arabic. A large number had limited or no internet access at work. The majority were motivated to achieve CPD	The study identified that there is positive motivation towards CPD but consideration needs to be given towards delivery, regarding language and technology	Strength 2 Importance 1
Dopp *et al.* 2010[198]	57 pharmacists; 5 states in the USA	Pre and post study survey (date not given for intervention)	To determine whether using a structured tool would support CPD completion compared to control subjects	Significant outcomes from the CPD stages of reflect, plan, act, evaluate, and record were found between matched study subjects and study and control group comparisons	The study identified that training and support is needed to support the utilisation of a CPD tool	Strength 4 Importance 4a
McConnell *et al.* 2010[142]	91 pharmacists; Denver, USA	Online survey at enrolment and after 10-months of follow up study	To assess effects of CPD compared to CE on perceptions of factors relating to practice	Participants of CPD, rather than CE, post-intervention, identified better interactions with other healthcare colleagues and had initiated work changes. In addition, they identified patient care had improved along with professional knowledge and skills. However, time was more of a barrier	The study showed that CPD had positive outcomes on practice compared to CE	Strength 5 Importance 2a and 3
Budzinski *et al.* 2012[216]	4140 completed surveys from 67 emails to hospital pharmacist, community pharmacist or pharmacy student; Canada	Questionnaire developed from Information assessment method sent via email (August 2008 to May 2009)	To assess the use of an electronic knowledge resource to record CE activities and identify educational needs	Pharmacists who had read the electronic knowledge resource attributed what they had learnt to practice improvement, learning and motivation to learn more	The study confirms that the use of e-portfolios or questionnaires to record learning is an effective method that can be used to support CE, as they are easily trackable and easy to complete	Strength 4 Importance 4b

Table 2.3: (Continued).

Study author and year research completed	Study demographic	Method of data collection	Objectives of study	Key findings	Comments on importance of the study	BEME score
Mohamed Ibrahim 2012[217]	359 pharmacists; Cairo, Egypt	Questionnaire (2010)	To determine CE preferences of pharmacists prior to implementation of a compulsory CE system	Therapeutics and clinical skills were preferred topics. Community pharmacists had attended less CE events than their hospital colleagues. However, hospital pharmacists reported less satisfaction than community pharmacists with CE. Common barriers were cited in addition to some related to technology and employers	The study identifies the need to be flexible and that there is no one size-fits all approach	Strength 4 Importance 1
Walters *et al.* 2012[218]	101 community pharmacists, New Zealand	Evaluation questionnaire pre and post online training, plus follow up telephone interview (2010)	To evaluate online training and establish the feasibility and acceptability of this format in community pharmacists	Online training was found to be an appropriate and cost-effective methods of improving skills	This study identifies that online training can have a wider audience reach, and can be a more cost-effective format	Strength 3 Importance 1
Buxton 2012[219]	50 practising pharmacists; Wisconsin, USA	Survey (2011)	To identify satisfaction with CE webinars and evaluate reasons for enrolment	Whether one or more webinars had been completed satisfaction was positive, and no differences were found in motives for enrolment between those only completing one or multiple webinars	The study identified that limited number of completions was a concern and that there was a need to address scheduling conflicts and identify other deterrents to participation	Strength 2 Importance 1

Table 2.3: (Continued).

	Study author and year research completed	Study demographic	Method of data collection	Objectives of study	Key findings	Comments on importance of the study	BEME score
Trewet and Fjortoft 2013[220]	105 pharmacists; USA	3 surveys (2010)	To evaluate the effectiveness of tools designed to support the pharmacist through a CPD process at a national meeting	Nearly all the test groups reported successful application of learning and achieving their designed learning plan (87%) however practice changes were implemented in more than half of the test groups after using a CPD process to plan their learning activities. There were no significant differences among groups regarding the outcome measures	The study identifies that using a structured CPD approach is useful to support learning outcomes, and incorporating CPD into education events can support practice change	Strength 3 Importance 3	
Buxton and DeMuth 2013[221]	29 pharmacists; Wisconsin, USA	Course evaluation survey (date not given for intervention)	To examine perspectives of a CE program delivered live or via a simultaneous webcast	Whilst both groups were satisfied with the presentation from an audio-visual perspective and the ability to put the learning into practice the live group were significantly more satisfied with the overall learning experience	The study identifies that although a positive experience and a useful alterative to physical attendance, webcasts do not fully replace the experience of being live at a learning event	Strength 4 Importance 1	
Buxton *et al.* 2014[222]	82 pharmacists; Wisconsin, USA	50 question online survey (2012)	To evaluate pharmacists' satisfaction of a CE programme offered as either synchronous or asynchronous webinars	Whilst both groups were satisfied with the content of the programme the asynchronous group were more satisfied with multiple aspects of the learning programme	The study identifies that when not physically able to attend an event, participants would rather access this in their own time and at their own pace	Strength 3 Importance 1	
Grzeskowiak *et al.* 2014[223]	60 hospital pharmacists; Australia	Utilising and evaluating clicker use throughout presentation (2012)	To evaluate the use of clickers as a potential for an engagement tool in CE activities during a face-to-face event	Attendees were positive about the use of clickers and their positive use in engagement, and advocated their future use	The study showed that using different technologies can increase engagement in learning activities	Strength 4 Importance 1	

2.3.1 Demographic characteristics review

All articles were published between 2005 and 2014. The 19 studies came from eight different countries, with seven coming from the USA,[142,198,213,219-222] three from Canada,[208,209,216] two each from Belgium[211,212] and Australia,[215,223] and one each from Egypt,[217] United Arab Emirates (UAE),[214] GB,[210] New Zealand[218] and Qatar.[34] The participant number varied by study, from nine to 4140. Of the studies, seven had up to 50 participants,[208-211,213,215,221] five had between 50 and 100,[142,198,219,222,223] and seven had over 100 participants.[34,212,214,216-218,220] All of the studies with over 100 participants utilised a survey as their data collection method, except one that combined using a survey with a follow up interview.[218] There were an additional four studies that also used survey.[142,198,219,222] Focus group was used as a solo tool in three studies,[209,211,215] with course evaluation used three times.[208,221,223] Interview as a solo method was used once.[210] Pharmacists were the main target audience of all studies with four studies targeting only community pharmacists,[211,212,215,218] and three targeting only hospital pharmacists,[210,213,223] with the remaining studies covering all sectors.

2.3.2 The shift from CE to CPD

CE was the focus of 10 studies,[211,212,214-217,219,221-223] with CPD being the focus in four.[198,208,209,220] Interestingly, articles from the USA showed a mixture of CE and CPD, due to regional differences in legislation. Other countries focused on the current process used in the country where the intervention took place. Of the 19 included studies, four articles focused on the shift from CE to CPD.[34,142,208,215,]

Austin *et al.*[208] was the first included study that could be found. This was published in 2005, the year that CPD was first introduced in GB. The study was conducted using 11 focus group sessions, each with 4-5 pharmacists, with the aim to explore attitudes, behaviours and preferences towards CPD, taking place in Ontario, Canada. During the intervention less than half of those participating initially understood the difference between CE and CPD but grasped the concept after explanation from the facilitator of the study. Participants felt that CPD may be harder to implement as CE was easy to measure in terms of hours completed, whereas CPD relied on self-appraisal and self-reflection. However, this could be supported by peers and mentors. Time constraints to ensure the whole CPD process was completed were also raised, along with lack of employer support. It was felt that structured learning was preferred, but it was

acknowledged that teaching could also serve as a CPD activity. This study supported the shift from CE to CPD, although it acknowledged that it may be a challenge to implement, while highlighting that using workplace learning and peer mentors could support engagement in the process. It was further acknowledged that to be successful, views of CPD needed to be holistic across regulators, educators, professionals and the public.

Wilbur,[34] in 2010, completed a survey of 134 pharmacists in Qatar aiming to determine CE/CPD needs and preferences of pharmacists. Although Qatar does not have any mandatory requirements for CE or CPD, the College of Pharmacy at Qatar University wanted to set up a CPD programme for all pharmacists to fill the void of current CE activity that was available, which was largely self-directed and voluntary, from limited employers and external sources. The survey of pharmacists was answered by approximately 25% of pharmacists in Qatar (n=134/523), with a quarter of respondents (n=24/134) having not participated in any CE activity previously. A third (n=46/134) had attended face-to-face events abroad or had completed online activity. Time, availability of programmes, cost and workload were cited as barriers for participation. Almost all (n=119, 89%) intended to participate in events in the future with them most likely to participate in live presentations and workshops, allowing small group activity. Topics of choice would be therapeutic area or clinical skills. Again, lack of employer support was noted as a barrier to participation, along with no access to the internet. This study showed that pharmacists wish to participate in CPD activities where opportunity allows, with preference seen for face-to-face provision.

Dopp *et al.*[198] in 2010, across five states in the USA, (Indiana, Iowa, North Carolina, Washington and Wisconsin) aimed to investigate whether using a structured educational intervention could support achievement of CPD. This pilot intervention was led by professional associations and Schools of Pharmacy from the included states to support CPD intervention introduction. These were the first 5 states in the USA to introduce and trial CPD in favour of CE. Participants in the study were voluntary and enlisted through email and flyer circulation, with participants being enrolled in either an intervention or control group. Initially all participants were asked to complete a 71-question survey (n=251) and complete a home study package called CPD 101 (n=232) which outlined CPD definitions and the rationale for its introduction in the USA. After this, the control group (n=105) received no further intervention, and the

intervention group (n=127) took part in three face-to-face workshops, giving more in depth detail about CPD and the processes involved. After attrition, only 28 participants from the intervention group and 29 from the control group completed the follow up evaluation. There were limited differences at follow up in confidence in identifying learning needs, although the intervention group showed greater use of a structured self-assessment tool ($p<0.01$) and they were also more likely to appraise their current work and practice to identify learning needs ($p<0.01$). In addition, they were more likely to maintain records of learning, and more likely to review and reconsider their planned learning objectives. In both groups, at follow up, over 70% of respondents agreed that the current CE system was not fit for purpose in terms of meeting their lifelong learning needs. Again, this study identified that support given for achievement of CPD encourages reflection and greater depth of learning.

The fourth study looking at the shift from CE to CPD was a study by McConnell *et al.*[142] This was also from 2010, and utilised a non-blinded, randomised controlled trial, in Colorado, USA, where 44 pharmacists were in the intervention group and 47 pharmacists were part of the control group. The control group was asked to continue with traditional CE whereas the intervention group participated in three CPD workshops and were asked to record their learning using the CPD approach. The participants in both groups were asked to complete a questionnaire at the start and at follow up regarding their perceptions of their pharmacy practices. At follow up, those in the intervention group completing CPD, reported increased interactions with other health care professionals (32% vs 6%), and 21% had initiated practice changes, versus none in the control group. CPD was seen to improve patient care, professional knowledge, skills and values (46% vs 23%; 34% vs 6%; 48% vs 17% and 43% vs 11% respectively). Control participants reported that the current CE system was not meeting their learning needs. However, those in the intervention group, as in the previous two studies, reported time as a barrier for completing CPD, more than those in the control group (75% vs 32%). All of the differences noted in the study were significant ($p<0.05$). This study showed that CPD had increased practice outcomes compared to CE interventions.

2.3.3 Face-to-face CE/CPD interventions

Four of the studies evaluated face-to-face CE/CPD interventions.[142,198,209,223] The paper by McConnell[142] and Dopp *et al.*[198] have been discussed above. Austin *et al.*[209] in 2006 carried out a study of 47 participants of a Professional Skills Enhancement Workshop (PSEW) in Ontario, Canada, using an end of course evaluation plus follow up survey. The PSEW is intended to act as a platform for CPD, and support pharmacists who are required to undertake a practice review, who were currently deemed to require remedial work by the regulator. The study aimed to develop the workshop and evaluate the value of peer-supported CPD by attending the workshop. The workshop consisted of two half-day elements focusing on clinical aspects and patient interactions. Of the 34 participants who completed the evaluation, 58.8% agreed that the sessions helped their understanding of the practice review, and 67.6% agreed that attendance was a valuable use of time. At follow up, 12-18 months after the workshop, from 25 respondents, 92% agreed that their skills had improved for utilising drug information resources, interpreting drug information requests and appropriate questioning. The study found that using a structured workshop supported individuals who were behind with their CPD to catch up with their colleagues through peer support. This peer support focused on framing, clarifying and addressing clinical questions along with focus on patient interviewing techniques. The benefit of using peers found in this study echoes findings from the earlier study by Austin[208] that also found peer support is important to maintain engagement in CPD. The study shows that structured support allows achievement of regulatory requirements.

The newest study identified during the literature search was by Grzeskowiak *et al.*[223] in 2014. This study, focusing on a CE intervention, involved 60 pharmacists who attended the Society of Hospital pharmacists of Australia, south Australia and Northern Territory Branch's 2012 Autumn symposium. Clickers were used during this symposium with the aim that they would be used to capture evaluation data of the event and increase engagement. When asked about the use of clickers, 100% strongly agreed and agreed (n=49/49) that using the clickers was easy, and 98% (n=45/46) strongly agreed and agreed that clickers enhanced interaction. Participants also agreed or strongly agreed that using clickers allowed comparison of knowledge with peers (78%, n=28/39). From an organisational perspective using clickers was an easy and efficient way to collect responses and increase engagement, as if a large number

did not answer correctly, further explanation could be given. This study showed that the appropriate use of technology can enhance face-to-face interventions through increased feedback and participation. The studies outlined that supporting completion of CE/CPD and using available resources enhances the experience, and supports fulfilment of regulatory requirements.

2.3.4 Online learning

Five of the included studies evaluated online learning, all with a focus on CE.[213,216,218,219,222] A study by Sweet *et al.*[213] in 2009 piloted a web-based CE programme for 29 hospital pharmacists in Michigan, USA with the aim to evaluate the use of the programme on increasing pharmacists' knowledge on new drugs, and to gather perceptions on the format, to see if it was favourable. Three modules were created, that would take an hour in total to complete. Three were completed within a month for this study. Knowledge of the drugs was tested pre and post completion of the modules, with a 70% post score required to achieve a CE credit. The average score across all modules increased from 59.1% to 95.5% with improvements in all tests being significant ($p<0.0001$). Overall, when asked about format, 96% of participants agreed the format was positive for presenting material and offered an alternative approach to CE without having to attend face-to-face sessions.

A study by Walters *et al.*[218] in 2012 also looked at a CE programme online. This study included 101 community pharmacists, based in New Zealand. The online programme sought to upskill pharmacists providing an opioid substitution treatment intervention. The aim of the study was to evaluate the online training, and also to evaluate the usability and feasibility of the online format. Pre and post questionnaires were used, along with follow up interviews (n=12). The questionnaires had 10 statements to test skills and knowledge pre and post learning, utilising a 7-point Likert scale where 1 was strongly disagree to 7 being strongly agree. All ten statements saw a statistically significant increase post training ($p<0.001$). When asked to rate the training on a scale of 1 (very poor) to 7 (excellent), 93% rated the training positively. In total 97% said they would recommend the training to others. From the interviews there was general agreement that the online format should continue, although one participant did comment of the potential advantages associated with face-to-face learning. The study concluded that online training was appropriate and a cost-effective method of increasing clinical skills and reaching a wide audience.

A study by Budzinski *et al.*[216] in 2012 e-mailed 6,500 Canadian pharmacists 67 e-mails over a 38-week period with the aim to assess the use of an e-resource for CE and understand educational needs of pharmacists. Each of the emails contained a link to an e-therapeutics bulletin, which contained an excerpt of facts from an online drug and therapeutic resource. A pop-up questionnaire appears asking for the recipients to answer it. A total of 4140 responses were received, in which 52.5% (n=2175) expected health benefits for a patient from applying the knowledge received. Over half (50.4%, n=2086) agreed that practice improvement had been seen as a result of reading the resource. When asked if the content was relevant to at least one patient, 75.7% (n=3133) agreed that is was. This study identified that the use of e-resources was an effective way to support CE and to support practice and patient care improvement.

Buxton *et al.*[219] in 2012 looked at professional development webinars for 50 pharmacists in Wisconsin, USA, with the aim to evaluate reasons for enrolment and evaluate satisfaction after completion. Mandatory fulfilment of CE exists in various states, therefore webinars were used to support timely learning in a practical way. Fee paying webinars of 60 minutes, covering various therapeutic topics, were delivered monthly. Evaluation forms were used, consisting of Likert scale questions where a 1 was given for very dissatisfied through to 5 for very satisfied. Of the 50 pharmacists who participated in one or more of the webinars and had completed evaluations, a mean of 4.5/5 was given for the subject matter of the webinars. Of the 38 who had watched just one webinar, 4.7/5 was given when rating the webinar as a means of getting clinically relevant CE conveniently, compared to 4.3/5 for those who had watched 2 or more (n=12). Of the respondents, 87.7% agreed or strongly agreed that they would participate in a future webinar. Factors influencing participation included timing of the event, topic, time required and cost. Respondents reported that they would prefer asynchronous events to complete in their own time, with 68% agreeing or strongly agreeing. This study showed benefits of using webinars as a mode of CE although highlighted that pharmacists may not participate in multiple events, so factors influencing participation need to be considered during the planning process. In a different setting, Buxton[222] also looked at distance learning, comparing synchronous versus asynchronous approaches, in 2014, using a course of 8 lectures. The synchronous approach asked participants to listen to a lecture once a week, at a specified time, followed by a live question and answer session. The asynchronous

approach allowed participants to complete the course at their own pace and in their own time. There were 41 pharmacists who completed an 8-lecture fee paid online series synchronously and 41 who completed the same series in an asynchronous manner, in Wisconsin, USA. The aim was to compare satisfaction with content and learning environment. In terms of participation there was no significant difference seen between the 2 groups in regard to feeling part of a group, the usability of the format or the format being conducive to learning. However, the asynchronous group had statistically higher satisfaction. Out of 5, with 1 being strongly disagree and 5 being strongly agree, the following average ratings were given for the asynchronous compared to the synchronous completion respectively; for audio quality (4.3 vs 3.4, p=0.001), visual quality (4.6 vs 4.2, p=0.03), being value for money (4.5 vs 4.2, p=0.005), not being distracted during the presentations (4.4 vs 3.9, p=0.02) and being comfortable in their surroundings (4.6 vs 4.3, p=0.04). This was potentially due to the fact that they were able to do the learning completely at their own pace, in their own time and location, as truly independent learning. However, the synchronous group were statistically significantly ($p<0.001$) more positive about being able to ask questions during the presentation (4.3 vs 3.6). Both groups felt learning objectives were achieved and the topics were well covered. This study shows that for independent learning, being able to access learning at an individuals' own time and pace is valued by participants.

A third study by Buxton and De Muth[221] in 2013, evaluated the difference in perceptions between live presentation versus simultaneous webcast. This study used 29 pharmacists from the USA with the aim to examine perceptions of pharmacists participating in CE events, either face-to-face live or via a live simultaneous webcast. For the study, 14 pharmacists attended a live event in Wisconsin and 15 attended remotely. Distance learners, through a webcast, were still able to interact with the speaker through typed questions. All participants had access to the lecture slides. When asked their preferred format for learning, interestingly 100% of those who attended the live event said face-to-face (n=14), whereas for the distance learning group 9/15 stated their preference for live distance education, so the responses echoed the formats they had used to participate in the event. Out of 5, where 1 was strongly disagree to 5 being strongly agree, the live group were happier with value for money of the session (4.71 vs 3.93) but both groups had similar scores for their

learning needs having been met (4.43 vs 4.20) and they could now list commonly abused drugs (4.86 vs 4.47). No differences were seen for scores relating to the presenter. The live group were more positive about the audio and visual quality. This study showed that, pharmacists have differing personal preferences for learning formats, and excluding audio and visual issues, learning objectives can be met using webcasts if the participant has a preference for distance learning.

2.3.5 Tools to support application of learning from CPD

Two studies involved a review of tools to support CPD completion.[210,220]

Swallow *et al.*[210] in 2006 investigated the use of professional portfolios, and Trewet and Fjortoft[220] in 2013 evaluated the use of a CPD worksheet to support implementation of change after a learning event. When looking at professional portfolios,[210] 25 pharmacists from two NHS hospitals in Durham and Tees Valley, England were included in the study. They were given a portfolio from the College of pharmacy practice, to record self-appraisal, discussions with employers and college membership submissions. They were then emailed to participate in an evaluation with the aim to identify the ways that the portfolio was used to support acquisition and use of knowledge. There were 9 pharmacists who volunteered and participated in interviews prior to using the portfolio at 5 weeks. The portfolio aimed to facilitate self-appraisal and discussions prior to submission of CPD entries. The analysis was conducted using the framework technique,[224] that involves familiarising with the data, and then identifying themes, indexing, charting, then mapping and interpretation. ‘Socialised learning’ and ‘learning amplification’ were the key themes identified. Socialised learning identified that new methods of learning were becoming available, learning is dynamic, and real-life problems supported learning new skills. Socialised learning does, however, rely on human interaction. The study identified that learning could be amplified through support from management, with managers supporting learning outcomes, rather than focusing on the process, and allowing learning in the correct environment, with cover in place to allow adequate time for learning and portfolio completion. Portfolios support this by focusing on broadening knowledge and expertise, and self-development, expanding on the traditional paradigm of learning which focuses on benchmarks and competency.

Trewet and Fjortoft[220] conducted a study including 47 test group pharmacists and 58 control group pharmacists that took place in Washington DC, USA. The aim was to evaluate the use of a CPD worksheet in guiding the pharmacists through the CPD process to support their planning and participation in CPD during a national meeting. The test group were asked to complete the designed worksheet and the control group did not receive this. All participants completed 3 surveys, completing one prior to the meeting, one immediately after the meeting and one at 6 weeks after the meeting. The surveys used items previously used by Dopp *et al.*[198] Only 56 responses were received at the second follow up (n=22 test group, n=34 control group). No significant differences were seen between groups at follow up, but the intervention group showed greater positivity for questions relating to documenting learning needs and identification of specific learning objectives. When asked about achievement of meaningful learning, 71% of the test group answered often/always compared to 64% of the control group. With regard to achieving their learning plan, 32% of the test group were very successful compared to 18% of the control group. This study showed that a structured approach for recording CPD during an event supports achieving learning outcomes.

2.3.6 Preferences of pharmacists

The remainder of the included studies were surveys to establish preferences for lifelong learning. A study by Driesen *et al.*[211] in 2007, consisting of six focus groups (n=39) of pharmacists in Belgium aimed to investigate how CE courses could be optimised, and to investigate interest in distance learning and obtain views on mandatory CE. There were two focus groups with attenders, two with non-attenders and two with representatives from the education provider, Instituut voor Permanente Sudie voor Apothekers, translated as the Institute for Permanent Study for pharmacists (IPSA). A preference for live events was found, compared to distance learning, but content needs to be relevant to practice and delivered by experts. Topics relating to new and innovative therapies and practices were preferred. Timing of events and cost were identified as barriers to participations. Mandatory CE requirements were seen as positive from providers, as well as being positive from non-attenders who expressed a need for external pressure to participate. In addition, all parties identified that patients should be aware of the role of the pharmacists and the requirements for CE.

In Belgium again, another study by Driesen *et al.*[212] in 2008 surveyed 1032 community pharmacists with the aim to profile pharmacists on preferences for format for CE interventions and identify whether preferences were linked to participant demographic. Using cluster analysis, three groups were identified. Cluster 1 (12.9%, n=133) were not interested in lectures and showed more interest in distance learning. Those in this cluster were mainly motivated by material incentives and most likely to be older than 44, a pharmacy owner and male. Cluster 2 (57.7%, n=595) showed an interest in both lectures and workshops. Those in this cluster were most likely to have intrinsic motivation to participate. Cluster 3 (29.5%, n=304) were mostly interested in lectures but not workshops. This cluster was most likely to be women. This study shows that pharmacists have different factors, including demographics that motivate their participation, so a range of options need to be catered for differing preferences.

Hasan,[214] reviewed the needs of pharmacists in the UAE in 2009 utilising 132 surveys from participants at an annual pharmacy conference. The aim was to determine the type and format of CE preferred. Of the participants, 79% (n=92) thought that participation in CE enhanced knowledge. The most common reasons for participation in CE were topic and being easily accessible, both chosen by 75% of the respondents. The most preferred option of format was interactive workshop chosen by 76%, whereas live in person was chosen by 73%. In terms of topic choice, 81% preferred disease management topics and 80% selected innovation in pharmacy practice. Pharmacists in UAE showed a clear preference for face-to-face learning with topics that were linked to therapeutics and practice.

McNamara *et al.*[215] in 2009 carried out four telephone focus groups with 15 community pharmacists in Australia with the aim to identify learning preferences and experiences of CE and CPD. Feedback was related to adult learning principles based on individual learning needs dependent on previous experiences and current knowledge. There was a common thread of wanting knowledge to be up to date, from evidence-based information. The need for evidence-based material stemmed from previous experiences of educational interventions. Interaction rather than didactic learning was preferred. Where CE was required, limited reflection on learning outcomes was seen, compared to those participating in CPD. Time investment was seen as a benefit where knowledge could be applied into practice. This study showed that learning interventions need to be based on adult learning principles of the want to gain

knowledge through intrinsic motivation, but knowledge needs to be applicable into daily work practices.

Finally, 359 Egyptian pharmacists were surveyed by Mohamed Ibrahim[217] in 2012. Again, the aim of the study was to determine preferences for CE, prior to implementation of mandatory CE in the country. The top three preferences for format identified were live presentation (31%, n=111), hands on workshop (19%, n=68) and internet-based learning (16%, n=57). Of the respondents, 83.5% had access to home internet. However, 62% of the respondents said they had inadequate, or no access to the internet at their workplace. With topic preferences, therapeutic areas were top with 85.3% selecting this option. Looking at demographics, community pharmacists had attended less events in the previous two years than their hospital colleagues (15% vs 28%). Hospital pharmacists were less satisfied with events (21% vs 33%). Younger pharmacists were most likely to participate in online learning. Barriers to participation differed by gender with male barriers being cost, and female barriers being content, location, timing and format. Technology access was also cited as a barrier. Respondents were broadly positive about participation in activities to support CE. This study, like in previous studies, showed that a flexible approach to learning is needed, and that there is no one size fits all model.

2.3.7 Quality assessment

When reviewing quality of the papers identified, using BEME criteria, 6 papers were ranked as having results that were likely to be true (strength 4)[198,212,216,217,221,223] with 1 being ranked as having unequivocal results (strength 5):[142] the McConnell paper outlining the benefits of CPD compared to CE. When looking at importance, 5 papers showed behavioural change in participants (importance 3),[142,208,209,212,220,225] with 2 papers showing change in organisational practice (4a):[198,211] the 5 state USA pilot for CPD[198] and the implementation of mandatory CE in Belgium.[211] In addition 1 paper showed benefit to patients or clients, as a result of the intervention (4b), where the e-Bulletin was circulated and used to increase clinical knowledge and application.[216]

2.4 Discussion

Only limited studies have identified the preferences of pharmacists for participating in lifelong learning, including CE and CPD activities, and what model is the most effective for learning of pharmacists. This review highlights elements of preference, but no clear

model of preference. It should also be noted that all previous reviews of CE/CPD reviewed countries with mandatory systems of CE/CPD in place. [196,202,203] The papers identified in this review echo this, except for Qatar.[34] Egypt was implementing mandatory CE after the included study in this review.

Attewell *et al.*[129] showed that some pharmacists did not understand the relevance of CE/CPD once their careers were progressing, so many were not fully engaged. As also seen in the review, the quality and facilitation of delivery impacts on participation[199,226] along with understanding of CE/CPD and technical problems[199] although external factors such as regulatory requirements do impact on CE/CPD accomplishment.[227] Two studies[209,223] showed that participation increased where there was a mandatory requirement to take part, and that tools to capture learning need to be easy to complete, to ensure that assurance of competence can be demonstrated. Echoing other available studies,[197,198] participants in studies identified, found the process of completing CPD documentation to be a barrier. Timing of events was also highlighted as a barrier to attendance.[34,219] Prior to preparing a training session, the need to complete a needs assessment was highlighted.[209]

It is also important to recognise that a range of learning formats should be used and topics need to be targeted to those individuals motivated to learn.[153] Having confidence in the format and process of learning will increase participation, as well as having support in the workplace. Power *et al.*[228] in 2011 noted that hospital pharmacists are more confident in the process than community pharmacists. Studies showed[211,212,214,217] that topics should be relevant to practice, and predominately clinical and focus on therapeutic areas. When correlating topic choice and format preference, Driesen[212] identified that face-to-face is preferred for topics where participants have the least knowledge.

Although papers whose primary objectives were looking at motivators and barriers to CPD were excluded from this review, many of the included papers had secondary outcomes that commented on motivators and barriers for participation in lifelong learning, as seen with papers in this review by Driesen *et al.* [211,212] outlining incentives as motivators and barriers of timing and cost being seen by Driesen *et al.*,[211] Wilbur[34] and Mohamed Ibrahim.[217] These motivators and barriers echo those found in studies

focuses on motivators and barriers.[129,131,199,226,228] Further detail on motivators and barriers will be reviewed in chapter 3.

In general, the review showed that face-to-face activity is preferred, where possible. Face-to-face activity allows student and instructor interaction and immediate feedback, although this is more time and resource intensive. Previous research by Schindel *et al.*[153] in 2012 showed that pharmacists value face-to-face training. With a variety of face-to-face methods available, it is vital to give participants choice, ensuring information is presented in a way that is tailored to their learning style.[228] Combining face-to-face with technology such as clickers increased participation and engagement.[223] A systematic review on the use of audience response systems used in pharmacy in 2019,[229] although carried out with pharmacy students, showed them as being effective in teaching, although impact on academic performance could not be determined. In this review, it was seen that clickers are seen as positive in postgraduate learning.[223] Grzeskowiak *et al.* [230] have also shown positive results in an additional study. Interactive learning was deemed in numerous literature as a positive experience.[34,214,215,222,223,231]

Distance learning, in addition to online learning, can provide a more flexible approach for pharmacist development, but it does not yet replace fully traditional face-to-face learning.[222] The shift towards online learning was established late in the 20th century as a cheaper and more up to date method of learning than paper libraries.[232] This has created a cost saving in delivery, and a better use of resources.[233] Distance learning was seen as a format starting in 2007 in this review.[211,212] Newer studies focused on the use of technology in educational interventions. The articles relating to online learning were published over a two-year period, whereas the articles relating to face-to-face were published over an eight-year period. Specifically, the four face-to-face interventions reviewed [142,198,209,223] took place between 2006 and 2014, whereas all online learning interventions took place between 2012 and 2014 [216,219,222,231], showing later introduction of online provision, and future opportunities. However, none of the studies identifying practice outcomes found an increase in learning outcomes as a result of online provision, and a study from Buxton in 2012[221] comparing face-to-face versus online showed a preference for a face-to-face approach. A systematic review of e-learning effectiveness in pharmacy by Salter *et al.*[231] was completed in 2014. The

study found that e-learning is effective in increasing knowledge and is accepted as a format by pharmacists, so can be as effective as face-to-face learning and better than no learning. However, it also showed that there is limited evidence that e-learning is effective in improving skills or professional practice. It suggested that properly validated tools and follow up research are required to support effectiveness of e-learning interventions.

Technology can still be an issue in some places such as Egypt. Where technological issues occur,[217,231] face-to-face learning is still preferred where this option is given.[211,214,221] Therefore, when using online learning, access to the internet needs to be considered to ensure participation.[34,217]

It is noted that all online events were CE events. Satisfaction in participation in online learning did not differ whether participation was in single or multiple sessions.[219] In terms of overall experience, it is seen that asynchronous learning is preferable to synchronous for flexibility.[219,222] Furthermore, it is seen that participation in webinars is more satisfactory when completed live face-to-face, rather than simultaneously yet remotely, when looking at application into practice and audio-visual satisfaction.[221] However, completing at a time later than a live event allows working at the individual's pace, therefore not missing a learning opportunity.[217] In general, with online learning, although initially a cost may be incurred from creating the learning, cost savings can be seen from using online learning.[234] Future work should focus more on new and emerging mediums, such as social media.

Combining formats has the potential to increase uptake in activity due to flexibility.[226] When using a blended approach, combining distance and face-to-face learning, gender was not associated with outcomes, although those with a preference for online learning showed higher scores for perceived learning, learning application and motivation.[235] However, a study by Lim *et al.*[49] in 2014 looking at perceived and actual learning, found no difference between online and blended learning approaches.[236] It is seen that no one size fits all, so multiple forms of CE/CPD may need to be utilised according to the audience,[219,221] although this may differ according to demographic groups.[212,217] For example, women had a preference for lectures over workshops and those not interested in lectures were more likely to be over 44, male and own a pharmacy.[212] Younger pharmacists were more likely to access online programmes.[34]

Men are concerned about cost and women are concerned about location.[217] Participants who do not have a specific requirement for format appear more motivated to attend learning events.[212]

As further identified in the review, due to the variety of formats and no consistent model, it is hard to clarify results or to identify a perfect activity, as also identified in previous studies.[154,136] This shows that lifelong learning interventions do need to be varied to suit individualism, and these may change with new models being introduced. Pharmacists learn differently, and this is influenced by multiple factors. Although this study has identified elements to support the perception of a good programme e.g. topic and facilitator, quality assurance of programmes overall was outside the scope of this review. Interestingly, none of the studies mentioned quality assurance of programmes delivered. However, ensuring programmes are fit for purpose to ensure patient and health outcomes is important.

The review outlined that clear outcomes for the learning and how it can be applied into practice and benefit the workplace are essential to facilitate interest in the learning.[127,139] When looking at outcomes achieved after events, reading articles resulted in practice improvement,[216] as did both live and audio-visual events that are used for CE.[221] Online interventions also saw an increase in skills and knowledge.[213,218] Increased practice outcomes, and patient care, were seen after CPD, rather than CE interventions.[142,208] When using a CPD process to plan learning activities, more changes in practice were seen.[198] However, this change in practice was not always measurable.[220] Whilst e-learning increased knowledge and skills initially, there was no evidence to show an increase in long-term knowledge.[231]

When looking at the structure of the event, support is needed in the process of CPD, with clear structure of event in order to support learning needs.[208,220] Professional outcomes or formal requirements for engagement is seen to be important as a driver for attendance.[209,211] Therefore, understanding of these formal processes need to be understood along with the tools to support the completion of CE/CPD records.[198,216] Relevance to practice of topics is also highlighted[211,214,217] as well as ensuring opportunities are available for application of learning.[210,220] This is supported by workplace peer mentors,[208,215] taking into account individual advantages/disadvantages of work based learning approaches.[210] A good speaker is

highlighted as supporting the outcomes of an event,[211] along with an experienced facilitator.[211,237] Reflection of personal practice is seen in CPD rather than CE.[142,198,208,215]

As seen in the review, CPD has increased practice outcomes over CE, with increased reflection and application of learning into practice. CPD therefore, when compared to CE, supports the quality assurance of competence, as evidence of application of knowledge and reflection of this must be demonstrated. This demonstration of application links to higher levels of learning theories such as Kirkpatrick[115] and Bloom's taxonomy.[146] Supporting providers to create programmes that help the participant to learn, reflect, apply and then evaluate practice is encouraged. Using Kirkpatrick or Bloom's taxonomy would aid creation of uniform learning measures, to support evaluation of practice outcomes.[238-240]

2.5 Conclusions

Although an increasing amount of technology is being utilised, face-to-face learning is still preferred, albeit this could change after the current pandemic. Nevertheless, it is clear that there is no one model that fits everyone. Interactive learning should be used where possible and multiple formats offered, to reflect preferences of different learners. There is a need for a structured approach to the planning and delivery of learning events, for learners to benefit from support to achieve the CE or CPD process and regulatory requirements. A quality assurance process also needs to be in place. The transition globally towards CPD, in comparison to CE, is a positive move encouraging reflective practice, and application of learning, with increased outcomes being seen from CPD interventions.

Chapter 3 – Pharmacy Education South London (PESL) evaluation

3.1 Introduction

As outlined in chapters 1 and 2, post-registration learning opportunities to support learning and CE/CPD often have limited quality assurace. While standards are set for early training and qualification, currently, pharmacy professionals have inconsistent access to lifelong learning resources although lifelong learning is essential in order for pharmacists to fulfil their role with the required skills and competencies.[241]

Traditionally, lifelong learning events were face-to-face for pharmacists, however more is becoming available in alternative formats. Due to the multiple providers outlined in chapter 1, often in a small locality, face-to-face meetings were not always planned in collaboration with other providers leading to clashes or multiple events to be attended in a limited time scale. SL echoes the national picture of training provision.

3.1.1 Health Education England South London

SL was one of the original 13 LETBs. It was known as Health Education England South London (HEESL). Their delivery plan for 14/15 set out four main aims: workforce at the forefront of change, recruitment and retention, lifelong learning and making it happen.[242] Workforce planning is crucial to the success of the future of healthcare, thus it incorporates all of the above strands, as seen in the NHS five year forward view document[66] in 2014. Local implementation is required to ensure the ambitions set out in the five year forward view, are achieved, to support the NHS overall and give the best experience to patients and staff. The workforce plan for SL[170] was overseen by the Workforce Planning Advisory Group (WPAG) to help develop a strategy to commission the correct number of places for education to ensure a sustainable and quality workforce.

From the HEESL workforce plan 2014/2015[170] there were approximately 1800 pharmacists in SL as shown in figure 3.1, which outlined current supply and demand of pharmacists. A workforce survey was completed with community pharmacists across London in 2015 showing there were 582 full time equivalent community pharmacists in SL with 902 current community pharmacists.[243]

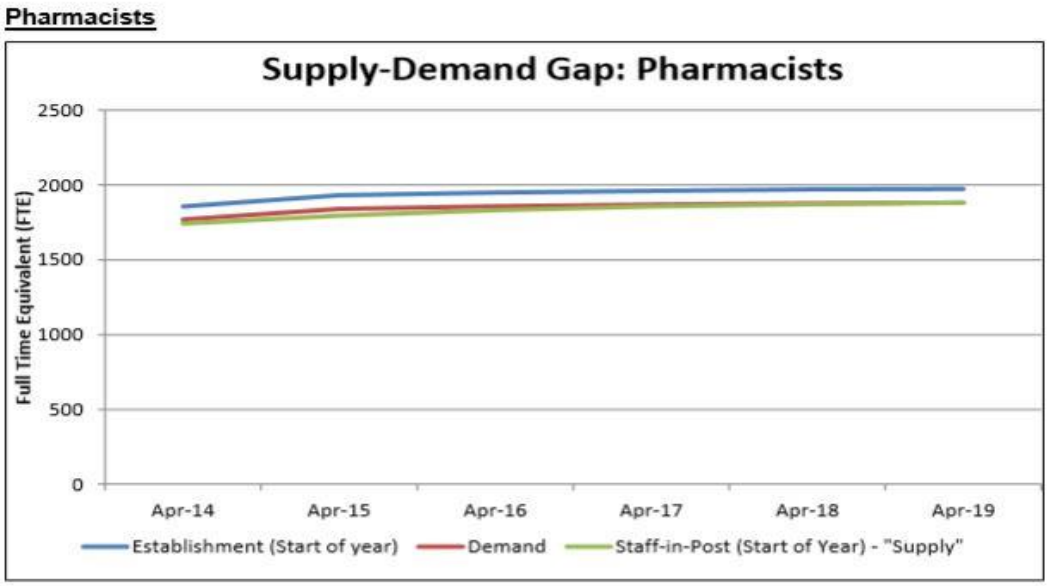


Figure 3.1: Pharmacist numbers in SL[170] Accessed 24/02/2015

3.1.2 NHS Community pharmacy contract

The NHS community pharmacy contract was introduced in 2005.[244] It gives three levels of services that are required by a pharmacy: essential services, advanced services and locally commissioned services, as outlined in the community pharmacy contractual framework (CPCF), as at 2015, as shown in figure 3.2. Carrying out these services is central to holding an NHS pharmacy contract. Essential services must be carried out in all pharmacies. Advanced services are services where the pharmacist must be accredited to deliver these and locally commissioned services require both the pharmacist and pharmacy to be authorised by the local authority or local NHS CCG or area teams to offer the service.

Dispensing of prescriptions is an essential service and this is supported by increased use of technology in pharmacies, including using electronic transfer of prescriptions (EPS) between GP surgeries and community pharmacies, and summary care records (SCR), allowing read only access of patients medical notes, which support provision of care across all levels of services.

The two most common advanced services until the introduction of the updated community pharmacy contractual framework 2019-2022 were Medicines Use reviews (MURs) and the New Medicines Service (NMS). These services were offered by pharmacists to support patients to use their medication to full effect. In July 2015.

providing an annual flu vaccination in a pharmacy moved from being a locally commissioned service to being a national advanced service.[245]

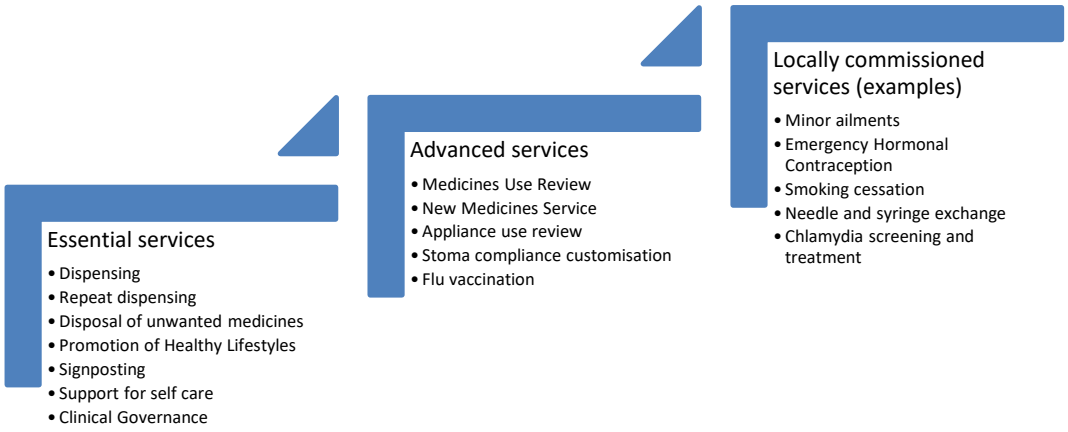


Figure 3.2: Services listed in the NHS community pharmacy contract as at 2015[245,246]

MURs were introduced in 2005, and they were the first advanced service in the CPCF. They are intended to be consultations carried out with the patient to ensure understanding of the use of medicines, and to help identify and rectify any problems the patient may have.[247] MURs can be planned or unplanned, but need to fulfil careful criteria as outlined in the Department of Health Pharmaceutical Services (Advanced and Enhanced Services) (England) Directions[248] which were last updated in 2013. Pharmacies got paid to carry out a maximum of 400 MURs a year with a proportion of these being targeted at patients with certain conditions. Those with respiratory disease, taking high-risk medicines or recently discharged from hospital[249] were originally targeted. A fourth category was introduced in January 2015 where patients with cardiovascular disease were also included[250] and the target percentage increased from 50 to 70% of patients. MURs are now being phased out to end in 2022.

The NMS service was introduced in 2011 as an additional advanced service[251] to support medicines adherence in patients who are prescribed a new medication for one of the following: asthma, chronic obstructive pulmonary disease (COPD), type 2 diabetes, antiplatelet/anticoagulant therapy and hypertension. This service involves an initial conversation with the patient and two follow ups to ensure there are no problems which are preventing the patient from taking their medication.

Locally commissioned services are driven by local needs, and services are commissioned based on the PNA. Table 3.1 lists all of the locally commissioned services running in each borough of SL in 2015, showing the variety across the geography, but also highlighting the importance of formal education and training and lifelong learning, as all of these services will require up to date knowledge and accreditation of the pharmacists.

The information provided in the PNAs is invaluable to understand the local population and their needs. This information can then be used in conjunction with national statutory requirements or initiatives and national NHS priorities to plan more effective local learning interventions to ensure that the topics chosen are based on service requirements, changes in legislation or local drivers, which will ultimately have an impact on patient's experience and care.

The most common locally commissioned services in SL in 2015 were smoking cessation services, supervised consumption and needle and syringe exchange services with all three of these being commissioned in all boroughs. The 2015 PNAs showed the prevalence of smoking ranges from 14% of the population in Richmond to 26.1% in Bromley. Opiate and/or crack users (OCU) ranged from 4.01 in Bexley to 13.4 in Lambeth, per 1000 of the population.

Smoking cessation has been offered in pharmacies for over 20 years with positive outcomes.[252,253] A Cochrane review in 2012 concluded that using NRT can increase the rate of quitting by 50 to 70% in any setting, although no statistical value was given to this.[253]

Supervised consumption and needle and syringe exchange services are both aimed at those who use illicit drugs, predominantly, cocaine and heroin. Although a stigma still exists around those who use illicit drugs,[126] provision of services from pharmacies is increasing, with pharmacists playing an increasing role in providing services, for example, methadone, a heroin substitute, or buprenorphine, an opioid substitute and ensuring clean needles are provided, to limit further infections occurring. The consumption of the drugs methadone and buprenorphine are supervised by a

pharmacist to ensure that they are swallowed, and not taken back onto the streets to be sold. Pharmacists are positive about the role they play in that regard.[254] In one study, over a five year period from 1995 to 2000, training in drug misuse was seen to have doubled from 31.8% to 66.8% pharmacists receiving some form of training with pharmacists providing supervised consumption increasing from 37% to 82.8%.[255] Thus, provision of services increases with pharmacist training interventions, and this is also seen in previous studies.[256] So continued learning is needed of pharmacists to give them the knowledge and confidence to increase patient care and outcomes.

	Services commissioned by public health or the borough as listed in the PNA
Bexley	Sexual Health, supervised consumption, stop smoking, needle and syringe exchange
Bromley	Supervised consumption, needle and syringe provision, emergency hormonal contraception, chlamydia screening and treatment, Pan-London C-card scheme, HIV point of care testing, smoking cessation services, NHS health checks
Croydon	Stop smoking, chlamydia screening, enhanced sexual health, supervised consumption service, needle and syringe programme, NHS health checks, Pharmacy first minor ailments, domiciliary medicines review
Greenwich	Supervised consumption, needle and syringe provision, emergency hormonal contraception, chlamydia screening and treatment, smoking cessation services, NHS health checks
Kingston	Needle and syringe exchange, patient group directions service, screening service, stop smoking service, supervised administration service
Lambeth	Needle and syringe exchange, Supervised administration, Nicotine replacement therapy vouchers, stop smoking, Varenicline (Champix), Emergency hormonal contraception (EHC), Chlamydia screening and treatment, Oral contraceptives, Free vitamin D distribution
Lewisham	Emergency hormonal contraception(EHC) and progesterone contraception, Smoking cessation services, supervised Methadone, Needle exchange, NHS health checks, Vitamin D, Pharmacy First (formally known as Minor ailment) services, Medicine Optimisation Service
Richmond and Twickenham	Emergency hormonal contraception (EHC), Chlamydia testing and treatment, Supervised methadone/buprenorphine, Needle exchange, Smoking cessation, Alcohol screening and early interventions. NHS health checks, Access to palliative care medicines
Merton	Needle and syringe exchange, Patient group direction service, Screening service, Stop smoking service, Supervised administration service
Southwark	Needle and syringe exchange, Supervised administration, Nicotine replacement therapy vouchers, Varenicline (Champix), Emergency hormonal contraception (EHC), Chlamydia screening and treatment, Oral contraceptives, Free vitamin D distribution
Sutton	Needle and syringe exchange, Patient group direction service, Screening service, Stop smoking service, Supervised administration service, NHS Health Check, Chlamydia screening, emergency hormonal contraception (EHC), Needle exchange, Supervised consumption of methadone/buprenorphine
Wandsworth	Domiciliary Medicines Use Review (MUR), NHS Health Checks, Stop Smoking, Chlamydia screening, Emergency hormonal contraception (Patient Group Direction service), Needle exchange, Supervised consumption of methadone/buprenorphine, Transforming Community Equipment Services (TCES)

Table 3.1: Services commissioned locally as listed in PNAs 2015

3.1.3 SL pharmacy learning initiatives

In addition to the learning provision already outlined in the introductory chapter, in SL there are some specific initiatives in place which are outlined below.

3.1.3.1 Community Education Provider Networks (CEPNs)

CEPNs were set up in boroughs and localities to support local networking and initiatives amongst healthcare professionals. They are based on the theory of working collaboratively to achieve desired outcomes.[257] A call for CEPNs to be set up in SL came in April 2012, with SL being the first LETB to initiate this activity.[258] Figure 3.3 describes the structure of CEPNs, which includes representation from all the groups listed on the chart, including academic from academic health science networks (AHSN) to work across a defined area for the development of the local workforce, driven by local need. The PNA is one way that could be used to help define the population need. As of 2019, CEPNs integrated with PCNs to support multiprofessional working.

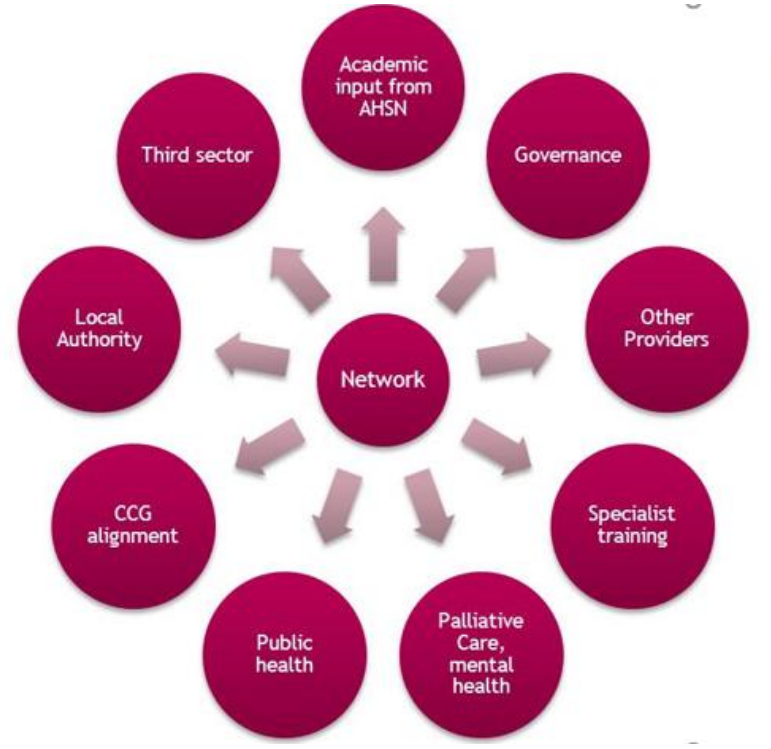


Figure 3.3: CEPN structure [258]

3.1.3.2 Structured Training and Experience for Pharmacists (STEP)

STEP was established in 2000 in South East London for hospital pharmacists using three Trusts: Guy's and St Thomas' NHS Foundation Trust, King's College Hospital Foundation Trust and Lewisham and Greenwich NHS Trust. This programme is a

three-year programme for pharmacists employed at one of the three trusts, involving specialist six month placements, all while being enrolled on a three-year diploma programme, working towards achieving the JPB Diploma in General Pharmacy Practice (DipGPP).[259,260]

3.1.3.3 Health Champions (HCs)

Although not specifically directed at pharmacists, in SL in 2014, there were over 600 HCs carrying out a wide range of services, covering all 12 boroughs, although these are not all based in HLPs. In June 2015, there had been 672 that had undertaken training.[261,262] The HC project was designed to develop the role of the wider pharmacy team to lead public health campaigns, recruit people into health and wellbeing services in the pharmacy and signpost to other services, not running in HLPs, where appropriate. HCs are usually healthcare assistants or 'medicines counter' assistants who have successfully completed the Royal Society for Public Health Understanding Health Improvement level 2 award. SL was the pioneer of this training, giving ongoing learning and development to a population who would not normally have investment. This work was recognized when SL were finalists at the prestigious Chemist and Druggist awards in 2015.[263]

3.1.3.4 Leadership training

There were 19 pharmacists who completed a leadership training course between March and December 2015 funded by money received from HEESL. This course was run by Chartered Institute of Personnel and Development (CIPD). The RPS endorsed this course to map across to the competencies required for Faculty accreditation. The course consisted of 10 modules over a nine-month period, with the modules running as full day courses on a Sunday. Each module was designed to focus on a specific skill, with activities to embed the knowledge taught. This was then supported by set coursework activity between sessions. Modules included; developing self-awareness, managing yourself, CPD, working with others, working with teams, managing services, managing people 1 and 2, developing capability and contest of change. In total, 16 participants took part in the formal evaluation of the programme. The top three skills learnt from the course were delegation, time management and communication. The biggest barrier for application of learning stated was lack of time. After the course

participants have expanded their roles, increased services, and became more involved in local committees and organisations.[264]

3.1.4 Suggested solution to identified problem of multiple provision of post-graduate learning

3.1.4.1 Pharmacy Education SL (PESL) collaboration

A proposal was prepared, working with key stakeholders from the LPCs, CPPE, academia and the LPFs to bring learning together under one umbrella to help coordination of topics and dates, based on local priorities. This collaborative approach to events also encompassed an ethos that events would be available to all members of the pharmacy team. The ambition was to bring consistent learning opportunities across the boroughs in SL for face-to-face learning, holding multiple events on the same topic across the geography using local knowledge of venues. Lectures and workshop-based learning opportunities were proposed, working in conjunction with the key stakeholders based on the current model of expert speakers used in LPF events and facilitated workshop events run by CPPE. The combination of workshop and lectures were used to identify any difference in format, to build on previous work where no perfect model has been identified.[136,137,265,266]

From the proposal written, funding from HEESL was acquired, to support delivery of the new model under one umbrella; Pharmacy Education South London (PESL), to plan and deliver a collaborative programme of lifelong learning events. PESL was formed in April 2014.[267] The money acquired from HESL was given predominantly to support community pharmacy as alternative sources of funding are available for hospital pharmacists through NHS trusts, as outlined in section 1.5.5. However, for PESL all pharmacists and pharmacy teams would be welcome, although topics would be chosen based on community pharmacy drivers and services, both national and local. The PESL initiative would initially focus on face-to-face learning interventions.

Events were publicised on the RPS LPF pages for South West and South East London, and in print in the Pharmaceutical Journal which is circulated to all RPS members, along with CPPE emails to registrants for their topics. LPCs also circulated the events to their contractors, and LPF leads emailed their CCG contacts and hospital chief pharmacists. Technicians were invited through the London lead of the

Association of Pharmacy Technicians United Kingdom (APTUK) via their website and tweets.

3.1.4.1a Topics for PESL

The first year of PESL ran from April 2014- April 2015.

The topics delivered during April 2014-April 2015 were:

- Dementia Friends Training – nine events held
- Hypertension – nine events held
- Novel Oral Anticoagulants (NOACs) – ten events held
- Respiratory, inhalation technique – nine events held
- Diabetes – nine events held
- Alcohol – five events
- Anti-platelets – six events held

In this chapter, for analysis, only the first 4 topics will be considered: namely dementia, inhalation techniques, hypertension and NOACs. During the period of May to November 2014, 37 events were held over those four topics, two of these topics were workshop based, run by CPPE (inhalation techniques and dementia) and twp topics were lecture based, using an expert speaker (hypertension and NOACs). The reason for the selection was to show a comparison between the two different available styles.

3.1.4.1b Rationale for topics selected

Dementia was chosen as a topic to link closely to a national initiative from the Alzheimer's Society; Dementia Friends. From the PNA information in 2015, it was estimated that by 2020, 17% of the population will be affected by dementia.[173] The Prime Minister's challenge on dementia, was made in 2012. This focused on improving care and support for those living with dementia with the challenge being set of getting 1 million dementia friends.[268] The ambition for SL was to ensure at least one dementia friend in each pharmacy. This initiative was supported by the RPS [269] and CPPE rolled out a package in April 2014 delivering the Alzheimer's society dementia friends training, plus some clinical information on dementia. Due to the national interest of this topic, it was felt important to include it and allow SL to give support to this initiative. NHS drivers for this topic included the National Institute for Clinical Excellence (NICE) Quality Standard 1 on Dementia.[270]

Inhalation technique is relevant to both respiratory conditions, asthma and COPD, linked to the NICE quality standards: COPD quality standard and asthma quality standard.[271,272] Both conditions are also listed under the target groups for MUR and NMS services. Being able to effectively advice on the correct use of inhalers, will enhance these consultations to ensure patients use their inhalers to get the maximum amount of drug through correct use of their medication.

Dementia and inhalation technique were both programmes available through CPPE, so CPPE were commissioned to run these sessions.

Hypertension and NOACs (now known as direct oral anticoagulants[273] (DOACs)) are both cardiovascular disease related topics. Cardiovascular disease is the leading cause of disease related death in the UK. For example, in Lambeth it is the cause of death in 130 per 100,000.[182] Both hypertension and NOACs are listed under the NMS service, as well as being topics for focus during high risk medication MURs, as multiple medication are often involved. NOACs, at that time, contained new drugs that pharmacists may not be familiar with so this training was an opportunity to give new knowledge of new medications and review the current guidelines for the use of those medications for cardiovascular conditions, linking to NICE Quality standards of chronic heart disease and hypertension.[274,275] NICE updated its guidance in 2014 to replace aspirin with the use of NOACs in patients with stroke[276] so this meeting was extremely topical and up to date. These sessions were both led by a local consultant cardiology pharmacist, who has written widely on the topic, and is an expert in the area.

3.1.4.1c PESL 2015-2018

The PESL programme continued from April 2015-April 2016, prior to the follow-up evaluation, with an additional six topics being covered:

- Consultation skills
- Minor Ailments
- Substance Misuse
- EPS and SCR
- Eye Health

- Safeguarding

PESL then ran until the end of 2018, running 134 sessions covering 29 topics.[277] After this point it was stopped due to lack of funding. During its lifespan, PESL delivered training to an audience of 2,450 pharmacy staff.

3.1.5 Aims and objectives

The aim of this chapter was to identify factors that influence the perceived success of a face-to-face lifelong learning event from the perspective of attendees.

The objectives were:

- To evaluate a trial of learning events being run in SL (PESL project)
- To identify the primary drivers for attendance at lifelong learning events
- To identify the barriers to attendance at lifelong learning events
- To determine the actions completed as a result of a learning event

3.2 Method

3.2.1 Design

A mixed method approach was used to evaluate the success of PESL interventions. Evaluation forms were used at the end of each event to gain quantitative data, plus follow up semi structured interviews were carried out after the events for qualitative data. An additional follow up survey was circulated to attendees two years after the introduction of PESL to understand impact on practice, after creating a database of email addresses from sign up lists as at that stage over 1800 evaluation forms had been completed, with 500 different individuals having attended at least one learning event. This approach was used to allow a better understanding of face-to-face learning interventions and application into practice.

3.2.1.1 Event evaluation form

The evaluation form consisted of 14 questions in five main sections. Section 1, demographics were tick box of gender, age and job role. Section 2 focused on pre-event, with tick box answers on how they heard about the event, the information received and their motivation for attendance. Section 3 focused on the event attended, using a 4-point Likert scale. This section used questions that were previously used in evaluating South London LPF events. The Likert scale intentionally omitted the middle point to capture definitive opinions. Free text responses were provided to determine

the most and least positive aspects of the event. Section 4 focused on the facilitator and expert speaker, again using a 4-point Likert scale with section 5 using a free text response to look at an outcome-based learning plan along with a tick box question asking about intended application of knowledge.

Face validity was confirmed by a pre-pilot with seven pharmacists who were part of the LPF committee. No formal pilot was undertaken due to the questionnaire being similar to the one used previously at LPF events. All responses were anonymous, apart from where contact details were given. Contact details were recorded separately to survey responses.

During sign in at events the postcode for attendees' place of work and home was captured to identify if any trends were apparent for choice of venue. Due to ethical issues and to protect individuals only the first half of the postcode was captured. On the PESL evaluation forms, participants were asked to give their contact details if they would be willing to take part in a follow up interview. They were then emailed an invitation to be involved.

3.2.1.2 Interviews

The interview schedule was designed to be in two parts. Part one included 6 questions which were aimed at PESL attendees to get more detail about the experience of the PESL learning event(s), including preferred format, but also to gain more detail into the drivers and motivators for attendance, as well as understanding if any action had taken place after the event(s). An open question was also included to understand how likely the participant was to recommend future events.

The questions being reviewed here are:

- Which topic(s) have you attended through PESL?
- What was your primary reason for attending the meeting?
- Do you think the topics have been relevant?
- Please can you tell me what you remember about the learning event(s)?
- Describe how you have applied your learning after the event(s)?

- Please share any examples of actions you have taken to change your practice after the event?
- How likely are you to recommended future PESL events to colleagues and why?

Part two of the interview included 16 short open questions designed to be more generic, and could be used for non-attenders also. This part was designed to capture views and opinions on various learning formats and preferences, as well as understanding drivers and barriers to attendance. The answers for the first 6 questions related to PESL will be reviewed in this chapter. The others will be reviewed in the next chapter, chapter 4.

These tools were face validated through the PESL committee, and no amendments were found to be needed.

3.2.1.3 Follow up questionnaire

The follow up questionnaire consisted of 15 questions, in five sections, using some questions from the previously ethically approved evaluation form and interview schedule. Section 1 contained 3 demographic tick box questions. Section 2 asked about attendance, using tick box. Section 3 focused on application of knowledge using tick box and free text responses. Questions from the evaluation form were used to see if the intended outcomes that were stated to be completed after the learning event had been completed, with new outcomes added of competing an MUR/NMS consultation. Questions from the follow up interview were adapted to understand the application of learning into practice and to understand resource requirements after learning events. Section 4 focused on relevance and topics using free text responses, and section 5 was a tick box asking about communication preferences about events. Using Raosoft sample size calculator,[278] based on the sample size of 500 individual email addresses captured, for the follow up questionnaire, 218 responses would be required to achieve a 95% confidence interval to eliminate sample error. For the follow up questionnaire, once ethically approved, the questionnaire was piloted using 10 SL LPF committee members. Minor tweaks were made to the layout of the questions, but not to the content, so their responses were included in the sample, as they had all attended previous sessions.

3.2.2 Data collection

Evaluation forms specific to the date and venue were prepared by the researcher and sent to an independent LPF committee member attending the event. Following each of the 37 events (n=9 for dementia friends, n=9 for hypertension, n=10 for NOACs and n=9 for inhalation technique), the evaluation form was given to attendees by the LPF committee member, who was not involved in data analysis. Participants were informed by the LPF committee member about the purpose of the evaluation and that participation was voluntary. Forms were completed at the end of the event. Implied consent was given by participants by completing the evaluation form. After the event, completed evaluation forms were returned to the lead researcher by the LPF committee member for analysis.

Those who accepted an invitation for follow up interview were emailed to arrange a suitable time for the interview. A participant information sheet was emailed to those who arranged virtual interviews and were given in person where face-to-face interviews occurred. The lead researcher travelled to places convenient for the participants where possible or conducted interviews over the phone. Interviews lasted between 15 to 20 minutes. Written consent was gained where possible. Interviews were audio recorded with written or verbal consent being given, and transcribed verbatim, before being deleted.

The follow up questionnaire was added to SurveyMonkey®. The survey link was added to the RPS SL website and sent in a SL training newsletter. The places were chosen as they were used to advertise PESL events. This attracted only 4 responses. Personal emails were not sent, as the researcher had not obtained consent for the email addresses to be used in that way. In order to gain responses, it was decided to give out the questionnaire as hard copies in person at future PESL events, so copies were sent to facilitators of events between September and December 2016 along with an explanation letter about the purpose of the survey and a stamped addressed envelope for return of completed surveys. Some events did not return forms, or attendees did not complete them, with comments from the facilitators of events, that the attendees found the form too long, or they did not want to complete it. Those that were returned were entered into SurveyMonkey® by the researcher.

3.2.3 Data analysis

Responses for both surveys were transposed into a Microsoft Excel worksheet for data evaluation. Descriptive statistics were run on all variables and association between predefined independent and dependent variables were tested using Chi square test, where $p \leq 0.05$ is significant. Word clouds were used to display word analysis and the most common words, using wordle.net. Content analysis was also used for free text responses in the follow up questionnaire.

It must be noted that the follow up questionnaire responses were not paired, as no personal data was collected, so overall responses to questions were compared.

Postcode analysis was completed using batchgeo. The distance from the event postcode was captured from the software. The postcode of the event venue was correlated to how far the trainee had travelled from work or home to the event, using a range of less than 2 miles, 2.01 to 4 miles, 4.01 to 6 miles, 6.01 to 8 miles, 8.01 to 10 miles and over 10 miles.

Interviews of PESL attenders were completed over a two-month period, in May and June 2015. For the analysis of interviews, thematic analysis was completed using an inductive thematic framework approach[158] using five phases of familiarisation of the data: generating initial codes, searching for themes, reviewing the themes and defining and naming the themes. The interviews were transcribed, and primary codes were generated. These codes were later compared, altered and modified during the consolidated analysis based on the full picture of the data as ideas developed until no new themes had occurred plus a stopping criterion of three, to ensure that saturation of themes is achieved.[279] Results are shown as themes with corresponding subthemes. Quotes from interviews are used to illustrate the findings under each theme.

3.2.4 Ethics approval

The evaluation form, questionnaire schedule and follow up interview schedule, along with the protocol used received ethical approval from Kingston University Ethics committee. (1415/018)

A copy of the evaluation form can be found in appendix 2. A copy of the interview, including consent form, can be found in appendix 3. A copy of the follow up questionnaire can be found in appendix 4.

3.3 Results:

3.3.1 Evaluation forms

A total of 641 participants attended PESL events over the evaluation period. Of those who had registered for events, there was a non-attendance rate of approximately 10% noted from attendance registers. Nearly all the participants (93.6%, n=600) returned their evaluation form, although not all were fully completed. However, because more than 50% of the survey was completed, they were all included in the analysis. Therefore, numbers of responses are shown for each question. From the 600 received forms, 286 participants had attended a workshop with 126 attending a dementia workshop and 160 attending a respiratory workshop. For lectures there were 314 participants with 154 attending the hypertension lecture and 160 attending the lecture on NOACs.

3.3.1.1 Age of attendees

Overall, the split of ages attending was roughly equal with the highest overall group being less than 25 (25.2%) and the least being between the ages of 36-45 (15.3%). However, by format there was a statistically significant correlation between age and format of learning attended ($p<0.001$) with those over 55 preferring lectures and those under 25 preferring workshops. Breakdown of attendance by age can be seen in table 3.2. Looking at workshops, dementia, and the opportunity to become a dementia friend appealed more to over 55s than those aged less than 25. For inhalation technique 46.5% (n=73) of attendees were under 25.

Age of attendee	Overall % (n=600)	Workshop % (n=286)	Lecture % (n=314)
Less than 25	25.2 (n=151)	31.8 (n=91)	19.1 (n=60)
26-35	16.8 (n=101)	14.3 (n=41)	19.1 (n=60)
36-45	15.3 (n=92)	14.3 (n=38)	17.2 (n=54)
46-55	17.8 (n=107)	14.3 (n=41)	21 (n=66)
Over 55	20 (n=120)	16 (n=46)	23.5 (n=74)
No response	4.8 (n=29)	10.1 (n=29)	0 (n=0)

Table 3.2: Age of attendee versus format attended

3.3.1.2 Gender of attendees

The demographic data showed that 34.5% (n=207) of the participants were males and 57.2% (n=343) were females. However, no statistical association existed between gender and format preference. However, when considering gender and age, there was a statistically significant difference in attendance pattern, with the highest percentage of male attendees being over 55 and highest percentage of female attendees being under 25 ($p<0.05$) (Table 3.3).

Age	Male (n=207)	Female (n=343)
Less than 25	22.7% (n=47)	30% (n=103)
26-35	15.9% (n=33)	19.2% (n=66)
36-45	10.6% (n=22)	19.8% (n=68)
46-55	22.2% (n=46)	15.2% (n=52)
Over 55	27.5% (n=57)	13.7% (n=47)
No response	1.1% (n=2)	2.1% (n=7)

Table 3.3: Gender versus age of attendees

3.3.1.3 Role of attendees

Current and pharmacists in training accounted for over three quarters (76.7%, n=460) of those who attended, but attendance was seen for all roles. Traditional CPPE learning events are only open to registered pharmacists, pre-registration trainees and technicians. Through PESL, students, dispensing assistants and medicines support staff were also able to access CPPE workshops (n=66 attendees). The finding that those under 25 prefer workshops, was reflected by the difference between attendance at events by students and pre-registration trainees, with 7% more pre-registration trainees at workshops than lectures and 6.8% more students at workshops than lectures, as shown in table 3.4. This is not statistically significant at these low numbers. Those that reported themselves as 'other' included LPC officers, and those working in specialist pharmacy roles, for example lecturers or retired pharmacists.

Role	Overall % (n=600)	Workshop % (n=286)	Lecture % (n=314)
Pharmacist	56.7 (n=340)	45.8 (n=131)	66.6 (n=209)
Medicines support staff	1.7 (n=10)	2.8 (n=8)	0.6 (n=2)
Dispensing assistant	5.5 (n=33)	4.2 (n=12)	6.7 (n=21)
Technician	4.3 (n=26)	3.5 (n=10)	5 (n=16)
Pre-registration trainee	7.5 (n=45)	11.1 (n=32)	4.1 (n=13)
Pharmacy student	12.5 (n=75)	16.1 (n=46)	9.2 (n=29)
Other	6.0 (n=36)	6.6 (n=19)	5.4 (n=17)
No response	5.8 (n=35)	9.9 (n=28)	2.2 (n=7)

Table 3.4: Role of attendees versus learning attended

3.3.1.4 Motivators for attendance

Participants were able to choose multiple responses for their reason for attendance, therefore the percentages listed are based on total attendance for each given option. The most common reasons stated for attendance, as seen in table 3.5, were topics being relevant to role (59%, n=354), interesting topic (56.3%, n=338) and a CPD opportunity (51%, n=306). Of the 354 who ticked the topic was relevant to role, 105 (29.7%) also ticked the topic would be relevant for future roles. Of the 164 (27.3%) who chose the option 'topic was relevant to future role,' 69 were pharmacists and 46 were students, 20 were pre-registration trainees and the remainder were counter staff. There were, however, variances between topic and knowledge with lectures being seen as more interesting, and a better opportunity to update knowledge over workshops by 8.5% and 5.3% respectfully. However, this is not statistically significant ($p>0.05$). Lectures were also seen as being 12% more of a CPD opportunity than workshops.

Motivator	Overall % (n=600)	Workshop % (n=286)	Lecture % (n=314)
Topic relevant to role	59 (n=354)	55.9 (n=160)	61.8 (n=194)
Interesting topic	56.3 (n=338)	51.7 (n=148)	60.2 (n=189)
CPD opportunity	51 (n=306)	44.7 (n=128)	56.7 (n=178)
Topic relevant to future role	27.3 (n=164)	32.2 (n=92)	22.9 (n=72)
Social interaction with pharmacy colleagues	14.8 (n=89)	15.4 (n=44)	14.3 (n=45)
Opportunity to learn as a pharmacy team	24.2 (n=145)	25.2 (n=72)	23.2 (n=73)
Update knowledge on a condition	32.5 (n=195)	29.7 (n=85)	35 (n=110)
Other (please specify)	0.17 (n=1)	0.35 (n=1)	0 (n=0)

Table 3.5: Motivators for attendance

3.3.1.5 Overall rating of the session

When participants were asked to rate the benefits of the session using the rating scale from 1 being not at all and 4 being very/a lot, 54.8% (n=329) of participants agreed fully that the event increased their understanding of the topics, with 60% (n=360) agreeing fully that the learning was relevant to their role. Follow up questionnaires were used to explore in more detail what 'relevance' means to attendees to understand the responses to this question. Results can be seen in 3.3.2.3. Although the participants agree that the learning was relevant only 41.5% (n=249) agreed fully that it would change their practice. Full results can be seen in table 3.6.

Question	Rating	% response overall (n=600)	% response workshop (n=286)	% response lecture (n=314)
How much did the session increase your understanding of the topic?	1	0.8 (n=5)	0.7 (n=2)	0.6 (n=3)
	2	4.2 (n=25)	4.9 (n=14)	3.5 (n=11)
	3	33.8 (n=203)	31.4 (n=90)	36 (n=113)
	4	54.8 (n=329)	52 (n=149)	57.3 (n=180)
	no response	6.5 (n=38)	10.8 (n=31)	2.5 (n=7)
How thought provoking was the session?	1	0.8 (n=5)	0.3 (n=1)	1.3 (n=4)
	2	4.2 (n=25)	5.2 (n=15)	3.2 (n=10)
	3	34.6 (n=208)	25.5 (n=73)	43 (n=135)
	4	53.2 (n=320)	57.3 (n=164)	49.6 (n=156)
	no response	7.2 (n=42)	11.5 (n=33)	2.9 (n=9)
How relevant was the session to your role?	1	1 (n=6)	1 (n=3)	1 (n=3)
	2	6 (n=36)	3.5 (n=10)	8.3 (n=26)
	3	25.6 (n=154)	23.4 (n=67)	27.7 (n=87)
	4	60 (n=360)	60.4 (n=173)	59.5 (n=187)
	no response	7.3 (n=44)	11.5 (n=33)	3.8 (n=11)
How likely is the session to change your practice?	1	1.2 (n=7)	0.3 (n=1)	1.9 (n=6)
	2	8.5 (n=51)	5.6 (n=16)	11.1 (n=35)
	3	40.2 (n=241)	36.3 (n=104)	43.6 (n=137)
	4	41.5 (n=249)	44.7 (n=128)	38.5 (n=121)
	no response	8.7 (n=52)	13.1 (n=37)	4.8 (n=15)

Table 3.6: Overall rating of session

3.3.1.6. What will be done as a result of the session

Participants were able to choose multiple responses for intended application of knowledge. All responders ticked at least one option on the evaluation form, therefore the percentages listed in table 3.7 are based on total responses for each format. Overall, 57.8% (n=347) stated they would complete a CPD cycle after the event. This varied for workshop and lectures with 16% more participants stating they would complete a cycle after attendance at a lecture versus a workshop which was statistically significant (p=0.00005). Proactively dealing with patients was the second highest activity stated (54.7% overall, n=328), with 5% more participants from the workshop stating this than attendees at the lecture ($p<0.05$). The difference between lecture and workshop for all other activities was similar, with all being within 1.5%, apart from delegating responsibility, where attendees from the workshops stated they would be delegating responsibility 4.5% more compared to those attending a lecture. Almost half of participants overall (47.8%, n=287/600) stated they would improve current services with only 13.5% overall (n=81/600) saying they would look to develop

new services. For both improvement and development of services responses were marginally higher after lecture attendance (48.4% vs 47.2% and 13.7% vs 13.3%).

Option	Overall % (n=600)	Workshop % (n=286)	Lecture % (n=314)
Delegation of team roles	9.2 (n=55)	11.5 (n=33)	7 (n=22)
Improvement of services	47.8 (n=287)	47.2 (n=135)	48.4 (n=152)
Complete CPD entry	57.8 (n=347)	49.3 (n=141)	65.6 (n=206)
Development of new services	13.5 (n=81)	13.3 (n=38)	13.7 (n=43)
Proactively deal with patients/carers with this condition	54.7 (n=328)	57.3 (n=164)	52.2 (n=164)
Improved working relations with other health/social care providers	23.1 (n=139)	23.1 (n=66)	23.2 (n=73)
Supporting team members learning needs	25.8 (n=155)	25.9 (n=74)	25.8 (n=81)
Other	0.8 (n=5)	1.4 (n=4)	1 (n=3/314)

Table 3.7: What will be done as a result of the session?

There were seven comments left for 'other' actions that would be completed; four were received from workshops (three from dementia and one from respiratory), and three were received from lecture (one from NOAC and two from hypertension). Comments received were:

Dementia – become dementia friendly and champion

Dementia – I will look to provide signposting folder to pharmacies in Croydon

Dementia – better understanding of friends and family situations

Respiratory – not sure yet….create events for GP surgery

NOAC – more aware in clinical setting

Hypertension – increase understanding and gain knowledge

Hypertension – future MUR when qualified (pre-registration trainee)

Although 306 (51%) had stated they had attended the session as a CPD opportunity (table 3.5), 347 attendees (57.8%) stated that they would complete a CPD cycle after the event. Of the 347, 238 indicated their role as pharmacists, nine as dispensing assistants, 20 as technicians, 27 as pre-registration trainees and 36 as students. Table 3.8 outlines the number of CPD cycles intended to be completed by role. Those who are required by regulation to complete a cycle were the majority with 70% pharmacists and 77% technicians saying they would complete a CPD cycle after the event. Nearly half of students (48%) stated they would complete a cycle, rising to 60% in pre-

registration trainees. Although not a regulatory requirement, 27% of dispensing assistants who attended stated they would complete a CPD cycle.

Role	Number of attendees	Number who stated intention to complete CPD cycle	% who stated intention to complete CPD cycle
Pharmacist	340	238	70%
Pharmacy technician	26	20	77%
Pre-registration trainee	45	27	60%
Pharmacy student	75	36	48%
Dispensing assistant	33	9	27%

Table 3.8: CPD completion by role

3.3.1.7 Speaker

Of those who responded, almost all (98.3%, n=526/534) ranked the speaker as overall good (scale mark 3) or very good (scale mark 4) in all aspects of ability to stimulate discussion, ability to engage and support learning, time management, ability to relate learning to practice and overall rating. The mode response was 4, followed by 3. There was no statistical significant difference between providers of lectures given by an expert speaker and workshops delivered by rehearsed material in table 3.9, although scores of 4 were higher in all aspects for workshop, except when rating ability to relate the learning to practice.

		Overall % (n=600)	Workshop (n=284)	Lecture (n=314)
Ability to stimulate discussion	1	0.7 (n=4)	0 (n=0)	1.3(n=4)
	2	2.5 (n=15)	2.7 (n=8)	2.2 (n=7)
	3	28.6 (n=172)	22 (n=63)	34.7 (n=109)
	4	56.1 (n=337)	58.4 (n=167)	54.1 (n=170)
	no response	12.1 (n=72)	16.9 (n=48)	7.7 (n=24)
Ability to engage and support learning	1	0.5 (n=3)	0 (n=0)	0.9 (n=3)
	2	2.5(n=15)	1.4 (n=4)	3.5 (n=9)
	3	26 (n=156)	19.5 (n=56)	31.8 (n=100)
	4	58.8 (n=353)	62.2 (n=178)	55.7 (n=175)
	no response	12.2 (n=73)	16.9 (n=48)	8.1 (n=25)
Time management	1	0.6 (n=4)	0 (n=0)	1.3 (n=4)
	2	2.5 (n=15)	2.4 (n=7)	2.5 (n=8)
	3	25.3 (n=152)	18.2 (n=52)	31.8 (n=100)
	4	59.6 (n=358)	62.6 (n=179)	57 (n=179)
	no response	11.8 (n=71)	16.8 (n=48)	7.3 (n=23)
Ability to relate to practice	1	0.3 (n=2)	0 (n=0)	0.6 (n=2)
	2	2.6 (n=16)	2.8 (n=8)	2.5 (n=8)
	3	25.5 (n=153)	21.3 (n=61)	29.3 (n=92)
	4	58.3(n=350)	58 (n=166)	59.6 (n=187)
	no response	12.6 (n=76)	17.1(n=51)	8 (n=25)
Overall rating for speaker	1	0.5 (n=3)	0 (n=0)	1 (n=3)
	2	0.9(n=5)	0.7 (n=2)	1 (n=3)
	3	21.8 (n=131)	16.1 (n=46)	27 (n=85)
	4	65.8 (n=395)	67.1 (n=192)	64.6 (n=203)
	no response	11 (n=66)	16.1 (n=46)	6.4 (n=20)

Table 3.9: Feedback on the speaker

3.3.1.8 Further feedback from the evaluation forms

Free textboxes were included on the evaluation forms to allow participants to comment on the session. They were asked to comment on the most and least positive aspects of the event, as well as give any specific comments on the speaker and finally, they were asked to share what they would do as a result of the learning. These responses can all be found in appendix 5.

3.3.1.8a The most positive aspect of the session

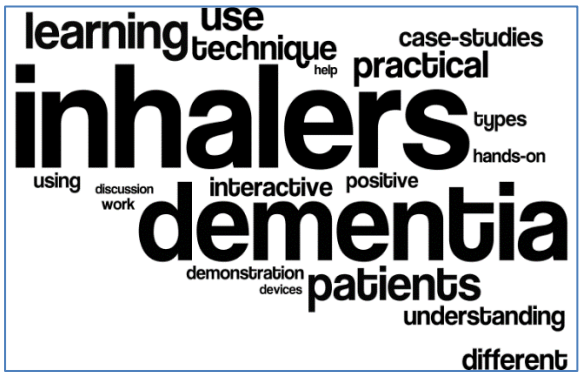
From the quantitative feedback received (table 3.5), the topic was the key driver for attendance with 59% of attendees stating they attended due to the topic being relevant to the role and 56.3% saying they came due to an interesting topic. Furthermore, when looking at the quantitative question, ‘how much did the session increase your

understanding of the topic?' 57.3% of respondents responded with the top rating (scale 4) for lecture versus 52% for workshop (table 3.6). These are echoed in the free text responses with the topic being portrayed strongly as the most positive aspect for both workshop and lectures.

Gaining information and the use of case-studies were highlighted for both workshop and lecture, which will all help towards CPD. For workshops (figure 3.4), the feedback for dementia strongly portrays the topic and practical/technical skills acquired. 'Dementia' was mentioned 38 times (45%) in 85 comments given and 'inhaler(s)' was mentioned 53 times (51%) in 103 received comments. The dementia workshop feedback is more patient focused, whereas for the respiratory sessions, focusing on inhaler technique, the feedback was more about practical application. Full breakdown by subject can be seen in appendix 5. For lectures (figure 3.5), the words favour knowledge of the condition, gaining information and evidence about the subject. 'Hypertension' was listed 8 times (8%) out of 95 comments and 'NOAC(s)' was mentioned 23 times (21%) out of 107 comments. Evidence, in terms of current practice guidelines, and the use of case studies were also highlighted in free text responses.

None of the words listed on the word cloud for workshop talk about the speaker (figure 3.4), whereas speaker and expert both appear on that of the lecture (figure 3.5). From the quantitative ratings of the speaker (table 3.9) both scores were similar, so this indicates that activities and practical experience are key to workshops but an expert highlighting guidelines and case studies is key to a clinical update lecture.

Workshop:



Lecture:

Figures 3.4 and 3.5: The top 20 words for most positive aspect of the sessions

3.3.1.8b Least positive aspects of the events

The least positive aspects of the events, across both workshops (56 comments) and lectures (60 comments) were length of session, amount of content leading to no time for questions or to complete tasks, lack of resources, difficulty in finding venue, refreshments provided, level of knowledge required, travel, time of event, the room size and temperature and low attendance by colleagues.

For both workshop and lecture *'time of meeting'* and being *'after work'* were listed as least positive aspects. *'Needed more time'* and *'not enough time'* also featured across both, highlighting time is an issue, for when the session occurs, but also within the session. For dementia, a quote stating *'big subject, little time'* echoes this. Other specifics for dementia were '*no books*' and for lectures *'food didn't turn up'* was featured for one particular session along with themes of *'no handouts', 'too much evidence,'* and *'presentation of the graphical evidence was quite complex*.'

3.3.1.8c Any comments on the speaker

This echoes the most positive aspect of the event; highlighting workshops are run by engaging facilitators (figure 3.6) who can facilitate activity in a good environment, whereas the lecture highlights excellent knowledge and information (figure 3.7). The word 'excellent' featured 6 (13%) times in the workshop comments (out of 46 in total), and 14 (25%) in the lecture comments (out of 56). The word 'engaging' featured 8 (17%) times in workshop and 4 (7%) in lecture, which echoes the quantitative feedback (table 3.9) where the top score (scale 4) for engagement scored 62.2% for workshop and 55.7% for lecture. 'Good' featured 8 times in both (17% workshop v 14% lecture), and 'knowledge' was featured 5 times (9%) in lecture feedback but zero in workshop comments.

The comments highlighted workshop tutors as '*very engaging', 'brilliant teache*r' and *'excellent trainer, very engaging and good delivery*.' The expert speaker was described as '*always excellent*' showing previous experience of attending a talk along with '*x is always very well versed*.' One comment described a positive as '*very knowledgeable and used experience from practice*' which echoes back to the word clouds for the most positive aspect where 'expert' and 'speaker' were highlighted. However, one comment received backs up the least positive aspects' comments regarding clear presentations

needed saying, of the lecture '*sometimes too technical for support staff and hard to understand. Would be beneficial if the PowerPoint could be received by the audience in advance*.'

Workshop:

Lecture:

Figures 3.6 and 3.7: Comments received on the speaker (top 15 in each case)

3.3.1.8d Application of knowledge

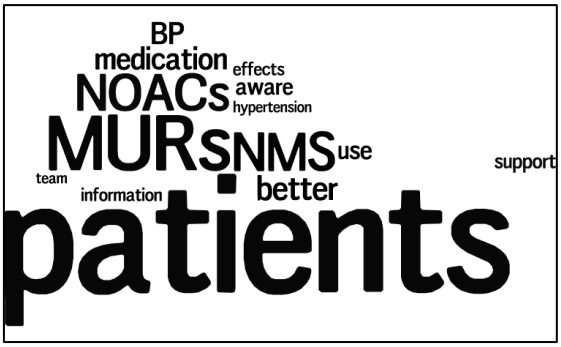
The biggest themes are impact on patients and service provision. Patients are mentioned 54 times out of 111 comments (49%) in overall workshops comments and 60 times out of 135 times (44%) for lectures overall. The words from the workshops (figure 3.8) suggest a more hands on approach to application, for example '*coaching on inhaler technique,' 'check inhaler technique'* and *'be more proactive with other patients*.' This last quote reflects the answers from the evaluation from regarding application of knowledge where 57.3% of respondents said that after a workshop they would proactively deal with patients/carers, compared to 52.2% for lectures. For the dementia workshop being patient focused featured in outcomes, with the word 'understanding' mentioned 9 times (16%) in 58 comments, for example '*give our dementia patients' better care and understanding*.' This link to patient outcomes echoes the findings from the most positive aspect of the session in 3.3.18a. However, there was no mention of new services resulting from the dementia training, or from the respiratory training, although from respiratory there was intention to support patients to use their inhalers more effectively. The lectures tend to favour service-based outcomes (figure 3.9) giving more application into day to day practice, as reflected in the data in table 3.7, where lectures saw slightly higher scores than workshops for improvement of services and development of new services after the session. Indeed 'NMS' was not mentioned in outcomes for workshops whereas it was mentioned 25

times (19%) in the outcomes from the lectures. 'MURs' were mentioned 8 times (7%) in workshop and 34 times (25%) in lecture comments. However, the comments not only focused on completion of these services but doing this in a patient focused way, for example *'confidence in conducting NMS and MURs*' was acquired, with an *'improved MUR service to patients'* being the outcome. The outcomes for patients would also be improved through '*better, more informative MURs and NMS*' with improved *'interaction during MURs and NMS*'. From the hypertension session, '*starting a blood pressure (BP) clinic'* and '*better BP monitoring*' were also mentioned.

The patient focused and practical improvement themes seen in application of knowledge follow through from the comments that were also seen in the previous most positive aspect of the session responses (figures 3.6 and 3.7).

Workshop:

Lecture:



Figures 3.8 and 3.9: Top 15 words for Intended application of knowledge

3.3.2 Location analysis

From the 600 received evaluation forms, 470 had either first half of work and/or home postcode recorded, with 384 home postcodes and 327 work postcodes captured. As only the first half of the postcode was captured, in total 71 different work postcodes and 102 different home postcodes were captured.

Nearly a quarter (24.4%) (n=94/384) of attendees attended an event less than 2 miles from home, whereas 46.2% (n=151/327) of attendees attended an event less than 2 miles from work, showing participants are willing to travel further to an event from home. The evaluation forms did not capture where they had come from for each specific event. Results of all distances travelled can be seen in figure 3.10. The

difference between home and work, and between less than 2 miles and over 2 miles was significant (p<0.0001) indicating that venues closer to work are preferential. There was not specific topic or location that attracted people to travel a longer distance.

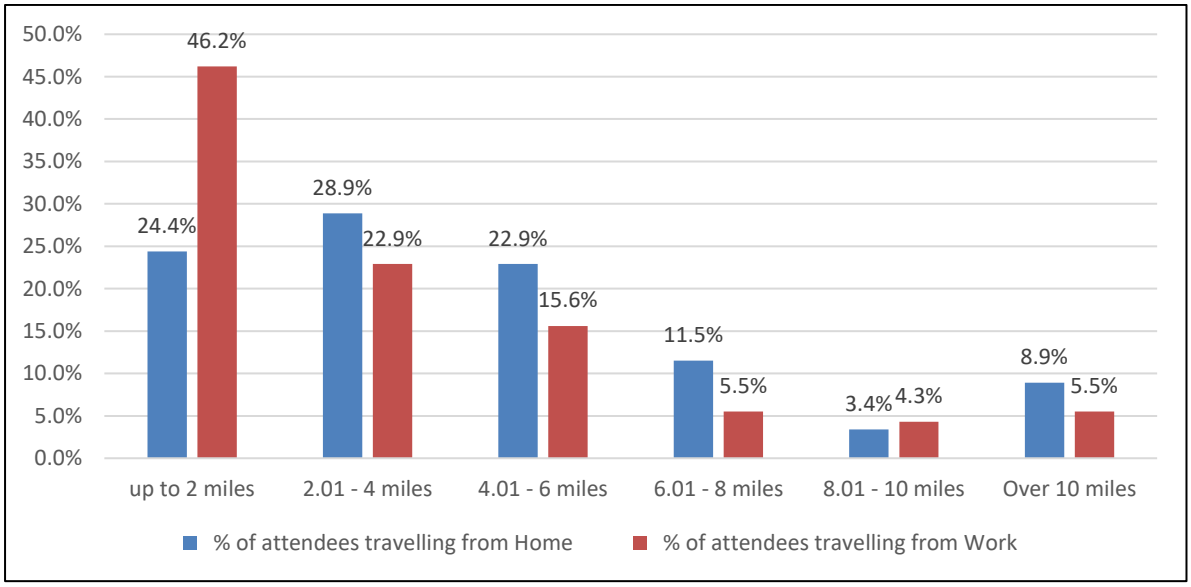


Figure 3.10: Percentage of attendees with distance travelled to event locations

3.3.3 Results from follow up survey

Only 122 responses were received (24.4% of 500). Of the 122 responses, 18 had not previously attended a PESL event, so although they could not answer PESL specific questions including actions taken and case studies from application of learning, they did complete other parts of the questionnaire (in results from 3.3.2.1c onwards). Therefore, this gives a sample of 104 who attended a previous topic (20.8% of 500). Those who had not attended previously (n=18) consisted of 10 females and eight males, with one being a student, two dispensers and two counter assistants, three pre-registration trainees and 10 pharmacists. We excluded those from the analysis of PESL specific questions. The demographic data from all the 122 responders, is shown in table 3.10.

Gender		Years since qualification	
Male	39 (32.0%)	NA - still studying	16 (13.1%)
Female	70 (57.4%)	NA - pre-registration trainee	7 (5.7%)
No response	13 (10.7%)	NA - in a support role	14 (11.5%)
Sector of practice		1-4 years	10 (8.2%)
Academia	7 (5.7%)	5-10 years	11 (9.0%)
Community	79 (64.8%)	11-20 years	17 (13.9%)
Hospital	3 (2.5%)	21-30 years	21 (17.2%)
Industry	1 (0.8%)	31-40 years	15 (12.3%)
Primary Care	6 (4.9%)	41+ plus	1 (0.8%)
No response	26 (21.3%)	No response	10 (8.2%)
Role			
Academia	5 (4.1%)	pharmacist manager	12 (9.8%)
accuracy checker	1 (0.8%)	pharmacy assistant	3 (2.5%)
commissioner (pharmacist)	1 (0.8%)	pharmacy technician	2 (1.6%)
counter assistant	2 (1.6%)	pre-registration trainee	7 (5.7%)
Dispenser	6 (4.9%)	student	16 (13.1%)
GP practice pharmacist	2 (1.6%)	superintendent pharmacist	3 (2.5%)
Pharmacist	53 (43.4%)	No response	9 (7.4%)

Table 3.10: Demographic data of responders (n=122)

Out of a maximum of 13 events, over a quarter (26.9%, n=28/104) had attended one event, which was the mode answer, with three (2.9%) having attended all possible topics. The three were two males, and one female, including an academic and a CCG pharmacist. The third did not give their demographics. Full breakdown of results can be seen in table 3.11.

Number of topics attended (n=13)	Number of responders (n=104)	%
1	28	26.9
2	14	13.5
3	5	4.8
4	9	8.7
5	15	14.4
6	14	13.5
7	8	7.7
8	3	2.9
9	2	1.9
10	3	2.9
11	0	0.0
12	0	0.0
13	3	2.9

Table 3.11: Number of topics attended by survey respondents

When looking at representation of the follow up responders, in relation to the number of attenders at the sessions that were run, when looking at the first four topics, the responses received at follow up only represented 14.3% of attendees at hypertension, up to 34.4% of attendees at inhaler technique. The follow up cohort represented 73.1% of attendees at the EPS and SCR event. The full results can be seen in table 3.12.

Topic	Overall attendance at topic	Responses received to follow up survey (n=433)
Dementia	126	38 (30.2%)
Hypertension	154	22 (14.3%)
NOAC	160	26 (16.3%)
Inhaler technique	160	55 (34.4%)
Diabetes	84	31 (36.9%)
Alcohol	58	24 (41.4%)
Anti-platelets	77	25 (32.5%)
Consultation skills	80	23 (28.8%)
Minor ailments	96	25 (26.0%)
Substance misuse	96	35 (36.5%)
EPS and SCR	78	57 (73.1%)
Eye Health	58	42 (72.4%)
Safeguarding	71	30 (42.3%)

Table 3.12: % attendance by topic from follow up responders

3.3.3.1 Application of actions post learning event

3.3.3.1a Intended actions versus completed actions

As seen in table 3.12, the follow up survey resulted in 104 individuals who had attended a total of 433 events. As indicated in table 3.7, at the end of events participants stated their intended actions as a result of learning attained. The most commonly stated intention from an event was completion of a CPD cycle at 57.8%. From the 433 events attended by the 104 individuals at follow up, completion of a CPD cycle was also seen to be the most completed stated action, both from the 4 evaluated events, and the subsequent events (table 3.13).

A minority of responses were received stating that no action had been completed as a result of a session. NOAC and inhaler technique were the only sessions that had 0% saying they had not completed an action.

At the events over half (54.7%) had stated they intended to be more proactive in dealing with patients and carers as a result of the session. This was also seen at follow

up as a positive activity when participants were asked to reflect on how they had applied learning. Improvement of services and supporting team members are also seen as positive actions that were taken as a result of the session (table 3.13), comparing to 47.8% and 25.8% originally stating them as intended actions, from table 3.7.

The examples given in ‘other’ are stated in the next section, 3.3.3.1b.

When comparing reported actions completed from the first four events only, compared to all sessions average as per results presented in table 3.13, more actions were completed for all options from the first four session than overall, except for development of new services and improved working relationships with other health/social care providers. The most completed action seen, as mentioned above, was the completion of a CPD cycle with 47.5% (n=67) of responses expressing this based on the first four sessions compared to 45.3% (n=196) overall. The second most completed action was proactively dealing with patients/carers with the condition with 36.7% (n=159) responses (46.1% (n=65) from the first four sessions). The third most completed action was improvement of services with 37.6% (n=163) responses (41.1% (n=58) from the first four sessions).

On average, 29.8% (n=129) of responses indicated the completion of an MUR/NMS consultation as a result of attendance at an event, with more being completed as a result of the first 4 events (41.8% (n=59)). There was variation seen between sessions with some sessions seen as providing more opportunity for some actions than others. Delegation of team roles was completed by 22.8% of EPS and SCR responders, compared to 2.9% from substance misuse. Improvement of services was completed by 59.1% of the attendees following the hypertension session compared to 11.4% of attendees at the substance misuse one. Substance misuse resulted in the lowest level of follow up action for six of the actions, and thus was highest for ‘not applied any learning from this event.’ Hypertension was seen as having the highest application for two actions; improvement of services as already seen and completion of a CPD cycle.

Answer Options	Dementia Friends (n=38)	Hypertension (n=22)	NOAC (n=26)	Inhaler Technique (n=55)	Diabetes (n=31)	Alcohol (n=24)	Anti-platelets (n=25)	Consultation Skills (n=23)	Minor Ailments (n=25)	Substance Misuse (n=35)	EPS and SCR (n=57)	Eye Health (n=42)	Safeguarding (n=30)	Average (n=433)
1	13.2% (n=5)	22.7% (n=5)	11.5% (n=3)	14.5% (n=8)	19.4% (n=6)	12.5% (n=3)	12% (n=3)	4.3% (n=1)	20% (n=5)	2.9% (n=1)	22.8% (n=13)	9.5% (n=4)	20% (n=6)	14.5% (n=63)
2	31.6% (n=12)	59.1% (n=13)	38.5% (n=10)	41.8% (n=23)	38.7% (n=12)	33.3% (n=8)	36% (n=9)	30.4% (n=7)	44% (n=11)	11.4% (n=4)	45.6% (n=26)	26.2% (n=11)	43.3% (n=13)	37.6% (n=163)
3	47.4 % (n=18)	59.1% (n=13)	46.2% (n=12)	43.6% (n=24)	58.1% (n=18)	33.3% (n=8)	36% (n=9)	47.8% (n=11)	40% (n=10)	34.3% (n=12)	45.6% (n=26)	45.2% (n=19)	53.3% (n=16)	45.3% (n=196)
4	7.9% (n=3)	18.2% (n=4)	3.8% (n=1)	3.6% (n=2)	12.9% (n=4)	4.2% (n=1)	4% (n=1)	13% (n=3)	16% (n=4)	5.7% (n=2)	21.1% (n=12)	0% (n=0)	16.7% (n=5)	9.7% (n=42)
5	47.4% (n=18)	45.5% (n=10)	34.6% (n=9)	50.9% (n=28)	45.2% (n=14)	29.2% (n=7)	32% (n=8)	30.4% (n=7)	32% (n=8)	20% (n=7)	36.8% (n=21)	31% (n=13)	30% (n=9)	36.7% (n=159)
6	36.8% (n=14)	27.3% (n=6)	7.7% (n=2)	21.8% (n=12)	29% (n=9)	12.5% (n=3)	28% (n=7)	30.4% (n=7)	32% (n=8)	8.6% (n=3)	35.1% (n=20)	11.9% (n=5)	30% (n=9)	24.2% (n=105)
7	23.7% (n=9)	31.8% (n=7)	26.9% (n=7)	36.4% (n=20)	41.9% (n=13)	20.8% (n=5)	32% (n=8)	30.4% (n=7)	36% (n=9)	8.6% (n=3)	24.6% (n=14)	11.9% (n=5)	30% (n=9)	26.8% (n=116)
8	5.3% (n=2)	4.5% (n=1)	11.5% (n=3)	5.5% (n=3)	3.2% (n=1)	12.5% (n=3)	8% (n=2)	13% (n=3)	12% (n=3)	17.1% (n=6)	10.5% (n=6)	11.9% (n=5)	3.3% (n=1)	9.0% (n=39)
9	26.3% (n=10)	40.9% (n=9)	46.2% (n=12)	50.9% (n=28)	35.5% (n=11)	20.8% (n=5)	72% (n=18)	26.1% (n=6)	12% (n=3)	5.7% (n=2)	21.1% (n=12)	16.7% (n=7)	20% (n=6)	29.8% (n=129)
10	5.3% (n=2)	4.5% (n=1)	0% (n=0)	0% (n=0)	6.5% (n=2)	12.5% (n=3)	4% (n=1)	4.3% (n=1)	4% (n=1)	22.9% (n=8)	3.5% (n=2)	7.1% (n=3)	3.3% (n=1)	5.8% (n=25)

Table 3.13: Stated completed actions

Key: 1 – Delegation of team roles. 2 – Improvement of services. 3- Complete CPD entry. 4- Development of new services. 5 – Proactively deal with patients/carers with this condition. 6 – Improved working relationships with other health/social care providers. 7 – Supporting team members learning needs. 8 – Other. 9 – Completed an MUR/NMS consultation. 10 – Not applied any learning from this event.

3.3.3.1b Case studies of application of learning from the event

Other actions and case studies were given as examples to outline actions completed as a result of attending the sessions. These are listed in figure 3.11.

Full examples of application of learning after an event can be seen in appendix 6 and case studies can be found in appendix 7.

Figure 3.11: Application of learning after attendance at PESL events

3.3.3.1c Tools to support application of learning

Multiple options could be chosen for this question regarding useful tools for application of learning after an event. There were 103 responses to this question, out of a possible 122. It is interesting that 2 (1.9%) answered that they did not require any tool after an event. These were both pre-registration trainees, with one being a male working in hospital and one female working in community. A copy of the event presentation was the most requested tool with almost three quarters (70.9%, n=73) saying this would be useful. Case studies and follow up emails were also requested by over half of responders (52.4%, n=54) followed by online assessment then flashcards by 43.7% and 38.8% of responders respectively. Online 'chat' area was the least required. The most common timescale for receiving tools would be a week after an event, with over half of those who responded choosing this for all tools, except for an online 'chat' area. Full breakdown can be seen in tables 3.14 and 3.15.

Tool	**Response (n=103)**
None	2 (1.9%)
Copy of the presentation	73 (70.9%)
Case studies	57 (55.3%)
Follow up email with a reminder of key points	54 (52.4%)
On line assessment	45 (43.7%)
Flash cards	40 (38.8%)
On line 'chat' area where you can share ideas and ask questions	17 (16.5%)
Other (please specify) • Audio with key points • More info about topic • A summary would be useful	3 (2.9%)

Table 3.14: Useful sources respondents would like to receive after an event

Tool	1 week	1 month	2 months	3 months	6 months	1 year	Annual newsletter
Copy of the presentation (n=57)	48 (84.2%)	5 (8.8%)	1 (1.8%)	0 (0%)	0 (0%)	0 (0%)	3 (5.3%)
Case studies (n=51)	31 (60.8%)	14 (27.5%)	1 (2.0%)	2 (3.9%)	0 (0%)	0 (0%)	3 (5.9%)
Flash cards (n=31)	23 (74.2%)	6 (19.4%)	1 (3.2%)	0 (0%)	0 (0%)	0 (0%)	1 (3.2%)
Follow up email (n=57)	34 (59.6%)	14 (24.6%)	0 (0%)	5 (8.8%)	0 (0%)	0 (0%)	4 (7.0%)
On line assessment (n=42)	22 (52.4%)	14 (33.3%)	1 (2.4%)	1 (2.4%)	2 (4.8%)	1 (2.4%)	1 (2.4%)
On line 'chat' area (n=21)	9 (42.9%)	4 (19.0%)	2 (9.5%)	2 (9.5%)	1 (4.8%)	1 (4.8%)	2 (9.5%)

Table 3.15: When respondents would like to receive resources after an event

3.3.3.2 Barriers to application of learning

There were 82 responses to this question. Multiple options could be chosen for this question. The biggest barrier was found to be time, with 59.8% (n=49) selecting this option. Interestingly 18.3% (n=15) also specified that the learning was not relevant to current role. Of these, three were students, one was a commissioner, three worked in academia, three were practising community pharmacists, two were locums and three did not specify their role. Many of the 16 responses, which included five from individuals stating 'learning not relevant to current role', who specified 'other' also pointed towards relevance of learning to practice. Full breakdown can be seen in table 3.16.

Barrier	Response (n=82)
Time pressures	59.8% (n=49)
Learning not relevant to current role	18.3% (n=15)
No tool to support the application of the learning	9.8% (n=8)
No patients with that condition	7.3% (n=6)
Not supported by pharmacy team	6.1% (n=5)
Other (please specify) • Maybe confidence to apply new learning after a quick event • Locum work means you rarely see same patients more than once for follow up review • Difficult to contact GP • Patients not wanting to discuss things with me • Not in a patient facing role x 3 • Depends what I am teaching. Try to incorporate when I can • Student so not yet in practice x 6 • Not sure who will commission services. How will we be paid? • Use to best of my ability	20.7% (n=16)

Table 3.16: Barriers to application of learning

3.3.3.3 Explaining 'relevant'

Previous understanding of attendance drivers showed participants attendance when a topic was 'relevant.' To investigate this further a question was asked to share what makes a topic 'relevant.' There were 52 responses to this question. Full results can be seen in appendix 8. The main factors for making a topic relevant were seen to be supporting practice, improving patient care, supporting knowledge gaps, keeping up to date and something that is common to pharmacy or will be used regularly.

3.3.3.4 Preferred face-to-face learning format

When asked about their preferred face-to-face learning format of PESL, over half of attendees (55%, n=61) specified they preferred workshops with the remaining responders almost equal between lecture and having no preference. Breakdown of responses can be seen in table 3.17.

Face-to-face learning method	Response (n=111)
Lecture	21.6% (n=24)
Workshop	55.0% (n=61)
No preference	23.4% (n=26)

Table 3.17: Preferred face-to-face learning format

3.3.3.5 Communication preference to hear about future events and receive reminders after signing up for an event

There were 115 and 114 responses to the preferred communication and reminder questions respectively from the 122 received questionnaires. The most preferred communication method was email with 97.4% (n=112) wanting to hear about future events by this method. Once signed up for an event, 93% (n=106) would like to be reminded by email. Although text messages acquired only 23.5% (n=27) responses for initially hearing about events, 36.8% (n=42) wanted to receive a text reminder about an event after having signed up for it. Social media as a method of communication for future events was requested by less than a fifth with only 15.7% (n=18) and 13.0% (n=15) asking for Facebook or tweet respectively. Around a third of those would use these methods for reminders (5.3%, n=6 for twitter reminders, 3.5%, n=4 for Facebook reminders). Monthly communication about future events is preferred over weekly, except using Facebook where half (9/18) said Facebook posts were wanted weekly and half said monthly. Full results can be seen in tables 3.18 and 3.19.

Communication method (n=115)	Weekly	Monthly
Email (n=112, 97.4%)	32.1% (n=36)	67.9% (n=76)
Newsletter (n=28, 24.3%)	14.3% (n=4)	85.7% (n=24)
Text (n=27, 23.5%)	44.4% (n=12)	55.6% (n=15)
Facebook posting (n=18, 15.7%)	50% (n=9)	50% (n=9)
Tweet (n=15, 13.0%)	40% (n=6)	60% (n=9)

Table 3.18: Communication preference to hear about future events

Method	Response (n=114)
Email	93.0% (n=106)
Text	36.8% (n=42)
Tweet	5.3% (n=6)
Facebook posting	3.5% (n=4)

Table 3.19: Communication preference to be reminded about upcoming events

3.3.3.6 Future topics

There were 49 suggestions for future topics, with 33 of these were mentioned only once. All suggestions can be seen in figure 3.12. These are mainly clinical topics. Cancer was the most common suggestion for future topic with eight people stating this topic, closely followed by seven requesting diabetes. Skin conditions and mental health were all asked for on four occasions, with antibiotics and first aid being asked for by three individuals. There were an additional three who also said any topic would be suitable.

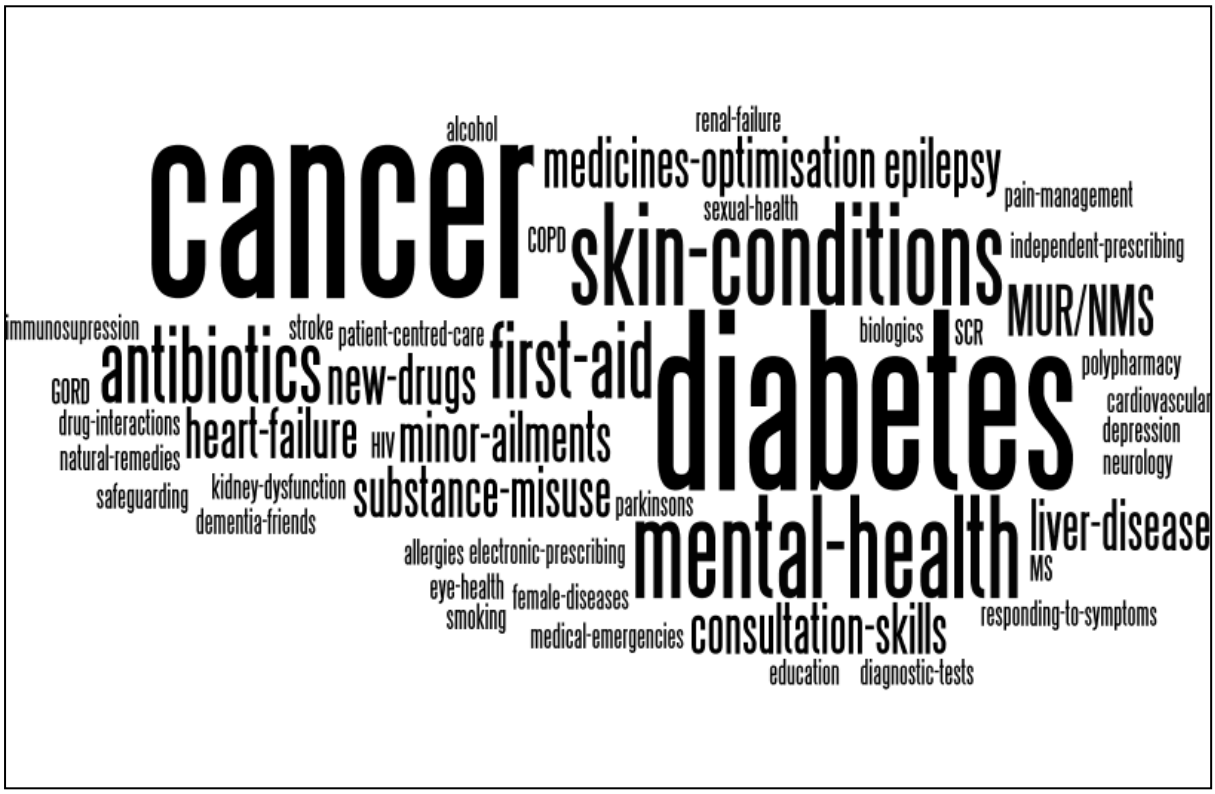


Figure 3.12: Requested future topics

3.3.4 Results from follow up interviews

In total, 154 unique email addresses were collected from evaluation forms during the research period. All of these were approached to participate in the interview regarding their experience. In total 12 people (7.8%) responded to the request to be interviewed. Two interviews were completed over the phone, the remaining were completed face-to-face. These took on average 20 minutes. Initially 10 interviews were completed to ensure saturation, as no new themes were found after interview seven. However, to allow all those interested to participate an additional interview was completed to gain a total of 11, as after initial interest, the 12th individual did not respond. Each interview was transcribed. Full transcriptions can be found in appendix 9.

A total of four males (36%) and seven females (64%) were interviewed from a variety of sectors echoing the 34.5% male and 57.2% listed attendance at sessions. The age of those who were interviewed also reflected attendance data with interviews being carried out with those in all age categories. Roles of those interviewed also reflected a wide sample of pharmacy roles, although there were no technicians or dispensing assistants that responded to the call to be interviewed as shown in table 3.20.

Job role	Sex	Age range
NHS Hospital pharmacist	Female	36-45
Community pharmacist working in an independent pharmacy	Female	46-55
Community pharmacist working in an independent pharmacy	Male	Less than 25
Private Hospital pharmacist	Female	26-35
Community pharmacist owner and CPPE tutor	Female	36-45
Community pharmacist working for a multiple	Male	26-35
Pharmacy Student	Female	Less than 25
Pharmacist working in a GP surgery	Female	Over 55
Academic	Female	36-45
CCG pharmacist	Male	26-35
Community pharmacist owner	Male	Over 55

Table 3.20: Role, gender and age of those who were interviewed

3.3.4.1 Themes identified

All comments from the interviews fit into three broad themes: personal reasons affecting attendance, success factors for a session and application of learning, which all support comments already seen. These could also be themed as factors having an effect or impact before, during and after the event, as shown in figure 3.13.

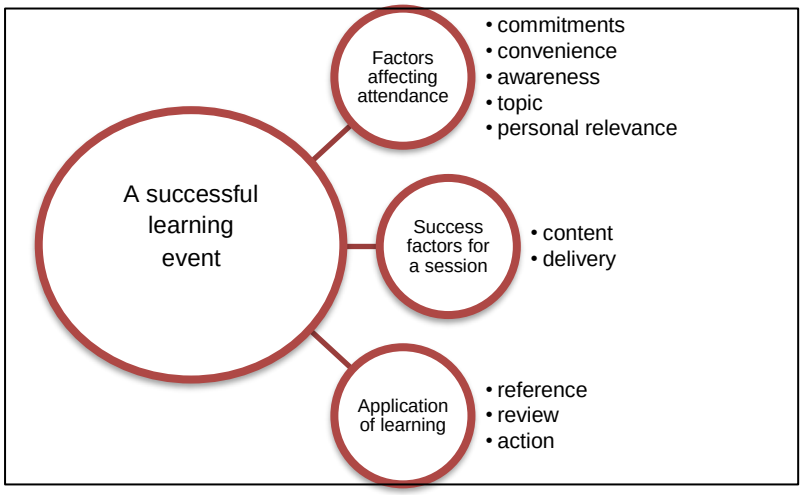


Figure 3.13: Themes identified that ensure a successful learning event

3.3.4.1a Personal reasons affecting attendance – before the event

As attendance at PESL events is voluntary and completed in participants own time, individuals will have personal drivers which motivate them to attend. Five sub themes emerged under this theme: commitments, convenience, awareness, topic and perceived benefits. These need to be considered to build and maintain attendance.

Attendance is impacted by ***commitments***. These include personal, family and work commitments. Some of these cannot always be predicted.

'*I know I signed up for antiplatelets but then something came up.'* **Interview 1**

'*Unfortunately when they work from 9-9 it is very difficult for them to get out.'* **Interview 8**

'Another barrier is personal commitments. Our jobs are getting more stressful, so for many pharmacists…you are in your pharmacy 8-7, you need a personal life and you need to be able to go home and relax.' **Interview 11**

Childcare and caring for parents is also important, as well as maintaining the work life balance.

'Lots of people have family commitments, children, elderly members of the family they may look after.' **Interview 6**

Convenience is also important, in terms of timing and location. These comments are reflected in the comments in the survey on least positive aspect of the session whereby time of session and venue were found to be key. Easily accessible venues at a convenient location for the individual, either close to home or work dependent on preference aid attendance. Linking to commitments, people want to be able to access learning events easily, and getting home easily afterwards needs to be considered.

'*I live five minutes away so it is good and very close.'* **Interview 3**

Easy parking or access to public transport will increase attendance.

'*Wherever I can get on the tube, as I don't drive.'* **Interview 4**

Awareness: If pharmacists and their teams are unaware of events this will mean they do not attend. Although the events were publicised through multiple routes, this relies on a cascade process, or on people reading emails and communication.

'*To be honest a very small number of people turn up. I am wondering, is it they don't actually realise it is happening? I am happy with the way they run, just disappointed that more people don't realise they are happening.'* **Interview 2**

Many aspects of publicity can be tackled to ensure awareness, but a balance must be struck to ensure people do not begin to ignore the messages if they are seeing the message on multiple occasions.

'With a lot of the ones I have attended I only heard about them a week or so in advance. If they could do it more in advance that would be good.' **Interview 3**

Access to the message also depends on whether participants are active on social media with one interviewee stating those not on social media could be at a disadvantage.

'If they are not on social media then they are missing that aspect (of marketing) too.' **Interview 9**

The ***topic*** and title of sessions need to be clear, with clear aims and objectives for the session published in advance, so participants can make an informed decision about attendance.

'I remember the format in which the objectives were set out and what objectives I was particularly interested in learning.' **Interview 6**

There may be an assumption on the content of topics which may put participants off.

'*antiplatelets I thought would be similar to NOACs so I didn't attend that one.'* **Interview 2**

However, it is evident that an interest in the topic increases engagement, especially where this can be used in practice.

'I think all of the topics have been good in the sense that they all helped us to support the key services.' **Interview 5**

'*It was topics that were for education and training purposes.'* **Interview 6**

'My primary reason for attending would have been for making sure I was aware of current evidence and practice.' **Interview 1**

'…just an interest in the topic I think. It came up and seems like something I really wanted to go to, something I could learn from. It wasn't necessarily something that was a CPD need' **Interview 9**

Local relevance of topics is important, with potential outcomes.

'B*ecause it was linked to a campaign as part of the LPC.'* **Interview 3**

The speaker on the topic can also has an impact on attendance, with previous experience of a named speaker playing a part, as well as the speaker being an expert

in their field, as already highlighted in the evaluation forms. The quotes given by interviewees reflected the sessions they had attended from the whole PESL series.

'(the main motivator for attendance was) Mainly the speaker, because I have heard her at other things before and I just felt I really enjoyed listening to her.' **Interview 4**

'For all of those courses the talks were being run by (the expert speaker), who I have a lot of respect for, and I knew that by going I would learn a lot as she is the guru of cardiology and medicines, so that was my main reason for attending.' **Interview 5**

Perceived Benefits: CPD was a key driver for attendance and was mentioned in all interviews. Some of this CPD may have just been for personal interest, but for others it did fulfil the regulatory requirement. Most spoke of completing cycles as an outcome for attendance.

'CPD really, keeping up with what you are meant to be doing.' **Interview 2**

'*I got called up last year and I was actually surprised that I had done quite a lot, so I am trying to be conscientious and keep up.'* **Interview 2**

'*I know I did a CPD entry on it, I definitely did complete a CPD cycle'* **Interview 3**

'I did roughly speaking I believe about 7 CPD cycles as a result of these PESL.' **Interview 6**

Away from CPD, networking with other pharmacists and pharmacy team members was a key factor for attendance. Being able to speak to others in the same field, and across sectors appears to drive attendance. Mixing across the sectors of pharmacy gives an opportunity to share and learn together.

'*Sometimes you work in isolation, it gives you opportunity to talk to someone else in a different field and just network, and compare what is going on.'* **Interview 8**

'*What was good was there was a mixture of hospital and community as well as primary care based pharmacists'.* **Interview 1**

'I do recommend them regularly to my colleagues, peers and others and I do it because I personally like them as they are a good opportunity to meet people from different walks of life, different jobs, different areas, and you meet people and you always learn something.' **Interview 10**

'I remember that we got chances to network as well, so when you are eating we got a chance to speak to other students who were there and pharmacists as well. If you

wanted to you could speak to the guest lecturer as well, so a good opportunity to learn from each other.' **Interview 7**

'It was brilliant because it was with all the … hospital pharmacists, because we did little break out groups and I was in a team of 3 hospital pharmacists, and you don't often get a chance like that to get interaction between secondary and primary care.' **Interview 11**

'I do recommend them regularly to my colleagues, peers and others and I do it because I personally like them as they are a good opportunity to meet people from different walks of life, different jobs, different areas, and you meet people and you always learn something.' **Interview 10**

Working with other members of the pharmacy team and giving them the opportunity to participate in team learning was also highlighted as perceived benefit of attendance. Pharmacy staff may need to be supported to attend, if they are not used to attending, however, once they do come, they realise they enjoy it.

'I feel that it is a necessity for our pharmacy staff to be partaking in these events, not only for the networking opportunity, but for the education opportunity.' **Interview 6**

'Actually I brought some of my staff with me from the practice, and they enjoyed it.' **Interview 8**

3.3.4.1b Success factors for session – during the event

The success of a session was identified to be influenced by two criteria; content and delivery.

Content: Pharmacists want to have up to date knowledge in evidence based-practice, so change in guidelines is an important topic for a successful session. Clinical guidelines were also cited in the quantitative responses as being positive aspects of the session.

'*Making sure I was aware of current evidence and practice for using those types of medication', keeping up to date with the latest things' and 'to look at any new updates on the subject areas concerned'* **Interview 3**

'Evidence for the NOACs, when we would use them in practice, the different indications.' **Interview 1**

Delivery: based on the specific sessions that the interviewees had attended, the speaker delivering this content is also important for success, thus triangulating with

the findings from the quantitative feedback received. There is a need to be engaged by the learning which is occurring. Thus the speaker or presenter of the session must be able to engage the audience. This will motivate attendance and also contribute to the success of the event.

'(The speaker) is the expert', I liked (the expert speaker)'s presentation. She is an excellent speaker, and she knows her subject inside out and it is a subject I deal with a lot' **Interview 8**

'*(The expert speaker) is obviously a very excellent speaker who is knowledgeable on her expert areas and very passionate about what she does.'* **Interview 10**

'*I remember her engaging speaking'.* **Interview 1**

Delivering learning in a format that is suitable to participants learning style will aid participation and engagement in the session. A mixture of learning formats should be provided, to allow for learning preferences e.g. lecture, workshop or group discussion. Discussions during the event are seen to be important to share information and also ask questions. Group work was also deemed important as group learning is good for active learners. Group size, however, does need to be controlled for comfort.

'*I prefer the more lecture based as that is stuff I wouldn't hear otherwise'* **Interview 3**

'(The speaker) was very happy for people to interject and ask questions as we went along.' **Interview 1**

'I think there was a little bit of a discussion towards the end which was also quite nice, with some questions from others of what they have come across and what they wanted to know.' **Interview 4**

'…as *I said I do learn better in a group.'* **Interview 8**

'The workshop style was most interactive which I thoroughly enjoyed because we participated in our groups, and were able to contribute our thoughts and learn from each other.' **Interview 6**

'*It was open and interactive, and I am one of those people who learns better by seeing, as opposed to reading lots of books. I am a practical, hands on person. So they suit me very well.'* **Interview 8**

'They were small groups, which made it more comfortable.' **Interview 8**

3.3.4.1c Application of learning – after the event

Two subthemes were identified to help put the learning into practice after the event. These are reference and action.

With regards to ***reference***, to help cement learning from events and increase the application of knowledge into practice, a variety of tools can be considered. Participants like to be able to refer back to something after the event, through notes, handouts, presentation slides or post event work activities.

'*I remember taking notes and the handouts that come out of it'* **Interview 6**

'I love to look back at the slides and go over them to see if there is anything I missed. I can save them and go back to them if I want to in the future.' **Interview 7**

Organisers of events need to ensure that if slides are promised after an event, that this does in fact occur. This will help the participants use the knowledge gained.

'*We were sent the slides, and anything we asked for was sent too, especially the inhaler slides were very useful. In fact, I used them, especially with the GPs.'* **Interview 8**

Action post the event: In order to cement the learning a discussion after the event with patients or colleagues is useful. A good topic will encourage the cascade of learning, along with feeling confident about speaking on that topic area. Application of learning may also be through teaching others.

'*It is also good to have an overview of what is going on so I can discuss these with my colleagues'* **Interview 10**

'having a better understanding of the drugs, especially the newer drugs that are around, getting my head around those, so I can better listen to the students and correct them, or to direct them on the right path.' **Interview 9**

Although, application of learning cannot be guaranteed, linking to local services or national initiatives also supports discussion with others.

'*I know with the dementia training that was linked into the dementia friend's website so we got the pack on that and cascaded it to staff as well.'* **Interview 3**

Action will take place after the event if the learning is relevant to the individual and their working environment. Multiple examples of application of learning were given, including identifying specific medications during reviews, and giving more appropriate information on their usage, both to patients and other health care professionals.

From previous word clouds on intended application of knowledge after the event (figures 3.8 and 3.9), we have already seen MURs and NMS being a big focus for application of knowledge. This was reflected in comments given with interviewees stating they were more confident in conducting these services now.

'I *think going to that session has made me feel more confident about being able to do that.'* **Interview 1**

'As a result, we are now taking the opportunity to do new medicines services more confidently.' **Interview 6**

'Well in terms of the NOACs, certainly, it has helped my MUR situation, as I am now more armed and I can advise patients accordingly, so it was useful.' **Interview 11**

From conducting the interviews, it appears that at least one life has been saved from the information received at the event. The interviewee explains that '*for the hypertension one, she talked about how to take blood pressure measurements and what to do if you get error readings, and one of the reasons you may get error readings with blood pressure monitoring is if people have got abnormal rhythms of the heart, so literally the next day after the event a patient came in for a blood pressure check, and the readings kept coming back as 'error', so I decided to check his pulse, which is something I wouldn't have done if I hadn't been to the training course the night before, and his pulse was very irregular, so I rang up his GP straight away and expressed my concern about this patient. The GP visited within a few hours and within a few hours he was in hospital. Actually he had a life threatening condition, so it was useful I had done that. He wouldn't have survived probably if we hadn't done that. I probably saved his life*.'

3.4 Discussion

The results highlighted the key ingredients for a successful lifelong learning session. It also provided an insight on the factors influencing the engagement and attendance to such sessions: topic, the ability to gain knowledge and skills, an expert speaker or facilitator and an appropriate venue.

3.4.1 Factors affecting attendance

The CPPE annual report 2013/14 identified the number of attendees at their workshops.[280] The 2014/15 annual report did not capture this data. In 2013/14 CPPE held 596 workshops with 14114 attendees. This works out as an average attendance per workshop of 23.7 people. PESL events attracted 641 attendees over 37 events, therefore giving an average attendance of 17.3 people per event. It must be noted that, contrary to PESL, CPPE charge for non-attendance at events. Although CPPE ran some of the sessions for PESL, they were not dealt with through CPPE system, so these charges did not apply. This may have influenced the attendance rate for PESL, as non-attendance rate for PESL events was on average about 10% per event. However, PESL is a new programme, whereas CPPE has been in existence for over 25 years in 2016,[88] therefore members are aware of them. Unfortunately, we did not survey those who have signed up and then not attended, so we cannot identify what personal, work and family commitments may have contributed to this.

Through the learning from PESL, it is clear that ongoing lifelong learning events need to be publicised widely, with monthly emails being the preference. Teams should be made aware of the opportunities available to them to participate, and attendance should be supported through an educational insfrastructure.[128] From the results, there could also be a role for regular attenders of events or ‘champions’ of learning events, to advocate and share information about upcoming events. The follow-up study showed three individuals who had attended all previous 13 PESL events, so regular attenders could be approached to be champions. Also, organising ‘bring a friend’ to events could encourage new comers, or those who do not feel comfortable on their own, as doing activities with a friend is shown to have benefits for both parties.[281] Multiple routes are used for publicity of events, both SL wide and locally through the LPCs. Publicity needs to be managed so pharmacy teams have access to the session details in advance, with the results showing monthly email communication is

preferable. The Office of National Statistics showed that in 2019, 86% of adults used email, and this was the most common internet based activity.[282] There is a risk that by receiving multiple messages about one event, communication will be ignored. Although email was preferred for communication, individuals may not be members of organisations such as RPS, and communication through LPCs relies on cascade within the pharmacy team. Therefore, CPD opportunities may be lost for those without membership of organisations, so wider opportunities for publicity, such as social media, which continues to grow in popularity, should be investigated, as the results show half of follow up participants are open to social media communication.

From our results, it appears that we had a high turnout of under 25s and over 55s. One fifth, 20% of attendees at PESL sessions were pharmacy students or pre-registration trainees which would account for the majority of under 25, although there were also some newly qualified pharmacists present. For inhalation technique, 46.5% (n=73) of attendees were under 25. This may be due to the opportunity for hands on experience with various devices, which would support learning. The over 55s may have felt they knew this information if they had been practicing for a long time. Students and pre-registration trainees may attend due to enthusiasm in the profession, or due to them seeing these events as support for passing any exams they must sit, or to gain information that may help their confidence. PESL events attracted 20% of attendees over the age of 55, showing we had an appeal for this age group. This could be due to those in that age group having fewer child-care commitments and attending for personal interest and networking. The least attendance for PESL came from those in the age group 36-45. Linking to themes identified, this could be due to caring responsibilities or having young children. The Office for National Statistics in 2013 identified the average age for a mother was 30 years old.[283] However, our results showed higher female attendance than male for the 36-45 age group, which may be due to the profession being more female dominated. The GPhC 2013 registrant survey identified that 39.6% of pharmacists are male and 60.4% female.[7]

Due to these events being face-to-face, attendance may be increased from those with caring responsibilities if virtual learning environments are offered, although consideration for format needs to be considered, with previous research showing that

with online learning older students preferred to watch lectures, whereas younger students preferred more interactive learning strategies.[284]

The attendance at the PESL events shows that the attendance mirrored the national figures, as the events attracted a reflective sample of the pharmacist registrants based on gender. There was no statistically significant association between format and gender, different to previous studies showing that women were more likely to favour lectures,[212] explained by a preference for read write learning.[285] However, another study [286] suggests women favour teamwork. It is interesting that male attendance increased with age. This is in contrast to a previous study that showed older males had a greater interest in distance learning.[212] We did not capture ownership or type of pharmacy in this survey. However, our findings could perhaps be correlated with ownership of pharmacies with the GPhC registrant survey of 2013[7] noting that 44% of pharmacists working in independent pharmacies were over the age of 60, the highest of any setting. This survey also noted the increasing percentage of those working with increasing age in independent community pharmacy. Owning a pharmacy brings a need to maintain knowledge to increase business opportunities. Although we did not capture sector of pharmacists, PESL was targeted at community pharmacists.

Most attendees at the PESL events were those on the GPhC register (56.7%), or pharmacists in training (20%). From the interviews, it was clear that there is a desire for more team involvement, so more work could be done to encourage pharmacists to bring their teams to events. Information does also need to be understandable by support roles, so workshops, with more hands-on activity may be seen to be more suitable.

Personal interest, CPD completion and networking were the main motivators for attendance from our sample population. Working with others also came across strongly. This study further showed that sharing the learning with colleagues supports impact of learning into practice. Donyai *et al.*[199] cited personal desire to learn, requirement to maintain professional registration and learning at a changed pace from the routine as facilitators for attendance at CPD events. Personal interest was also found to be a motivator for CPD completion in a previous study by Hanson.[131] Working

together has been highlighted in previous studies as providing benefits for the individual[287] and better outcomes come from these partnerships.[153] CPD completion was found to be important, but to ensure successful CPD, Gibbs *et al.*[288] in 2011, highlighted that the key to successful CPD is knowing what is to be achieved, which was also shown by Lee *et al.*[139] in 2011. Our results echo this, with clear objectives and aims providing motivators to attend learning as seen in the interviews, and application of learning from events supporting completion of CPD cycles for many of the attendees.

Barriers of attendance and participation in CPD has been explored in detail, with time being cited as the most common barrier similar to previous studies looking at engagement in learning and CPD.[131,199,210] Time of event was found to be one of the least positive aspects of the event and time was also cited as the biggest barrier to applying learning from events at follow up. Evening events were found to present a likely conflict with family time,[219] which was also commented on in interviews during this study. Hanson *et al.*[131] found that there are three main barriers for lifelong learning: job constraints, location, distance and time scheduling issues and family constraints. These were all seen as least positive aspects of the event in this study, along with being factors mentioned during interviews. Donyai *et al.*[199] identified eight barriers to CPD. Time has already been mentioned. The other barriers were costs and resource issues, understanding of CPD, facilitation and support of CPD, motivation and interest in CPD, attitudes towards regulatory CPD, system constraints and technical problems. Resource issues identified in this study as least positive aspects of an event include no handouts and no workbooks available. However, topic and CPD opportunity were seen as facilitators for attendance in this study, suggesting that attitude towards CPD has changed over time. The role of the manager in supporting ongoing learning is cited in many references, showing that if a manager supports their team in learning, this is more likely to have an impact.[139-141,210] This study supported this with the benefit of participation of team members and discussion with others highlighted in interviews, along with almost a third of responders at follow up showing how they have used the learning to support team member learning needs.

No previous studies can be found on travel distance to attend lifelong learning events. However, as mentioned above, location and distance of events has been cited as a

barrier to attendance.[131] This was echoed by the interview results where location was an important factor for attending an event. Participants in this study were more likely to travel to a location closer to work compared to home. This may be due to this being an afterwork activity, therefore people will stay close rather than travelling home to come back again. Timing of events, as discussed above was highlighted as a limiting factor for attendance, so people may be able to attend more from work as it will take less time to travel to the venue. Therefore, event locations close to major employers, for example hospitals and universities can be good venues to support this. Work locations may also be favoured due to local promotion of events. Events are publicised through employers and via the LPCs. The LPCs are more likely to publicise those venues in their locality, which may encourage people to stay close to work, emphasising the factor regarding local relevance and importance of topic. As seen above, where participants may attend a venue close to work, timings of sessions also need to be considered, to ensure participants do not get home too late, but also to allow time for the planned activities, as time was identified as a barrier to attendance, similar to previous studies.[131,199]

3.4.2 Factors affecting success of an event

Planning of events is crucial to ensure a successful and cost-efficient outcome. Cost effectiveness of CPD interventions is not currently evident,[154] although adequate funding is said to be needed when designing an education programme.[132] The cost element was not explored in this study. However, the topic, speaker and format of delivery were widely explored.

The follow up questionnaire identified how pharmacists interpreted topics to be relevant to their learning. Relevancy was related to supporting practice outcomes, including provision of services and patient care. These supported comments from interviews about using learning in practice. In a previous study, Marriott[226] highlighted the importance of pharmacists identifying topics of learning that are relevant to their individualised needs, and that are at a depth they are comfortable with. This also supports findings that were identified in chapter 2 literature view, with regards to relevance.[211,214,217] Only limited previous work has been completed on ensuring relevance of learning in other professions, with medics identifying that more work is

needed to integrate continuing education[149] and work place learning, and that clear standards, procedures and consequences are needed to facilitate assessment of learning to ensure its relevancy.[140] Nurses, on the other hand, identify that concepts are only truly understood when integrated into the professional career.[289]

The core advanced services are central to the provision from pharmacies, so continued learning events on topics driven by MURs and NMS will support patient care, as well as topics ensuring up to date knowledge on national, or locally commissioned services. Topics need to be based on the needs of pharmacists and patients and services, thus allowing for application of learning after the event. However, topics need to be regularly reviewed and current. In 2020, for example, MURs are being phased out of the community pharmacy contract. Conversely, when looking at the most commonly requested future topic of cancer, this has now been included in the community pharmacy contractual framework 2019/20 to 2023/2024.[290]

Topics chosen for events should be a range of locally driven topics, service driven topics and general interest topics, to appeal to all. Topic is a key aspect in choosing to participate in an event.[214] Clinical areas appeal when an expert speaker can share their knowledge and practice. The results showed that an expert speaker is central to the success of an event. The speaker must be able to identify key issues and engage their audience.[291] Two previous studies have shown that workshops may not always be more effective than lectures in improving knowledge.[137,266] When attendance to lectures is compared to workshops in this study, no statistical significance was found. Javadi *et al.* [266] showed knowledge improved after both lecture and workshop, and Lacoursiere *et al.*[137] showed that learning is not necessarily enhanced, even if concordant with preferred learning method. Our quantitative results showed limited difference between lectures and workshops for increasing understanding of the topic. However, from the evaluation form data, lectures appear to be attended more for up to date knowledge and CPD. Furthermore, in the qualitative responses knowledge was mentioned as a positive aspect of lectures. McNamara *et al.*[215] identify that pharmacists wanted knowledge to be up to date, from evidence-based information. From interviews, specific formats were not mentioned but knowledge of evidence-based practice was asked for and service provision was identified as useful for application of knowledge.

Face-to-face interaction at workshops, and ability to work as a group was seen as a preference by the interviewees, with individuals having their own personal preferences for learning. Workshop topics are good when linked to application and outcomes, or more hands on experience and activity, with the qualitative responses for positive aspects of the session for workshops being patient and service focused. Overall, the findings are in parallel with a previous study by Driesen *et al.*[212] that concluded that it is hard to have one model that will satisfy everyone. However, no matter the format, the speaker's ability to identify key issues and expertise will increase knowledge.[137,266,291] Most adults can only focus on a speaker for between 20 and 30 minutes, so including activities may increase engagement.[292]

Previous studies showed that the facilitator, and their ability to adapt to the audience influence outcomes of an event.[291,293] This builds on the IPO evaluation model which identified that training is impacted by the person who delivers the material.[119] However, although subject experts are valued, when evaluating an interprofessional learning event in 2016, Micallef *et al.*[294] found that, although the event was enjoyed, very few participants said expert learning would change their practice.

This study looked at face-to-face provision. However, as seen in the literature review, more evidence is being collected to establish new formats of learning and these should be explored in future studies, although face-to-face learning was shown to be preferable to online in previous studies.[135,214] This could be due to a higher level of instructor support.[295] There is a need to review all options to try to maximise involvement and ensure accessibility to all. Whatever system is used, there is a need to ensure adequate piloting and evaluation.[132]

3.4.3 Application of learning after an event

The quality of the sessions appears to be acceptable based on the topic and facilitator. Although in the evaluation form responses, it was seen that the events increased knowledge, this may not have not necessarily resulted in a change in their practice. When looking at intended actions, the completion of a CPD cycle and being more proactive with patients, were the most prevalent. Proactively dealing with patients was seen more for workshops, which echoes the most positive aspects identified in the

evaluation form. At follow up, completing a CPD cycle and proactively dealing with patients were in fact the most completed actions. When linked to a service or specific outcome, there appears to be more application into practice, as responders had completed an MUR or NMS as a result of a session, and also stated they had improved service provision.

Confidence appears to be a big outcome of events, as seen in the case studies, where participants feel more confident to talk about a subject due to their increased knowledge, which will also result in increased outputs. Increase in confidence about topic areas and encouraging discussion and cascading down of the topic to apply learning were also seen in the interview responses.

Over half of participants said they would complete a CPD cycle after the event showing that registrants do accept CPD as a day to day role of a registrant, or future registrant. However, this shows that almost half did not believe this to be necessary. At follow up CPD cycle completion was the most commonly stated completed activity. In a previous study of pharmacy technicians, 70.3% stated they would complete a CPD cycle after a learning intervention,[296] which agreed with the findings of this study that showed 77% of technicians intended to complete CPD after a session. In a 2011 review of the literature regarding British pharmacy professionals' beliefs and participation in CPD, lack of motivation was cited as a reason for not completing CPD.[199] This followed up a previous study stating that pharmacists did not see the relevance of CPD once they were established in their careers.[129] Identifying learning goals is an important step for pharmacists, to help them be able to apply their learning.[297] It is interesting that 27% of dispensing assistants stated they would complete a CPD cycle after the event, showing an engagement with updating their knowledge and skills.

There is limited data about the most effective way of applying learning into practice although there is work looking at what mechanisms are most useful for pharmacists to translate learning into behavioural change.[130] This study added to the literature identifying tools to support the application of learning, including a copy of the presentation, along with case studies. The interview responses backed up the quantitative data recorded by identifying reference sources as a theme. Using case studies helps to translate knowledge into practice, and allows real life application of

learning, in a safe environment. Previous studies have shown that interactive workshops may increase change in professional practice versus lectures, and that didactic sessions alone are unlikely to have an effect on change in professional practice.[136,265] The use of written learning logs is useful to determine how application will be achieved as shown in previous studies.[287,297] Online assessment after a learning event has also been linked to increased application of knowledge,[216,220] so online assessments could be incorporated after attendance at face-to-face events. McConnell *et al.*[298] highlighted perceptions of pharmacy practice activity improved after educational activity.

3.4.4 Limitations of study

Due to the anonymity of attendees, the comparisons drawn between lecture and workshop may not or may have the same attendees so there may be bias in findings related to the preferred learning preference or personal factors for attendance. In addition, this study only evaluated face-to-face events, so the online format was not investigated. Postcode distances may also be affected by multiple attendance, and we did not ask responders whether they had travelled to the event from home or work. We also failed to ask pharmacists who worked in independent community pharmacy whether they were owners. In addition, the sample size achieved for follow up surveys was not sufficient to demonstrate a 95% confidence interval, and for the follow up survey, there was no pairing of data, so only overall scores were compared, which may have caused a bias comparison. Furthermore, the data at follow up, although covering multiple sessions, came from a selected number of individuals. Non attendees were also not interviewed to understand why they hadn't attended. Due to the small number of attendees from the extended pharmacy team it was difficult to compare motivators and barriers, and completed actions, between pharmacists and extended pharmacy team.

3.5 Conclusion

SL is no different to the rest of the country in previous provision of lifelong learning events for pharmacists. Using the PESL model, evaluation of multiple learning events has been possible as to date no evaluation of specific learning events has been published. This evaluation can provide an opportunity to formulate an optimum model for future learning interventions.

There is currently limited research into postgraduate learning preferences of pharmacists and other members of the pharmacy team. From this evaluation, it can be seen that people are receptive to workshops and lecture style learning, with preferences according to age and gender. For face-to-face learning, the gender attendance is representative of the professional breakdown. Barriers to attendance should be reviewed by exploring alternative formats for delivery of learning, especially for those in the middle age category, plus increasing awareness of events.

Sharing best practice in sessions is important to allow group learning from professional experiences. A format also needs to be explored to be able to capture the shared experiences for dissemination after the event, to aid application of the knowledge gained. Currently there is no evidence on the most effective model for this. Topic selection is also central to effective education. Aims of the learning need to be correlated to tangible actions after the event; therefore future work is also needed on how to follow up with participants after events to support them to change their practice.

From this initial evaluation, it is clear that no one size fits all. Different formats of learning should be explored to appeal to all professionals throughout their career. Revenue, however, does need to be considered for future models, to ensure funding can support lifelong learning.

3.6 Recommendations for framework creation

Findings from this chapter suggest that learning events need clear outcomes and have a defined application of knowledge for after the learning event. Tools to support application of knowledge need to be identified to be included in the framework, and supporting pharmacists with examples of how to apply their learning in their practice should be explored.

A comprehensive strategy for picking local or nationally driven topics is crucial, which involves all stakeholders involved in providing lifelong learning in a local area, plus those involved in commissioning of services to ensure the workforce has the

appropriate skills and knowledge. Holding multiple events allows attendance at other local events if personal issues prevent attendance at a closer event.

When publicising events, the following should be covered:

- The topic, including:
    - the driver for the topic
    - the impact of the learning and why it is needed
    - what skills will be obtained
- The speaker and their experience
- How participants will be able to apply their learning after the event

A clear strategy for publicity needs to be identified to capture how the message will be shared, and with whom, to ensure the message gets to the target audience, and can also be cascaded to pharmacy support teams.

Chapter 4: Current reality and preferences for lifelong learning of pharmacists in SL

4.1 Introduction

As seen in previous chapters, lifelong learning, including mandatory CE and CPD requirements, is needed to ensure pharmacists are up to date with current practice and guidelines, and to ensure they are providing optimal patient care. With increasing new roles for pharmacists as outlined in chapter 1, they need to be trained to ensure service provision and competence, wherever they work.[41] This knowledge needs to be updated regularly to keep up with the new and changing roles, with better critical thinking and collaboration.[42] Achievement of lifelong learning, including maintaining regulatory requirements, is led by the individual professional to fulfil their individual needs, dependent on their role and expertise.

4.1.1 Formats of learning

Multiple studies have investigated the most successful format to be used to ensure positive interactions and improved attitudes. These have been introduced in chapter 3. Studies have suggested that learning outcomes need to be defined.[145] They also suggest that learning does not need to take place in the classroom to be successful[147] and can be easily integrated into clinical practice.[148] Furthermore, there is the identification that interprofessional education (IPE) and work place learning do overlap.[149] IPE will be introduced in chapter 5. Learning which is based on clinical work and practical experience will have greater impacts on patient outcomes,[150] although it is seen that assessment is difficult.[145]

As seen in chapter 3, achieving lifelong learning is about participation in a number of different interventions utilising various methods. The GPhC recognises this and acknowledges that achieving CPD is not just about participating in CE, but using a range of formats to achieve the cycle.[46] The GPhC do not specify how registrants should complete their CPD requirements, as long as learning is completed and there is a written reflection of how this has impacted practice. Previously, CE was almost wholly completed face-to-face,[299] whereas, although still prevalent, multiple additional formats are now also available. A study by Artino in 2010[151] has shown that learners who perceive that the topic of a course has content importance would rather attend a

face-to-face learning event. Benefits of attending face-to-face learning include networking for professional development, along with having the ability to question an instructor to support learning outcomes.[236]

4.1.1.1. Face-to-face learning

Face-to-face attendance activity allows student and instructor interaction plus immediate feedback, although this is more time and resource intensive.[295] It also allows the opportunity for peer discussion. A variety of face-to-face methods are available including networking meetings, conferences, workshops, seminars and lectures, thus giving participants choice to ensure information is presented in a way that is tailored to their learning style and learning needs.[234] Conferences bring groups of people together to discuss particular topics or themes, with one or more central speakers and the opportunity to discuss research. Pharmacists have the opportunity to attend multiple annual conferences, some fee paying and some free. These include RPS annual conference, the national pharmacy show, and the clinical pharmacy congress.

CPPE offer face-to-face workshops on multiple topics. Workshops combine information with practical skills and activities, usually in small groups. Having a variety of activities included in the workshop allows a wider range of learning styles to be accommodated.[300] Seminars are smaller group discussions focusing on a particular area or particular problem to be discussed. Communities of practice can also be established to gain knowledge.[138] A study by Javadi *et al*.[266] showed that knowledge was retained more successfully after completing a workshop compared to attendance at a lecture, although no difference was seen in knowledge or attitudes. Glasser, as quoted in Biggs[301] reminds us that individuals learn '80% of what they use and do in real life' so making activities relevant to current practice is essential for practising pharmacists. Encouraging the trainees to teach each other is also essential to learning as teaching each other will increase one's knowledge. Group work is beneficial as a tool to articulate and share ideas as most adults can only focus on a speaker for about 20-30 minutes.[292] A Cochrane review in 2001[265] identified that interactive workshops can result in a greater change in professional practice over didactic sessions alone.

Lectures are traditionally didactic and one way from a subject expert who is delivering new knowledge or skills to be learnt by the end of the lecture, and are traditionally the

preferred format of learning.[135] Women are seen to prefer lectures to workshops, as they dislike active involvement.[212] Research into what ensures an effective lecture shows clarity and visibility of slides and relevance of material is important. A speaker's ability to engage the audience too is also important.[291] Newer technologies are starting to be included in lectures to aid audience participation, including audience response systems which help to maintain focus, as outlined in chapter 2.

Peer review can be formal or informal and provides the opportunity to share and gain feedback from someone in the same profession or role, to understand individual strengths and opportunities. Gibbs[288] in 2011 believed that work based learning could be used more to achieve learning with 33% of pharmacists identifying a peer or professional discussion as a type of learning stimuli in a study by Pyhtila *et al.*[297] in 2014. Peer learning has also seen benefits in motivating individuals and gaining specialist work-related skills.[138]

4.1.1.2 Technology enhanced learning

The use of technology in learning is increasing steadily with Electronic learning (E-learning) packages, participation in online courses, webinars and podcasts increasing in popularity.[302] E-learning has become more common place in recent years, either in addition to, or as a replacement for traditional face-to-face learning. It is seen as useful for mandatory learning that needs to be repeated regularly, thereby saving time and money on face-to-face interventions, and allowing maximum coverage of the population.[221,299] Full e-learning has no face-to-face component and relies entirely on technology for the learning experience.[299,303] This learning can be asynchronous or synchronous.[299] Using e-learning has many benefits, including being able to fit in the learning around schedules, and ability to do it at one's own pace. Salter[231] in 2015 described e-learning as a format that "effectively increases knowledge and is a highly acceptable instructional format." It is seen as a format that is flexible and can be used on multiple devices in multiple locations at a learner's convenience.[236,299,304] This is of benefit for employers who have multiple locations but require all their staff to complete a piece of learning, where access to live learning may be difficult.[131] It is also beneficial for mandatory learning that needs to be repeated regularly, thereby saving time and money on face-to-face interventions and allowing maximum coverage of the population.[221,299] Incorporating web-based multimedia instructional vignettes has been seen to increase learning outcomes, as they provide experiential learning.[305] Female

students are seen to be more satisfied with e-learning than male students, although access to a teacher is also important.[306]

Through the use of e-learning, distance learning has become more popular. Distance learning is learning delivered where the student and tutor are not co-located[307] and relies entirely on technology for the learning experience. It can provide a more flexible approach for pharmacists' development, thus allowing pharmacists to learn at their own pace.[299] Distance learning has no face-to-face component and relies entirely on technology for the learning experience. A previous study found that older males have been seen to hold the greatest interest in distance learning.[212] Online lectures allow flexibility and the ability of repeating the content. However, studies demonstrate that university students still prefer traditional lectures more than online lectures.[295,308] Simonds and Brock[284] in 2014 found that older students tended to prefer videos of the professor lecturing, while younger students tended to prefer more interactive learning strategies.

Webinars are also being used more frequently with benefits including being able to share a message to a wide group of participants in various locations.[295,308] Webinars are meetings that can be presentations, demonstrations or discussions which take place online. These can be live events at scheduled times, or can be recorded for viewing after the event, allowing those who could not attend a chance to watch. Participants require a computer and microphone if they wish to speak or participate, along with speakers in order to hear the audio from the leader of the webinar. Files can also be accessed during the presentation. Benefits include being able to share a message to a wide group of participants in various locations.[295,308]

Asynchronous webinars are preferred[222] with slightly older audiences attending, as when synchronous events occur in the evenings they are likely to be in conflict with family time.[221] The GPhC have made use of multiple webinars when sharing consultations or new initiatives, such as updates to the inspection model, introduction of new professional standards, or the introduction of revalidation.

Usability of created resources needs to be tested prior to release, along with ensuring the learner achieves their personal objectives and learning outcomes from the online learning package.[309] Although initially a cost may be incurred from creating online learning packages, cost savings are seen when compared to face-to-face learning due

to multiple mass use and venue and resource savings.[232,233,310] However, the WHO in 2015[299] concluded that computer based learning or web-based e-learning are no better or worse than traditional learning when it comes to knowledge or skill acquisition.

Where distance learning is combined with traditional classroom learning, this is termed blended learning. Blended learning can provide a more flexible approach for pharmacist development, as it does not fully replace traditional face-to-face learning.[222] A preference for face-to-face in the room learning, over online delivery of lectures has previously been seen.[311] No difference is seen between perceived and actual learning gains between online and blended learning approaches.[236] Furthermore, using a blended approach does not impact outcomes based on gender.[235] Wilbur,[312] in 2016, incorporated self-assessment and peer review into the blended learning process to increase quality assurance.

Other forms of digital technology for learning include podcasts, and social media. Social media and mobile application use are becoming more commonplace especially with younger professionals who have been termed as 'digital natives' due to their understanding and use of technology on a regular basis.[313] Podcasts are digital audio files that can be downloaded from the internet that can then be listened to at a learner's convenience from a portable device or computer. After lectures there is a move towards synchronising recordings along with lecture notes, rather than just uploading the podcast alone. Griffin *et al.*[311] in 2009 identified that synchronising the recording gave increased knowledge over just listening to the podcast alone. Social media is being increasingly used for learning opportunities.[314] Forms of social media include Facebook, twitter, snapchat and Instagram. A study focusing on Twitter[315] showed 36% were comfortable using twitter with professional development being enhanced by following professional sources (67%) and classmates (59%). Blogs are also becoming more common and have been seen to be a good tool for reflective practice.[316]

4.1.1.3 Self-directed learning

As seen in 1.6.2.8, reading journals, books and manuals as a learning format still occurs. Books can be textbooks that provide background information on a topic. Books are only correct at time of publishing, so multiple editions may occur of the same title.

Journals are primary sources of information and provide research on topics, the majority of which are peer-reviewed by experts prior to publication. Journals provide the most up to date thinking on topics. In one study by Pyhtila[297] in 2014, 68% found journals as a useful source for identifying learning goals. Multiple journals are available to pharmacists, often containing articles on clinical and other issues, designed to support a reader's CPD. These include the Pharmaceutical Journal, the Chemist and Druggist magazine, P3, Training matters and pharmacy management. More specialised publications also exist including journal of medicines optimization, cleanroom technology, independent community pharmacist, National Health Executive and Prescriber & Future Prescriber. Manuals provide instructions on carrying out activities. These can be visual or written word, providing step by step approaches to tasks.

Due to the variety of formats on offer and the lack of consistent model, it is hard to identify the format preferred or used by all[136,212] or the cost benefits from the activities[154] or indeed which activities are needed if at all. To ensure participation in various learning formats and CPD opportunities, preferences need to be identified so they can be taken into account in the design of learning programs.[226]

4.1.2 Providers of pharmacist CPD in Great Britain

In GB, to support CPD requirements, lifelong learning for pharmacists is currently provided by a number of different organisations, which were outlined in chapter 1. These have been summarised in table 4.1.

Provider	**Provider abbreviation**
The Centre for Pharmacy Postgraduate Education	CPPE
The General Pharmaceutical Council	GPhC
Local Pharmaceutical Committee	LPC
Local Practice Forum	LPF
The National Pharmaceutical Association	NPA
The Royal Pharmaceutical Society	RPS
The United Kingdom Clinical Pharmacy Association	UKCPA

Table 4.1: Summary of providers

4.1.3 Motivators and barriers for participation in CPD learning activities

As seen previously, multiple studies have been conducted looking into barriers and motivators for participation of pharmacists in lifelong learning activities, including CPD and CE. Facilitators that influence participation in learning include desire to learn, a requirement to stay licensed or registered to practice and enjoying a change from routine.[131] Staying licensed may include being able to offer specific services in a pharmacy setting or completing statutory CPD. Clear outcomes for learning and how it can be applied into practice and benefit the workplace are essential to facilitate interest in learning and this was emphasised in the findings of chapter 3.[127] Having confidence in the format and process of learning will increase participation, as well as having support in the workplace.[228] However, it is noted that hospital pharmacists are more confident in the process of partaking in, and recording CPD, than community pharmacists.

Pharmacists fail to see the relevance of CPD, and decreased engagement is seen once they are further on in their careers.[129] We also saw this with the PESL attendance data. Lack of support and resources for CPD and lack of perceived relevance on practice also has an effect on participation.[199,226,317] To ensure participation in various learning formats and CPD opportunities, barriers and motivators need to be identified so they can be taken into account in the design of programmes.[226] The evaluation of the impact of CPD activities for the professional development of the learners, and application into their daily practice also needs continued scrutiny and increased focus. Understanding the mechanisms for translating learning into behavioural change and practice outcomes is crucial to help pharmacists maintain their professional development.[130,133] This can be achieved through measuring all aspects of implementation from barriers and facilitators through to strategies for implementation and outcome measures.[134] Planning prior to implementation is also key to a successful outcome[132] with activities being designed with application of learning into practice in mind.[235]

4.1.3 Learning theory

To help establish an optimum lifelong learning event framework, an understanding of learning styles and theories, and an evaluation of current models on offer is required. To ensure full learning and achievement of all aspects of Miller's triangle, individuals and their learning styles and preferences need to be considered. Bloom's taxonomy[146]

identified the domains of cognitive, affective and psychomotor, as determinants of learning styles. These are also referred to as feeling, thinking and doing, where the learning and understanding phase need to be understood prior to implementation. These domains may help to underpin the principles behind the movement from 'knows' to 'does' in the educational journey of a pharmacist, as each stage must be completed prior to moving up the scale.

4.1.3.1 Learning style preference models

4.1.3.1a VARK

Another model that looks at communication style preferences, which may impact learning is VARK, developed by Neil Fleming in 1998.[318] This separates learning styles into four main categories: V=visual, A=auditory, R=reading and writing and K= kinaesthetic. Fleming [319] acknowledges that, although it measures preferences, it does not measure strengths or quality of the communication. In 2001,[319] Fleming reported that 41% of the population had single style preferences, 27% had two, 9% had three and 21% of the population showed preference for all four styles.

Virtual learners learn best from charts, pictures, diagrams and different spatial arrangements. Auditory learners learn from explaining ideas to others, discussion and attending lectures. Read/write learners learn from written information such as lists, reports, textbooks and web pages. Kinaesthetic learners prefer hands on approaches to tasks, such as simulation.

Dobson[285] found that there is no difference seen between undergraduates and postgraduates, but women tend to have a read write style, whereas men are more visual learners. Overall, Saleem *et al.*[320] found that visual learning was the most common with 48.9% of learners displaying this preference, followed by 31.5% who were kinaesthetic and 30% who were auditory.

4.1.3.1b Honey and Mumford

Honey and Mumford[321] introduced the learning styles of activist, theorist, pragmatist and reflector. They defined learning styles as "a description of the attitudes and behaviours that determine our preferred way of learning." Their theory is based on Kolb's cycle.

Activist learners are described as those who learn by carrying out practical activities, their learning is optimized by working in groups and by interactive activities such as

role play. Theorist learners prefer to understand the background and theory of a concept often through the use of models and statistics. Pragmatist learners prefer putting theories into real life situations; they tend to achieve this through problem based learning. Finally, reflectors learn best by observing and rationalizing situations.

Honey and Mumford created a learning styles questionnaire, which was proposed to be an alternative to Kolb's learning style inventory.[321,322] Tsingos *et al.*[144] found that students who preferred to process information through reflection were more likely to achieve higher grades. With regards to gender they also found females scoring higher marks than males.

A study was carried out on pharmacy students looking at their Honey and Mumford preference. Male pharmacy students had higher pragmatist scores, with reflectors being the preferred style among all students.[323]

4.1.3.1c Interpersonal/intrapersonal learning

Interpersonal learners learn best through sharing, comparing and relating with others, interviewing and cooperating. Intrapersonal learners learn best through working alone, doing self-paced projects and reflecting.[324] These are based on the multiple intelligences theory which proposed that people who prefer a particular intelligence learn best through methods associated with that intelligence.

Although multiple training events are run for pharmacy professionals and evaluation forms are often completed, there is currently no published research into evaluation of how effective these sessions are and only limited research on pharmacists preferred learning styles.[323,325-328] Evidence has been seen that learning style does not differ by cultural or educational background.[325] It also doesn't appear to affect career choice.[326] Austin[326] in 2004 identified no difference between learning style and gender. However, understanding learning styles may allow opportunities to explore different learning methods to offer development to individuals.[328]

4.1.4 Rationale for study

Although studies have evaluated elements of pharmacists' participation in, and preferences and barriers for participation in learning events in GB, no survey has been carried out with large numbers.[199] This chapter seeks to be the first study to provide the pharmacists perspective on the main lifelong learning providers in GB, through analysis of previous participation in activities. In addition, preferences for participation

in terms of format, length and frequency are explored along with motivations and barriers for participation. With the multitude of providers and formats on offer, preferences should be considered to ensure future investment is used to maximise participation, ensure return on investment and to ensure CPD can be achieved in the best way for learners, and to support providers in the planning of events. This is needed in an increasingly financially and time stretched society. Previous studies relating to motivators and barriers for pharmacists' participation in lifelong learning have been either qualitative or quantitative. This study intends to combine both research approaches aiming to bring a more in-depth understanding to the subject.

4.1.4 Aim and objectives

The aim of this chapter was to establish current participation in and preferences of GB pharmacists in terms of format and provider plus motivators and barriers, for participation in lifelong learning activity and support needed for application of learning.

Objectives:

- To identify current pharmacy further lifelong learning providers
- To identify current models of pharmacy lifelong learning interventions from current providers
- To identify the primary drivers for attendance at lifelong learning events
- To identify the barriers to attendance at lifelong learning events
- To identify current best practice for delivery of lifelong learning events from local, national and international sources

4.2 Methods

4.2.1 Design

This study used structured interviews along with questionnaires. The location under investigation is SL, England, as in chapter 3, with approx. 1800 pharmacists. In 2018, this included 647 community pharmacies with 1195 community pharmacists, along with 10 NHS hospital trusts.[329] At the time of the study, in 2015 the breakdown was thought to be between 1700 and 1800 pharmacists.[170] The breakdown was thought to include the following:

- 550 hospital pharmacists [330]
- 1100 community pharmacists[243]
- 40 academic pharmacists
- 10 industrial pharmacists

- 30 CCG pharmacists
- 30 primary care pharmacists
- 20 LPC workers
- 20 support pharmacists e.g. working for the RPS or other specialist organisation

4.2.1.1 Questionnaire

The questionnaire included questions based on information from GPhC,[106] and previously used local evaluation forms as outlined in the PESL study. No other previous studies could be found that identified the aims of this present study. This questionnaire received face validation, to ensure suitability and clarity, through the SL LPF committee members, which consists of pharmacists from all sectors of the profession (n=8). The survey consisted of 26 Likert scale, tick box multiple choice and open-ended questions, in 7 parts. Part 1: Previous participation; 4 questions with dichotomous and tick box questions, part 2: perceived quality of providers; 1 question using a 5-point Likert type scale, from poor to excellent quality, plus comment boxes, part 3: barriers and drivers for participation; 2 questions with tick boxes plus comment boxes, part 4: preferences for participation; 7 questions using 5-point Likert scale, tick box and ranking questions, part 5: appraisal; 2 dichotomous questions, part 6: demographics; 7 questions identifying gender, role, years of registration, age, sector, professional status and working hours and part 7: learning type style preferences; 3 questions using ranking scales and a dichotomous question. A pilot study aiming for a 5% population (n=90) to ensure content validity was completed via local contacts and the LPF committees in SL. The pilot received 63 responses between February and March 2015. No problems or anomalies with the questionnaire were reported, therefore roll out then occurred starting in September 2015 with the pilot sample included in the data.

4.2.1.2 Interviews

The structured interview consisted of 16 questions with the objective of understanding the previous experience of lifelong learning and providers, preferences for completing learning activity, motivators and barriers, as well as multidisciplinary learning. All questions were face validated by a colleague pharmacist prior to the start of the study. It must be noted that 6 of the questions were used in the previous chapter to capture reaction to PESL events, so only the 10 remaining questions are used in this chapter.

Participants were invited to participate in the interview by giving their contact details when completing the questionnaire. Contact details were given by 74 responders at the end of the survey to participate in the follow up interview. All were contacted by email to ask if they were willing to take part in the interview, either in person or by telephone, according to preference and convenience.

4.2.2 Data collection

4.2.2.1 Questionnaire

The questionnaire was added to an online data collection tool, SurveyMonkey®. Using Raosoft software,[278] (http://www.raosoft.com/samplesize.html) based on a sample size of 1800, 317 responses were required to achieve a 95% confidence interval and to limit sample error. The questionnaire link was circulated through local pharmacy networks in SL; LPCs for dissemination to community pharmacies, plus sent to hospital and CCG Chief pharmacists, who are responsible for planning and commissioning local health services. It was also posted out to 250 pharmacies in SL which were known from previous work.[262] Three final year pharmacy students on the MPharm programme further helped to collect responses from hospital and community pharmacists using paper surveys with collection finishing in March 2016. Completion of the survey was taken as implied consent to take part. Responses were entered onto SurveyMonkey® by the lead researcher from paper surveys received.

4.2.2.2. Interview

Those who accepted an invitation for the follow up interview were emailed to arrange a suitable time for the interview. A participant information sheet was sent by email to those who wished to be interviewed and was given in person where face-to-face interviews occurred. Written confirmation of participation was received via email from all participants prior to carrying out the interview. The researcher travelled to places convenient for the participant where possible or conducted the interviews over the phone. Interviews lasted between 12-32 minutes, were audio recorded with further written or verbal consent of the participants, as appropriate, and were transcribed verbatim, before being deleted. All who responded (n=19) were interviewed between May and October 2015.

4.2.3 Data Analysis

For the questionnaire data, raw data was exported from SurveyMonkey® to Microsoft Excel to be analysed. As the data was non-normally distributed and ordinal in nature,

chi-square tests and Mann Whitney U tests were used to identify any associations between responses. Sub analyses were performed to identify potential variances by gender, sector, age and working hours. Statistical significance was assumed where $p \leq 0.05$. Preferences for learning formats were ranked according to 1st, 2nd and 3rd preferences expressed. These preferences were added to gain an overall preference score. For open ended questions word counts were used, represented in word clouds. Weighted averages were used to give a mean Likert type scale score for Likert scale responses.

Analysis of the interview data was done thematically using an inductive framework approach[158] using five phases, consisting of: familiarisation of the data, generating initial codes (table 4.2), searching for themes, reviewing the themes and defining and naming the themes. The transcripts were read and re-read until all emerging themes had been coded. In addition, all transcripts were managed and coded using NVIVO 10 software. Although no new themes were identified after 14 interviews[279] all responders were interviewed and included in the results. Results are presented in form of themes and corresponding subthemes underneath. Quotes from interviewees are used to illustrate the findings presented under each theme.

code	Subtheme	theme
regular/planned meetings are beneficial		
relevance to role		
local location		
timing of events influences attendance		
length of events influences attendance		
scheduled events give protected learning time		
good advertising and awareness needed		
registering ties you in		
CPD is a driver		
learning is mandatory and needs to be completed		
experience or trust in provider		
current/up to date topic		
interest in topic		
topics should be applicable to all		
local topics increase attendance	Motivators and Enablers	
a clear description of the topic is needed		
although you registered, things might come up		
family commitments stop attendance		
if you finish work too late you can't attend		
work/life balance needed	Barriers	Engagement
case studies are useful		
mixture of methods needed		
specialist speakers are useful		
sharing best practice		
Discussion		
Networking		
Multidisciplinary learning - seeing other people's point of view		
pharmacy is an insular profession		
mixing with other sectors		
human interaction with presenters needed	Ingredients for group learning	
effective facilitation needed		
articles are useful/flexible		
webinars are good refreshers of knowledge		
flexibility in participation in distance learning		
IT is easy to use		
IT can be a barrier if technical issues		
websites/email updates are sources of information		
No interaction	Individual learning	Intervention
Copy of slides useful		
References after an event		
Application opportunities need to be discussed	Tools	Application of learning
assessment of learning after the event	Assessment	

Table 4.2: Coding for thematic analysis

4.2.4 Ethical approval

The questionnaire for this study received ethical approval from the Kingston university ethics committee along with the interview schedule (1415/018).

A copy of the questionnaire can be found in appendix 10. The schedule along with the informed consent form can be found in appendix 3.

4.3 Results

4.3.1 Questionnaire responses

The response rate, including the 63 pilot responses was 338 giving a response rate of 18.8% if 1800 pharmacists in SL is assumed. Although 344 responses had been received, six were excluded from the analysis as they only answered the first question regarding participation in the previous six months with a 'no,' and gave no further responses. Despite the low response rate, the minimum sample size required (317) to gain a 95% confidence interval was achieved. Not all questions were answered by all responders therefore valid percentages are used for each question.

4.3.1.1 Demographics

Looking at demographics of the responders, the mode for demographics included the majority of responders being female (n=204, 60.4%), with 37.9% (n=128) being aged 26-35. The majority of responders worked over 30 hours (n=225, 66.6%), and 72.8% (n=246) were in employed work, with 68 responders (20.1%) working as locums. Community pharmacists accounted for 62.3% of respondents. The full demographics of pharmacist responders can be seen in table 4.3.

Gender		**Sector**	
Male	n=119 (35.2%)	Community Pharmacy	n=200 (62.3%)
Female	n=204 (60.4%)	Hospital pharmacy	n=90 (28%)
No response	n=15 (4.4%)	Primary care	n=28 (8.7%)
Age		Academia/education	n=27 (8.4%)
Less than 25	n= 37 (10.9%)	Industry	n=5 (1.6%)
26-35	n=128 (37.9%)	General Practice	n=5 (1.6%)
36-45	n=68 (20.1%)	Government	n=3 (0.9%)
46-55	n=52 (15.4%)	Registered pharmacist in full time study	n=2 (0.6%)
Over 55	n=32 (9.5%)	Other	n=8 (2.5%)
No response	n=21(6.2%)	**Employment status**	
Working hours/week		Employed	n=246 (72.8%)
Over 30 hours	n=225 (66.6%)	Locum	n=68 (20.1%)
Between 15-30 hours	n=68 (20.1%)	Not currently working	n=7 (2.1%)
Up to 15 hours	n=18 (5.3%)	Retired	n=6 (1.8%)
No hours	n=7 (2.1%)	Student	n=2 (0.6%)
No response	n=20 (5.9%)	No response	n=9 (2.7%)

Table 4.3: Demographics of pharmacist responders (n=338)

4.3.1.2 Previous participation

The majority (n=293, 86.7%) had taken part in some form of learning activity in the past 12 months. Results did not vary by gender. By sector, those working in primary care, defined as working in a commissioning or governance role, (96.4%, n=27/28) and academia (96.3%, n=26/27) were most likely to have participated. Results by demographic can be found in appendix 11. Of the 45 who had not participated in activity during the past year, there was no obvious connection with gender or sector. However, there was a significant correlation with working hours, with increasing non-attendance with reduced working hours (p=0.003).

4.3.1.3 Previous learning event provider

From the 293 responders who had participated in learning in the past 12 months, the employer was the most frequent organiser of lifelong learning provision. Just over half of responders (n=147/293, 50.2%) had participated in an employer led event. A full breakdown of participation by organisation can be seen in table 4.4. The employer was most used by academics (n=17/27, 63%) with community pharmacists using employer the least (n=86/200, 43%), compared to 43/90 hospital pharmacists (47.8%).

When considering that 246 participants stated they were employed, 60% (147/246) had used employer organised learning.

CPPE had been used by less than half (n=139/293, 47.4%), and 34.1% (n=100) stated their lifelong learning was self-driven. CPPE was used twice as much by community pharmacists (n=98/200, 49%) versus their hospital colleagues (n=23/90, 25.6%). The RPS had been used by 29.4% (n=86/293) with 19.1% (n=56) using an LPF. There was no difference seen across genders. There was similar usage across age groups with the exception of those under 25 who used GPhC and RPS more than other age groups. As expected, LPC and NPA were not used at all by hospital pharmacists, while UKCPA was used more by hospital than community pharmacists (8.9%, n=8/90 vs 1%, 2/200). Breakdown by demographic can be seen in appendix 12.

Organiser	**Response (Sample size = 293)**
Employer	50.2% (n=147)
The Centre for Pharmacy Postgraduate Education (CPPE)	47.4% (n=139)
Self-driven	34.1% (n=100)
Royal Pharmaceutical Society (RPS)	29.4% (n=86)
Local Practice Forum (LPF)	19.1% (n=56)
Other	15.0% (n=44)
A Higher Education Institution	12.6% (n=37)
Local Pharmaceutical Committee (LPC)	11.9% (n=35)
General Pharmaceutical Council (GPhC)	11.5% (n=34)
London Pharmacy Education and Training (LPET)	9.5% (n=28)
Pharmacy Management	9.5% (n=28)
Patient Group/organisation	7.4% (n=22)
Other professional body	6.1% (n=18)
National Pharmaceutical Association (NPA)	5.7% (n=17)
Specialist pharmacy network (This may include, but is not restricted to UKMI, BOPA, BPSA, PCPA)	5.7% (n=17)
The United Kingdom Clinical Pharmacy Association (UKCPA)	4.7% (n=14)

Table 4.4: Organisations of lifelong learning activities that have been used in the past 12 months (n=293)

4.3.1.3a Professional membership and use of provider

The three professional groups that had the most membership were the RPS, NPA and UKCPA. The majority, 81.4% (n=227/279) of responders were a member of the RPS, with 33.7% (n=94/279) being a member of the NPA, and 18.6% (n=52/279) were members of the UKCPA. Of those who said they were members, the RPS had been used for learning by 153/227 (67.4%), the NPA had been used for learning by 49/94 (52.1%) and the UKCPA had been used for learning by 30/52 (57.7%). The RPS had

members from all sectors; 69% of the community pharmacist responders (n=138/200) were members of the RPS with 58% (n=52/90) of hospital pharmacists also being members. Of those members, 65.2% (n=90/138) and 73.1% (n=38/94) of community and hospital pharmacists respectively had used the RPS for lifelong learning. As expected, the UKCPA had the majority of responders from hospital pharmacy, although members were also from community, primary care, academia and industry. However, between the two major sectors only 30% (3/10) of community pharmacist members had used them for lifelong learning, versus 70% (21/30) of hospital pharmacists. The NPA, being the trade organisation for community pharmacies, showed a predominance of community pharmacist members with 88.3% (n=83/94). All other groups had less than 20 members from the sample population. Full breakdown is available in table 4.5. All of the providers had been used for lifelong learning by some of their members. There were 17 responders that selected ‘other’ with the organisations listed being the pre-operative association, the UK Ophthalmic Pharmacy Group, British pharmacological Society, HIV Pharmacists Association, Royal Society of Public Health, the Pharmacists Defence Organisation (PDA) and the Older People Pharmacy Network.

Professional Group	Member but NOT used for learning (raw number)	Member and used for learning (raw number)	Total % of sample size who are members (n=279)
Royal Pharmaceutical Society (RPS)	74	153	81.4%(n=227)
National Pharmacy Association (NPA)	45	49	33.7%(n=94)
United Kingdom Clinical Pharmacy Association (UKCPA)	22	30	18.6%(n=52)
Higher Education Academy (HEA)	9	4	4.7%(n=13)
Guild of Healthcare Pharmacists (GHP)	9	5	5.0%(n=14)
Primary Care Pharmacists Association (PCPA)	7	7	5.0%(n=14)
British Oncology Pharmacy Association (BOPA)	4	7	3.9% (n=11)
Primary and Community Care Pharmacy Network (PCCPN)	6	5	3.9%(n=11)
Academy of Pharmaceutical Sciences (APS)	9	1	3.6% (n=10)
International Pharmaceutical Federation (FIP)	6	2	2.9% (n=8)
The College of Mental Health Pharmacy (CMHP)	7	1	2.9%(n=8)
British Pharmaceutical Nutrition Group (BPNG)	4	3	2.5% (n=7)
Commonwealth Pharmaceutical Association (CPA)	4	3	2.5% (n=7)
Institute of Pharmacy Management International (IPM)	4	3	2.5%(n=7)
Joint Pharmaceutical Analysis Group (JPAG)	5	1	2.2%(n=6)
Neonatal and Paediatric Pharmacists Group (NPPG)	4	2	2.2%(n=6)
UK Radiopharmacy Group (UKRG)	3	2	1.8%(n=5)
National Association of Women Pharmacists (NAWP)	3	1	1.4%(n=4)
Pharmaceutical Analytical Sciences Group	3	1	1.4%(n=4)
Palliative Care Pharmacists Network (PCPN)	3	7	1.1%(n=10)
Other (please specify below)	10	7	6.1%(n=17)

Table 4.5: Membership of professional groups

4.3.1.3b Perceived quality of lifelong learning supplied by provider

Where providers had been previously used, responders were asked to rank these 1-5, with 1 being poor quality and 5 being excellent quality. Only providers with over 50 responses are included in table 4.6. These are ranked from highest perceived quality to lowest perceived quality by calculating a weighted mean between 1 to 5. Whilst all providers were rated above average, CPPE is seen to be the best perceived quality provider scoring 4.2 out of 5 with the GPhC being the lowest with 3.4 out of 5. Free text responses were also collected for the various providers which highlighted positives, as well as some negative thoughts. Full responses are available in appendix 13. When talking about employers, the need to complete mandatory training was highlighted with little focus on other development. The comments regarding CPPE showed a perceived community focus, with comments showing that hospital pharmacists do not see the content as clinical. The comments on UKCPA focused on positives being great conferences and expert speakers.

	% rating 1	% rating 2	% rating 3	% rating 4	% rating 5	Weighted mean
CPPE	0.3% (n=1/301)	4.0% (n=12/301)	15.0% (n=45/301)	36.5% (n=110/301)	44.2% (n=133/301)	4.2
HEI	10.2% (n=10/98)	6.1% (n=6/98)	15.3% (n=15/98)	31.6% (n=31/98)	36.7% (n=36/98)	3.9
RPS	2.0% (n=5/253)	7.1% (n=18/253)	23.7% (n=60/253)	41.5% (n=105/253)	25.7% (n=65/253)	3.8
NPA	3.4% (n=4/116)	8.6% (n=10/116)	19.0% (n=22/116)	37.9% (n=44/116)	31.0% (n=36/116)	3.8
UKCPA	9.1% (n=7/77)	9.1% (n=7/77)	7.79% (n=6/77)	37.7% (n=29/77)	36.4% (n=28/77)	3.8
Employer	6.0% (n=16/266)	7.1% (n=19/266)	23.3% (n=62/266)	35.3% (n=94/266)	28.2% (n=75/266)	3.7
LPF	6.7% (n=9/134)	6.0% (n=8/134)	24.6% (n=33/134)	32.8% (n=44/134)	29.9% (n=40/134)	3.7
LPET	7.3% (n=7/96)	7.3% (n=7/96)	15.6% (n=15/96)	43.8% (n=42/96)	26.0% (n=25/96)	3.7
LPC	11. 2% (n=11/98)	5.1% (n=5/98)	32.7% (n=32/98)	28.6% (n=28/98)	22.4% (n=22/98)	3.5
PM	11.6% (n=11/95)	7.4% (n=7/95)	27.4% (n=26/95)	30.5% (n=29/95)	23.2% (n=22/95)	3.5
GPhC	7.8% (n=16/205)	11.7% (n=24/205)	27.8% (n=57/205)	35.6% (n=73/205)	17.1% (n=35/205)	3.4

Table 4.6. Perceived quality of lifelong learning per provider

The GPhC had most variation in responses across different demographic groups. Community pharmacists had stronger affinity for CPPE, employer and NPA. As expected, community pharmacists had a statistically greater (p=0.0450) perceived quality score for LPCs (3.5 out of 5) than hospital colleagues (2.7 out of 5). On the other hand, UKCPA and LPET had statistically greater scores from hospital pharmacists (p=0.00243, p=0.00334), scoring 4.4 out of 5, and 4.1 out of 5 compared to 2.7 out of 5 and 3.3 out of 5, respectively. Academics had the most positive outlook of all demographic groups. CPPE and employers had the most consistent scores across all demographic groups. Full results can be seen in table 4.7. By age group CPPE had high affinity with all age groups. Affinity for the RPS and LPFs increased with age.

Answer Options	Overall	Male	Female	Community	Hospital	Primary care	Academia/ Education	Less than 25	26-35	36-45	46-55	55+
CPPE	4.2	4.3	4.2	4.3	4.0	4.0	4.0	4.1	4.2	4.2	4.3	4.3
HEI	3.9	3.6	3.9	3.7	3.9	4.2	4.1	4.5	3.6	3.8	3.8	3.6
RPS	3.8	3.7	3.9	3.8	3.8	3.8	4.0	3.6	3.6	3.9	4.1	4.2
NPA	3.8	3.8	3.9	3.9	3.3	3.9	4.0	3.4	3.7	4.2	3.6	4.4
UKCPA	3.8	3.4	3.9	2.7	4.4	4.1	4.1	3.5	3.8	4.1	3.8	3.4
Employer	3.7	3.8	3.7	3.9	3.4	3.4	3.7	3.6	3.8	3.9	3.7	3.7
LPF	3.7	3.6	3.8	3.7	3.7	3.7	4.3	3.6	3.5	3.7	3.8	4.2
LPET	3.7	3.5	3.8	3.3	4.1	4.1	4.2	3.7	3.5	4.1	3.6	4.0
LPC	3.5	3.4	3.4	3.5	2.7	3.1	3.3	3.4	3.2	3.5	3.9	3.2
PM	3.5	3.2	3.6	3.4	3.4	3.8	3.8	3.6	3.1	3.8	3.6	3.3
GPhC	3.4	3.4	3.4	3.5	3.2	2.9	3.4	3.8	3.2	3.5	3.5	3.6

Table 4.7: Perceived quality of lifelong learning per provider by demographic group

4.3.1.4 Format used

When looking at the format that had been used, 62.0% (n=181/293) had completed an e-learning package, 54.8% (n=160/293) had attended a workshop, 53.4% (n=156/293) had read a journal article and 51% (n=149/293) had attended a conference or network meeting. All other formats had been used by less than 50%. Full breakdown can be seen in table 4.8. The eight who chose ‘other’ stated this as ‘online assessment’, ‘patient group direction (PGD)’, ‘internet research’ (two responders), ‘development of an advanced practice portfolio web-based learning but NOT a package’, ‘action learning set’ ‘employer training flu’ and ‘anaphylaxis training’.

Format	Response (n=292)
Completion of e-learning package	62.0% (n=181)
Attendance at a workshop	54.8% (n=160)
Reading journal(s)	53.4% (n=156)
Attendance at a conference/network meeting	51.0% (n=149)
Attendance at a lecture/seminar	42.8% (n=125)
Downloadable presentation	37.0% (n=108)
Participation in a webinar	27.1% (n=79)
Completion of a workbook	27.1% (n=79)
Reading book(s)	24.0% (n=70)
Formalised qualification	13.4% (n=39)
Reading manual(s)	12.0%(n=35)
Peer review	11.6% (n=34)
Podcast	5.8%(n=17)
Other	3.1% (n=8)

Table 4.8: Formats used for lifelong learning activity in the past 12 months

Some variation was seen for various formats across gender, sector and age. Full results by demographic can be found in appendix 14. Conferences were attended by 59.1% (n=106/179) of females versus 36.2% (n=37/102) of males, whereas manuals were used by 17.7% (n=18/102) of males versus 8.3% (n=15/179) of females. E-learning, workshops and manuals were used more by community (n=175) than hospital pharmacists (n=81) (69.1% (n=121) vs 46.9% (n=38), 58.3% (n=102) vs 43.2% (n=35) and 16.6% (n=29) vs 4.9% (n=4) respectively) whereas completing a formalised qualification was about double for hospital pharmacists compared to community pharmacists (19.8% (n=16) vs 9.1% (n=16)). Those aged 26-35 were most likely to have undertaken a formalised qualification. Attendance at workshops and lectures increased with age, as did the use of webinars. Reading journals was also completed significantly more (p=0.012) by the over 55s versus the under 25s (78.6% (n=22/28) vs 46.2% (n=14/30)). All other variables were not statistically significant.

4.3.1.4a Preference of format

Attendance at a workshop was the most preferred way of achieving learning, closely followed by completion of an e-learning package and attendance at a conference. 1st preference responses also mirrored overall response for individual formats. Full breakdown of results is shown in table 4.9.

Learning format	1st preference	2nd preference	3rd preference	Total of responders choosing this option (n=323)
Attendance at a workshop	66	55	32	153 (47.4%)
Completion of e-learning package	52	44	38	134 (41.5%)
Attendance at a conference/network meeting	51	31	29	111 (34.4%)
Attendance at a lecture/seminar	36	31	39	106 (32.8%)
Reading a downloaded presentation	26	14	27	67 (20.7%)
Reading journal(s)	14	17	20	51 (15.7%)
Participation in a webinar	13	18	17	48 (14.9%)
Role play/ patient simulation	12	7	12	31 (9.6%)
Mobile application(s)	9	13	6	28 (8.7%)
Small group discussion	8	22	20	50 (15.5%)
Completion of a workbook	7	27	15	49 (15.2%)
Listening to a Podcast	7	9	11	27 (8.4%)
Reading book(s)	6	8	9	23 (7.1%)
Information websites	6	8	17	31 (9.6%)
Video Websites e.g. YouTube	4	10	14	28 (8.7%)
Peer review	3	3	4	10 (3.1%)
Social Media	2	4	8	14 (4.3%)
Laboratory based activity	1	2	3	6 (1.9%)

Table 4.9: Overall preference for learning format

Again, preferences differ by demographic group. Full results can be seen in table 4.10. Females appear to have the most preference for people orientated activities, such as attendance at lectures, workshops or conferences. However, they also have preference over males for e-learning activity. Males appear to prefer more solo activities, such as downloading material, material on video websites, mobile applications or reading. Interestingly, males have a preference over females for peer discussion. When comparing sector, hospital pharmacists appear to prefer attendance at events, whereas community pharmacists prefer mobile applications and video websites. All sectors, genders and ages preferred attendance at workshops to lectures. Those aged less than 25 had a higher preference for technology-based learning from mobile applications and video websites. Those aged 36-45 were least likely to prefer face-to-face attendance and they showed the highest preference for e-learning by age group with females showing preference for e-learning over males. When comparing by demographic group, males and hospital colleagues are statistically significantly more positive about peer review (p=0.010 gender, p=0.003

sector) than females and community pharmacists, with results showing 4.3% vs 2.5% for gender and 4.5% vs 2.5% for sector.

	Overall response (n=323)	Male (n=117)	Female (n=202)	Community (n=197)	Hospital (n=89)	Less than 25 (n=36)	26-35 (n=126)	36-45 (n=68)	46-55 (n=52)	Over 55 (n=31)
Attendance at a workshop	47.4% (n=153)	44.4% (n=52)	49.5% (n=100)	45.7% (n=90)	50.6% (n=45)	50.0% (n=18)	48.4% (n=61)	36.8% (n=25)	59.6% (n=31)	48.4% (n=15)
Completion of e-learning package	41.5% (n=134)	38.5% (n=45)	43.1% (n=87)	42.6% (n=84)	43.8% (n=39)	44.4% (n=16)	38.9% (n=49)	47.1% (n=32)	36.5% (n=19)	41.9% (n=13)
Attendance at a conference/ network meeting	34.4% (n=111)	29.9% (n=35)	37.1% (n=75)	28.4% (n=56)	40.4% (n=36)	25.0% (n=9)	35.7% (n=45)	33.8% (n=23)	42.3% (n=22)	32.3% (n=10)
Attendance at a lecture/seminar	32.8% (n=106)	29.1% (n=34)	35.6% (n=72)	29.4% (n=58)	38.2% (n=34)	25.0% (n=9)	35.7% (n=45)	25.0% (n=17)	36.5% (n=19)	45.2% (n=14)
Reading a downloaded presentation	20.7% (n=67)	23.9% (n=28)	17.3% (n=35)	21.3% (n=42)	21.3% (n=19)	19.4% (n=7)	21.4% (n=27)	23.5% (n=16)	13.5% (n=7)	12.9% (n=4)
Reading journal(s)	15.8% (n=51)	15.4% (n=18)	15.8% (n=32)	17.3% (n=34)	11.2% (n=10)	5.6% (n=2)	17.5% (n=22)	14.7% (n=10)	11.5% (n=6)	29.0% (n=9)
Small group discussion	15.5% (n=50)	12.8% (n=15)	17.3% (n=35)	11.2% (n=22)	20.2% (n=18)	11.1% (n=4)	12.7% (n=16)	23.5% (n=16)	15.4% (n=8)	19.4% (n=6)
Completion of a workbook	15.2% (n=49)	9.4% (n=11)	17.8% (n=36)	12.7% (n=25)	20.2% (n=18)	19.4% (n=7)	12.7% (n=16)	17.6% (n=12)	9.6% (n=5)	16.1% (n=5)
Participation in a webinar	14.9% (n=48)	16.2% (n=19)	14.4% (n=29)	16.2% (n=32)	12.4% (n=11)	11.1% (n=4)	15.1% (n=19)	14.7% (n=10)	21.2% (n=11)	12.9% (n=4)
Role play/ patient simulation	9.6% (n=31)	11.1% (n=11)	8.4% (n=17)	11.2% (n=22)	5.6% (n=5)	19.4% (n=7)	7.9% (n=10)	17.6% (n=12)	1.9% (n=1)	0.0% (n=0)
Information websites	9.6% (n=31)	8.5% (n=10)	10.4% (n=21)	9.1% (n=18)	7.9% (n=7)	2.8% (n=1)	10.3% (n=13)	7.4% (n=5)	15.4% (n=8)	12.9% (n=4)
Mobile application(s)	8.7% (n=28)	12.0% (n=14)	6.9% (n=14)	11.7% (n=23)	5.6% (n=5)	13.9% (n=5)	10.3% (n=13)	8.8% (n=6)	1.9% (n=1)	3.2% (n=1)
Video Websites e.g. YouTube	8.7% (n=28)	16.2% (n=19)	4.5% (n=9)	11.2% (n=22)	4.5% (n=4)	16.7% (n=6)	6.3% (n=8)	7.4% (n=5)	13.5% (n=7)	3.2% (n=1)
Listening to a Podcast	8.4% (n=27)	10.3% (n=12)	7.4% (n=15)	10.2% (n=20)	6.7% (n=6)	13.9% (n=5)	9.5% (n=12)	7.4% (n=5)	5.8% (n=3)	6.5% (n=2)
Reading book(s)	7.1% (n=23)	11.1% (n=13)	5.0% (n=10)	10.2% (n=20)	3.4% (n=3)	5.6% (n=2)	7.1% (n=9)	8.8% (n=6)	7.7% (n=4)	3.2% (n=1)
Social Media	4.3% (n=14)	2.6% (n=3)	5.4% (n=11)	5.1% (n=10)	3.4% (n=3)	5.6% (n=2)	5.6% (n=7)	1.4% (n=1)	3.8% (n=2)	3.2% (n=1)
Peer review	3.1% (n=10)	4.3% (n=3)	2.5% (n=5)	2.5% (n=5)	4.5% (n=4)	5.6% (n=2)	2.4% (n=3)	2.9% (n=2)	3.8% (n=2)	3.2% (n=1)
Laboratory based activity	1.9% (n=6)	2.6% (n=3)	1.5% (n=3)	3.0% (n=6)	0.0% (n=0)	5.6% (n=2)	1.6% (n=2)	1.4% (n=1)	0.0% (n=0)	3.2% (n=1)

Table 4.10: Preferences for formats to achieve lifelong learning by demographic group

4.3.1.5 Time preferences for duration and frequency of events

The optimum time for participation in events is seen to be one-two hours with the exception of daytime or weekend events which can be longer. Although podcasts would be acceptable up to two hours, shorter appears to be preferable. The full breakdown of results can be seen in table 4.11.

	Less than one hour	Between one-two hours	Over 2 hours	No response
	Total responses = 338			
Weekday daytime events	12.4% (n=42)	31.1% (n=105)	32.0% (n=108)	24.6% (n=83)
Evening events	12.1% (n=41)	62.7% (n=212)	12.4% (n=42)	12.7% (n=43)
Weekend events	8.6% (n=29)	29.9% (n=101)	40.5% (n=137)	21.0% (n=71)
Participation in a webinar	34.0% (n=118)	38.5% (n=130)	7.7% (n=26)	19.8% (n=67)
Downloading and listening to a podcast	35.5% (n=120)	34.3% (n=116)	11.8% (n=40)	18.3% (n=62)
Downloading and reading material	21.0% (n=71)	44.4% (n=150)	26.3% (n=89)	5.9% (n=20)
Attending a lecture	11.5% (n=39)	61.5% (n=208)	16.0% (n=54)	10.9% (n=37)
Attending a workshop	4.7% (n=16)	50.6% (n=171)	34.6% (n=117)	10.1% (n=34)

Table 4.11: Time preference for participation in lifelong learning activities

Downloading and listening to podcasts appear to be acceptable monthly, with six-monthly being the most accepted for a one day conference, or weekday daytime or weekend event. Every three months seems to be optimum for evening events (including lectures and workshops) or participating in a webinar. Results for lecture and workshop are similar in that they are preferred to be between one-two hours every three months. The full breakdown of results can be seen in table 4.12.

	Weekly	Monthly	Every 3 months	Every 6 months	Annually	No response
	Total responses = 338					
Weekday daytime events	1.2% (n=4)	17.2% (n=58)	24.3% (n=82)	25.4% (n=86)	9.2% (n=31)	22.8% (n=77)
Evening events	0.9% (n=3)	26.0% (n=88)	30.5% (n=103)	18.9% (n=64)	8.9% (n=30)	14.8% (n=50)
Weekend Events	0.6% (n=2)	10.9% (n=37)	21.0% (n=71)	22.5% (n=76)	18.9% (n=64)	26.0% (n=88)
Participation in a webinar	5.6% (n=19)	23.7% (n=80)	27.8% (n=94)	13.0% (n=44)	5.3% (n=18)	24.6% (n=83)
Downloading and listening to a podcast	13.0% (n=44)	29.3% (n=99)	19.5% (n=66)	8.0% (n=27)	5.6% (n=19)	24.6% (n=83)
Downloading and reading material	22.2% (n=75)	33.7% (n=114)	22.2% (n=75)	8.0% (n=27)	4.7% (n=16)	9.2% (n=31)
Attending a lecture	2.7% (n=9)	22.5% (n=76)	33.1% (n=112)	18.9% (n=64)	8.0% (n=27)	14.8% (n=50)
Attending a workshop	3.3% (n=11)	21.6% (n=73)	35.5% (n=120)	19.5% (n=66)	9.8% (n=33)	10.4% (n=35)
Attending a one day conference	2.1% (n=7)	11.2% (n=38)	19.8% (n=67)	22.5% (n=76)	29.9% (n=101)	14.5% (n=49)

Table 4.12: Time commitment preferences for lifelong learning activities

Correlation of the modes from previous questions suggests the following:

Weekday daytime and weekend events is preferred to be over two hours every six months

Evening events is preferred to be between one-two hours every three months

Lectures or workshops is preferred to be between one-two hours every three months.

Webinars are preferred to be between one-two hours every three months

Podcasts are preferred to be less than an hour monthly

Downloading and reading materials are preferred to take between one-two hours monthly

Therefore, it is seen that face-to-face events are wanted less frequently than virtual learning, with the exception of webinars and self-directed learning that can be completed more regularly.

4.3.1.6 Likely participation

Whilst preferences exist, participants were also asked about likely participation. Downloading and reading material was the activity pharmacists were most likely to

participate in from the list provided with 207/338 (61.9%) choosing 4 or 5 on the Likert scale where 1 was not at all likely to 5 being extremely likely, for likely participation, with an average Likert scale score of 3.8. However, the likely participation for attendance at events was also high, with attending a workshop scoring 3.6 out of 5. Weekend events were least likely to be participated in, although just over a third (36.1%, n=120/338) were likely to participate. Full results can be seen in table 4.13.

Learning format	**1**	**2**	**3**	**4**	**5**	**No response**	**Weighted mean of 1-5 preferences**
	Total responses = 338						
Downloading and reading material	4.7% (n=16)	8.0% (n=27)	21.6% (n=73)	31.4% (n=104)	30.5% (n=103)	4.4% (n=15)	3.8
Attending a workshop	3.3% (n=11)	8.9% (n=30)	29.3% (n=99)	36.6% (n=121)	18.9% (n=64)	3.8% (n=13)	3.6
Evening events	9.2% (n=31)	13.9% (n=47)	26.9% (n=91)	28.1% (n=93/)	19.5% (n=66)	3.3% (n=11)	3.4
Attending a conference	8.6% (n=29)	15.7% (n=53)	26.0% (n=88)	27.5% (n=91)	16.9% (n=57)	5.9% (n=20)	3.3
Attending a lecture	7.4% (n=25)	10.9% (n=37)	31.7% (n=107)	32.9% (n=109)	13.3% (n=45)	4.4% (n=15)	3.3
Peer working in specialist area	11.5% (n=39)	16.6% (n=56)	26.6% (n=90)	24.8% (n=82)	15.7% (n=53)	5.3% (n=18)	3.2
Downloading a podcast	16.6% (n=56)	16.9% (n=57)	18.6% (n=63)	23.0% (n=76)	19.5% (n=66)	5.9% (n=20)	3.1
Participation in a webinar	12.7% (n=43)	16.9% (n=57)	25.1% (n=85)	26.6% (n=88)	14.5% (n=49)	4.7% (n=9)	3.1
Weekend events	18.3% (n=62)	19.8% (n=67)	21.6% (n=73)	26.3% (n=87)	9.8% (n=33)	4.7% (n=16)	2.9
Weekday daytime events	29.0% (n=98)	14.8% (n=50)	19.5% (n=66)	15.1% (n=50)	16.6% (n=56)	5.3% (n=18)	2.7

Table 4.13: Likely participation in lifelong learning activities where 1 = not at all likely, 5 = extremely likely

When comparing by demographic group females and hospital colleagues are significantly more positive about shadowing a peer working in a specialist area than males and community pharmacists (gender; p=0.101, sector; p=0.0317) with scores of 3.4/5 vs 2.9/5 and 3.5/5 vs 3.0 respectively. Those over 55 are also statistically more likely (p=0.103) to participate in evening sessions (3.9 out of 5) than younger colleagues under 25 (3.4 out of 5). Females gave higher likely participation scores across all elements showing they are most likely to participate in any offered format. Full results by demographic group can be seen in table 4.14.

Answer Options	Overall	Male	Female	Community	Hospital	Less than 25	26-35	36-45	46-55	Over 55
Downloading and reading	3.8	3.7	3.8	3.8	3.8	3.7	3.8	3.9	3.6	3.6
Workshop	3.6	3.4	3.7	3.6	3.6	3.8	3.6	3.5	3.8	3.8
Evening	3.4	3.3	3.4	3.4	3.3	3.4	3.3	3.2	3.4	3.9
Conference	3.3	3.2	3.4	3.2	3.5	3.6	3.4	3.3	3.2	2.8
Lecture	3.3	3.2	3.5	3.3	3.5	3.5	3.3	3.3	3.3	3.7
Peer working	3.2	2.9	3.4	3.0	3.5	3.1	3.3	3.3	3.1	2.8
Podcast	3.1	3.1	3.1	3.3	3.1	3.5	3.0	3.2	3.2	2.6
Webinar	3.1	3.0	3.2	3.2	3.0	3.1	3.0	3.3	3.5	3.1
Weekend	2.9	2.9	2.9	2.9	2.9	3.4	2.8	2.8	2.7	3.2
Weekday daytime event	2.7	2.5	2.9	2.4	3.1	2.7	2.7	2.8	3.0	2.7

Table 4.14: Likely participation in lifelong learning activities weighted means by demographic breakdown (out of 5)

4.3.1.7 Comparisons of preference and previous participation

It is interesting to compare the questions looking at current participation versus preferences, which has been done in table 4.15. Formats asked about in more than 1 question have been compared below; results are taken from tables 4.8, 4.10 and 4.13. For positive expression for completing a format, combining 4 and 5 in the Likert scale for likelihood for participation from table 4.13 have been considered. Unfortunately positive expression of interest wasn't captured for e-learning, however e-learning completion has been the most undertaken activity in the previous 12 months at 62%, although it was only the second most chosen format. However, looking at technology, downloading and reading material was the format that had the most positive interest. For interactive learning, workshop attendance was the format of modal choice (47.4%) with respondents also being positive about participating in this format, and over half has attended a workshop in the previous 12 months (54.8%). Over half had read a journal article in the past 12 months (53.4%), although this was a format of choice for less than a fifth (15.7%). Over half of respondents had attended a conference in the previous 12 months (51%), with 44.4% expressing a positive interest in this format with even fewer (34.4%) picking this as a format of choice. E-learning and workshop attendance were the most positive formats overall, however, although workshops (a

face-to-face activity) was the format of choice, e-learning was the format most undertaken.

Format	Undertaken in the previous 12 months (from table 4.8)	Positive expression of interest for participation in the format (from table 4.13)	Format of choice (from table 4.10)
E-learning	62%	Question not asked	41.5%
Workshop attendance	54.8%	55.5%	47.4%
Reading a journal	53.4%	Question not asked	15.7%
Attendance at a conference	51%	44.4%	34.4%
Lecture attendance	42.8%	46.2%	32.8%
Downloading and reading material	37%	61.9%	20.7%
Webinar	27.1%	41.1%	14.9%
Workbook	27.1%	Question not asked	15.2%
Reading a book	24%	Question not asked	7.1%
Podcast	5.8%	42.5%	8.4%
Peer review	3.1%	40.5%	3.1%

Table 4.15: Comparison of formats relating to those that have been used, those that participants would be happy to undertake and those that are the format of choice

4.3.1.8 Barriers to attendance

The biggest barriers to attendance were time and venue, with finishing work too late being cited by 47.4% (n=152/321) of responders, venues being too far listed by 42.1% (n=135/321) and getting home too late being listed by 36.1% (n=116/321). Differences were seen between male and female responders and those working in hospital and community settings, but no other demographic. The other demographics included age, role and hours worked per week. Male responders were more likely to state barriers of finishing work too late, not getting paid to attend, preferring to complete CPD through non face-to-face methods, and learning topic having no link to a pharmacy service, compared to female colleagues (58.3% v 41.4%, 36.7% v 24.8%, 19.1% v 10.1%, 15.7% v 6.6% respectively). Females stated childcare issues as a barrier in 18.2% of cases versus 4.4% of men. By sector, community pharmacists stated the following barriers: finishing work too late, venues being too far, not getting paid to attend, not being contractually obliged to attend, preferring to complete CPD through non face-to-face methods, format of learning, and previous bad experience, more frequently than hospital colleagues (62.4% v 28.9%, 47.2% v 34.9%, 36.6% v 18.1%,

13.7% v 8.4%, 18.3% v 1.2%, 10.2% v 3.6%, 10.7% v 3.6%). These differences were, however, not significant. For all listed barriers, except 'I do not require the training to do my job', where responses were mirrored, barriers were perceived to a greater extent by community pharmacists. Full results can be seen in table 4.16.

Barrier to attendance	Overall Response (n=321)	Male (n=115)	Female (n=198)	Community (n=197)	Hospital (n=83)
I finish work too late	47.4% (n=152)	58.3% (n=66)	41.1% (n=81)	62.4% (n=121)	28.9% (n=24)
Venues are too far	42.1% (n=135)	40.9% (n=46)	42.9% (n=85)	47.2% (n=92)	34.9% (n=29)
I would get home too late	36.1% (n=116)	37.4% (n=42)	36.4% (n=71)	41.1% (n=79)	34.9% (n=29)
I do not get paid to attend	28.7% (n=92)	35.7% (n=40)	24.8% (n=48)	36.6% (n=70)	18.1% (n=15)
No interest in subjects on offer	26.5% (n=85)	24.4% (n=28)	27.8% (n=54)	24.9% (n=49)	22.9% (n=18)
Not advertised with sufficient notice	23.4% (n=75)	21.7% (n=24)	24.8% (n=49)	26.9% (n=52)	18.1% (n=15)
Not needed for my job role	16.8% (n=54)	13.0% (n=15)	19.2% (n=37)	14.2% (n=28)	14.5% (n=11)
I do not get accredited to attend	16.2% (n=52)	17.4% (n=20)	14.7% (n=28)	18.3% (n=35)	12.1% (n=10)
I prefer to complete my training through non face-to-face methods	14.0% (n=4)	19.1% (n=22)	10.1% (n=20)	18.3% (n=36)	1.2% (n=1)
Childcare issues	13.1% (n=42)	4.4% (n=5)	18.2% (n=36)	13.7% (n=27)	12.1% (n=10)
I do not require the training to do my job	12.8% (n=41)	12.2% (n=14)	12.6% (n=25)	10.7% (n=21)	10.8% (n=9)
My employer supplies all the training I require	12.1% (n=39)	15.7% (n=18)	10.1% (n=20)	14.7% (n=29)	10.8% (n=9)
I am not contractually obliged to attend	12.1% (n=39)	10.4% (n=12)	12.6% (n=25)	13.7% (n=27)	8.4% (n=7)
No link to a pharmacy service	10.0% (n=32)	15.7% (n=18)	6.6% (n=13)	11.2% (n=22)	7.2% (n=6)
Format of learning does not appeal	9.7% (n=31)	10.4% (n=12)	7.6% (n=15)	10.2% (n=20)	3.6% (n=3)
Previous bad experience	8.7% (n=28)	10.4% (n=12)	9.1% (n=16)	10.7% (n=21)	3.6% (n=3)
Caring responsibilities	5.3% (n=17)	5.2% (n=6)	5.1% (n=10)	6.1% (n=12)	4.8% (n=4)

Table 4.16: Barriers for attendance at learning events (n=321)

Of the 35 open-ended responses, time featured strongly with timing of events being a barrier (n=12), along with release for attendance at events if they were daytime events due to no employer support for attendance (n=4). In addition, cost of some events was also a barrier (n=6) along with the current learning on offer being pitched at the wrong level due to specialism in role (n=4).

4.3.1.9 Motivators for participation

From the free text responses (n=289) about motivators for participation in lifelong learning, topic was the main factor (n=58), with many citing interest (n=30), requirement (n=42) and role (n=40) as motivators. Knowledge (n=39) and CPD (n=36)

plus relevance (n=36) also featured strongly. The top 30 responses can be seen in figure 4.1.

Figure 4.1: Main drivers for participation in lifelong learning

4.3.1.10 Appraisal

Of the 328 who answered the question, 181 (55.2%) stated they had had an appraisal in the past 12 months. 66 (20.1%) said they had not had an appraisal and 81 (24.7%) answered that this question was not applicable (NA) (figure 4.2). Of the 81 who answered NA they classified themselves as 24 employed, 45 locums, 6 currently not working and 6 retired. Of the 68 respondents who stated their employment as locum, 45 answered NA, with 1 saying no and 12 saying yes.

Looking at demographic breakdown, 44.2% (n=53/120) of men had been appraised, versus 63.1% (n=130/206) of women. In the community sector, 48.5% (n=78/202) had received an appraisal compared to 73.6% (n=67/91) in the hospital sector. This study did not ask for community pharmacists to state if they worked in a community multiple or independent pharmacy, which can pose a limitation in the analysis of this question. However, overall, 32.2% of pharmacists working in community stated NA when asked about appraisal, with only 5.5% of hospital pharmacists stating NA. In the over 55s,

only 18.8% (n=6/32) had undertaken an appraisal with the number varying from 54.4% to 64.1% in all other age groups.

Of the 181 who had had an appraisal, 141 (78%) said their professional learning and development needs had been discussed, with 40 (22%) saying they were not. The percentage of community pharmacists who had their professional learning and development needs discussed was 71% (n=71/100) compared to 85.1% (n=57/67) of hospital pharmacists (Figure 4.3).

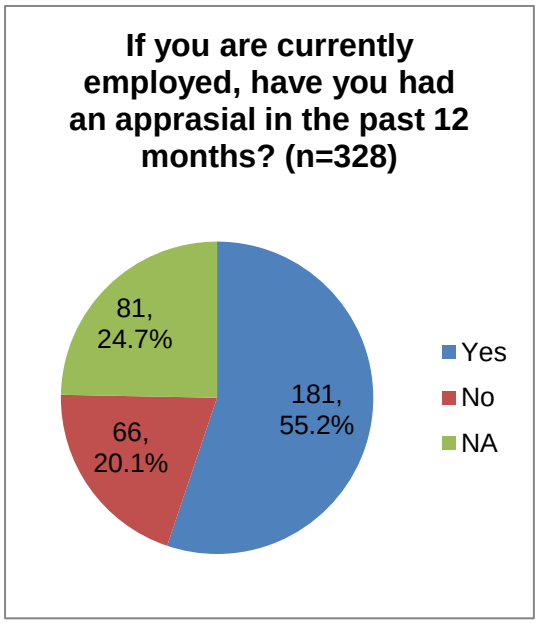


Figure 4.2: Percentage of those who had an appraisal in the past 12 months

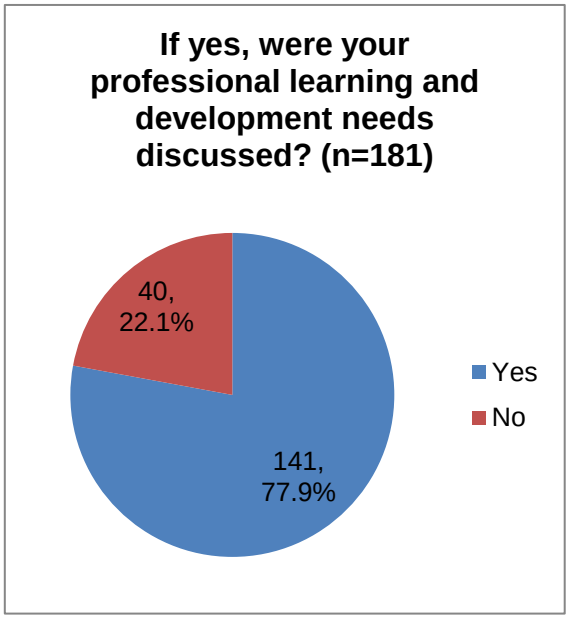


Figure 4.3: Percentage of individuals who had their professional learning and development needs discussed during an appraisal

4.3.1.11 Tools to support application of learning

After attending a learning event, 72% of responders (n=231/321) said they would benefit from receiving a copy of the presentation. Over half (58.6%, n=188/321) asked for case studies and 57.9% (n=186/231) asked for a follow up email with a reminder of key points. Just less than half (46.7%, n=150/321) felt that completing an online assessment would be of use. Interestingly, six responders (1.9%) said they did not need any tools after an event. All of these responders were community pharmacists, with three being male and three females; three were employed, two were locums and one was retired; two were less than 25, with one each from the other age ranges.

4.3.1.12 Topics of choice

Clinical topics (4.3 out of 5) and new pharmacy services (4 out of 5) hold the most appeal as topics of choice, with over half (54.4%, n=184) scoring 5 on the Likert scale, where 1 was not interested and 5 was extremely interested for clinical topics. Mentoring and research held the least appeal scoring 3.4 and 3.2 out of 5 respectively**.** Full breakdown of results is shown in table 4.17.

Topic	**1**	**2**	**3**	**4**	**5**	**NA**	**Weighted mean out of 5**
	Total responses = 338						
Clinical Topics	1.8% (n=6)	2.7% (n=9)	10.9% (n=37)	25.1% (n=85)	54.4% (n=184)	5.0% (n=17)	4.3
New Pharmacy services	3.6% (n=12)	5.6% (n=19)	15.4% (n=52)	29.3% (n=99)	40.8% (n=138)	5.3% (n=18)	4.0
Law and Ethics updates	5.0% (n=17)	11.8% (n=40)	22.5% (n=76)	31.1% (n=105)	24.9% (n=84)	4.7% (n=16)	3.6
Leadership skills	7.7% (n=26)	6.2% (n=21)	22.2% (n=75)	34.3% (n=116)	24.0% (n=81)	5.6% (n=19)	3.6
Pharmacy regulation	7.1% (n=24)	11.8% (n=40)	24.6% (n=83)	29.6% (n=100)	21.0% (n=71)	5.9% (n=20)	3.5
Managerial skills	8.6% (n=29)	9.2% (n=31)	26.9% (n=91)	29.0% (n=98)	21.0% (n=71)	5.3% (n=18)	3.5
Communication skills	8.0% (n=27)	7.4% (n=25)	28.7% (n=97)	28.7% (n=97)	21.9% (n=74)	5.3% (n=18)	3.5
Technology updates (e.g. EPS)	6.8% (n=23)	11.2% (n=38)	23.7% (n=80)	32.8% (n=111)	20.4% (n=69)	5.0% (n=17)	3.5
Revalidation	8.9% (n=30)	12.4% (n=42)	21.6% (n=73)	28.1% (n=95)	20.7% (n=70)	8.3% (n=28)	3.4
Mentoring	7.7% (n=26)	12.7% (n=43)	27.8% (n=94)	28.4% (n=96)	17.5% (n=59)	5.9% (n=20)	3.4
Research	10.1% (n=34)	17.5% (n=59)	24.0% (n=81)	21.9% (n=74)	18.9% (n=64)	7.7% (n=26)	3.2

Table 4.17: Interest in different topics for future lifelong learning events where 1 = not at all interested, 5= extremely interested (n=338)

When looking at different topics, community pharmacists were statistically more likely to want to learn about new pharmacy services ($p<0.00001$), law and ethics ($p=0.000076$), pharmacy regulation ($p<0.00001$), and research ($p=0.0072$) than hospital pharmacists, with hospital pharmacists ($p=0.000416$) and females ($p=0.428$) more likely to want to learn about mentoring. Full breakdown by demographics can be seen in appendix 15. All other comparisons did not render any statistical significance.

4.3.1.13 Learning style results

From the VARK model, the visual learning style was the most preferred, followed by kinaesthetic, then read-write and auditory. This was mirrored across all demographic groups, with the exception of those aged over 46, where auditory was preferred over read-write. No significant difference was seen across demographic groups. Full results can be seen in table 4.18.

	1st preference	**2nd preference**	**3rd preference**	**4th preference**	**Weighted mean (out of 5)**
Visual (learn by seeing and visualising)	37.1% (n=103/278)	31.7% (n=88/278)	20.1% (n=56/278)	11.2% (n=31/278)	2.9
Kinaesthetic (learn by doing and problem solving)	29.8% (n=86/289)	24.2% (n=70/289)	22.5% (n=65/289)	23.5% (n=68/289)	2.6
Read-write (learn by reading and re-writing notes)	25.0% (n=72/288)	14.9% (n=43/288)	26.0% (n=75/288)	34.0% (n=98/288)	2.3
Auditory (learn by listening and verbalising)	9.6% (n=27/280)	28.9% (n=81/280)	31.4% (n=88/280)	30.0% (n=84/280)	2.2

Table 4.18: Preferences of pharmacists for VARK learning styles

From the Honey and Mumford styles, activist was the most preferred style, followed by pragmatist, reflector then theorist, as seen in table 4.19. Activist was the most preferred style across all demographic groups, with theorist being the least preferred style. Pragmatist and reflector being 2nd and 3rd preferred styles differed across demographic groups. There is no significant difference in preferences between genders, but hospital pharmacists are significantly more likely to be activist than their community colleagues ($p<0.05$), with community pharmacists statistically more likely to be theorists compared to hospital pharmacists ($p<0.05$). There is also a statistical difference in being a theorist in those aged under 25 compared to those over the age of 55 ($p<0.05$).

	1st preference	2nd preference	3rd preference	4th preference	Weighted mean out of 5
Activist (learn from new experiences, discussions and brain storming)	46.8% (n=133/284)	16.5% (n=47/284)	18.7% (n=53/284)	18% (n=51/284)	2.9
Pragmatist (learn by thinking how to apply learning to reality)	23.7% (n=67/283)	32.9% (n=93/283)	21.6% (n=61/283)	22.0% (n=62/283)	2.6
Reflector (learn from self-assessment and peer assessment)	15.7% (n=44/281)	18.5% (n=80/281)	35.9% (n=101/281)	20.0% (n=56/281)	2.4
Theorist (learn from models, concepts or theory)	14.5% (n=40/275)	21.5% (n=59/275)	24.4% (n=67/275)	39.6% (n=109/275)	2.1

Table 4.19: Preferences of pharmacists for Honey and Mumford learning styles

Therefore it is seen that the preferred styles are visual and activist with the least preferred style being auditory and theorist.

Pharmacists showed a preference for learning interpersonally (through social interaction) with over half stating this preference (55.8%, n=177/317) with the remaining 44.2% (n=140/317) stating they prefer to learn intrapersonally (through independence or self-interaction. The preference for interpersonal learning is echoed by previous results in table 4.10 showing that participants are likely to participate in face-to-face activity, although downloading material to work through independently is also likely for participants.

4.3.2 Interview responses

A total of 19 interviews were completed giving a response of 25.7% (19/74). Of those interviewed 11 were female. Participants included one pharmacist working in a GP surgery, two Clinical Commissioning Group (CCG) pharmacists, two academic pharmacists, and five working in a hospital setting with the remaining working in a community setting. All participants who replied to the initial request for interview were included. A full breakdown of participants can be seen in table 4.20. Full copies of interview transcripts can be found in appendix 16.

Job role	Gender	Age range
NHS Hospital pharmacist	Female	36-45
Community pharmacist working in an independent pharmacy	Female	46-55
Community pharmacist working in an independent pharmacy	Male	Less than 25
Private Hospital pharmacist	Female	26-35
Community pharmacist owner and CPPE tutor	Female	36-45
Community pharmacist working for a multiple	Male	26-35
Pharmacy Student working in community pharmacy	Female	Less than 25
Pharmacist working in a GP surgery	Female	Over 55
Academic and community pharmacist	Female	36-45
CCG pharmacist	Male	26-35
Community pharmacist owner	Male	Over 55
Academic and community pharmacist	Male	26-35
Community pharmacist. Also works in GP surgery	Female	26-36
CCG Pharmacist	Female	36-45
Community Pharmacist	Male	46-55
NHS Hospital pharmacist	Female	36-45
Community pharmacist pre-registration trainee	Male	Less than 25
NHS Hospital pharmacist	Male	36-45
NHS Hospital pharmacist	Female	46-55

Table 4.20: Role, gender and age of interviewees

4.3.2.1 Themes identified

As seen in table 4.21, three main themes emerged from the interviews: Engagement, Intervention and Application of learning, each with related subthemes. For engagement, the subthemes were enables, barriers and topic; for intervention, the subthemes were ingredients for group learning and individual learning, and for application of learning the subthemes were tools and assessment.

4.3.2.1a Engagement

Engagement for attendance or participation in a learning event, is linked to attraction to the event, and is supported by ***motivators and enablers*** for participation. Enablers include regular planned and locally coordinated meetings and ensuring the meeting is relevant to role.

'I think they have three meetings a year where we get together and have a meeting together.' **Interview 1**

'Sometimes there are so many events on that you almost don't know, you are trying to decide which one you should go to, and it turns out that because there are so many so frequently it turns out that it is difficult to choose, so I don't choose anything.' **Interview 12**

'If it is relevant to me, if it is relevant to an identified learning need for me, if I know there is a change I need to keep up to date with.' **Interview 5**

As also seen in PESL interviews, and in table 4.11 the timing and length of the event will influence attendance. Good advertising is important, along with pre-registering to attend. There are also many factors relating to the topic, outcomes and views of training that motivate individuals to attend. For example, support service outcomes and personal CPD were seen as drivers for attendance as learning was deemed relevant.

'I choose training mainly to be able to provide new services. It is mainly based on the learning needed for the actual service, so I don't normally go to additional training unless it will benefit a service, so it needs to be necessary information.' **Interview 18**

'*I am sure there are lots of people who are behind on their CPD entries and actually that is a really good way to consolidate your learning*.' **Interview 5**

The timing and location of meetings drives attendance, echoing the survey results, along with previous experience of a learning provider. It is also important to provide ongoing learning in protected learning time.

'I like to sit down and have my time. I don't want to be disturbed by a phone.' **Interview 2**

'I think location makes a big difference. I know if you can get somewhere really easily it is less of a barrier after a long day.' **Interview 9**

'I think I would trust xxxx, because the ones I have attended I have liked.' **Interview 4**

However, if participants are not aware of sessions they won't participate so awareness and advertising of content and speaker is essential.

'Maybe advertisements need to be clearer, as many people may not check their emails or, I don't know, they may see it but ignore it.' **Interview 7**

'They may have signed up to it then think 'that was tonight', so reminders are important as well.' **Interview 9**

'I like to know who the speakers are and the agenda in advance, because sometimes you turn up and it is not at all what you thought, so if you have someone from a different angle to what you wanted covered, and I would also, ideally, like it to be someone independent.' **Interview 14**

'A lot of the time such things are only sent to certain people and it doesn't reach us, so a lot of the time we are not aware that a seminar or something is going on actually,

so, if, people are made more aware, and a summary of what it entails may make you go.' **Interview 19**

'I guess in the description it is the main headline, so maybe a bit more information about exactly what they are going to go through. I know some people may just look at the headline and think they don't know what it is.' **Interview 3**

There are multiple motivators and enablers linked to topic. Getting the ***topic*** right will attract more attendees to an event. The topic needs to be described well and be applicable to all, have national or local importance, and must be current and up to date to attract interest.

'It is up to date information that is provided and it is a comprehensive approach of provided information from lecturer to trainee.' **Interview 6**

'xxx seems to have the topics of the day, I mean covered in the sense that they are relevant for the time, whatever is happening at the time. It is current and up to date, in the sense that whatever thought processes for commissioners and for the profession perhaps.' **Interview 15**

'*The newer therapies around, new ways of treating patients, that's what makes something relevant to me. It is about practice, basically about information that improves my practice*.' **Interview 16**

*'To attend a face-to-face event I would have to be very interested in the topic, or it would be something I would have to attend to be able to provide a service**.'*** **Interview 13**

Echoing the survey, ***barriers*** to attendance include family and work commitments, and the need to try and maintain the correct work life balance. Finishing work too late, and unexpected events were also seen as a barrier to attendance.

'Jobs are getting more stressful, so for many pharmacists, especially community pharmacists, you are in your pharmacy 8-7 you need a personal life and you need to be able to go home and relax.' **Interview 5**

'Often there were events I couldn't attend as I was on call. I imagine there are other people too, that have family and other responsibilities.' **Interview 4**

'You have the greatest intention and you have it booked in, and then, as I say, it falls down the priority list, so what you thought was priority four weeks ago, has fallen down the list.' **Interview 14**

'Barriers tend to be time requirements, as things tend to be in the evening time, and after a 10-11 hour day then having to go to a meeting or training session seems to be making the day even longer.' **Interview 6**

Cost can also be seen as a barrier for some individuals if the course is a paid one.

'If I don't work I don't earn… so cost is a significant factor for me.' **Interview 16**

4.3.2.1b Intervention

The perceived success of the intervention depends on format.

Ingredients for group learning: When attending a face-to-face learning event a mixture of teaching methods is useful and the use of case studies is requested, to support the application of learning into practice.

'I think you need different styles for different people, there is no one answer.' **Interview 10**

'Really I prefer the cases you do in workshops because they just really help you to apply the learning, gives you that extra practice.' **Interview 7**

'I prefer workshops where we do case studies. I get more mileage from that than from anything else. The way I like it is a short lecture to introduce the topic and then breakout sessions where you discuss certain scenarios, pick up issues, then conclude.' **Interview 11**

'I prefer the lecture style myself because in a discussion if you are speaking to others with the same amount of knowledge as you and you don't necessarily get more out of that, unless someone is building on it. I like to be with others, but I would like to learn from an expert.' **Interview 9**

The opportunity to network enables discussion and the sharing of best practice, and having an expert speaker supports this learning, bringing different perspectives. In addition, the speaker or facilitator was seen to support recollection of knowledge and translating learning into ideas for application of knowledge into practice.

'Being with like-minded people or people with specialist areas, trying to speak to them and get their insight.' **Interview 17**

'The quality of the presenter is fundamental.' **Interview 11**

'Hearing a motivational speaker motivates you with some tips and you learn from the others on the table.' **Interview 2**

'I do like to learn from the experts. I think it is good to gain their knowledge.' **Interview 5**

'It is good to have discussion to help you remember what you are being told when you have a chance to think about how you will apply it in practice.' **Interview 1**

'I think it is to do with the speaker, and the way things are said, which makes you remember, but it is also about being able to talk about it and repeating similar information and discussing it, to make sure you understand it.' **Interview 4**

Mixing with other professions and sectors, and seeing other people's point of you is seen as a positive ingredient, as pharmacy can sometimes be insular.

'If you see it from a doctor's or nurse's point of view, it may change the advice you give the patient.' **Interview 5**

'Sometimes you sit there, especially as a community pharmacist alone in your pharmacy thinking you are doing a great job, and you meet others who are doing an amazing job, or others who aren't doing such a great job, so it helps you to benchmark yourself.' **Interview 5**

Individual learning has pros and cons. Articles and emails or websites are seen as positive opportunities for learning on your own and in your own time. These need to be filtered to ensure quality and relevancy. Websites and other updates are seen as useful sources of information.

'I am very much an avid reader of the PJ, C and D, pharmacy magazine. I like articles that are of interest to me. I tear them out and keep them in a file for reflection from a later on prospective.' **Interview 6**

'For reading I really like PJ online, because they give you CPD articles as well. That helps you learn as well. There is always the BNF that gives you general information but I mostly go for the PJ.' **Interview 7**

'I tend to read on my way to work as I have a commute.' **Interview 16**

'I do like to use websites and patient orientated websites, because that in itself makes me use the language the patients use.' **Interview 8**

'I tend to get things electronically… I don't really think the source is important, filtering is key as there is so much information out that that you have to really filter out what is rubbish, and getting to the top of the pyramid as to what is most useful, without having to read reams and reams of rubbish.' **Interview 10**

Flexibility is the main perceived benefit of independent learning which is facilitated by webinars as a format of learning. IT is also seen as easy to use.

'There are times I sometimes cannot make an event and you don't want to miss out, so a webinar is one of those good things that I like because I can do it from home…they are very clever with their IT so you listen but do the case studies with other people in a group virtually, which I think is an amazing model, because I felt like I was in a workshop but sitting at home.' **Interview 5**

'I have tried the webinar which is nice because it is in the comfort of your own home, in your own time.' **Interview 2**

Whilst technology is seen as a benefit, this is hindered when technology is not effective and has the lack of human interaction as a disadvantage.

'So if you have questions there is no one to ask if you have problems.' **Interview 18**

'You have got the distractions of comments coming up and it goes out of sync, and maybe some technical glitches, so they are not my favourite.' **Interview 9**

4.3.2.1c Application

Application of learning is supported by the appropriate ***tools*** and ***assessment***. A summary of notes, handouts or slides are tools to enable reflection on the learning, and planning opportunities to apply the knowledge that has been learnt, which echoes the questionnaire responses. Action points, key learning points or prompts are also seen as tools to support application in practice.

'Some handouts would be good, but I would also like a summary of what the actual objectives were after the learning event. PowerPoint presentations are o.k. but it also requires notes with it. PowerPoints are too brief, because when you go back to it doesn't help the understanding very well. I will go back to it if it is relevant.' **Interview 18**

'Prompts will help people to think about what they can do and let the client know they are using these prompts but it is for patient satisfaction and putting all aspects into practice.' **Interview 6**

'A very brief summary of the key learning points I am meant to have learnt during the session so I can go back, and think, these are the key 6 things I should have learnt from that meeting, or what I did learn so I can reflect on that, to help write my CPD cycle.' **Interview 10**

'Attachments of all slides, but often in the meeting you talk of certain, NICE guidelines for example, or you talk of a prescribing policy of a certain CCG, and put that in there, so you get one relevant email, and I would then save that and it would be useful reference point and it would help signposting too as it would have all the email links within and I would make a folder on my computer and say this is all the bits, NOACs for example.' **Interview 11**

Assessment of knowledge was seen as a positive, to ensure learning has been acquired, and so that the intervention is not just a one off event that is not used again.

'What I find very useful, and sometimes we do this with my colleagues is when you get sent questions, or multiple choice questions or something to check your learning, because then, it is like a game, or an exercise you might do, just to check….I think it

would help if we had some sort of test, yeh. I don't want to say exam, but some sort of test at some point, because something that would keep you motivated.' **Interview 4**

'A quiz would be good, a little test thing, to help you remember what you know and don't know and will help you. Probably the day after because then it is fresh in your mind. Maybe online or given as a sheet during the evening.' **Interview 7**

'I think maybe a follow up or a quiz. Maybe a quiz before to test my initial knowledge and then a quiz after to test what I have learnt... I think 7 days would be optimum for the after quiz to allow me to deal with any issues of going back to work and it would need to be emphasised at the event that there will be a quiz and that it needs to be completed as well.' **Interview 12**

4.4. Discussion

The findings collected from the study point out that the provision of lifelong learning activities, supporting CPD, is a complex situation that needs to be adjusted for personal preferences and circumstances. Comparing to a previous literature review regarding attitudes and participation in CPD activities in GB,[199] this is a large sample size, and combines qualitative and quantitative results, along with information of providers and preferences for different formats, including digital provision.

The demographics of the respondents broadly reflected the breakdown of pharmacists in GB at the time of the study.[331] Our survey gained the exact responses from females as in the GPhC registrant survey 2013 at 60.4%. The registrant survey had the most pharmacists within the age of 30-39 with less pharmacists at increasing ages. Our respondents echoed this. Our survey had 62% of pharmacists compared to 72% in the registrant survey, and this study had 28% of hospital pharmacists compared to 23% working in hospital on the registrant survey. Our survey had 73% employed compared to 74% on the registrant survey.

4.4.1 Engagement in lifelong learning

It is seen that there is a need to participate where possible, to support achievement of CPD requirements, so planning is important to ensure participants can see the value in attending, by having a clear understanding of the topic, what learning will be gained, and how they can use that learning in practice. It is also clear that perceived barriers differ by gender and sector of work, with some gender differences being significant,

such as for males, the barrier of working too late or for females having childcare issues, so these would need to be addressed, dependent on the target audience.

It was positive to see that most respondents in this study had participated in an activity to support their ongoing learning and CPD in the past 12 months. However, it is interesting to see that the national free system available to all pharmacists, CPPE, had only been used by just under half. This may be a result of having access to multiple organisations in addition to employers who offer a large range of support to their employees. Having seen that non-participation increases with decreased working hours, the role an employer has on motivating participation in learning cannot be underestimated.

Echoing responses seen in chapter 3 relating to advertising of an event, this study supported these findings, with interview responses identifying that advertising needs to be organised, outlining the key aspects of the session, and that the cascading of such information is needed within organisations.

Previous studies have shown pharmacists are more likely to participate in lifelong learning activities where they have an active interest.[131,199] There may also be a different perception of what is needed as additional learning if this is already embedded in the job, for example with shadowing, or peer review. The results of this study show that peer review and shadowing received greater scores when they are used regularly in practice, such as with hospital pharmacists. This may be, in part, due to the collaborative working nature and interprofessional element of the hospital role. With the introduction of peer review into the revalidation system for pharmacists in GB, this may act as a catalyst for pharmacists to participate in face-to-face events, and to gain feedback, especially for those community pharmacists who work in isolation. Males were also more positive about peer review in this study, perhaps as they are traditionally more likely to be in leadership roles.[332] CPD completion is integral to the new revalidation process, so participation in activities will continue to be required.

Attendance at events may be affected by age as our study showed that those between the age of 36-45 have least preference to face-to-face attendance. The findings from chapter 3 identified that this could be due to childcare or caring responsibilities. In addition to age, ease of access to venues and geography of an area may also impact

participation, as also outlined in chapter 3. A study in Western Australia showed pharmacists used journals most commonly, followed by reference books then the internet as sources of learning.[333] Our results showed that those over 55 are more likely to use journals as a format for CPD. The benefits of individual learning were explored during the interviews showing independent learning gives flexibility, and websites and webinars are useful to achieve up-to-date information.

The results of this study looked at preferences by sector. Due to their target audiences, it is not a surprise that community pharmacists had strong preference for LPC and NPA whereas UKCPA had greater participation as a provider for learning events from hospital pharmacists. CPPE and employer were also preferred by community pharmacists. Results from the PESL interviews showed trust in providers that are used regularly, which may support this finding. The content of sessions by CPPE may also be felt to not be appropriate for the hospital pharmacists, as topics are general, so if the pharmacist specialises in a certain area, more detailed development may be required, as seen in the ratings data of provider by demographic in this study. A study by Saade[334] in 2018 showed a significantly higher percentage of community pharmacists disagreeing that CPD met their learning needs, compared to other sectors. This may be due to the high completion of formalised qualifications in hospital pharmacists compared to community pharmacists. In this study, when looking at learning styles, hospital pharmacists were also seen as statistically more activist than their community colleagues which may explain their support of peer review. It was seen that academics had the most participation of all demographic groups, which is positive, reflecting job requirements to teach material that is relevant and up-to-date.

Building on findings from the literature review and PESL study, barriers and motivators of participations were also explored in this study. Once again, time was the most common barrier, as in previous studies,[131,199,210] although the findings of this chapter expanded these to discover time was a barrier as work might finish too late or it would be too late getting home. This was more prevalent in community-based pharmacists. To build on previous work about barriers to attendance at events,[131,199,226,228] venues being too far can also be added as this was highlighted as the second largest barrier to attendance in this study. This study identified that males stated more frequently

finishing work too late as a barrier to attendance, a finding not outlined in previous studies.[131,199,210]

Whilst the PESL study found personal interest, CPD completion and networking as the main motivators for attendance, this chapter found topic to be the main motivating factor. This study showed topic was given as an answer for key motivator for attendance almost double any other word. Topic was also seen as one of the key enablers and motivators given for attendance in interviews. The second motivator was interest from quantitative data, while networking was seen in the interview data. Previous studies on motivators and barriers did not investigate topic as a motivator,[131,199,335] although as seen in the PESL chapter, studies have identified relevance of topic being important to planning an event.[211,214,217,226] When looking at topics, this study supported the findings of Mohammed Ibrahim[217] who showed that topics based on therapeutics and clinical topics had the highest interest from participants.

4.4.2 Learning interventions

The results of this study have shown for the first time the level of use of lifelong learning providers in GB, and the correlations between demographics and learning preferences. Although demographics had an influence on participation and format preference, flexibility supported by a range of formats and opportunities is required, to support the learning of all pharmacists. The need to ensure participation is important to allow the attendees to apply their learning. The opportunity to network and share is also important to increase knowledge, as well as motivating individuals, as also previously identified by Herrera *et al.*[138] in 1996. This study echoes that the speaker or facilitator is also key to engage participants as seen previously in chapter 3 and by Copeland *et al.*[291] in 1998. Opportunities for hands on application will allow for practice improvement after the intervention,[336] although long term application of learning and achievement of learning outcomes still need further research.[231,309] This study echoed the findings from the PESL study, with both studies showing that a copy of the presentation and case studies are the most requested tools for participants to apply their knowledge into practice. In addition, the interviews in this chapter added the want for a summary of material along with a summary of key action or learning points. New

tools for learning can also be explored, such as human patient simulation, which was seen by Ong *et al.*[337] in 2018 to be favourable above asynchronous online learning for improving criticality and decision making skills. This study also highlighted the want for post learning assessment. Literature is moving towards assessment for learning, rather than assessment of learning,[338] so assessment can support key elements of knowledge to be maintained. Shah *et al*.[339] in 2016 trialled a framework for workplace learning, using a competency assessment programme, showing using a structure increased quality of workplace assessment. As also seen previously,[138-141] the support of managers is required to implement learning. This study showed positive responses whereby when appraisal had taken place around three quarters had discussed learning needs. It did highlight, however, that locums may be missing opportunities for appraisals, as they stated that an appraisal was not applicable to their role. Therefore not have an official process in place to identify their individual learning needs,

It must be noted that none of the providers are being used to their full capacity. Therefore, providers are encouraged to continue using various formats of learning, and should evaluate the impact of these through uptake and regular feedback. With the employer being the main provider, more awareness is needed of alternative opportunities to ensure value for money for those who are funding activity, especially when this is government funded. With the introduction of revalidation, a focus on collaborative working, to ensure peer review conversations, and impact on practice will be required. Rather than just attendance or participation, a change in practice will be needed, so activities need to be designed in a variety of formats to ensure learning can be applied to practice while embedding peer review. Therefore, a strategy is required for provision to match revalidation requirements. Our results show that providers need to consider relevance to practice and use examples that can increase knowledge but are also applicable to the pharmacist role. Our findings also support future planning of events, by identifying preferences for duration of event, and how often these should occur, with 1-2 hours every 3-6 months seen as ideal for face-to-face events, with independent learning opportunities to be utilised more regularly than face-to-face interventions. This builds on the findings from chapter 3, that communication of events is wanted monthly, through email.

The results emphasise that the intervention needs to provide the opportunity to learn according to individual learning needs, whilst enabling participants to share thoughts

and experiences, with networking at face-to-face events seen as positive from interviews. This study showed the preference for learning face-to-face, especially at workshops was high, supporting the opportunity to network, and share experiences. This builds on findings from chapter 3, supporting findings of networking opportunities from workshops. Connolly *et al*.[195] in 2016 showed the benefit of workshops to support peer learning and discussion.

The results show that downloading and reading material is the most likely way to achieve learning, despite it being a solitary activity requiring no active input from an expert or facilitator with no active participation needed by the participant. The results of this study show that, although e-learning is the most utilised method for achieving or delivering active learning, face-to-face learning is still preferred, where possible, with workshops being the most preferred format, showing that the format of learning is not the main driver. Lack of face-to-face interaction with a tutor is a factor in non-participation in e-learning,[340] as being active in the learning process was seen as a preference. E-learning may facilitate participation of fact heavy learning or mandatory learning by employers due to accessibility. Health and safety topics, for example, can be more easily accessed through e-learning. A previous study by Gonzalez-Gomez *et al.*[306] in 2012 showed higher female satisfaction with e-learning compared to male students, and our results echo this. However, with the increasing use of technology, the results show that younger pharmacists are increasingly using alternative technological methods to achieve learning as they want theory, whereas older pharmacists prefer the social interaction of learning in a group environment through lectures or workshops. This is echoed by Nesterowicz[340] in 2016 who showed younger learners being the most frequent users of e-learning. This study showed that the convenience of e-learning supersedes the preference people have for face-to-face interventions. From the interviews networking was an important element in group learning. With regards to gender, previous research by Driesen *et al.*[212] showed that women prefer lectures to workshops, as they disliked active involvement, however our study differs, showing involvement is preferred to ensure learning is achieved.

Even though younger pharmacists are open to technology and online learning, they do not want it to replace face-to-face contact completely.[284,340] This study supports those findings with half of under 25s rating a preference for attendance at a workshop, which was the second highest score by age for that preference, after 45-54 year olds.

Using technology, as in previous studies by Ikenwilo & Skatu[341] in 2014, and Lim *et al.* [236] in 2014, is shown to have positive impact, although it is impacted by technical barriers, which was also seen in the interviews in this study. Previous studies have shown e-learning to be flexible, which was also emphasised as a positive for individual learning in the interviews from this study.[236,299] This may also overcome some of the barriers related to venues being too far and getting home too late. Our findings do suggest though that there is a preference for human interaction as seen in the interviews. Likely participation in various formats from this study showed similar scores for e-learning and face-to-face attendance at workshops. When using technology, previous studies have shown that access to an individual to ask questions is desirable.[299,340]

The way an individual approaches learning has been defined in multiple ways.[342] An approach by Felder and Brent[343] defines learning styles as the 'characteristic ways of taking in and processing information.' Multiple learning styles inventories and characteristics have been described, with debate around whether these do make any difference to learning. Hawk [319] describes that 'no one instrument can capture all the richness of the phenomena of learning style' and Newton,[344] whilst acknowledging that learning styles are still used widely, proclaims that they are in fact a myth. Any learning styles tool is not designed to pigeon hole a learner, but to identify their current preferences.[319,328] This study confirmed that VARK learning style preferences of potential participants do not differ significantly by demographic.

4.4.1 Limitations

Although a large sample of pharmacists was surveyed, they were all from one location, so this may be considered as a limitation of the study. Although the demographics broadly represent those on the GPhC register at the time of the study,[331] results may vary across GB due to regional variations. Some analysis was limited by not asking questions that allowed full comparisons across format. Since the time of this study some providers no longer exist. This study is also limited as, although preferences were identified, knowledge actually gained from the various formats was not investigated.

4.5 Conclusions

Pharmacists want to participate in activity where possible, and the drivers for this are topic and gaining CPD. Barriers to be overcome include timing of event and location, so the use of technology should be explored. In fact, although it is seen that face-to-face learning is still preferred, currently e-leaning is the most used format, and thus is expected to continue to grow in the future. Planning in advance is crucial to ensure preferences are taken into account and to allow uptake and flexibility of opportunities, but also to ensure social interaction and the ability to ask for help when required. Where applicable, the sector and gender of attendees should also be included in the planning to ensure their unique motivators and barriers are taken into account. To support application of learning into practice, pharmacists should be given information, where available, and their knowledge should be tested, to ensure learning. There also needs to be a strategy to ensure good utilisation of providers.

The findings remind us that a one-off learning event may be insufficient to embed new learning into practice, so activities prior to and after the event are useful in helping to enable pharmacists to retain learning and apply them into practice. These findings will support planning of CPD interventions globally.

The study brings together new and previous research to highlight the ingredients needed to ensure maximum participation in learning events through the understanding of current experiences and expectations of pharmacy professionals. Thus, these findings will support pharmacists to continue to achieve CPD required to maintain revalidation with the GPhC.

4.6 Recommendations for framework creation

The findings from this chapter build on those already identified in the previous PESL chapter, to support the planning and delivery of a successful learning event.

Logistics of events are seen to be important factors, so a calendar of events is needed, to avoid any clashes with other local events, and when planning, timing and dates of events are required, along with format, length and intended audience. The cost of an event also needs to be considered.

The topic is a motivator for attendance, so this needs to be carefully considered, and this is supported by an expert speaker or facilitator. Tools to support application of

learning into practice, for example, a copy of the presentation or case studies, should also be planned.

Chapter 5: Learning from other professions in Great Britain

5.1 Introduction

In GB, as in countries globally, healthcare professions, similar to pharmacists, are registered by regulatory bodies, along with the majority also having professional bodies to support them. Nurses and doctors are the 1st and 2nd largest healthcare professions in GB, with pharmacists being the 3rd and dentists as the 4th largest healthcare profession.[345]

The Nursing and Midwifery Council (NMC) is the regulator for nurses and midwifes.[346] The Royal College of Nursing (RCN) is the professional body for nurses. The General Medical Council (GMC) regulates the medical profession. The British Medical Association (BMA) is the trade union and professional body for medics, providing events and learning materials, including access to the British Medical Journal (BMJ) and BMJ learning, an online learning platform. As previously described, the GPhC is the regulator of pharmacy professionals, and the professional body for pharmacists is the RPS, with learning providers outlined in previous chapters. The General Dental council (GDC) regulate dentists, and the health and care professions council (HCPC) regulate 16 professions working in health, psychological and social work professions including radiographers, paramedics, physiotherapists and occupational therapists.[347] As described in chapter 1, HEE provides an overview of workforce planning and provides education to those in health professions.[53]

CPD is needed to ensure practitioners are up-to-date with current drugs and guidelines, and to ensure they are providing the best possible patient care. CPD is a lifetime commitment of providing care in a safe and effective way.[203] This was highlighted in a case in GB, during the Bristol heart scandal, where multiple infants died due to a surgeon not using the most current procedure.[348] Thus knowledge and competence need to be updated regularly to keep up-to-date with the changing role.[41,42] Skills are also essential to be maintained, regardless of healthcare profession, to work together to maintain patient safety and care. CPD requirements are laid out by regulatory bodies of different professions. CE or CPD are commonplace for healthcare professionals globally, although the requirements in place are currently variable. Global requirements for pharmacists will be explored in chapter 6.

IPE is providing collaborative education and learning opportunities for two or more professions.[349,350] IPE is an essential element of pharmacy undergraduate education,[18] but in GB there are no widely used established channels for this post qualification. The benefits of learning together include better communication and breaking down barriers between professionals. Taking part in IPE has positive effects on perceptions of working interprofessionally[147] with each profession bringing their specialism. As pharmacists are considered the experts in medicines, working collaboratively will increase medicines safety and decrease medicinal prescribing errors.[351,352] Furthermore, future roles of pharmacists, e.g. working in GP practices and care homes, will be helped by closer collaborations.[129,148,353,354]

With increasing collaboration across professions, working together and understanding each other's roles and skills will support optimal patient care. This does not mean always learning together, but learning about each other. Interprofessional learning (IPL) may arise from IPE, where learning occurs as a result of the interactions between two or more professionals.[350] Studies show that working together provided benefits for the individual[287] and better outcomes come from these partnerships.[153]

Over twenty years ago, Owens *et al.*[355] found that 75% of professionals had taken part in IPE, although pharmacists were the profession with lowest participation. Hospital pharmacists have more exposure to IPE, due to their work environment, whereas community pharmacists, in their day-to-day practice, will not have the opportunities to learn collaboratively. Location is thought to play a role in the amount of contact between Healthcare professionals (HCPs), with professions in the same physical space enabling increased interactions.[356] Placements with other HCPs could act as an enabler for IPE and allow for greater relationships to be established.[357]

When validating the readiness for interprofessional learning (RIPLS) questionnaire for postgraduate use, Reid *et al.*[358] found that GPs place less emphasis on team work than other healthcare professions, although pharmacists had lower mean scores for patient centeredness. However, recent studies have also shown limitations of using the RIPLS scale.[359] Pharmacists have also been seen to show a statistically significant preference in learning with doctors over learning with other HCPs.[360] Hojat and Gonnella[361] developed a psychometric instrument to further understand the

pharmacist doctor collaborative relationship, identifying that 'collaboration and team, accountability and shared responsibilities' are amongst the drivers of such relationships. With regards to demographics, female students have been seen to be more positive than male students about participating in IPE.[286]

Despite all of the positives identified from IPE and IPL, there is still work to be done to integrate all of the professions.[149] Work also needs to be completed to ensure that IPE opportunities become commonplace in postgraduate work. All professions need to be bought in to the process, and research into the effectiveness and long-term outcomes needs to be continued.[362,363]

In 2014, Tran *et al.*[203] published information about CPD requirements in various countries, comparing that of dentists, nurses, pharmacists and physicians. Tran *et al*.'s[203] study used data for GB that had been gathered in 2013 through a literature review.

As introduced in chapter 1, in 2018, revalidation was introduced for pharmacists in GB, incorporating CPD, which updated regulatory requirements for re-registration. Revalidation is in place to support public confidence in professionals.[364,365] The GPhC describe revalidation as 'a future framework of assurance.'[11] Prior to the introduction of revalidation for pharmacists, there was only a CPD requirement in place. As with CPD requirements, revalidation requirements are also set by each professional regulator. Due to this change in legislation, a review is required to identify any changes for other healthcare professionals, to ensure all professions are being kept up-to-date. This is particularly important in light of interprofessional working becoming more common, and thus a collective health approach is being encouraged. Therefore, there is a need to learn from each other about how lifelong learning is structured, to ensure optimal patient care. Perceptions from learning providers and professional bodies will also support understanding of different professions and their ways of working to identify any best practice that can be shared across professions.

To achieve this a new review of regulatory requirements from the varied regulators' websites was conducted, to compare and contrast requirements, along with exploratory interviews to understand the application of the regulations in practise. This is the first in-depth qualitative analysis, including interviews, from practising

professionals, and representatives of professional groups, focusing on comparisons of CPD for healthcare professionals in GB.

5.1.1 Aims and objectives

The aim of this chapter was to investigate current reality in GB for regulatory lifelong learning requirements of healthcare professionals and healthcare regulators or support bodies, in terms of provision, uptake and attitudes, in order to identify similarities and differences.

Objectives:

- To identify the primary factors affecting participation in lifelong learning events
- To identify current reality about the provision of lifelong learning events
- To identify current best practice for delivery of lifelong learning events from local, and national sources
- Compare mandatory lifelong learning requirements between different GB healthcare professions

5.2 Methods

5.2.1 Design

A mixed method approach was used in order to obtain given information from regulator websites, along with qualitative data from healthcare professionals using semi-structured interviews. The review of regulator websites echoed the previous study by Tran.[203] Websites were reviewed for revalidation and/or CPD requirements, looking at the five main regulators: NMC, GMC, GPhC, GDP and HCPC.

Human participants were involved in data collection through semi-structured interview, either face-to-face or via telephone where face-to-face was not possible. The lead author completed all of the interviews. An interview proforma consisting of 18 questions was designed, aiming to understand current provision for, support for, participation in and evaluation of lifelong learning education and training, along with thoughts about the best options and attitudes towards preferences for delivery of events, to outline good practice. The interview schedule received face validation for content from three pharmacists not involved in the study.

Potential participants were contacted by email, and convenience sampling was used through local contacts, to gain participants. Contacts in pharmacy, nursing, medicine and dentistry from previous committee work on the South London LETB were approached. A snowballing sampling strategy was used to capture one representative each from different profession, along with representatives of professional groups and providers.

5.2.2 Data collection

A search of regulator websites in GB was utilised, with the lead author identifying the regulatory requirements for lifelong learning, as outlined in the available material on websites as at May 2018. This was reviewed in January 2020 to ensure no changes.

Individuals who agreed to participate in an interview were emailed an information sheet, outlining the study aims and objectives and the background of the researchers, including the right to withdraw from the study, and a consent form, which they were asked to read, sign and return, prior to the agreed interview time, if not available face-to-face. Those who were being interviewed face-to-face were given a copy of the information sheet and consent form prior to the interview commencing. Where face-to-face interviews occurred the researcher travelled to a convenient location for the participant. All other interviews occurred over the telephone. Verbal or written consent was obtained for recording, as appropriate. Interviews lasted between 10 to 15 minutes. All interviews were voice recorded and transcribed verbatim prior to deletion. The interviews took place between February 2017 and October 2018.

5.2.3 Data analysis

A summary was created of the requirements listed for CPD on regulator websites, in terms of approach and/or methods used, along with any quantitatively measured requirements, and this was tabulated.

For interviews, content analysis was used to identify frequency of statements, and quotes were used to highlight any key messages.[159,161] More information on rationale for content analysis can be found in section 1.13 and table 1.2.

5.2.4 Ethics

The interview schedule was ethically approved by the University ethics committee (1617/003).

A copy of the interview schedule can be found in appendix 17 and a copy of the full transcripts can be found in appendix 18.

5.3 Results

5.3.1 Website search

The websites of the NMC, GMC, GPhC, GDC and HPCP were all reviewed for CPD requirements. Three professions (nurses, doctors and pharmacists) have revalidation requirements. For the aforementioned professions, this includes a CPD requirement. In addition, although they are subject to CPD, dentists and HPCP registrants are not subject to revalidation. Revalidation for pharmacists and doctors is annual compared to nurses where it occurs every three years. Both pharmacists and dentists have seen changes since 2013; pharmacists with revalidation in 2018 and dentists having an enhanced CPD process introduced in 2018. Whilst completion of CPD is required across all professions that were reviewed, nurses and dentists have CPD requirements set by number of hours completed, versus pharmacists who have a set number of cycles to complete, through to doctors and HCPC registrants, who have CPD as a requirement, but there is no set structure outlined for completion.

Results are summarised in table 5.1.

5.3.2 Interviews

Interviews took place with one representative from each of the following healthcare practitioners: pharmacist, dentist, hospital doctor, nurse, paramedic and radiographer (n=6). Interviews also took place with one member of personnel from the following support/training bodies: two professional bodies, BMA and RPS, two providers, BMJ learning and CPPE and one commissioner in HEE.

Key results from the interviews have been summarised in table 5.2.

	Nurses	Doctors	Pharmacists	Dentists	Registrants of HCPC
Revalidation requirements	Every three years nurses must complete a minimum of 450 practice hours, 35 hours of CPD, five pieces of practice-related feedback, five written reflective accounts, reflective discussion, health and character declarations, professional indemnity arrangements and confirmation[366]	Revalidation was introduced in 2012, incorporating CPD.[367] Annually at appraisal the following should be discussed: CPD, quality improvement activity, significant events, feedback from patients and colleagues, complaints and compliments	Annually pharmacists must complete CPD, a self-reflection on the GPhC standards and a peer review conversation along with outlining changes in practice made as a result of these[47]	NA	NA
CPD requirements	Of the 35 CPD hours, at least 20 must have included participatory learning with other people to challenge insular learning	The GMC specify that there is no correct way to complete CPD, but it is about acquiring knowledge, skills, attitudes and behaviours affecting practise from both formal and informal learning activities. They also specify that there is no specific number of CPDs to be completed, nor number of credits that need to be gained	A total of four CPD entries are required, with a minimum of two being planned learning activities. This new cycle outlines the learning planned or completed and highlights an example of how this has been used in practice and benefitted the people using the service. Activities may be linked to personal learning preference	A total of 100 hours of CPD need to be completed over a five-year period, but annually, dentists will be required to declare how many they have completed that year	The HCPC requirement is that CPD must be declared on re-registration every two years and is randomly reviewed. No standards are set for the number of cycles to be completed. When submitting registrants should explain any gaps in their records that is longer than three months[368]
Any changes since 2013 requirements[203]	NA	NA	In GB CPD has been a professional obligation since January 2005, replacing a requirement to complete 30 hours of continuing education annually.[369] Revalidation was introduced in 2018 with the requirements listed above. Between 2005-2018 the requirement was the completion of nine CPD cycles annually	For dentists, as of January 1st 2018, there is an enhanced CPD process[370] replacing the old process[371] which has been in place since 2008, and all dentists will transition to the new scheme at the end of their five-year CPD cycle. There is a reduction in the overall CPD hours, as non-verifiable CPD has been removed. In 2013 the requirement was at least 250 hours of CPD every five years with at least 75 hours being "verifiable" CPD[203]	NA

Table 5.1: CPD requirements from regulator website search

Profession	How can learning be achieved	When learning takes place for face-to-face events	Providers	Tools to support application of learning	Evaluation of events
Dentist	Verifiable – a certificate is needed Non-verifiable -self-directed learning e.g. reading brochures, practice meetings	Evenings mostly	British Dental Journal British Dental Association	Case study approach to learning No extra given.	None
Doctor	Portfolio. Demonstration of competencies	Mainly during the day	Deaneries	Online modules Handouts	Differs by provider
Nurse	Anything	Evenings and during the day Weekends are not common	Royal College of Nursing Educational institutions	Case studies Vignettes	Online questionnaire
Paramedic	Attendance at courses	Evenings and during the day	Trust Ambulance service	No extra given. Up to you how to apply learning	Evaluation form – good bits, bad bits, how they can improve in the future
Pharmacist	Anything that can be completed. Online or face-to-face	Mainly evening but sessions can occur during the day at weekends or during the week	CPPE. RPS. Private providers and professional groups.	Assessments Handouts	Evaluation form. No information gained on content of form.
Radiographer	Mixture of anything. Postgraduate programmes, self-reflection, learning in the workplace	Weekends or lunchtime	Royal college	CPD tool at the end of journal articles giving structured guidance	Self-reflection using CPD portfolios
BMA (PB)	Online courses. Attendance at courses in London	2 hours in the evening twice monthly	(are a provider)	Recordings of lectures Handouts Relevant BMJ learning article	SurveyMonkey®
BMJ learning (P)	Online courses	Anytime as online. Hour long modules	(are a provider)	Framework given to allow self-reflection	Start rates and completion rates. Star ratings
RPS (PB)	No role in provision				Role in accreditation
CPPE (P)	Online e-learning, distance learning. E-assessments, workshops, peer led focal point workshops	Mostly evenings but conferences during the day or at weekends. Lunchtime	(are a provider)	Assessments Case studies	Feedback forms
HEE (commissioner)	Different things for different professions		Medical schools, Higher education institutions		Turnover, student feedback, attainment in previous years

Table 5.2: Summary of requirements for CPD/CE for surveyed professions from interview. PB = professional body. P = provider.

CPD/CE practices

In GB, a culture of CPD is seen with all professions that were interviewed (dentist, doctor, nurse, paramedic, pharmacist and radiographer) engaging in CPD (n=6/6). Of these, hours of CPD are specified for nurses and dentists, with the HCPC having a portfolio approach to learning. For pharmacists, the number of cycles that need to be completed is specified.

'*We don't have a set number of points. I know some professions will have continuing medical education or CPD points that they have to collect. We just have to show evidence to the HCPC that we are engaging regularly with ongoing CPD and we get audited every two years*.' **Radiographer**

'*Revalidation for pharmacists includes recording and submission of four CPD records… of which at least two have to be planned CPD*.' **Pharmacist**

How is learning achieved and verified

Most professions could achieve their learning through multiple formats. The paramedic was the only professional who stated learning is mainly through attendance.

'A lot of it is attendance at courses and sort of higher education things then you have to write up how it applies to what you are going to do.' **Paramedic**

All other professions noted a mixture of available activities, with opportunity to undertake face-to-face or alternative methods of learning.

'*We try and encourage radiographers to make their portfolios have a mixture of everything so it would be attending any formalised, um, credit bearing postgraduate programmes...But we would then also encourage them to do independent reflection on learning events that have taken place in the workplace*.' **Radiographer**

Providers spoke about their online training provision (BMJ learning) or portfolio of learning options (BMA, CPPE).

'Learning itself is online learning. We have 1700 modules, 1200 of which are available to normal subscribers. The other ones are what we do for our journals, which are only available through our journals. The CPD sort of product is 1200. Half of those modules are interactive, in house 'proper' learning modules. The other half are, read this journal article.' **BMJ learning**

'The BMJ has a big learning site where there are lots of modules, they can do online modules, there are all sorts of specialities and subjects. Um, we, at the BMA, in London, run regular, CPD events so people come along and do two hours in the evening, with lectures and asking questions.' **BMA**

'*We have a lot of formats available. We have online learning, so we have a number of e-learning courses... Face-to-face workshops*.' **CPPE**

Certification or proof of attendance/participation is commonplace to fulfil CPD requirements. Certificates are required for three professions (nurses, doctors and dentists) for verifiable CPD. These are required for submission to the regulator for audit or for use during an appraisal for doctors.

'*It can be anything. It can even be going to a conference, so as long as you get a certificate of attendance you are fine.*' **Nurse**

'People can keep a portfolio of all their evidence, they get certificates, and then their can help them with their appraisal and to maintain their registration.' **BMA**

However, all professions stated that the regulator only looks at a small sample of records submitted.

'*Only 2.5% of submissions will be looked at annually*.' **Pharmacist**

'*They will check a percentage*.' **Nurse**

Support given for lifelong learning participation

A large culture of carrying out learning in the professional's own time is seen. All professions interviewed stated some learning should be completed independently (n=6/6). Doctors are seen to be given protected time during work hours, and dependent on the hospital trust, nurses may also get this too.

'It is protected time, and backfill time. There is a study budget for whatever they do, I think it is nominal, £500 or something, I don't know the exact. But in terms of the training that is mainly in house, in the various hospitals, so we might host a thing, but you have to turn up to so many of them, I think the requirement is 70% or something like that.' **Doctor**

'*I have noticed that some trusts say we will pay the fees and you do it in your own time, other trusts say we will pay the fees and we will give you some study leave. Others do a combination.*' **Nurse**

When learning takes place for face-to-face activity

Evenings are a very common time for activity to take place (dentist, BMA, CPPE). Some activity predominantly takes place during the day (doctor) or mainly in the evenings (dentists), with other professions having flexibility of events during the day or the evening (nurses, paramedics, pharmacist). Radiographers noted weekend events being common.

'During work hours are the most common but some places will start to put on more into the evening, but it is very rare to do weekends although I think they are there.' **Nurse**

'Evenings mainly.' **Dentist**

'*Things that are organised on a regional basis and through the college of radiographers are quite often organised at weekends, so there could be an AGM with some study events going on a Saturday...people were saying I just can't get time off because the service is so pressurised.*' **Radiographer**

Geography does play a part in the time of activity, as travelling time to locations and the associated cost can affect attendance numbers.

'*BMJ learning, as a department, also has other products, so there are masterclasses as well, which are face-to-face learning, um, which, we have about, between 2 and 3 hundred attendees for. ... the regional ones weren't as popular, so we only do them in London now*.' **BMJ learning**

'*And making the time to go after work is very difficult, and travelling, you don't know if it is local to you. And cost of travelling can be a bit much.*' **Dentist**

Providers of lifelong learning

Professional bodies are the predominant providers of training across the board, although employers and universities also provide learning opportunities.

'Well, of course, it is all NHS providers who have training, both nursing postgraduate, pharmacists, doctors, apprentices. Training providers in the NHS and then a variety of other providers for different groups. Medical schools, HEIs, not so much further education colleges, but expanded apprenticeships.' **HEE**

'So the ambulance services themselves do a lot of stuff but we are such a widening profession now that we can go to all sorts of places. So the trust also offer courses but it has become so wide recently that people are looking at all places.' **Paramedic**

'The BDJ (the British Dental Journal), you have to be registered with them. They do a lot of, they send you emails to say this is going on and this is going on. They have BDA (British dental association) events as well.' **Dentist**

'The royal college is probably the main provider.' **Radiographer**

As outlined in previous chapters, pharmacy has availability to utilise learning from CPPE, along with the professional body and other specialised training organisations.

'If people are part of the Royal Pharmaceutical Society, they can use the Pharmaceutical journal and just access articles. There is the Centre for Pharmacy Postgraduate Education (CPPE) through Manchester who do a lot of distance learning or workshops, and events there. There is a variety too of meetings, through the RPS, local meetings through LPFs. Evening meetings. There are other meetings that people might go to run by people like UKCPA or Pharmacy Management.' **Pharmacist**

Doctors see their learning led by Deaneries, geographic areas of HEE.

'It is run through the deaneries, so that is the post-graduate schools basically. They are across the different regions.' **Doctor**

Interestingly, the RPS does not define its role as a provider but being there to quality assure material and content being delivered.

'So the RPS, because we are not a provider, don't have to evaluate in that sense. We accredit others, so we will look at training programmes that other providers produce and we accredit that training, we have a training seal.' **RPS**

Tools to help application of learning into practice

A variety of support material is seen to support application of learning into practice. These include case studies being used during the session (nurse, dentist, CPPE), vignettes (nurse), online material (CPPE, doctors), handouts (doctors), CPD support tools providing reflection points from the session (pharmacist, radiographer) and post course assessments (CPPE). The BMA send out a list of the top information to remember after the event with links to further learning. In some cases, it was stated that no support is given (paramedic).

'*In post-registration there is a lot of use of cases, and that is in many forms… The other areas like emergency nursing, they have vignettes, so they have models that are falling to pieces or whatever and then they have to problem solve.'* **Nurse**

'You see case studies in practice.' **Dentist**

'If you go to the study days it is fairly standard. Handouts.' **Doctor**

'I am a big UKCPA fan, and often they give you grids to help you think about the elements you need for CPD, and to fulfil the requirements for the GPhC requirements.' **Pharmacist**

'Well both of the journals that the college of radiographers produce they have a CPD tool at the end of it and they give you, um, elements within that paper that you need to reflect on and then record within your CPD.' **Radiographer**

'Through the assessment we try to get people to test knowledge and understanding, but we also test comprehension, which is probably as far as you can go with an e-assessment and multiple choice.' **CPPE**

'No, it tends to be up to you really to apply it.' **Paramedic**

When asked about any tools that are not currently utilised that may be of benefit, review and evaluation of learning, critical analysis/appraisal and handouts were mentioned.

'*I think it should be part of an annual evaluation by your* boss.' **Paramedic**

'*I am thinking of critical analysis, we should probably get more of that going on*.' **Nurse**

'*Handouts and things during lectures would be quite good and you struggle scribbling it all down. It is mainly seminar/lecture*.' **Dentist**

Evaluation of learning events

Evaluation of events takes place in numerous ways including online follow up survey (nurse, BMA), self-reflection (radiographer), and the most common, evaluation form (paramedic, pharmacist, CPPE). It is noted however, that this may not be seen as true evaluation. Providers such as BMJ learning and HEE also look at completion rates or turnover. A few stated that no evaluation takes place of the learning events (dentist). When describing the content of the evaluation forms, it is seen that similar questions are asked, covering what went well and what could be done differently (paramedic, nurse, BMA) and in a few cases the intention of how the learning would be applied (radiographer, pharmacist, CPPE).

Certainly with our university they do an online questionnaire… looking at what have been the highlights of the module, and what are the areas they would like me to relook at. **Nurse**

'We tie completing the SurveyMonkey® to them getting their CPD certificate.' **BMA**

'Most of those providing those events will have their own form or evaluation but that is much more about how the day went, what did you get from it. Now, you can take those and use them for your own reflection.' **Radiographer**

'They ask you what you go out of it, what were the good bits, what were the bad bits, how could they improve in the future.' **Paramedic**

'Usually you get an evaluation form at the end.' **Pharmacist**

'*We have feedback forms that everybody does. But that's probably not true evaluation because if you were going to do proper evaluation you are looking at what difference has that made to one's practice which you can't measure in a two-hour workshop. So, at the end of a two-hour workshop you can only measure at best I think, peoples intentions*.' **CPPE**

'Purely data wise, we look at start rates and completion rates, which kind of tell us if the topic is popular, and the completion rates tell us that the module is of sufficient quality that they want to get to the end of it, and pass rates, so are the questions written to a standard.' **BMJ learning**

'When it comes to nursing and the other courses we commission and continue to do, we have contract with evaluation points throughout the year that looks at turnover, student feedback, attainment in previous years, and we have an annual quality setting process with providers.' **HEE**

'Not really, no' (when asked about evaluation or evaluation forms). **Dentist**

Opinions on the best model for lifelong learning

A combination of face-to-face and online was seen to be a good approach, with individuals having preferences according to age or experience.

'I think you will find most people do well with a balance, um, and also depends on individuals learning style and what they like best.' **BMA**

'Probably to do with my age but I personally prefer face-to-face.' **Radiographer**

'In the past, and this is me just making an assumption, I would, many people were, you know, a little old fashioned, so liked talk and chalk, or, you know, being lectured at. I mean nowadays its, um, its changed dramatically, with the online options and simulation laboratories and, you know, cinemas in the office and lectures on line.' **BMA**

'We do have the very traditional GPs where people want to read and do tests for an hour, and then we have the much younger group that have completely different ways to learn, and they just want to watch a video or something, so we are moving in that direction....' **BMJ learning**

Online learning was a good opportunity for those who work shifts or those who found time to be an issue, as it can be completed in an individual's own time. Younger learners may also prefer this method.

'I think both are really valuable. I think online is more accessible if you work shifts.' **Paramedic**

'Online is so good because you can just do it when you want. Some of it you can start it and then pause it and go back to it.' **Dentist**

The cons of online learning were that it is seen as a tick-box exercise and not taken as seriously, with learners just being able to click through the material. Face-to-face delivery is seen to have the advantage of being able to share ideas, network and ensure everyone is on the same page.

'When you are expecting to do something online it can be done in a bit of a rush and be seen as a bit of a tick box exercise. I just have to do it because I have to do it.' **Radiographer**

'Um, my own view is that there is added value in face-to-face, not just necessarily with the trainer and trainees, but amongst the trainees, as there is a shared learning if you have a group of people together.' **Doctor**

'I prefer to be able to go along to a session and get practice experience and people feeding in what they are seeing on a day to day, whether that is on a practical or process element or service provision or whether it is a clinical topic.' Pharmacist

'There is definitely pros and cons of each. We have noticed that with our online e-courses that engagement tails off… I think with online learning as well, sometimes people just click through… Face-to-face learning, probably more engagement, but then, you do have that 'is learning effective in the evenings' where people have had a long day at work.' **CPPE**

'I think both are really valuable. I think online is more accessible if you work shifts so you can do it whenever you want but I don't know if the update is that good on them. Face-to-face tends to cost more and then you have to get there when you are free but I think once you are there you tend to engage better with the material and you are there because you really want to be there.' **Paramedic**

'Thoughts I have are that we need to keep up with new technology and new ways of learning, and sometimes I look at some of our delivery and I think, um, we need to up our game really'. **HEE**

It was noted that there should not be a one size fits all approach as people are different.

'Everyone has a different learning style, and I think some things are better for some people and some things are better for other people, and you need a mix, sort of dynamic and up to date and interesting. Some people will like to do head in a book and theory and others will look to be doing practical and the best is probably a mix of those things, so I think the individual has to find their individual best way to learn.' **BMA**

5.4 Discussion

It is seen that, although all healthcare professions surveyed in GB are required to undertake CPD, how this is completed is varied. Three professions; medicine, nursing and pharmacy outline revalidation requirements, that include CPD. Both pharmacists and dentists have seen changes in requirements in recent years.

Whilst the term 'revalidation' is used by three professions, the requirements for this differ. This is echoed by the GDC, whose policy advisor quotes that 'you will notice that we don't refer to "revalidation" in relation to lifelong learning or CPD.'[372] They continue that revalidation can have differing meanings to different people, so the GDC, in their new scheme, just focus on what features should be included in a scheme to ensure the lifelong learning of professionals. The HCPC define CPD as 'a way for registrants to continue to learn and develop throughout their careers in order to keep their knowledge and skills up to date and be able to work safely and effectively.'[373]

Since the review by Tran *et al.* in 2013,[203] two professions have seen changes in the regulatory requirements of CPD; pharmacists and dentists. Whilst both professions have seen a reduction in overall requirements, there is more emphasis on verified learning, and showing the impact of learning on practice. A review of CPD requirements of UK health professionals published in 2020 also acknowledged that the regulatory requirements are the minimum expectation and CPD activity is likely to exceed that set by the regulator.[374]

This study shows that most CPD is completed in the professional's own time, and this could mainly be guided by personal learning needs. When looking at the literature, Pool *et al.*[375] in 2016 saw that for nurses, mandatory courses were useful for complying with requirements, conferences were used for deepening knowledge and postgraduate education was used to develop careers. Although mandatory to complete CPD for all professions, this study showed that only a few records are checked by the regulators annually. This may impact on the importance professionals place on the entry. When surveyed in 2009,[376] it was seen that 70.5% of nurses had participated in CPD in the past year. A systematic literature review of paramedic CPD[377] showed that paramedics need to take ownership of their CPD, and increase their clinical exposure for CPD. In a systematic review of CPD attitudes of pharmacists in GB,[26] it was identified that overall pharmacists understood the benefits of CPD participation, however, there was no overall acceptance and uptake of CPD. In 2011, a report was issued looking at the role of the GMC in CPD.[378] The report outlined a concern among medics that the GMC could make requirements too prescriptive, although it should be setting quality standards. When asked whether their activity over the last five years had helped to improve patient care, 79% (n=1559/1975) said yes and 6% said no, with the remainder stating they were unsure.

This study outlined that although verification of learning was sometimes needed, fulfilment of learning was down to the individual. Also, quantifying CPD differed by profession. For pharmacists there are a specified number of CPD cycles to be completed, versus hours of CPD specified for nurses and dentists, whereas medics and registrants of HCPC can be more flexible. Timings for the revalidation cycle also differed with pharmacists and medics having an annual declaration of revalidation, and the other surveyed professions ranging from a two to five year rolling cycle. Whilst this time limits vary, dentists are required to demonstrate ongoing learning by declaring

completed hours annually, and HCPC registrants have to demonstrate continual learning by explaining any extended breaks of no recording.

The findings have shown that multiple professional bodies are used to provide education and training interventions, but there is limited literature regarding evaluation of the uptake of different providers, although a study of uptake for pharmacists in GB has been completed, as seen in chapter 4. Previous literature has, however, cited the benefits of employer interventions/learning to support practical experiences. The studies show that if a manager supports their team in learning, this is more likely to have an impact.[139,140,210] Schindel *et al*.[141] in 2019 show that peer and manager support is needed in a time of changing practice, and that CPD is successful if it encompasses learning in practice and the workplace. Nurses and paramedics saw more variety in learning times than other professions, with events occurring during the day or during evenings perhaps due to shift work, to allow participation.

As supported by this study, pharmacists, along with nurses and doctors are required to show the impact of their learning on their practice[365,366] Any CPD event is not truly successful unless learning has been translated into practice. O'Loan in 2019[379] when surveying pharmacists in Northern Ireland, noted that professional practice improved more when pharmacists had undertaken structured CPD, and especially where it incorporated workplace learning activities. Feedback from service users supports the demonstration of learning into practice. It is interesting from this study that medics are required to gain feedback from patients as part of their CPD. Gaining feedback from patients will allow reflection on practice and identification of patient outcomes first-hand. Nurses and pharmacists need to complete reflective accounts or peer discussions, to self-reflect, and gain feedback. Although peer review discussions for pharmacists could potentially involve patients, this is not commonplace.

Reflection is known to be integral to CPD for continual improvement.[32] In this study, reflection on learning outcomes is evident for nurses, pharmacists and medics, as part of their CPD entries or appraisal conversations. This study also outlined some of the tools available after CPD interventions, to support application of learning. Learning which is based on clinical work and practical experience will have greater impact on patient outcomes.[150] A study focusing on radiographers[380] noted that the resulting impact to patients should be the primary feature of any CPD activity. When looking at

application of learning into practice in different professions, how the CPD enhances the organisation was also an important factor in driving CPD requirements for nurses.[139] Core learning for dentists to complete as part of their CPD includes topics based around patient safety, so will have a perceived application into practice.[381] Work is ongoing to ensure consistency of CPD experiences for dentists across Europe to aid transferability across countries and improve patient care.[382]

This study showed that, as in previous studies that there is 'no one size fits all' approach for lifelong learning, with advantages and disadvantages of online and face-to-face learning events.[383] When looking at age preferences, previous research by Simonds[284] in 2014 shows that with online learning older students preferred to watch lectures, whereas younger students preferred more interactive learning strategies. The PESL study, in chapter 3, identified that those aged 36-45 have lower preference for face-to-face learning, possibly linking to child-bearing age. The PESL chapter also identified that when considering pharmacists, even though younger pharmacists are open to technology and online learning, they do not want it to replace face-to-face contact completely, which was also found by Simonds in 2014.[284]

Similarly, topic preferences may differ throughout careers. Differences between demographic groups was seen in chapter 4 for pharmacists. Although topic choice was not specifically looked at in this study, it has been seen in a previous study[384] that the themes of focus for CPD change throughout the life of the nurse from creating possibilities at the bedside in the early stages of the career through to doing CPD for a particular focus or for self-fulfilment at the end of a career. For doctors, those in the 51-55 age bracket had a greater perceived need for CPD in a clinical area compared to colleagues over 55, whereas younger doctors perceived less need for CPD in IT areas.[341]

As in this study, and in the PESL and survey chapters, time has been cited as a barrier to CPD, both time needed for attendance, and the time of the day. Pharmacists note time as their biggest barrier to participation in CPD.[199] Time for face-to-face events was the biggest barrier to attendance in female doctors in a previous study.[341] Geography was an issue for attendance in this study, as also outlined in the survey chapter.

5.4.1 Limitations

The limitations of this study include that only one person from selected professions was interviewed, so experiences will be varied, and opinions given regarding preferences of learning would be personal, and not necessarily representation of the profession as a whole. In addition, representatives from professional bodies did not represent all professions. Regulators were also not approached for interviews so information was only used that was published and available on websites. The professional body for the largest healthcare profession in GB, the RCN was not interviewed either, so only the professional bodies for the 2nd and 3rd largest professions were interviewed.

5.5 Conclusion

It is seen that CPD is commonplace across healthcare practitioners in GB, and professions see the benefit of completing learning. Although specific requirements for CPD completion and verification differ amongst the professions, including in timescales, number of records and feedback needed, similarities were seen in required outcomes and how learning is received. Regulators update requirements when they see a need to do so. CPD is beneficial when the impact of learning is shared and is supported by a work-based approach to increase outcomes. CPD can be completed in various formats and at flexible times, so CPD provision is responsive to the needs of the profession and their regulatory requirements. Participation and engagement is dependent on individual preferences and needs. Best practice identified includes flexibility in approach to providing learning, to allow registrants to participate how and when is suitable for them and summaries and tools to support application of learning into practice were appreciated. With a multi-professional care approach being promoted to become common place in primary and secondary care, it is essential that a common standard for ensuring competence across the workforce is established and maintained. Although varied requirements are in place, regulation should support patient-based practice outcomes.

5.6 Recommendations for framework creation

This chapter has identified that learning is similar, yet varied, so any framework created needs to allow flexibility to be adapted to varying needs and requirements. The findings should encourage a framework to define the format of the delivery, and to identify whether backfill will be provided to allow for protected time for learning.

Certification of learning and planning for any tools to support application and evaluation of the learning should also be ensured.

Chapter 6: Learning from other pharmacists globally

6.1 Introduction

6.1.1 Mandatory lifelong learning at a global level

As already established, lifelong learning is essential for pharmacists to ensure their knowledge and competence is maintained throughout their career. Lifelong learning requirements consist of regulatory requirements of the country where the pharmacist is registered, such as mandatory requirements to achieve CE hours or demonstrate CPD as introduced in chapter 2. These can include a requirement to achieve a specified amount of CE hours, with a pure participation focus, or complete CPD which requires the participant to identify their individualised learning needs, plan and participate in an activity and then show the value of the learning on their practice.

Multiple reports have reviewed the requirements set up at a global level for mandatory lifelong learning[196,202-205] and these show a wide range of variation amongst countries. In the FIP global report on CPD/CE in pharmacy education,[196] it was seen that 33 out of 66 surveyed countries had no requirements in place. As the report shows, around the world there are many different systems in place for CE and CPD, or they may not exist at all. Where a mandatory requirement to demonstrate CE or CPD is seen, the requirements are wide and varied across, and within, countries. Current requirements may be linked to length of time that the profession has been established, the role of the pharmacist or current regulation requirements. Chapter 1 explored the ongoing need to standardise undergraduate education of pharmacists globally, as well as setting clearer standards to maintain post-registration.

From looking at the international CPD reports available[196,202,203] mandatory CPD systems are in place in Australia, Canada (Ontario), GB, Ireland, Malaysia, Namibia, New Zealand, Northern Ireland, Oman, Portugal, Singapore and UAE. It is noted that pharmacy in Portugal and the UAE is regulated by Government/Ministry, and these have CPD credit systems, akin to CE, whereas all other listed countries have mandatory CPD for pharmacists that is regulated by councils or boards at the individual state level in a country. The USA is the only country listed in the reports, which looked at data until 2014, as having a mandatory CE system, in some states.

Driesen *et al.*[336] noted that there is no global model in place for lifelong learning. Nevertheless, various models have been outlined for CE or CPD including assessment,[385] learning at work,[386] reflection,[387] peer review[195] and specialisation.[388] Formats used include face-to-face, distance learning which includes sent written material to review, and online learning, including webinars or e-learning activities. Models or formats used for CE/CPD differ both globally, but also within countries, but no review of these models has been carried out, so currently providers of lifelong learning have no reference of whether any particular model shows better outcomes or is more preferred by pharmacists. Where there are no CE/CPD requirements in a country, pharmacists may still want to engage in learning activities so identifying current approaches used may benefit those introducing models in the future.

Bruno *et al.*[204] point out that despite the differences seen in different countries, the improvement of patient health is the key goal that binds all practitioners. A review by the Pharmaceutical Society of Ireland[202] recognised that a CPD model must focus on practitioner development to ensure that skills and knowledge are built upon throughout a career, whilst recognising different jobs in different career settings, with a primary focus on patient care. It also showed that a balance of activities is needed to achieve CPD and the focus should be on outcomes, rather than inputs. When comparing CE and CPD, it has been noted that CPD offers a greater return of investment compared to CE as there is a greater focus on context and application.[199,201] It has also been noted that CPD must facilitate changes in behaviour to support advancement of pharmacy practice.[389] Driesen *et al.*[336] noted that CPD has had increasing popularity in countries that have a tradition of lifelong learning, with associated behavioural change. Another study by McConnell *et al.*[142] echoed this showing that participants noted greater practice improvement after CPD compared to those participating in CE. Wheeler *et al.*[197] in 2018 also noted the benefit of CPD on practice over CE. Regardless, any education program that a pharmacist participates in should support assurance of competency to practice, and increase application of knowledge into practice for the benefit of service users.[198]

Globalisation of pharmacy education, to create a culture of learning from each other to ensure enhanced patient care, is ongoing.[390] Alsharif[206] outlines several of the organisations currently developing globalisation strategies for pharmacy education.

These include American Association of Colleges of Pharmacy, FIP, and the World Health Organisation (WHO). Internationally, the 2017 FIP global report – pharmacy at a glance,[391] representing 74 countries (76% of the world's population) identified there were 2,824,984 actively practicing pharmacists. In that report, the median density of pharmacists per 10,000 of the population was 5.09. There are higher densities of pharmacists for the population in countries with increased income. In GB and the USA, for example, the number of Schools of Pharmacy are growing, thus creating more future pharmacists. Despite the number of pharmacists, there is still a global shortage of pharmacists to provide patient care,[390] with the WHO United Nations Educational, Scientific and Cultural Organization (UNESCO) FIP Pharmacy Education Taskforce in 2008,[392] noting a current shortage of over 4 million health care workers globally, including pharmacists. Therefore, there is a need to address education provision globally to help fill this gap. The FIP 2014 report[196] notes that the market for CE/CPD provision correlates to a country's wealth, so further work is required to reduce inequalities related to access to learning.

6.1.1.1 Lifelong learning models in different countries

Pharmacists from GB register with the GPhC, the pharmacy regulator. Any person registered with the GPhC is bound by their revalidation requirements, which have been outlined in previous chapters.

Australia, through the Australian Pharmacy Council (APC), introduced mandatory CPD for renewal of registration in 2010[393] after recognition that the regulation of the profession differed significantly in different states.[394] Pharmacists should follow the National Competency Standards (NCS)[395] and accreditation of CPD activities is carried out by the APC.[396] Although the Pharmacy Board of Australia expects pharmacists to follow NCS, a study in 2016 found that 86% of pharmacists knew the NCS existed but they reported low usage.[397] Although useful for self-development, pharmacists did not use it regularly.

In parallel to pharmacy in GB, pharmacy in New Zealand, until 2004, was regulated and represented by the Pharmaceutical Society of New Zealand (PSNZ).[398] In 2004, the Pharmacy Council New Zealand (PCNZ) was created as the regulator, with the PSNZ continuing to act as the professional representative body. Pharmacists in New Zealand are required to register annually and declare CPD at this time. The council

outlines requirements to achieve annual practising certification (APC). Although the CPD standards are set by the Council,[399] to achieve them enrolment is required in a Council-approved recertification programme. The current programme that is used is run by the PSNZ, ENHANCE 2.0. To achieve the required standards, points are gained from participation in learning activities, with a minimum of 20 points gained per year and 70 gained over a three-year period. ENHANCE allows a framework for recording activity, in addition to providing learning support and opportunities for face-to-face learning with verifiable points to support achievement of the required outputs.[400] Group 1 activities, worth 1 point, include activities where minimal or no attendee participation is required e.g. reading a journal. Group 2 activities, worth 2 points, demonstrate an understanding through assessment, and group 3 are activities that demonstrate practice improvement, also involving a learning partner, which are worth 5 points.[401]

In the USA, registration of pharmacists is done at a board level in different states, overseen by the National Association of Boards of Pharmacy (NABP). Across the USA various systems for CPD and CE exist, with no clear model across the country. The Accreditation Council for Pharmacy Education (ACPE) sets standards for education, as well as accrediting providers of CE. Information is available to support both CE and CPD activities, with the recognition that CPD is an active learning process to support achievement of career goals.[402] Although, there is recognition that CE does not fully support a culture of lifelong learning,[203] CPD is still not fully implemented across all states. CPD started to be discussed in 2004,[40] and was introduced as a pilot during 2006-2007 in five states (Indiana, Iowa, North Carolina, Washington, and Wisconsin).[198]

In Canada, after completing university and a preregistration internship including provincial and national examinations, pharmacists are registered at a provincial level. To date, there is no consistent model for CE, with some provinces adopting a CPD model, such as in Ontario.[22]

Looking at other countries, limited literature exists regarding mandatory lifelong learning requirements. The majority of the literature available explains CPD systems in place, where they exist, although these are varied, and have been introduced at different times.

Mandatory CPD was introduced into Singapore in 2006.[196] Ethiopia is also new to the CPD concept, with guidelines being introduced in 2013. In a study in 2016, Gelayee *et al.*[403] explored understanding of pharmacists and found that 56.5% were unaware of the CPD concept, although 73.9% engaged in self-directed learning activities. In contrast, Malaysia introduced CPD in 2012, setting a target of 30 CPD points annually, and when it was reviewed in 2015,[404] it was seen that 87.9% were aware of the current CPD requirements, and 49.4% believed the target of 30 points was acceptable. Targets are also seen in the United Arab Emirates, where pharmacists are expected to gain 20 credit hours a year. Portugal also runs a CPD credit system.[196] Targets are not mentioned in the literature, but Ghana runs a CPD platform for self-directed learning.[196] Greece also has CPD requirements and when Greek pharmacists were surveyed about CPD in 2016,[405] almost half said they would spend 8 hours or more on CPD on a monthly basis, with all agreeing they needed to strengthen knowledge. In China, a flexible approach is taken. China link professional development activity to needs-based health policies.[196] China also has no independent accreditation body for pharmacy education.[23] Belgium introduced mandatory CE in 2014, with courses run by IPSA, as seen in chapter 2.[211] IPSA is the post-graduate training institute for Flemish and Brussels pharmacists. They operate a points based system. In Ireland, a new process of CPD was introduced in 2015, with the Irish Institute of Pharmacy (IIOP) set up in 2013 to develop and manage the CPD system for pharmacists in Ireland.[406] Their five-stage CPD cycle reflects elements of self-appraisal, planning, action, documentation and evaluation.[200]

No standards for lifelong learning exist in South Africa, Japan, Namibia or Paraguay.[196] Cuba also has no standards in place.[24] Yemen, also currently have no standards as their pharmacy course was only established in 1987.[29] The Pharmacy Council of India, as regulator, does not have in place any current regulations surrounding CE, nor does it set minimum competencies or standards of service. In Bangladesh, over 95% of graduates work in the pharmaceutical industry, and as such, little emphasis is placed upon CPD or CE requirements.[21] This is similar in Vietnam where many pharmacists work in the pharmaceutical industry, and CE opportunities are extremely limited.[28]

Whilst previous studies have looked at requirements and comparisons of CPD/CE globally, no qualitative study can be found from practising pharmacists registered in different countries.

6.1.1 Aims and objectives

The aim of this chapter was to identify current practice of lifelong learning, including mandatory CPD/CE globally, from registered pharmacists, and explore views of the various models in place, through qualitative interviews.

Objectives:

- To identify the primary factors affecting participation in lifelong learning events
- To identify current reality about the provision of lifelong learning events
- To identify current best practice for delivery of lifelong learning events from national and international sources
- To compare global requirements and practices of lifelong learning for pharmacists

6.2 Methods

6.2.1 Design

Human participants were involved in data collection through semi-structured interview, either face-to-face or via telephone or skype where face-to-face was not possible.

The same interview proforma was used as in chapter 5, which was 18 questions aiming to understand current provision for, support for, participation in and evaluation of lifelong learning education and training, along with thoughts about the best options and attitudes towards preferences for delivery of events, to outline good practice. The interview schedule received face validation from three pharmacists not involved in the study. A copy of the interview schedule can be found in appendix 17.

6.2.2 Data collection

Pharmacists from countries including GB, Ireland, Australia, Belgium, Canada, Malta, the USA and New Zealand were approached as colleagues who had an interest in lifelong learning, due to previous conference attendance. Colleagues registered in other countries along with those registered on the Overseas pharmacists' assessment programme (OSPAP) course at Kingston University were also approached. OSPAP is a course for pharmacists from outside of the European Union who wish to join the register in GB. Practising pharmacists were chosen for interview to understand the reality of how requirements set by regulators are applied in practice.

Individuals who agreed to participate were emailed an information sheet, including the right to withdraw from the study, and a consent form, which they will be asked to read,

sign and return, prior to the agreed interview time. All interviews were voice recorded after verbal consent was received and transcribed verbatim prior to deletion. Interviews took place between February 2017 and October 2017.

A copy of the full transcripts can be found in appendix 19.

6.2.3 Data analysis

Content analysis was used to identify frequency of statements, and quotes were used to highlight any key messages.[159-161] See sections 1.13 and table 1.4 for more information about content analysis.

The interview schedule was ethically approved by the Kingston University ethics committee (1617/003).

6.3 Results

One pharmacist registered in each of Australia, Belgium, Chile, GB, India, Iraq, Ireland, Malaysia, Malta, Pakistan, Philippines and USA was interviewed. In addition, two pharmacists from New Zealand were interviewed. Thus a total of 14 interviews were completed. Despite multiple emails, no representative from South Africa or Canada was recruited.

There is a mixture of CE and CPD requirements in place around the world, along with countries who do not have any regulatory requirements. These have been summarised from the interviews in tables 6.1 and 6.2.

Country	CE or CPD?	Specific requirements	Is support given?	Verification of learning
Australia	CPD	Annual requirement of 40 credits Group 1 – 1 credit per hour of learning. Education or non-peer reviewed material (maximum 50% of points from this group) Group 2 – 2 credits per hour of learning. Demonstration of learning or peer review Group 3 – 3 credits per hour of learning. Learning with a practice led element.	Done in own time Can claim back fees on tax return	Need to provide evidence that you completed the CPD
Belgium	CE	60 CE points to be acquired over 3 years Maximum 10 points annually from online (increased from 8 in 2018). Category A – pharmacotherapy Category B – pharmaceutical care Category C – anything else although not all points can come from here.	People must pay to attend lessons but can claim back up to 400 euro per year at nine euro per hour	Certification. Now an online system using ID card.
Chile	NA			
Great Britain	CPD	Revalidation requirements consist of completion of 4 CPD cycles annually, along with an annual reflection on the Standards for pharmacy professionals and a peer discussion.	Done in own time	Submission online is annual in order to maintain registration
India	No requirements			Certificate of attendance
Iraq	CPD			No follow up from mandatory events. No record needed.
Ireland	CPD	Portfolio of CPD showing outcomes on practice. For those in patient facing roles an annual weekend training is required with eight standardised patient interactions then online e-assessment with 16 cases of three open book MCQs.		1/5 of pharmacists are reviewed annually Standardised format for recording based on a five stage cycle. Online system so can upload evidence.
Malaysia	CPD	Requirement to get 30 CPD points annually		Proof needed or attendance and portfolio needs to be submitted to the Board of Pharmacy
Malta	No requirements			No requirements
New Zealand	CPD	Requirement to get a minimum of 20 CPD points annually but over three years 90 points are required from three groups (like Australia).		Certification needed of credits completed
Pakistan	No requirements		The pharmaceutical industry supply training for their workers	
Philippines	CE	Points system		Certificates
The United States of America	CE or CPD	Differs by state – points-based system (NB The pharmacist interviewed came from a state with CE requirements – some other states in the USA have a CPD requirement)	Depends on where you work. May be given protected CE time in work hours.	Certificates

Table 6.1: Summary of requirements for CE/CPD according to pharmacists from surveyed countries

Country	How can learning be achieved	When learning takes place for face-to-face events	Providers	Tools to support application of learning	Evaluation of events
Australia	No restriction on format although a minimum of 50% must involve peers	Monthly local evening seminars Weekend seminars	Pharmaceutical society of Australia Society of Hospital Pharmacists	Online assessments	Surveys
Belgium	Attendance at lessons or lectures. Face-to-face or online	Mainly evening. 8-10pm with drinks and sandwich from 7:30 Occasionally weekend.	Institute for Permanent Study for pharmacists (IPSA) – Flemish speaking part. The Scientific Society of Francophile Pharmacists (SSPF) – French speaking part.	10-14 days post event a list of 10 to remember is sent Working groups are created to work through follow up case studies Online assessments	Evaluation form – organisation, content, speaker, documentation and knowledge gained. Overall score out of 20. Goal to get average over 14.
Chile	Training courses		The Association of Pharmacists	Case studies Group working	
Great Britain	Anything can be completed. Online or face-to-face	Mainly evening but sessions during the day also occur during the week or at the weekend	CPPE. RPS. Private providers and professional groups	Assessments Handouts	Evaluation form. No information gained on content of form.
India	Training courses			No extra given	
Iraq	All face-to-face	During the day or at weekend	Syndicate of Iraqi Pharmacists	Handouts of slides	Small survey – happy, parts to improve, your thoughts
Ireland	Online and face-to-face	Adhoc	Irish Institute of Pharmacy (IIOP)	Personal development portfolio	Anonymous online survey Providers undertake annual quality review
Malaysia	Self-choice	Anytime	Pharmaceutical companies		None
Malta	Face-to-face	After 8pm. Occasionally meetings on a Sunday	The university. Medicines authority. Drug companies. Medical school	Case scenarios	Feedback form
New Zealand	Mixture of face-to-face and online	Evenings or weekends	New Zealand Pharmaceutical Society. New Zealand Hospital Pharmacists association. Community franchises	Online material with special code. Memory stick with information. Online MCQ assessment. Handouts	Evaluation form. What went well, not so well and what learning was achieved
Pakistan	Does not exist	Hospitals may put on for their staff. Nothing for those in industry or community			None
Philippines	Face-to-face	Daytime or evening	Philippine Pharmacist Association	Nothing given	Evaluation form
United States of America	Conferences, accredited articles and book chapter based learning, accredited webinars	Daytime	Need to be accredited by Accreditation Council for Pharmacy Education (ACPE) or American Society of Health-System Pharmacists (AHSP). American College of Clinical Pharmacy (ACCP), American Pharmacy Association	Handouts	Online Survey. Relevance to role, learning objectives, any bias felt, was the assessment fair and a true reflection of the article.

Table 6.2: Summary of requirements for CE/CPD according to pharmacists from surveyed countries

CE/CPD practices

Of the 14 pharmacists that were interviewed, seveb were from countries where they needed to undertake CPD: Australia, GB, Iraq, Ireland, Malaysia and New Zealand (two pharmacists); three pharmacists had to undertake CE: Belgium, Philippines and the USA; and the remainder had no requirement. Of the nine who engaged in CPD/CE, six of these were a points-based or credit based system (Australia, Belgium, Malaysia, Philippines, New Zealand, USA). Hours of CPD (Australia, New Zealand) or CE (Belgium) were also required in some cases to gain credits along with a specification of the number of CPD cycles to complete (GB). It must be noted that the interview responses represent individual practising pharmacists and the requirement on their practice e.g. in the USA the pharmacist interviewed had a CE requirement, whereas other pharmacists from other states may be subject to CPD requirements.

'On an annual basis, we have to do 40 CPD credits….So CPD credits, it depends on the type of CPD you do....The whole thing is meant to be based on a reflective cycle ... It is supposed to be checking the Australian national competency framework.' **Australia**

'It is now the third year that you have continuing education, so you have a CE system. … within a period of three years 60 points, so an average of 20 a year. And points represent hours of education. So it is a pure CE system.' **Belgium**

'There a lot of differences between the government sector and the private sector. In (the) government sector they will actually push you to all the CPD and you will have enough points to fulfil for the year'. **Malaysia**

'Each state is different, so my state is just 15 CE hours annually.' **USA**

'Revalidation of pharmacists includes recording and submission of 4 CPD records…it is an annual submission.' **GB**

Gaining the credits can be complex to understand, with Australia, Belgium and New Zealand having scaling systems in place. The groups of activity seen in Australia and New Zealand are similar. Ireland has a separate organisation in place to implement a CPD system, and supports pharmacists to achieve requirements, and they also commission education and training programmes. Interestingly, although no formal requirement exists in many countries, courses are still offered, with often high participation rates, for example in Malta. It is also seen that pharmacists would like to participate in CPD, where available, for example in Chile.

'There are two types, so, the first group of CPD is 1 credit which is 1 hour of working on education and that is basically anything that hasn't been peer reviewed, or hasn't developed other people. ... If you do a group 2, group 2 represents having some kind of learning, or demonstrating learning or peer review… If I had read a journal article and then done a quiz on it, that would be a group 2. So every 1 hour gets 2 credits. Then group 3 is where you actually do something with a practise led element to it, so say that I go to a conference and run a workshop and change perspectives... But there is actually a limit of how much group 1 learning you are supposed to do. So you cannot have more than 50% so 20 credits of your learning as group 1...The whole thing is meant to be based on a reflective cycle ... It is supposed to be checking the Australian national competency framework.' **Australia**

'The law says that every year, from the 20 points average, a maximum of 10 points you can obtain by doing online things. So you have three categories of activities or lessons. Category A are all the lessons that have an interest in pharmacotherapy. Category B is the pharmaceutical care. And those two groups, each hour represents 2 points. And then you have category C which is like the garbage category which covers all the rest and this is 1 hour per point. And you cannot obtain all your points with category C.' **Belgium**

'Every year you have to record your CPD and it is done online. And you have to get 20 points a year minimum, but over three years you have to get 90 points. And then they split it up and you need a certain number of group 1 points, a certain number of group 2 points and a certain number of group 3 points. Now, group 1 points – that just means like, reading an article or, reading a paper or something like that, so you can show you have done something. In group 2 though, you have to do learning, but also be assessed on it, so there will be, if you go to a conference and they give you a test at the end and you pass it, you can put that down. And then group 3 you need a learning partner and you have to do, it is a combination of doing all of your group 1 and group 2. So you are learning and then showing how you are using that in practice. So an example could be like, um, one of the group 3 points ones I did was writing a community acquired pneumonia guidelines. You do the research then you write the guideline, then you put it in practice and you see how practice is changing as a result.' **New Zealand 2**

'So every year, a pharmacist needs to apply for continued registration and then they also need to engage with the Institute of Pharmacy (IIOP)...they need to maintain an e-portfolio on the IIOP website. .. They need to demonstrate they are engaging in CPD ... we must be able to have a direct evaluation of a pharmacists knowledge, skills and competencies in a range of patient facing roles. ... we have copied the Ontario model, so a pharmacist will come to a central location. It is run twice a year, on Saturday and Sunday each weekend, and they go through 8 what we call standardised patient interactions...then they move to a clinical knowledge review, which is an online e-assessment and they sit at the computer with, I think, 16 cases, each has three

multiple choice questions on each, it is open book, and they need to complete that in just under 2 hours.....' **Ireland**

'There are no legal requirements but there are continuing education courses routinely. I would say with a very high participation of over 60%, 70% of pharmacists, even though it is voluntary'. **Malta**

'No, no need for CPD. I think it is a horrible drawback. I think there should be….When I became a pharmacist I didn't have to do any continuing professional development.' **Chile**

How learning takes place

Face-to-face learning activity is the most common seen from the interviews, although in Western countries there is an increase of online courses available, with online provision noted in Australia, Belgium, GB, Ireland, Malaysia, New Zealand and USA, allowing flexibility of learning. Where online was mentioned this was always in conjunction with a face-to-face offering. Face-to-face activity comprises of multiple activities, including conferences, postgraduate programmes, or courses. The opportunity to not just undertake face-to-face, but also participate in alternative options was noted as positive.

'It is all face-to-face.' **Iraq**

'Mostly face-to-face.' **Philippines**

'It is actually pretty flexible. I have done some online trainings actually, from BMJ, yeh. So they don't restrict you on what education tools you are using, as long as they are a good one, and you print out the certificates after that, and submit that.' **Malaysia**

'You can have online and you can have face-to-face. You could basically attend courses that they would recommend, but aren't actually run by them. So it is a mixture.' **New Zealand 1**

'It could be conferences, it could be accredited articles, accredited webinars, and you get your hours'. **USA**

Opinions of the best model for lifelong learning

A blended approach of face-to-face and online was seen to be a good approach, with individuals having personal preferences. Different formats suit different topics, such as skill development needing face-to-face interventions, whereas knowledge updates are suitable to be done online. This was noted more than once.

'you can only follow 10 credit points online. We find it important that there are still offline things happening, so you can have contact with other pharmacists. … you have to offer everything, and it is a combination of off and online that is important…. we offer everything, so they can choose.' **Belgium**

'So, where you are looking for skill development you need to have face-to-face if you are going to assess whether the objectives have been achieved… For others we rely more on online, so, for example, do you need to have face-to-face training for an update on what the changes in flu vaccine are every year, no....What we did explore was a blended model. The blended model has far less uptake for the face-to-face element, but the feedback from those who do engage is far better, because they are coming to the group with a greater level of understanding of the subject matter.' **Ireland**

'I think it depends on the topic you are covering, so, there are some things like, say you want to get emergency hormonal contraceptive pill accredited, the online course is sufficient, followed by, you know, a test at the end. When you want to discuss more emerging themes and stuff like that then I think face-to-face is significant to make those connections and see what other community pharmacists or hospital pharmacists are doing, and it is more improvement-based initiatives.' **New Zealand 2**

'It's interesting, as lot's of it is down to people's personal preference.' **GB**

Face-to-face delivery is seen to offer the advantage of being able to share ideas, network and have hands on experience. Geography and time of event, along with time needed to attend, were seen as barriers for face-to-face attendance. Online learning was a good opportunity for those who work shifts or those who find time to be an issue, as it can be completed in an individual's own time, and online also overcomes geographical issues. The cons of online learning were that it is seen as a tick-box exercise and not taken as seriously, with learners just being able to click through the material.

'A lot of people don't have much flexibility due to hours of work and what they do, so as much as they might want to go along to an evening meeting, where others might feel supported there, they might need to be in their pharmacy stores till late, by which time there is no enthusiasm to go on and do the things that are seen to be less of a requirement, so something a bit more passive might be o.k.' **GB**

'I always like face-to-face things. I think this is much better. But, because the country is very long and thin, it is very complicated to make everyone go to the capital. Maybe you could do it in different regions, but maybe you could do it on line, but at least once a month or a few times a year you need to meet.' **Chile**

'I prefer face-to-face, but I guess it isn't always possible. You need to make time out of your busy day to go and do a face-to-face, there are certain things that will just stick in your head and you won't ever forget, because when you read something you may forget it all actually, if you don't have a direct application soon.' **USA**

'It is all face-to-face. .. one thing is the opportunity to meet your colleagues… it will be more skills, and more hands on… Online sometimes is like I don't have to do it...' **Iraq**

'I think face-to-face will always have that human element to it, and you will have an opportunity to interact with peers, and learn with them. It lacks the flexibility of course that an online course would provide, but that human element is fantastic.' **New Zealand 1**

'Face-to-face is the best, as e-learning, it does not, it is something that is not quite popular as people don't take it as seriously as such, they just think it is something they can do in their own time and they are mentally absent during those sessions as well.' **Pakistan**

'I think at one of the local hospitals they have evening seminars and probably about on a monthly basis. I don't think distance is a barrier, well, it is a barrier in Australia… because they have, like, rural locations, so they are quite adept to skype and teleconference and running things so you do things remotely… You know, from the northern tip to Brisbane, which is half way down, takes a 5 hour flight. It is a massive place, so to run national and things like that it is often online, teleconference.' **Australia**

Support given for lifelong learning participation

A large culture of carrying out learning in the professional's own time is seen. Protected time is seen in hospitals in New Zealand and the USA, but not in the community sector. Australia and Belgium offer systems whereby some money could be claimed back from attendance.

'So community, usually you don't get support. Some hospitals will give you protected time to do that and others won't and you do it all in your own time.' **New Zealand 2**

'Um, I think it depends on where you work. So with some hospitals, if you are like a specialist pharmacist you do get days. A whole day where you get to do research or work on your CEs or things, but I think in community, I don't think they do.' **USA**

'The study day is a day off, so you aren't working on the ward.' **USA**

'I don't think it is that supported…. so it would be in your own time and you would probably have to pay for it and claim it back on your tax return.' **Australia**

'So people have to pay to go to lessons but there is an agreement between employers and employee organisations, that is on a higher level. But everyone who comes to a lesson can get a refund of 9 euro per hour with a maximum of 400 euros per year.' **Belgium**

'It is normally done in people's own time.' **GB**

When learning takes place for face-to-face activity

The flexibility of offering learning events both during the day, evenings and weekends is widely seen. Geography does play a part in the time of activity to ensure attendance, with small countries, such as Malta, not facing problems with attendance. In the USA, there are more day time learning activities held, as well as in Iraq due to political reasons. Where distance learning is offered, this can be accessed at all times.

'Sometimes you could get a particular body like a hospital who might get a bespoke training designed to meet their needs, but in general it is after hours or weekends.' **New Zealand 1**

'There is very little online, so mainly face-to-face. It is the geography that helps, but people also use these occasions for networking and social things… Most of it takes place after 8pm, although there are some meetings held on a Sunday. It depends on who is funding or organising it.' **Malta**

'They can choose to do it whenever is convenient some are in the day and some in the evening.' **Philippines**

'During the day and sometimes the weekend...because of the situation it has moved away from night and into more of the daytime.' **Iraq**

Providers of lifelong learning

Professional bodies are the predominant providers of training across the board, although employers, universities and pharmaceutical companies also provide learning opportunities.

'So there are a lot of professional bodies here. The biggest ones are the Pharmaceutical Society of Australia (PSA) and they run monthly, locally, in this area, educational seminars… there is also the Society of Hospital Pharmacists and they have about 5000 of the registered pharmacists with them. They tend to provide, more like, weekend seminars and things like that.' **Australia**

'It is quite general, it is by the pharmaceutical companies or product companies.' **Malaysia**

'The Philippine Pharmacist Association handles the CPD part, yeh, and then they partner up with the regulatory body, the Professional Regulations Council.' **Philippines**

Country wide providers – that sit outside the professional body or regulator

Belgium has taken the approach that 1 provider delivers all the required content, to ensure consistency across the country, utilising IPSA for Flemish speakers and Brussels based pharmacists, along with Société Scientifique des Pharmacies Francophones (SSPF*)* for French speaking pharmacists. These are the postgraduate training institutions, who organise and deliver events, on behalf of pharmaceutical companies. The Belgian pharmacist in the interviews did note that the government mandated a CE system, but did not provide funds to set it up. GB has a provider, CPPE that appears to be unique globally as a provider of education and training, available to all registrants. CPPE sits outside of the professional body or regulator, and provides learning provision to all registrants of the GPhC.

'We (IPSA) *have a website, the local organisation that provide a lot of the marketing for us. We are also linked to other organisations, that defends the pharmacist political, and also they have incorporated our lessons in their marketing material… We can organise everything for you, um speaker, the drinks, the, everything, invitations. The only thing the pharmaceutical company needs to do is pay* (so their content is delivered)*. And it is all free for the pharmacists....We are the main provider in the Flemish part of Belgium. So you have IPSA and on the French speaking side, they are called SSPF… Every year the responsible pharmacist was a member with us, so in total we had 6000 pharmacists who followed lessons with us.*' **Belgium**

'If people are part of the Royal Pharmaceutical Society (RPS), they can access the Pharmaceutical journal… There is the Centre for Pharmacy Postgraduate Education (CPPE) through Manchester University who do a lot of distance learning and workshops, and events. There are a variety of meetings, through the RPS, local meetings.' **GB**

Countries including Ireland and USA have accrediting organisations to support commissioning and accreditation of training for pharmacists, with Ireland using the IIOP and USA having ACPE. The ACPE accredits provider organisations.

'So, there isn't a model of accrediting providers...the Institute (IIOP) accredits on behalf of the Pharmaceutical Society Ireland (PSI). So we are an accrediting body, rather than providing. … we have gone out to tender, we have found very poor response rates and we have got involved in some training ourselves. There are some people who deliver training but want to sell what they have rather than provide what we need...' **Ireland**

'So anyone can be a provider but they need to be accredited by ACPE (Accreditation Council for Pharmacy Education) or AHSP (American Society of Health-System Pharmacists), so once these are accredited activities you get a point for it. It can't just be any random thing...So for example, there are two big societies, there is AHSP that is a huge society which produces a lot of CEs. There is ACCP (American College of Clinical Pharmacy) that produces a lot and there is the American Pharmacy Association. These are the three big ones. American pharmacy association is more of less community, ACCP is more clinical, AHSP is a mixture of everyone.' **USA**

Verification of learning

Of the countries engaging in CPD/CE, certification or proof of attendance/participation is commonplace in all but Iraq. Even where CPD/CE is not a requirement, it is seen that certificates are issued at times, such as in India.

'It is a randomised… you can be asked by the board to produce your CPD documents and evidence of how you have got your CPD.' **Australia**

'You can enter (your record) when you like throughout the year, and you can submit it when you feel it is ready for them to look at it.' **GB**

'You have to prove you attended and submit a portfolio to The Board of Pharmacy.' **Malaysia**

'Every year when you go to renew your licence they ask you have you done your 15 hours. Yes? Then you get audited. So you have to keep track of your CE credits. So every time you do a CE activity you get a certificate and you have to hold on to it.' **USA**

'You get a certificate of attendance.' **India**

'We don't record.' **Iraq**

Tools to help application of learning into practice

A variety of support material are provided to support application of learning into practice (see table 6.2). These include case studies being used during the session (Chile, Malta), online material (New Zealand), handouts (GB, Iraq, USA), CPD support

tools (Ireland) and post course assessments (GB, New Zealand, Australia, Belgium). Pharmacists in Belgium are sent out a list of the top information to remember after the event with links to further learning. In some cases, it was stated that no support is given (India, Philippines).

'People are very much interested in case scenarios.' **Malta**

'Well, they will be your sort of conventional resources which are your written material. … You could have a memory stick with information on it, you could have access to online material with a special code you could have. You could have leaflets, pamphlets, and material. It is a combination. You could sometimes have access to MCQ questions and interviews on line, all sorts of things like that. It is targeted.' **New Zealand 1**

'They give us handouts of the slides.' **Iraq**

'Personally the handouts are also good because if you are organised and keep track of them that is great.' **USA**

'It was mostly about you being able to use what you have learnt, to wherever you work, but they don't necessarily help you after that as once you are done you are done, so they don't try to keep in touch or anything.' **India**

'I don't think they give anything.' **Philippines**

Evaluation of learning events

Evaluation of events takes place in a number of ways (see table 6.2), including online follow up survey (Ireland, USA), and the most common, evaluation form (Australia, Belgium, GB, Iraq, Malta, New Zealand, Philippines). A few stated that no evaluation takes place of the learning events (Malaysia, Pakistan). When describing the content of the evaluation forms it is seen that similar questions are asked, rating different aspects of the session e.g. content and speaker, covering what went well and what could be done differently, and in a few cases the intention of how the learning would be applied.

'We ask them, was the course organised well, was it practical enough, what did you think of the speaker, was it good, not good…. are you happy about the organisation, are you happy about the content of the course, were you happy about the speaker, was the documentation helpful for following the lesson, is the knowledge you gained useful for your practice' **Belgium**

'Yes, small surveys. Are you happy? Similar to that? Happy, things to improve, what was your thoughts, it is very straightforward one.' **Iraq**

'What went well, what didn't go so well, and what learning you achieved.' **New Zealand 2**

'For what I do, it is (an online) survey…
Do you feel it is relevant to what you do?
Do you feel it met the learning objectives?
Do you feel it has been tainted by an bias or drug companies, or whatever
Do you feel the questions were fair?
Do you feel the questions were a true reflection of the article?.....
Because I pay so much, I think that is why the evaluation is so rigorous.'
USA

6.4 Discussion

As echoed in previous international studies, the majority of countries as represented by the interviewees (nine out of 13) had mandatory CE/CPD requirements in place. Even in those countries where lifelong learning requirements were not specified, a culture of wanting to learn and stay up to date was seen.

However, support is still required for pharmacists to achieve successful outcomes. Donyai *et al.*[50] noted that CPD cannot replace objective assessment of outcomes, so CPD is only as good as the record that is made by the pharmacist. A study by Austin *et al.*[208] in 2005 explored pharmacists' attitudes towards CPD in Ontario and found that there was an ambivalence towards CPD and support was needed to help support identifying learning needs. There was also a recognition that peer-support and workplace learning are essential to achieve CPD. In a study carried out by Thompson *et al.*[393] in 2013, three years after mandatory CPD was introduced in Australia, 91% of respondents believed they knew the CPD requirements for renewal of registration. Registrants, however, could not understand the difference between CPD and CE with 76% believing they were synonymous. They believed that more guidance on the frameworks available was needed.

As seen from the results in chapter 4, this study showed that face-to-face provision of learning is prevalent and preferred, where possible, with increasing amounts of online provision. In addition, blended learning approaches are increasing. This study also echoed a previous study by Driesen *et al.*[211] in 2007, along with the findings from

chapters 3 and 4 that show differing formats were seen to be preferable for different audiences.

Multiple previous studies have focused on format preferences, and the pros and cons of each, and this study was no different. Face-to-face interactions allow participation and two-way interaction, and the ability to ask questions, along with networking and sharing experiences with peers, which was also seen in chapter 4. Online learning is a more flexible option that allows work at the participants own pace and in their own time but limits the ability to engage with an instructor. Blended learning supports the ability to have some face-to-face along with some self-directed study. There are challenges when introducing blended learning, as complex planning, and time and resources are required, but there are multiple opportunities with this approach.[407] A study from pharmacists in the Middle East showed that whilst pharmacists appreciated the ability of online learning to be flexible, the challenges they faced included technology, time management and learner isolation.[408] This study highlighted that different topics were more suitable for various formats, with hands on service based learning better suiting face-to-face and knowledge updates could be completed online. This has been seen in undergraduate education where grades improved when content was delivered online followed by team based classroom activities.[409] A study by Jeffries[410] in 2013 emphasised that e-learning can assist learners to keep up-to-date with new knowledge.

This study showed that geography can affect participation in events, such as in conflict zones in Iraq, where all activity takes place during the day. Geography may also affect the ability to join face-to-face events, as seen in this study in Chile or Australia, echoed by a previous study in rural Western Australia[333] that showed that journals were the most common source of education, followed by reference books and the internet. Conversely, smaller countries, such as Malta, showed in this study that geography supported face-to-face provision. Location of training has been identified as a barrier for attendance at learning events in multiple previous studies[199,226] plus in chapters 3 and 4. In countries where CPD is not commonplace, lack of opportunities or being unaware of the CPD concept could be a barrier, such as that in a 2018 study of pharmacists in Ethiopia.[403] This study identified that pharmacists in Belgium and Australia have the potential to claim back money from attendance at training events, but time in lieu was not common practice globally.

This study identified the main providers of training, which included professional bodies, employers and pharmaceutical companies. These findings are supported by the FIP CPD/CE global report[196] from 2014 that showed from 66 surveyed countries, 59 (90.6%) used professional associations for pharmacist training. The report also showed 83.1% of countries (54/66) used universities as providers, 55.4% (36/66) used employers, 30.8% (20/66) used regulators, and over half of the countries (34/66, 52.3%) used private providers. Limited studies have been carried out into different providers globally. Ultimately, as long as mandatory requirements are met, or opportunities are provided to keep up to date, the provider should be the one best placed to deliver content, as previous studies have identified that the facilitator is central to ensuring learning,[199,226] learning that is relevant to practice is also seen to support engagement, as seen in chapter 3.

Belgium have taken the approach that one provider delivers all the required content, on multiple occasions, to ensure consistency across the country. The CPPE model in GB is similar to this. This was also seen to be successful, running multiple events, when trialling PESL in one geographical location. By having a centralised approach, this supports quality assurance of the process, and also of the providers, which is important to ensure consistent approaches. It is seen that quality assurance is essential for all elements of lifelong learning, as in the literature review chapter of this thesis. Ireland and USA utilise accreditation bodies to support assurance. Indeed, in their annual report 2017[411] the IIOP stated that the system in place provided quality assurance, and ensured patient needs were being met, with 95% engaging in the process.

A previous study by Austin[209] in 2006 highlighted that mandatory requirements for achieving lifelong learning increases participation in events.[209] In this study, where mandatory lifelong learning requirements are in place, it is seen that proof of attendance is required in multiple places for verification by the regulator. This places the emphasis on the pharmacist to demonstrate they have participated in the learning. However, it does not prove that application of learning into practice has been achieved. This is agreed by Gregory[412] in 2018 who identified the 9Ps of practice change, saying that regulatory change does not equal practice change, and support is needed. The 9Ps are: permission, process pointers, practice, positive reinforcement, personalised attention, peer referencing, physician acceptance, patients expectations and

professional identity.[412] Follow up work on the 9Ps identified 7 techniques to support practice change: 1. mentoring style of delivery, 2. practice-based delivery, 3. incremental approach to learning, rather than one-off events, 4. a show me approach to change rather than a tell me why approach, 5. soft-skills development, 6. practice and 7. 360-degree feedback.[413] A variety in experience of support for application of learning was seen in this study with some countries showing a culture of additional tools being provided, whereas pharmacists in other countries did not receive any tools, including India and the Philippines in this study. As seen by Austin[209] and Gregory,[412] techniques are needed, alongside physical tools to support implementation of learning.

Where evaluation forms are used for events, this study showed that similar questions are asked, focusing on the event itself and the positives and negatives. Limited occasions asked for intention of how the learning would be applied. Seeking understanding of intent to apply learning would support pharmacists in CPD, to complete the cycle demonstrating reflection of practice, which is an integral step of the CPD process, and is an opportunity for the future.

This study has shown that globally there are multiple systems for lifelong learning for pharmacists, building on the findings from the chapter 2 literature review. CPD is becoming more evolved globally as the importance of ongoing education is recognised.[414] Mandatory systems include those using points based systems, systems where cycles must be completed, and systems where evidence of participation are required. Assessment of learning to demonstrate competence is also seen. Some countries and pharmacists also show active involvement in lifelong learning activity, even where there is not a mandatory system in place. A global framework of adopted pharmaceutical workforce development goals is supporting the FIP to create a roadmap for development of CE/CPD in the pharmacy profession.[152]

Lessons learnt include the benefit of country wide systems that can assure quality of the CPD/CE system so there is confidence from regulators that learning is quality assured, such as in Ireland and USA. Country wide providers that are independent of professional bodies and regulators also give assurance that learning will be uniform regardless of where you live in a country, such as IPSA in Belgium or CPPE in GB. In a systematic review of factors affecting global participation in pharmacy professional activities, completed in 2020[87] the four factors identified were attitudes, access to

needs based education, support and policy, showing a collective and policy driven approach is important.

6.4.1 Limitations

Limitations of this study include that only one pharmacist, apart from New Zealand, was interviewed for each country, and a purposive approach was taken to gain participants, with known pharmacists approached, which may have affected the range of countries sampled. In addition, a range of pharmacist experience is represented, with some pharmacists interviewed working for pharmacy organisations. Country variations may also not be represented, e.g. in the USA, where there are variations in requirements in different states. However, the range of countries represented shows the variety that exists globally, so can be built on in future studies.

6.5 Conclusion

It is seen that globally a variety of models of CE/CPD exist to ensure pharmacists are up-to-date, and even where mandatory systems are not in place, there is a motivation from pharmacists to participate in learning events. Countries should continue to work together to share experiences of processes and learning material in order to support all pharmacists with keeping up to date with their practice, in a way that supports the individual. Work needs to continue to ensure globalisation of pharmacy education, to support migration of the pharmacy workforce, and allow patients to have consistent experiences wherever they travel globally.

6.6 Recommendations for framework creation

As in chapter 5, the need for flexibility in running a learning event is seen. However, structure is important to outline the key elements needed for a successful event. A budget should be set prior to planning, and, as seen in chapter 5, the format for the event should be identified. This chapter built on previous findings identifying that where multiple events are going to be held, this can be a success. The use of case studies to support application of learning was also seen, along with the collection of details for follow up, and providing questions that could be used when creating evaluation tools.

Chapter 7: The PRACTICE Framework for organising and delivering a learning event

7.1 Introduction

7.1.1 Overview of existing frameworks in pharmacy education

Frameworks have multiple purposes and they are used to provide consistency and quality assurance of delivery and bringing together all stakeholders.[201] FIP released a quality assurance framework for pharmacy education in 2014[205] which outlined that quality pharmacy education was underpinned by science, practice and ethics. The quality itself was then supported by five pillars: context, structure, process, outcomes and impact. Whilst this framework was predominantly aimed at Schools of Pharmacy for undergraduate teaching, the importance of post-graduate courses is emphasised.[201] Mestrovic *et al*.[201] in 2015, when describing the quality assurance framework acknowledged that a significant amount of learning continues to take place after students leave university, and that the framework can be used by pharmacists to help assure them of the quality of the education they are receiving. Indeed, the quality criteria framework can be used by educational providers and learners to assess CE and CPD educational activities. The framework contains 50 yes/no statements measuring quality based on science, practice, ethics, context, structure, process, outcomes and impact. Whilst these are important, they don't give step by step guidelines needed for planning, delivering and evaluating an event on a practical level.

Building on the pillars identified for quality, Farrell *et al*.[132] in 2012 identified elements that should be considered when planning a CE intervention including funding, partnership working, using distance learning expertise and best practices, planning systematically, future planning, and completing a pilot prior to the event. A study by James[237] in 2002, looking at CPD development needs of community pharmacists, also provided suggestions for supporting the process of CPD for pharmacists. The study identified that when designing a process to support CPD, individual needs and personal barriers to participation should be taken into account, assessment of learning should be considered, and that facilitation of learning is pivotal to development of staff. Whilst our results have found similar priorities, in the papers by Farrell *et al*.[132] and James[237] these were just lessons learnt, upon reflection, so a framework building on

these would ensure a breakdown of steps in the planning, delivery and evaluation of an event is created to apply the learnings previously learnt from practice.

Frameworks also aim to support uniformity, for example, across nations, such as the common training framework (CTF) for hospital pharmacy[415] which was drafted in 2017 to ensure key elements were achieved for education and training provision. Furthermore, frameworks can bring together concepts that are related, such as the framework used by Bader *et al*.[416] in 2017 which used elements of the FIP 2014 global framework for quality assurance of pharmacy education,[205] to help analyse the current status of pharmacy in Jordan, related to education, regulation and practice and propose a way forward.

7.1.2 The need for a framework for planning, delivery and evaluation of lifelong learning activities

This thesis has brought together both quantitative and qualitative elements to understand the picture of current education and training interventions, supporting achievement of lifelong learning, including CE/CPD requirements, both in GB and internationally, and to understand preferences and elements that ensure the success of planned learning events. The thesis identified that CPD is the mainstay for healthcare professionals in GB and used as a means of revalidation in some professions. Face-to-face attendance was seen as the traditional way to achieve CPD although distance and online learning is becoming more common, even more so in times of pandemics. To date, there is no unified model in GB, or globally that provides consistency in planning, delivering and evaluating learning events, that can support quality assurance, whilst also supporting optimal participation. This is an ongoing challenge for validation of learning.

As seen from the studies mentioned above, previous frameworks and studies have identified elements that are important in the delivery of learning,[132,201,205,237,416] but no one has previously created a checklist or framework outlining all the key tasks (statements) needed for the planning and delivery of a successful event. As outlined in the previous chapters, creating a framework that can support all aspects of organising, delivering and evaluating an event will support quality assurance, and global sharing of information to drive forward lifelong learning. The need for systematic

development of pharmacy professions is needed.[417] Whilst the framework would work primarily for face-to-face events, it could also be used for online interventions. As introduced in chapter 1, and further seen in chapter 4, there are multiple providers of lifelong learning for pharmacists in GB, so there is sometimes a variety between providers, and no standard planning approach is seen. The purpose of this framework is to support standardisation and enable planners of lifelong learning interventions to be consistent in their approach, so pharmacists participating in lifelong learning feel engaged and that learning has supported their personal development.

The key findings from each of the chapters in the thesis are summarised in table 7.1. It is apparent that the key principles identified for post-qualification learning from this thesis echo the seven guiding principles set out by the Quality Assurance Agency for course design and development. These principles are:[418]

1. 'Strategic oversight to ensure that course design, development and approval processes and outcomes remain consistent and transparent.'
2. 'Accessible and flexible processes for course design, development and approval that facilitate continuous improvement of provision and are proportionate to risk.'
3. 'Internal guidance and external reference points that are used in course design, development and approval.'
4. 'Feedback from internal and external stakeholders to be used to inform course content.'
5. 'Development of staff, students and other participants to enable effective engagement with the course design, development and approval processes.'
6. 'Course design, development and approval processes that result in definitive course documents.'
7. 'Design, development and approval processes that are reviewed and enhanced.'

Chapter 2: Literature review

- No one size fits all
- Face-to-face learning is still preferred
- Interactive learning should be used where possible
- Multiple formats should be available
- The learning needs to be planned and structured appropriately
- Reflective practice should be encouraged
- Quality assurance of programmes needs to be ensured

Chapter 3: PESL

- Face-to-face attendance is still wanted
- Topic selection is central to effective engagement
- Aims of the learning should be able to correlate to tangible actions after the event
- Future work is also needed on how to follow-up with participants after events to support them to change their practice, and learn about application of their learning
- Funding also needs to be considered for future models
- A comprehensive strategy for selecting local or nationally driven topics is crucial to ensure the workforce has the appropriate skills and knowledge
- In publicising events, the topic, including the driver for the topic and the skills that will be obtained, the speaker and their experience plus how learning can be applied after the event should be included

Chapter 4: Survey

- It is seen that face-to-face learning is still preferred, although there is an increasing emergence of online learning
- Continued work is still needed to ensure preferences are taken into account when planning learning programmes
- There needs to be a strategy to ensure good utilisation of providers
- A framework needs to be created to ensure knowledge is gained from the learning programmes on offer, and that this is measured and evaluated

Chapters 5 and 6: Learning from others

- Continuing Professional Development (CPD) is common for other healthcare professionals in GB
- For pharmacists globally there is no consistent model
- Face-to-face learning is the most common model seen globally
- Application into practice is a key element in the CPD cycle
- There are multiple providers for pharmacy CPD in GB
- Globally several countries employ accreditation bodies and use national providers
- Evaluation of learning events is not commonplace, but, where it happens, there is still a culture of evaluation forms

Table 7.1: Key findings of the thesis chapters

Whilst the studies completed as part of this thesis have found many findings similar to previous studies, it has brought together insights into planning, delivery and evaluation of learning events to identify the key tasks for completion needed at each stage which no previous framework has provided.

Therefore, combining all elements presented in table 7.1, and looking at the structures and findings identified in the studies presented in previous chapters, it is clear that a framework to support the organisation and delivery of a training event must consist of a needs analysis, emphasise elements of the intervention, along with a focus on application of learning in practice and evaluation of the event and learning. The needs analysis should include an understanding of the target learners, the topic planned and its relevance to both professional and/or personal practice. Timing, duration and format of the event, available funding, venue and methods for publicising and advertising the event should also be considered. All steps should be informed and supported by appropriate stakeholders. For the intervention, the content and delivery needs to be considered, ensuring that the session links to local or national priorities or guidelines and is delivered or facilitated by an appropriate and knowledgeable individual or team. The intervention also needs to consider application of learning, by providing clear learning outcomes and allowing reflection of how these might be translated into practice, along with tools required to support application of learning. Verification of learning, e.g. certification, should also be considered. Previously, it has been acknowledged that evaluation of CPD events is a challenge.[419] From the evaluation models introduced in section 1.9 Kirkpatrick[115] emphasises the need to evaluate immediately and over a period of time, with other models extending to review engagement and satisfaction,[125] evaluating individual elements of the learning and material,[119] quality of resources,[122] along with exploring costs and training needs.[120] Performance improvement[123] and outcomes[124] should also be measured. Therefore, evaluating the event should be planned to identify when and how this is going to occur, and should capture thoughts on the session, as well as impact on practice that was intended or achieved as a result of engagement with the session. These factors also support the achievement of CPD. An element of assessment is also needed to support application of learning into practice. Having clear plans in place with strategies for pharmacists' education and training will support pharmacy workforce development.[87]

7.1.3 Validation of frameworks

Validation of a tool is important to ensure that is it fit for purpose, ensuring that data can adequately be captured, and that it can be reliably used.[155] Validation is based on evidence that is gathered.[420-422] If a tool has been validated this gives confidence to those using the tool. Validity can be measured using various approaches. These

include content validity, ensuring the instrument covers all the required content. Construct validity reviews the extent to which test scores relate to the idea being studied. Criterion validity identifies whether any other tool is available to measure the same variable. Reliability of a tool identifies whether the tool is consistent in its measurement. Validation using multiple approaches increases assurance and confidence in the tool, and helps to finesse the approach being taken. It also allows gathering of feedback from multiple stakeholders. Increased validity comes from the systematic collection of data about the tool from different sources.[420] Methodology for validation would include a variety of the tools outlined above and these can be undertaken in a step wise approach or simultaneously. For example, in software tools development, a waterfall method using expert validation is typically used,[423] although there is an increase in agile development methodology.[164] The waterfall methodology follows set phases, where one phase is only started after completion of the preceding phase. Once the design stage is over no further changes will be made. Conversely, the agile methodology focuses on iterative stages, but where the design idea is not completely set in stone and can be adapted throughout, dependent on feedback, and will keep adapting until the user of the tool thinks it exactly meets their requirements.[164]

7.1.4 Aim and Objectives

The aim of this chapter is to present the development and validation of a framework, informed by previous empirical studies, including surveys and interviews, in combination with evidence from literature.

The objectives are to:

- Use accumulated findings to propose a framework to support the planning, delivery and evaluation of learning events
- Validate each statement of the created framework through expert and end user validation using an agile and iterative validation approach
- Validate the entire framework with experts and end users using a think aloud approach
- To run a learning event in practice using the developed framework and gain views of attendees

7.2 Method and results

A summary of the method used to create and validate the PRACTICE framework is shown in table 7.2. As the process was iterative, methodology and results have been combined, as the set of results for each method informed the next. The validation of the PRACTICE framework uses agile development as it involves multiple iterative development approaches, which seek to improve output after each iterative step.[164] Being an iterative process means that the framework was constantly revised throughout the development and validation process.

Phase 1: Development and design	Needs assessment completed using triangulation methods, capturing all key findings from previous chapters and literature review
Phase 2: Validation	Primary validation • Face validation: Pilot of overall framework • Content validation • Creation of GANTT chart
	Secondary validation • Pilot 'think aloud' • 'Think aloud' interventions
Phase 3: Implementation and testing	Organising and delivering an event using the framework

Table 7.2: Summary of methodology used for development and validation of the PRACTICE framework

7.2.1 Ethics

This study was ethically approved by the Kingston University research committee (1819 060.1).

7.2.2 The development of the PRACTICE framework

A needs assessment was used to develop the PRACTICE framework, using a mixed methods triangulation approach with both qualitative and quantitative data presented in chapters 3-6, in order to create a unified approach for learning events. In addition, the literature review in chapter 2 also provided insights. A summary of the methodologies used throughout the project, and the rationale for these can be seen at the beginning of the thesis in table 1.4.

Initially, key concepts for inclusion were identified from the key findings, as outlined in table 7.1. These were then organised into themes, which created theme headings and statements for inclusion in the final framework. An approach to create an acronym-based framework was undertaken, to enhance remembrance of the created framework.

Appendix 20 shows the rationale for the development of the PRACTICE framework elements, with key information that supports the key concepts identified for initial inclusion.

The PRACTICE training framework was created, featuring 8 themes, based on the following headings, using the key elements needed for delivering a training event.[424]

- **P**reparation – 10 statements
    - Date set for the event
    - Budget set for the event
    - All stakeholders included in the planning
    - Format for event identified
    - Length of event identified
    - Timing of event (day of the week and time of day) identified
    - Audience identified (which group/groups)
    - Expectations of attendees captured
    - Plan for evaluation both at intervention, and afterwards, planned
    - Reminder sent to registrants
- **R**esources – five statements
    - A venue/online platform identified
    - The venue is accessible/central (if not online)
    - The venue/online platform booked/secured
    - Booking platform set up
    - Evaluation form for event planned (if applicable)
- **A**dvertising – five statements
    - Stakeholders support dissemination of details
    - Identification of backfill provided (if applicable)
    - Mode of advertisement identified
    - Advertising completed in sufficient time to allow planning
    - Advertising includes:
        - Aims of event
        - Topic including driver for the topic
        - Skills to be acquired
        - Benefit to practice
- **C**apacity – four statements
    - Other events in the local area do not clash
    - Calendar of events made available (if applicable)
    - Number of repeated events identified (if applicable)
    - Maximum capacity for the event identified
- **T**opic – five statements
    - Topic is applicable for all potential attendees
    - Expert speaker(s)/facilitator(s)/provider identified
    - Topic is relevant to audience professionally and/or personally
    - Link seen between topic and potential application/ practice outcomes
    - Aims of event correlate to tangible actions
- **I**ntervention – eight statements
    - Presentation referenced to local/national priorities or guidelines
    - Copies of slides/workbooks made available (if applicable)
    - Case studies used

    - A mixture of learning formats used
    - Contact details collected for follow up evaluation
    - Assessment of learning given or signposted (if applicable)
    - Opportunities to network are given
    - Ability to ask questions
- **C**PD – five statements
    - Application into practice opportunities identified
    - Tools given to support learning
    - Actions planned with measurable outcomes
    - Certification of learning given (if applicable)
    - A follow up email is sent with key points
- **E**valuation – six statements
    - Methodology planned
    - Evaluation tool completed – at event
        - Good elements
        - Least positive elements
        - Relevance to practice
        - Learning outcomes achieved
        - Speaker/facilitator feedback
        - Organisation of event
        - Proposed changes to practice from event
    - Evaluation tool completed -follow up
    - Final evaluation report created
    - Evaluation shared with stakeholders
    - Lessons learnt and identified to support future interventions

Overall, initially 48 statements were created, as outlined above. Planning, Resources, Advertising, Capacity and Topic were grouped as 'before intervention,' CPD and Intervention were grouped as 'intervention,' and Evaluation was classed as 'after intervention.'

The model created is based predominantly on the needs of GB based pharmacists, although pharmacists from other countries and other experts contributed to study findings. The survey chapter (chapter 4) indicated that face-to-face learning is still preferred where possible' despite e-learning being on the rise, for implementation testing a face-to-face event will be used. In addition, the findings from chapter 2 show that previous online events were used for CE, so CPD events were predominantly face-to-face.

7.2.3 Validation approach

The methodology used for developing and validating the PRACTICE framework was similar to the methods used by Donyai *et al*. in 2013,[50] with the addition of one extra stage, namely the pilot testing of the framework in practice. In addition, think aloud interviews were used in place of focus groups and telephone interviews. Donyai *et*

al.[50] developed a framework to support the measurement of CPD outcomes, based around CPD relevance and CPD impact, building on a previously created UK National Patient Safety Agency (NPSA) Risk matrix.[425] Once the CPD outcomes framework had been designed it was then validated for use using a three stage process: face validation, clarity/complexity and finally usability assessment. Each of these stages used a different group of participants. In the Donyai study,[50] face validation included five pharmacists (two from hospital and three from community practice) being asked to provide comments on the framework with regards to its desirability, and views on the different elements being used to measure relevance and impact. Comments were incorporated into the framework design. Clarity of the framework was assessed using the content validity index where seven pharmacists were asked to score each statement of the framework on a scale of 1 to 4, where 3 or 4 were determined as relevant content. Finally, user feedback was received using a focus group interview with six participants and telephone interviews with 17 individuals who had used the framework. Reported benefits of using a framework were an increased understanding of CPD activities and increased objectivity of the CPD assessment. The fact that the use of the framework relied on accurate self-reporting was identified as a limitation. The methodology presented supported the design of the validation process for the PRACTICE framework.

7.2.3.1 Face validation

7.2.3.1a Procedure

Face validation was obtained by expert review of the first draft of the framework, aiming to understand whether the framework was a viable concept that could be used in practice. Face validation allowed experts to review the framework and give initial feedback on whether it was fit for the intended purpose and to identify whether it was viable to continue the validation processes.[155,156] In addition, face validation may start to look at whether the content is fit for purpose,[426] and also whether the tool is fulfilling its intended aims.[168] Echoing the validation process used by Donyai *et al*.[50] the face validation stage was looking for feedback on the overall viability, desirability and usability of the framework and was being used to gain views on the different statements being used, to understand impact and applicability.

To achieve this, questions were designed to gather feedback on the overall PRACTICE framework, and the individual statements within the framework. These questions were used to support face validation.

Questions on the overall PRACTICE framework were as follows:

- Would you recommend/implement this framework when planning and running training events? (Definitely/probably/possibly/probably not/definitely not)
- What benefits can you see from using this framework?
- Would you use the complete framework in the future? Yes/No Why?
- Which stakeholders would benefit most from using the framework?
- Any other comments?

Question per heading of the PRACTICE framework were as follows:

- What is missing for this element?
- What are the challenges to complete this element?
- When do you think the individual elements needs to be completed in relation to the training event?
- Any other comments?

7.2.3.1b Sample population and date of intervention

A purposive sampling approach was used to identify participants for this step as feedback from all levels of user was required, from organisers through to end users. To enable this, the participants at an education and training development day organised in South London were approached, as participants had current involvement and interest in lifelong learning of pharmacists and this location was also used for the previous studies presented in this thesis. Face validation used a mixture of 20 individuals, including LPC members, training providers and practising pharmacists, which provided a diverse spectrum of experience and knowledge. Working in groups allowed discussion of concepts, and allowed challenging of understanding.

During the development day, a time slot was dedicated to the PRACTICE framework. A presentation was given to the participants, by the developer of the framework, about the development process of the framework, covering elements presented in table 7.1. It was then explained that feedback was being asked for regarding the framework, and comments would be used to amend and validate the framework, as part of a research study. The participants were sat around 4 tables. Each table was given a paper copy of the PRACTICE framework and asked to answer the questions relating to the framework through written feedback. In addition, each table was given two elements

of the framework and asked to provide written feedback on the questions for these two elements specifically.

The event took place on 4 July 2018. Consent was implied by participating in the activity. Appendix 21 presents the full results received from this face validation.

7.2.3.1c Results

When asked whether they would use the complete PRACTICE framework in the future, three groups replied positively and the fourth group did not respond. The following benefits of the PRACTICE framework were identified during this exercise: supporting the planning of events, standardisation, reducing time and wastage, along with the framework regarded as a useful checklist to monitor completion of given statements from the PRACTICE framework. Feedback from the face validation supported the aim behind the creation of the PRACTICE framework, that it supported standardisation, and would reduce time. Suggestions for improvement included adding time scales about when activities should be completed, alongside activities required during the pre-planning stage.

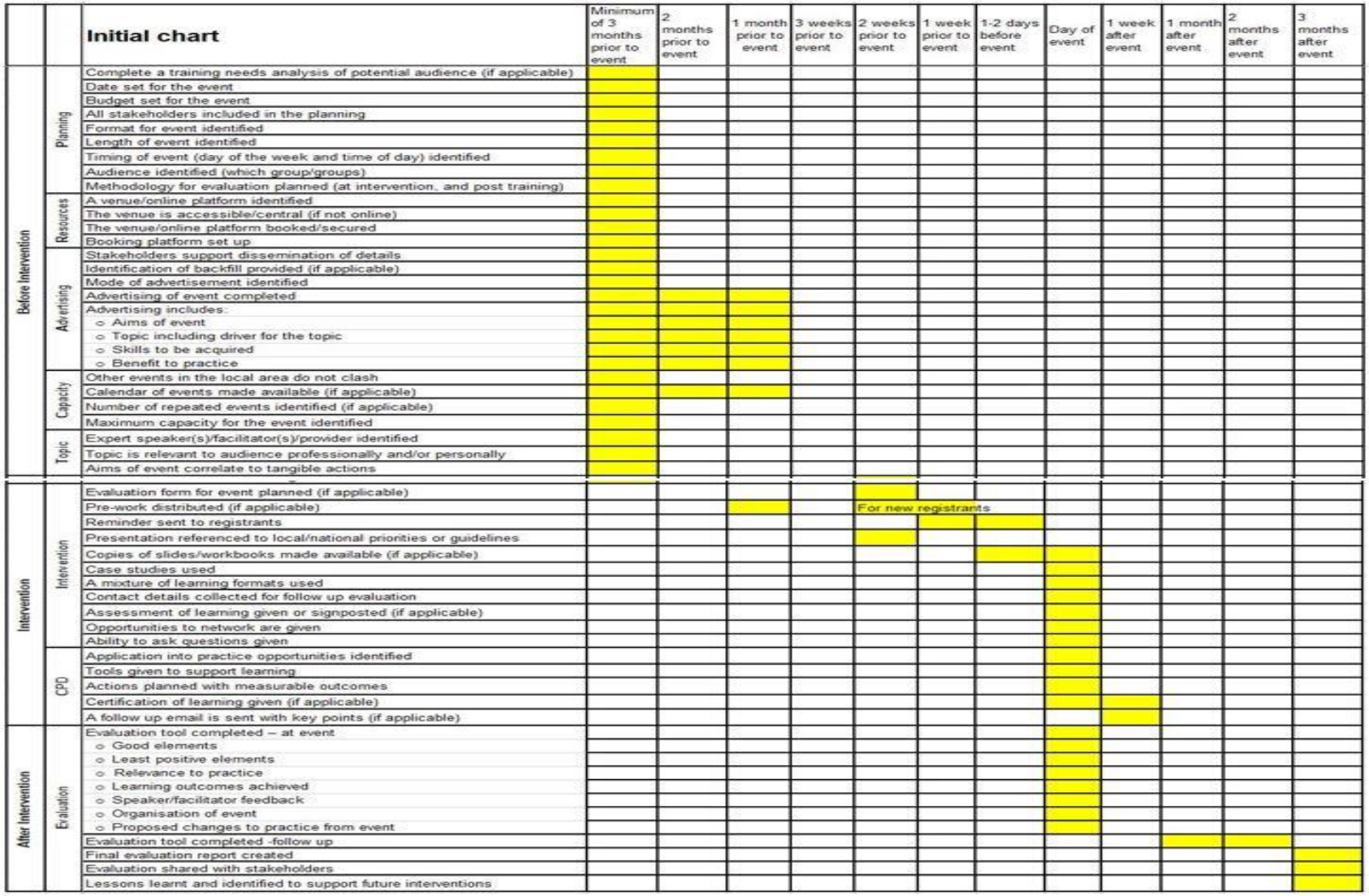
7.2.3.1d Changes to framework

As a result of the face validation, the framework was revised. Changes can be seen in table 7.3. Two statements were added, three statements were edited, one moved position and four were removed which resulted in 45 statements remaining.

As per the feedback, a suggested timeline was added for each statement of the framework, which would aid the chronological planning of training events. Time scales from minimum of 3 months prior to the event until 3 months after the event were added, with times that were closer to the event being given in weeks or days. The initial GANTT chart can be seen in figure 7.1 and appendix 22.

Initial statements	After face validation
	Complete a training needs analysis
Date set for the event	Date set for the event
Budget set for the event	Budget set for the event
All stakeholders included in the planning	All stakeholders included in the planning
Format for event identified	Format for event identified
Length of event identified	Length of event identified
Timing of event (day of the week and time of day) identified	Timing of event (day of the week and time of day) identified
Audience identified (which group/groups)	Audience identified (which group/groups)
Expectations of attendees captured	Removed
Plan for evaluation both at intervention, and afterwards, planned	Methodology for evaluation planned (at intervention, and post training)
Reminder sent to registrants	Moved position
A venue/online platform identified	A venue/online platform identified
The venue is accessible/central (if not online)	The venue is accessible (location and access) for all attendees (if applicable)
The venue/online platform booked/secured	The venue/online platform booked/secured
Booking platform set up	Booking platform set up
Evaluation form for event planned (if applicable)	Evaluation form for event planned (if applicable)
Stakeholders support dissemination of details	Stakeholders support dissemination of details
Identification of backfill provided (if applicable)	Identification of backfill provided (if applicable)
Mode of advertisement identified	Mode of advertisement identified
Advertising completed in sufficient time to allow planning	Advertising completed in sufficient time to allow planning
Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice	Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice
Other events in the local area do not clash	Other events in the local area do not clash
Calendar of events made available (if applicable)	Calendar of events made available (if applicable)
Number of repeated events identified (if applicable)	Number of repeated events identified (if applicable)
Maximum capacity for the event identified	Maximum capacity for the event identified
Topic is applicable for all potential attendees	Removed
Expert speaker(s)/facilitator(s)/provider identified	Expert speaker(s)/facilitator(s)/provider identified
Topic is relevant to audience professionally and/or personally	Topic is relevant to audience professionally and/or personally
Link seen between topic and potential application practice outcome	Removed
	Pre-work distributed (if applicable)
	Reminder sent to registrants
Aims of event correlate to tangible actions	Aims of event correlate to tangible application into practice outcomes
Presentation referenced to local/national priorities or guidelines	Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)	Copies of slides/workbooks made available (if applicable)
Case studies used	Case studies used
A mixture of learning formats used	A mixture of learning formats used
Contact details collected for follow up evaluation	Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)	Assessment of learning given or signposted (if applicable)
Opportunities to network are given	Opportunities to network are given
Ability to ask questions	Ability to ask questions
Application into practice opportunities identified	Application into practice opportunities identified
Tools given to support learning	Tools given to support learning
Actions planned with measurable outcomes	Actions planned with measurable outcomes
Certification of learning given (if applicable)	Certification of learning given (if applicable)
A follow up email is sent with key points	A follow up email is sent with key points
Methodology planned	Removed
Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event	Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed -follow up	Evaluation tool completed -follow up
Final evaluation report created	Final evaluation report created
Evaluation shared with stakeholders	Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions	Lessons learnt and identified to support future interventions

Table 7.3: Changes made at face validation. Where blacked out, no previous statement existed. Yellow indicates a change in wording, green is a new statement and red indicates the previous statement was removed. Pink indicates a new position.



		Initial chart	Minimum of 3 months prior to event	2 months prior to event	1 month prior to event	3 weeks prior to event	2 weeks prior to event	1 week prior to event	1-2 days before event	Day of event	1 week after event	1 month after event	2 months after event	3 months after event
Before Intervention	Planning	Complete a training needs analysis of potential audience (if applicable)												
		Date set for the event												
		Budget set for the event												
		All stakeholders included in the planning												
		Format for event identified												
		Length of event identified												
		Timing of event (day of the week and time of day) identified												
		Audience identified (which group/groups)												
		Methodology for evaluation planned (at intervention, and post training)												
	Resources	A venue/online platform identified												
		The venue is accessible/central (if not online)												
		The venue/online platform booked/secured												
		Booking platform set up												
	Advertising	Stakeholders support dissemination of details												
		Identification of backfill provided (if applicable)												
		Mode of advertisement identified												
		Advertising of event completed												
		Advertising includes:												
		o Aims of event												
		o Topic including driver for the topic												
		o Skills to be acquired												
		o Benefit to practice												
	Capacity	Other events in the local area do not clash												
		Calendar of events made available (if applicable)												
		Number of repeated events identified (if applicable)												
		Maximum capacity for the event identified												
	Topic	Expert speaker(s)/facilitator(s)/provider identified												
		Topic is relevant to audience professionally and/or personally												
		Aims of event correlate to tangible actions												
Intervention	Intervention	Evaluation form for event planned (if applicable)												
		Pre-work distributed (if applicable)					For new registrants							
		Reminder sent to registrants												
		Presentation referenced to local/national priorities or guidelines												
		Copies of slides/workbooks made available (if applicable)												
		Case studies used												
		A mixture of learning formats used												
		Contact details collected for follow up evaluation												
		Assessment of learning given or signposted (if applicable)												
		Opportunities to network are given												
		Ability to ask questions given												
	CPD	Application into practice opportunities identified												
		Tools given to support learning												
		Actions planned with measurable outcomes												
		Certification of learning given (if applicable)												
		A follow up email is sent with key points (if applicable)												
After Intervention	Evaluation	Evaluation tool completed – at event												
		o Good elements												
		o Least positive elements												
		o Relevance to practice												
		o Learning outcomes achieved												
		o Speaker/facilitator feedback												
		o Organisation of event												
		o Proposed changes to practice from event												
		Evaluation tool completed -follow up												
		Final evaluation report created												
		Evaluation shared with stakeholders												
		Lessons learnt and identified to support future interventions												

Figure 7.1: Initial PRACTICE framework including GANTT chart

7.2.3.2 Content validation

7.2.3.2a Procedure

After the initial face validation, item validation took place, echoing the content validation used in the study by Donyai *et al*.[50] In this study content validity helped identify relevance of statements. Each statement in the PRACTICE framework became an item. Individual sheets of the PRACTICE framework were distributed in person and by email to individuals involved in organising training events for statement validation. The statement validation was based on a previous model introduced by Polit[162] in 2006. For this step of the validation, participants were asked to rate each element of the framework on a scale of 1-4, with 1 being 'not relevant' and 4 being 'highly relevant'. Only scores of 3 or 4 were used in the overall content validity index (CVI) calculation.

In addition, participants were invited to provide additional comments about the framework. Item CVI (I/CVI) was measured, along with a scale CVI (S/CVI). The I/CVI is calculated by calculating how many experts provided a score of 3 or 4 for each item, out of the total number of experts. The recommendation is that 0.78 is the minimum I/CVI for it to be assessed as valid. The S-CVI/Ave, also referred to as the average congruency percentage (ACP), is calculated by looking at the total score from all I/CVI divided by the number of statements. The recommendation is that 0.90 is the minimum ACP.[167] Therefore, the aim of this step was to measure the I/CVI and ACP for the PRACTICE framework in order to assess its current validity.

Printed paper copies of the PRACTICE framework were provided, with the following instructions attached:

- Please score each element of the framework using the following scale, in relation to using this framework to support the running of a training event:
    - 1 – not relevant
    - 2 – somewhat relevant
    - 3 – quite relevant
    - 4 – highly relevant

7.2.3.2b Sample population and date of intervention

Participants engaged in this validation stage had not been present at the LPC development day so had not previously seen the PRACTICE framework. They were

chosen because of their involvement in organising pharmacy training, or actively teaching or facilitating training courses for pharmacists, or other healthcare professions. Thus, they could identify to what extent the PRACTICE framework would be applicable for the training of pharmacists along with training of other healthcare professions, such as nurses. For pharmacists, contacts through Pharmacy Education South London, Health Education South London, Local Practice Forums and Local Pharmaceutical Committees were used. They were contacted between September and October 2018. These participants were approached in person and provided a paper copy of the framework and the instructions or they were contacted via email which included the framework and instructions in attachments. Participants were given the background to the PRACTICE framework, and details of the face validation, and asked to rate each element between 1 and 4 for and then return their rating to the researcher. A total of six individuals were approached.

For other healthcare professions, the Health Education Research and Evaluation (HERE) research group at Kingston University was approached, which has members from nursing and allied health professions. During the HERE face-to-face session, the researcher presented the background to the PRACTICE framework, outlining the information presented in table 7.1, and summarised the previously undertaken face validation. Participants were handed paper copies of the framework and were asked to score each item and return the sheets. Five nurses and one educational psychologist participated. This took place during the HERE meeting on 14th September 2018. Implied consent was given through completion of the activity.

From all the scores received, CVI scores were identified, along with an ACP score.

7.2.3.2c Results

The results obtained from pharmacists indicated an ACP of 0.92, whereas an overall ACP of 0.89 was achieved from other healthcare colleagues. When scores were combined, and overall ACP of 0.90 was achieved. Items that scored less than 0.78 for I/CVI are presented in table 7.4. Five statements were calculated to have less than 0.78 based on scores given by pharmacists, along with five also having a calculated score of less than 0.78 by healthcare professionals. When looking at scored combined for pharmacists and other healthcare colleagues, there were still five statements, all

of which were represented by one of the two groups. Pharmacists all gave scores of 3 or 4 for 33/46 statements, whereas for other healthcare colleagues this was lower, namely 24/46. Overall, when combining the scores allocated by both groups 19 out of the 46 statements received scores of 3 or 4 from all participants.

Pharmacists	Score	Healthcare colleagues	Score	Combined	Score
Complete a training needs analysis	0.67	Timing of event (day of the week and time of day) identified	0.67	Complete a training needs analysis	0.75
Identification of backfill provided (if applicable)	0.67	Maximum capacity for the event identified	0.67	Pre-work distributed (if applicable)	0.75
Number of repeated events identified (if applicable)	0.50	Identification of backfill provided (if applicable)	0.50	Other events in the local area do not clash	0.75
A follow up email is sent with key points	0.50	Other events in the local area do not clash	0.50	Number of repeated events identified (if applicable)	0.67
Certification of learning given (if applicable)	0.33	Pre-work distributed (if applicable)	0.50	Identification of backfill provided (if applicable)	0.58

Table 7.4: Scores for items/statements less than 0.78 for I/CVI. Yellow identifies the common statement that scored below 0.78

Full scores are presented in appendix 23. In addition to the scoring, additional feedback was collected and received with regards to clarity of some of the statements.

7.2.3.2d Changes to framework

No statement was completely removed to allow triangulation with the next step of validation (the think aloud), and also because of the differences in the scoring between professionals. Identification of backfill (if applicable) was the only statement that scored less than 0.78 in both groups. As this was already seen as optional due to 'if applicable' it was kept for further scrutiny during the think aloud process. The other statements listed in table 7.4 that had calculated scores less than 0.78 were kept as they had scored over 0.78 in the alternative validation group. As pharmacists are the primary audience for the PRACTICE framework 'if applicable' was added to the two statements that did not include it and were rated less than 0.78 by pharmacist respondents. In addition, two statements moved position. Changes from this stage can be seen in table 7.5.

After face validation	After content validation
Complete a training needs analysis	Complete a training needs analysis of potential audience (if applicable)
Date set for the event	Date set for the event
Budget set for the event	Budget set for the event
All stakeholders included in the planning	All stakeholders included in the planning
Format for event identified	Format for event identified
Length of event identified	Length of event identified
Timing of event (day of the week and time of day) identified	Timing of event (day of the week and time of day) identified
Audience identified (which group/groups)	Audience identified (which group/groups)
Methodology for evaluation planned (at intervention, and post training)	Methodology for evaluation planned (at intervention, and post training)
A venue/online platform identified	A venue/online platform identified
The venue is accessible (location and access) for all attendees (if applicable)	The venue is accessible (location and access) for all attendees (if applicable)
The venue/online platform booked/secured	The venue/online platform booked/secured
Booking platform set up	Booking platform set up
Evaluation form for event planned (if applicable)	Moved position
Stakeholders support dissemination of details	Stakeholders support dissemination of details
Identification of backfill provided (if applicable)	Identification of backfill provided (if applicable)
Mode of advertisement identified	Mode of advertisement identified
Advertising completed in sufficient time to allow planning	Advertising completed
Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice	Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice
Other events in the local area do not clash	Other events in the local area do not clash
Calendar of events made available (if applicable)	Calendar of events made available (if applicable)
Number of repeated events identified (if applicable)	Number of repeated events identified (if applicable)
Maximum capacity for the event identified	Maximum capacity for the event identified
Expert speaker(s)/facilitator(s)/provider identified	Expert speaker(s)/facilitator(s)/provider identified
Topic is relevant to audience professionally and/or personally	Topic is relevant to audience professionally and/or personally
	Aims of event correlate to tangible application into practice outcomes
	Evaluation form for event planned (if applicable)
Pre-work distributed (if applicable)	Pre-work distributed (if applicable)
Reminder sent to registrants	Reminder sent to registrants
Aims of event correlate to tangible application into practice outcomes	Moved position
Presentation referenced to local/national priorities or guidelines	Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)	Copies of slides/workbooks made available (if applicable)
Case studies used	Case studies used
A mixture of learning formats used	A mixture of learning formats used
Contact details collected for follow up evaluation	Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)	Assessment of learning given or signposted (if applicable)
Opportunities to network are given	Opportunities to network are given
Ability to ask questions	Ability to ask questions
Application into practice opportunities identified	Application into practice opportunities identified
Tools given to support learning	Tools given to support learning
Actions planned with measurable outcomes	Actions planned with measurable outcomes
Certification of learning given (if applicable)	Certification of learning given (if applicable)
A follow up email is sent with key points	A follow up email is sent with key points (if applicable)
Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event	Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed -follow up	Evaluation tool completed -follow up
Final evaluation report created	Final evaluation report created
Evaluation shared with stakeholders	Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions	Lessons learnt and identified to support future interventions

Table 7.5: Changes made to the framework after content validity. Where blacked out, no previous statement existed. Yellow indicates a change in wording. Pink indicates a new position.

7.2.3.3 User feedback

7.2.3.3a Procedure

The final step of validation utilised a 'think aloud' protocol.[163,427] The aim of this stage was to talk through the PRACTICE framework to ensure clarity of language ensuring each of the statements was transparent, and understandable, and whether they could be used in practice. In addition, this stage aimed to identify any missing elements or duplications not previously identified.

Think aloud allows people to verbalise their thoughts, using verbal protocols as data, thus giving feedback on a topic or subject.[163] Completing a think aloud also supports content validity, to ensure all essential elements are present in the framework.[155] Repeating the process of think aloud and using an iterative approach of updating after each discussion, allows thoughts to be clarified throughout the process, and allows any thoughts that have previously been missed to be verbalised. This iterative process is used as it is reported that sometimes verbalisation does not keep up with the cognitive process, where more thoughts are available than the time available to say them.[163] Using a think aloud differed from the methodology used by Donyai *et al*.[199] where focus groups were used. The think aloud process was chosen to allow an iterative approach, and allow individual contributions.

7.2.3.3b Sample population and date of intervention

The initial think aloud protocol was conducted with an educational psychologist, who also plans training sessions and is an expert in the think aloud process. This think aloud also acted as a pilot to understand the process along with providing face and content validation, and suggestions for initial changes. After this, six additional end users completed the think aloud. The participants were contacts involved in training events and with project planning experience, with four being involved in pharmacy event planning and two involved in event planning within healthcare but outside of pharmacy. Using a mixed audience further supported validation for the PRACTICE framework to be used for pharmacy with potential uses for other professions. All think aloud interviews were conducted face-to-face. These participants had not been involved in any previous validation element. Using peers in this process supports testing of validity as it challenges the researcher's assumptions and questions methods and interpretations.[12] This allowed an element of prior knowledge to be

brought to the intervention, and support identification of gaps or duplications, and allow verbalisation of different approaches.

During each think aloud, participants were given a paper set of instructions outlining the aim of the framework and how to use it (appendix 24). They were also given a paper copy of the latest version of the framework. They were asked to verbally talk through the elements and statements of the framework and give comment on positioning of the statement as part of the overall framework, readability and if anything needed to be added or removed. The researcher made notes throughout the conversations on suggested modifications to the PRACTICE framework. No audio or video recordings were made, as notes were taken, and the think aloud process here was the final stage of validation of content, building on previous content validity scoring.[427] The initial PRACTICE framework used for the think aloud process can be seen in appendix 25.

The think aloud interventions occurred between January and March 2019. Each think aloud session lasted approximately 30 minutes, with time decreasing with each intervention. Implied consent was given through participation in the interview.

7.2.3.3c Results

Between each interview, changes were made to the framework with regards to language and layout. As the think aloud approach employed an iterative approach, after each conversation the framework was updated, and the updated version was presented at the next interview.

7.2.3.3d Pilot think aloud

Due to experience with planning training, the suggestions made from the pilot with the educational psychologist were included. From the feedback received one statement was removed (complete a training needs analysis of potential audience) and replaced with newer statements for ease of understanding. Four new statements were added:

- Identify gaps in audience knowledge/their training needs
- Identify stakeholders
- Familiarise yourself with the venue facilities (if applicable)
- contact details downloaded from booking platform. Create attendance list

Changes to the position within the framework also changed for seven statements, moving them earlier in the process. Adjustments to wording were made to eight statements for clarity. Linking to this, as some statements had previously been positioned with their originally allocated theme (P, R, A, C, T, I, C, E) of the framework, the left-hand column of the framework, as seen in figure 7.1 was changed. All elements included in 'before intervention' were combined to read 'Practice/Resource/Advertising/Capacity/Topic.' In addition, 'Intervention/CPD' were combined, leaving 'evaluation' on its own. From figure 7.1, the sections from the left hand column, 'before intervention', 'intervention' and 'after intervention' were moved to the top of the GANTT chart to correlate with the timescales, as in figure 7.2. The framework with changes incorporated can be seen in table 7.6. Full changes can be seen in appendix 26.

Before intervention							Intervention	After intervention			
Minimum of 3 months prior to event	2 months prior to event	1 month prior to event	3 weeks prior to event	2 weeks prior to event	1 week prior to event	1-2 days before event	Day of event	1 week after event	1 month after event	2 months after event	3 months after event

Figure 7.2: Initial timescales allocated to the PRACTICE framework GANTT chart

After pilot think aloud
Identify audience (which group/groups)
Identify gaps in audience knowledge/their training needs
Date set for the event
Budget set for the event
Identify stakeholders
All stakeholders included in the planning
Format for event identified
Duration of event identified
Timing of event (day of the week and time of day) identified
Number of repeated events identified (if applicable)
Expert speaker(s)/facilitator(s)/provider identified
Topic is relevant to audience professionally and/or personally
Aims of event correlate to tangible application into practice outcomes
Maximum capacity for the event identified
Other events in the local area do not clash
Methodology for evaluation planned (at intervention, and post training)
A venue/online platform identified
The venue complies with accessibility requirements and has good transport links (if not online)
Familiarise yourself with the venue facilities (if applicable)
The venue/online platform booked/secured
Booking platform set up
Stakeholders are willing to support communication of the event
Identification of backfill provided (if applicable)
Mode of advertisement identified
Advertising of event completed
Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice
Calendar of events made available (if applicable)
Evaluation form for event planned/developed (if applicable)
contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)
Case studies used
A mixture of learning formats/pedagogical approaches used
Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)
Opportunities to network are given
Time allowed for questions and answers
Application into practice opportunities identified
Appropriate tools given to support learning
Individual actions planned with measurable outcomes
Certification of learning given (if applicable)
A follow up email is sent with key points (if applicable)
Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed -follow up
Final evaluation report created
Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions

Table 7.6: PRACTICE framework statements after pilot think aloud.
Yellow indicates a change in wording. Pink indicates a new position. Green indicates a new statement.

7.2.3.3e Think aloud 1

Multiple changes were made to the framework after the first think aloud. Building on the changes made to combining the themes of Practice/Resource/Advertising/Capacity/Topic, 12 statements were moved to a new position within the framework, and various statements were combined. Three new statements were added:

- A venue/online platform identified
- The venue complies with accessibility requirements and has good transport links (if not online)/parking available
- Identification of money available to release/backfill participants (if applicable)

Multiple statements were reworded for clarity. In addition, asterisks were added to various statements to link statements together, relating to planning and advertising.

The updated framework statements can be seen in table 7.7.

7.2.3.3f Think aloud 2

After think aloud 2, one new statement was added:

- Check that equipment needed at the venue are available e.g. IT

Multiple statements were moved (n=8), combined (n=1) or had their wording tweaked (n=6). One further statement had asterisks added relating to preparing the evaluation form for the event. The statements included in the PRACTICE framework after think aloud 2 can be seen in table 7.8.

After think aloud 1
Identify audience for training (which group/groups)
Identify audience training needs/gaps in audience knowledge
Identify stakeholders and include them in the planning
Topic is relevant to audience professionally and/or personally
Date set for the event
Budget set for the event
A venue/online platform identified
The venue complies with accessibility requirements and has good transport links (if not online)/parking available
Format for event identified
Timing/duration of event (day of the week and time of day) identified
Identification of money available to release/backfill participants (if applicable)
Maximum capacity for the event identified
If the event is repeatable, the number of events is identified (if applicable)
Expert speaker(s)/facilitator(s)/provider identified
The venue/online platform booked/secured
Other events in the local area do not clash
Calendar of events made available (if applicable)
Aims of event correlate to tangible actions and planning of event elements/modification of material complete (see * elements below)
Methodology for evaluation at intervention, and post training planned
Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed.
Booking platform set up (including ** plus contact details, special requirements)
Mode of advertisement identified
Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice
Communication/advertising of the event completed through stakeholders
Ensure required equipment/resources for event are ordered or will get to the venue
Evaluation form for event planned/developed (if applicable)
contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*
Case studies used*
A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)*
Opportunities to network are given*
Time allowed for questions and answers*
Application into practice opportunities identified*
Appropriate tools given to support learning*
Individual actions planned with measurable outcomes*
Certification of learning given (if applicable)
A follow up email is sent with key points (if applicable)
Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed for follow up - either email or post
Final evaluation report created
Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions

Table 7.7: PRACTICE framework statements after think aloud 1

Yellow indicates a change in wording. Pink indicates a new position. Green indicates a new statement. Grey indicates a new statement combined from previous statements.

After think aloud 2
Identify audience for training (which group/groups)
Identify audience training needs/gaps in audience knowledge
Identify stakeholders and include them in the planning
Topic is relevant to audience professionally and/or personally
Format for event identified
Budget set for the event including Identification of money available to release/backfill participants (if applicable)
Timing/duration of event (day of the week and time of day) identified
Maximum capacity for the event identified
If the event is repeatable, the number of events is identified (if applicable)
A venue/online platform identified
Date set for the event
Expert speaker(s)/facilitator(s)/provider identified
The venue complies with accessibility requirements and has good transport links (if not online)/parking available
The venue/online platform booked/secured
Other events in the local area/ public or religious holidays do not clash
Calendar of events made available (if applicable)
Planning of event elements/modification of material complete (see * elements below)
Aims of event correlate to tangible changes in practice
Methodology for evaluation at intervention, and post training planned
Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed.
Online booking platform set up (including ** plus contact details, special requirements)
Mode of advertisement identified and marketing material prepared including **
Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice
Communication/advertising of the event completed through stakeholders
Check that equipment needed at the venue are available e.g. IT
Ensure required resources for event are ordered to get to the venue
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*
Case studies used*
A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)*
Opportunities to network are given*
Time allowed for questions and answers*
Application into practice opportunities identified*
Appropriate tools given to support learning*
Individual actions planned with measurable outcomes*
Certification of learning given (if applicable)
A follow up email is sent with key points (if applicable)
Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed for follow up - either email or post
Final evaluation report created
Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions

Table 7.8: PRACTICE framework statements after think aloud 2.
Yellow indicates a change in wording. Pink indicates a new position. Green indicates a new statement. Grey indicates a new statement combined from previous statements.

7.2.3.3g Think aloud 3

During think aloud 3, no statements moved position, but wording was changed for eight statements and four new statements were added:

- Identify topic for the training session
- Identify an alternative format for cascade for non-attenders (if applicable)
- communicate with venue about room layout for event (if applicable)
- Arrange/order catering and/or refreshments (if applicable)

The statements of the PRACTICE framework after think aloud 3 can be seen in table 7.9.

7.2.3.3h Think aloud 4

From think aloud 4, there were only two statements changed, for clarity. 'Methodology for evaluation at intervention, and post training planned' was changed to 'Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call'. 'Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed' was changed to 'Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed'. In addition, the PRACTICE headings were removed to allow more cross over of statements, and fluidity of the process, therefore 'Practice/Resource/Advertising/Capacity/Topic' and 'Intervention/CPD' and 'Evaluation' were removed from the left-hand column. These headings were useful to structure the initial framework but were removed to avoid rigidity. The PRACTICE framework statements after think aloud 4 can be seen in table 7.10.

After think aloud 3
Identify audience for training (which group/groups)
Identify key learning topic/learning needs for the target audience
Identify topic for the training session
Identify key stakeholder groups associated with the planned training and include them in the planning
Topic is relevant to audience professionally and/or personally
Format for event identified e.g. face-to-face or online
Budget set for the event including Identification of money available to release/backfill participants (if applicable)
Timing/duration of event (day of the week and time of day) identified
Maximum capacity for the event identified
If the event is repeatable, the number of events is identified (if applicable)
Identify an alternative format for cascade for non-attenders (if applicable)
A venue/online platform identified
Date set for the event
Expert speaker(s)/facilitator(s)/provider identified
The venue complies with accessibility requirements and has good transport links (if not online)/parking available
The venue/online platform booked/secured
Other events in the local area/ public or religious holidays do not clash
Calendar of events made available (if applicable)
Creation of event material/modification of material complete (see * elements below)
Aims of event correlate to tangible changes in practice
Methodology for evaluation at intervention, and post training planned
Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed.
Online booking platform set up (including ** plus contact details, special requirements, venue details)
Mode of advertisement identified and marketing material prepared including **
Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice
Communication/advertising of the event completed through stakeholders
Check that equipment needed at the venue are available e.g. IT
communicate with venue about room layout for event (if applicable)
Ensure required resources for event are ordered to get to the venue
Arrange/order catering and/or refreshments (if applicable)
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*
Case studies used*
A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation survey
Assessment of learning given or signposted (if applicable)*
Opportunities to network/breaks are given*
Time allowed for questions and answers*
Application into practice opportunities identified*
Appropriate tools given to support learning*
Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable)
Certification of learning given (if applicable)
A follow up email is sent with key points (if applicable)
Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed for follow up - either email or post
Final evaluation report created
Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions

Table 7.9: PRACTICE framework statements after think aloud 3.
Yellow indicates a change in wording. Green indicates a new statement.

After think aloud 4
Identify audience for training (which group/groups)
Identify key learning topic/learning needs for the target audience
Identify topic for the training session
Identify key stakeholder groups associated with the planned training and include them in the planning
Topic is relevant to audience professionally and/or personally
Format for event identified e.g. face-to-face or online
Budget set for the event including Identification of money available to release/backfill participants (if applicable)
Timing/duration of event (day of the week and time of day) identified
Maximum capacity for the event identified
If the event is repeatable, the number of events is identified (if applicable)
Identify an alternative format for cascade for non-attenders (if applicable)
A venue/online platform identified
Date set for the event
Expert speaker(s)/facilitator(s)/provider identified
The venue complies with accessibility requirements and has good transport links (if not online)/parking available
The venue/online platform booked/secured
Other events in the local area/ public or religious holidays do not clash
Calendar of events made available (if applicable)
Creation of event material/modification of material complete (see * elements below)
Aims of event correlate to tangible changes in practice
Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call
Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed.
Online booking platform set up (including ** plus contact details, special requirements, venue details)
Mode of advertisement identified and marketing material prepared including **
Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice
Communication/advertising of the event completed through stakeholders
Check that equipment needed at the venue are available e.g. IT
communicate with venue about room layout for event (if applicable)
Ensure required resources for event are ordered to get to the venue
Arrange/order catering and/or refreshments (if applicable)
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*
Case studies used*
A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation survey
Assessment of learning given or signposted (if applicable)*
Opportunities to network/breaks are given*
Time allowed for questions and answers*
Application into practice opportunities identified*
Appropriate tools given to support learning*
Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable)
Certification of learning given (if applicable)
A follow up email is sent with key points (if applicable)
Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed for follow up - either email or post
Final evaluation report created
Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions

Table 7.10: PRACTICE framework statements after think aloud 4.
Yellow indicates a change in wording.

7.2.3.3i Think aloud 5

Think aloud 5 moved and amended one statement. ‘A follow up email is sent with key points (if applicable)’ was changed to ‘A follow up email is sent with key points and contact details for further questions (if applicable)’. The complete list of statements included in the PRACTICE framework after think aloud can be seen in table 7.11. In terms of design, the time scales at the top of the GANTT chart were all changed to weeks for consistency, as previously there was a mixture of weeks and months, as seen in figure 7.3.

Minimum of 3 months prior to event. Tasks to be completed at this time are flexible dependent on location/local priorities	2 months prior to event	1 month prior to event	3 weeks prior to event	2 weeks prior to event	1 week prior to event	1-2 days before event	Day of event	1 week after event	1 month after event	2 months after event	3 months after event

Changed to

Minimum of 12 weeks prior to event. Tasks to be completed at this time are flexible in terms of order and timing dependent on location/local priorities	8 weeks prior to event	4 weeks prior to event	3 weeks prior to event	2 weeks prior to event	1 week prior to event	1-2 days before event	Day of event	1 week after event	4 weeks after event	8 weeks after event	12 weeks after event

Figure 7. 3: Changes made to PRACTICE framework GANTT chart timings

7.2.3.3j Think aloud 6

The final think aloud resulted in one combination of statements, combining ‘Application into practice opportunities identified*’ with ‘Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable).’ Aside from that only minor changes were made, such as tidying up minor grammatical errors, such as removing full stops and capitalising statements that currently started with lowercase. In addition a key was added at the bottom of the table outlining all of the elements included in the statements with asterisks (*,** or ***). This was to be expected as the content was being refined with each iteration. The final changes made to the framework as a result of think aloud 6 can be seen in table 7.12.

After think aloud 5
Identify audience for training (which group/groups)
Identify key learning topic/learning needs for the target audience
Identify topic for the training session
Identify key stakeholder groups associated with the planned training and include them in the planning
Topic is relevant to audience professionally and/or personally
Format for event identified e.g. face-to-face or online
Budget set for the event including Identification of money available to release/backfill participants (if applicable)
Timing/duration of event (day of the week and time of day) identified
Maximum capacity for the event identified
If the event is repeatable, the number of events is identified (if applicable)
Identify an alternative format for cascade for non-attenders (if applicable)
A venue/online platform identified
Date set for the event
Expert speaker(s)/facilitator(s)/provider identified
The venue complies with accessibility requirements and has good transport links (if not online)/parking available
The venue/online platform booked/secured
Other events in the local area/ public or religious holidays do not clash
Calendar of events made available (if applicable)
Creation of event material/modification of material complete (see * elements below)
Aims of event correlate to tangible changes in practice
Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call
Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed.
Online booking platform set up (including ** plus contact details, special requirements, venue details)
Mode of advertisement identified and marketing material prepared including **
Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice
Communication/advertising of the event completed through stakeholders
Check that equipment needed at the venue are available e.g. IT
communicate with venue about room layout for event (if applicable)
Ensure required resources for event are ordered to get to the venue
Arrange/order catering and/or refreshments (if applicable)
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*
Case studies used*
A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation survey
Assessment of learning given or signposted (if applicable)*
Opportunities to network/breaks are given*
Time allowed for questions and answers*
Application into practice opportunities identified*
Appropriate tools given to support learning*
Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable)
Certification of learning given (if applicable)
Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
A follow up email is sent with key points and contact details for further questions (if applicable)
Evaluation tool completed for follow up - either email or post
Final evaluation report created
Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions

Table 7.11: PRACTICE framework statements after think aloud 5.
Yellow indicates a change in wording.

After think aloud 6
Identify audience for training (which group/groups)
Identify key learning topic/learning needs for the target audience
Identify topic for the training session
Identify key stakeholder groups associated with the planned training and include them in the planning
Topic is relevant to audience professionally and/or personally
Format for event identified e.g. face-to-face or online
Budget set for the event including Identification of money available to release/backfill participants (if applicable)
Timing/duration of event (day of the week and time of day) identified
Maximum capacity for the event identified
If the event is repeatable, the number of events is identified (if applicable)
Identify an alternative format for cascade for non-attenders (if applicable)
A venue/online platform identified
Date set for the event
Expert speaker(s)/facilitator(s)/provider identified (if applicable)
The venue complies with accessibility requirements and has good transport links (if not online)/parking available
The venue/online platform booked/secured
Other events in the local area/ public or religious holidays do not clash
Calendar of events made available (if applicable)
Creation of event material/modification of material complete (see * elements below)
Aims of event correlate to tangible changes in practice
Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call
Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed
Online booking platform set up (including ** plus contact details, special requirements, venue details)
Mode of advertisement identified and marketing material prepared including **
Advertising includes:** o Aims of event o Topic including driver for the topic o Skills to be acquired o Potential impact on individual practice
Communication/advertising of the event completed through stakeholders
Check that equipment needed at the venue are available e.g. IT
Communicate with venue about room layout for event (if applicable)
Ensure required resources for event are ordered to get to the venue
Arrange/order catering and/or refreshments (if applicable)
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
Contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*
Case studies used*
A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation survey
Assessment of learning given or signposted (if applicable)*
Opportunities to network/breaks are given*
Time allowed for questions and answers*
Appropriate tools given to support learning*
Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable)
Certification of learning given (if applicable)
Evaluation tool completed ***– at event o Good elements o Least positive elements o Relevance to practice o Learning outcomes achieved o Speaker/facilitator feedback o Organisation of event o Proposed changes to practice from event
A follow up email is sent with key points and contact details for further questions (if applicable)
Evaluation tool completed for follow up - either email or post
Final evaluation report created
Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions
* • Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable) • Assessment of learning given or signposted (if applicable)* • Opportunities to network/breaks are given* • Time allowed for questions and answers* • Appropriate tools given to support learning* • Copies of slides/workbooks made available (if applicable)* • Case studies used* • A mixture of learning formats/pedagogical approaches used* ** • Aims/rationale of event • Topic including driver for the topic • Skills to be acquired • Potential impact on individual practice *** • Good elements • Least positive elements • Relevance to practice • Learning outcomes achieved • Speaker/facilitator feedback • Organisation of event • Proposed changes to practice from event

Table 7.12: PRACTICE framework statements after think aloud 6. Yellow indicates a change in wording and grey indicates a new statement combined from previous statements.

All changes of statements from initial creation through to final framework prior to implementation and testing, in one document can be seen in appendix 26. The time scales attached to the statements are as outlined in figure 7.3.

A comparison of the initial framework statements to the final statements can be seen in figures 7.4 and 7.5. The final PRACTICE framework, including suggested timescales, for testing in practice had 51 elements, as seen in figures 7.6 and 7.7 and appendix 27.

At the point of the viva for this thesis, incorporating an equality, diversity and inclusion impact assessment was discussed. Various elements of the framework have now been highlighted where an impact assessment would be useful, as seen in figures 7.6 and 7.7.

Initial statements
Date set for the event
Budget set for the event
All stakeholders included in the planning
Format for event identified
Length of event identified
Timing of event (day of the week and time of day) identified
Audience identified (which group/groups)
Expectations of attendees captured
Plan for evaluation both at intervention, and afterwards, planned
Reminder sent to registrants
A venue/online platform identified
The venue is accessible/central (if not online)
The venue/online platform booked/secured
Booking platform set up
Evaluation form for event planned (if applicable)
Stakeholders support dissemination of details
Identification of backfill provided (if applicable)
Mode of advertisement identified
Advertising completed in sufficient time to allow planning
Advertising includes: o Aims of event o Topic including driver for the topic o Skills to be acquired Benefit to practice
Other events in the local area do not clash
Calendar of events made available (if applicable)
Number of repeated events identified (if applicable)
Maximum capacity for the event identified
Topic is applicable for all potential attendees
Expert speaker(s)/facilitator(s)/provider identified
Topic is relevant to audience professionally and/or personally
Link seen between topic and potential application practice outcome
Aims of event correlate to tangible actions
Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)
Case studies used
A mixture of learning formats used
Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)
Opportunities to network are given
Ability to ask questions
Application into practice opportunities identified
Tools given to support learning
Actions planned with measurable outcomes
Certification of learning given (if applicable)
A follow up email is sent with key points
Methodology planned
Evaluation tool completed – at event o Good elements o Least positive elements o Relevance to practice o Learning outcomes achieved o Speaker/facilitator feedback o Organisation of event Proposed changes to practice from event
Evaluation tool completed -follow up
Final evaluation report created
Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions

Initial framework

After think aloud 6
Identify audience for training (which group/groups)
Identify key learning topic/learning needs for the target audience
Identify topic for the training session
Identify key stakeholder groups associated with the planned training and include them in the planning
Topic is relevant to audience professionally and/or personally
Format for event identified e.g. face-to-face or online
Budget set for the event including Identification of money available to release/backfill participants (if applicable)
Timing/duration of event (day of the week and time of day) identified
Maximum capacity for the event identified
If the event is repeatable, the number of events is identified (if applicable)
Identify an alternative format for cascade for non-attenders (if applicable)
A venue/online platform identified
Date set for the event
Expert speaker(s)/facilitator(s)/provider identified (if applicable)
The venue complies with accessibility requirements and has good transport links (if not online)/parking available
The venue/online platform booked/secured
Other events in the local area/ public or religious holidays do not clash
Calendar of events made available (if applicable)
Creation of event material/modification of material complete (see * elements below)
Aims of event correlate to tangible changes in practice
Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call
Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed
Online booking platform set up (including ** plus contact details, special requirements, venue details)
Mode of advertisement identified and marketing material prepared including **
Advertising includes:** o Aims of event o Topic including driver for the topic o Skills to be acquired o Potential impact on individual practice
Communication/advertising of the event completed through stakeholders
Check that equipment needed at the venue are available e.g. IT
Communicate with venue about room layout for event (if applicable)
Ensure required resources for event are ordered to get to the venue
Arrange/order catering and/or refreshments (if applicable)
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
Contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*
Case studies used*
A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation survey
Assessment of learning given or signposted (if applicable)*
Opportunities to network/breaks are given*
Time allowed for questions and answers*
Application into practice opportunities identified*
Appropriate tools given to support learning*
Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable)
Certification of learning given (if applicable)
Evaluation tool completed ***– at event o Good elements o Least positive elements o Relevance to practice o Learning outcomes achieved o Speaker/facilitator feedback o Organisation of event Proposed changes to practice from event
A follow up email is sent with key points and contact details for further questions (if applicable)
Evaluation tool completed for follow up - either email or post
Final evaluation report created
Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions

Framework ready for implementation testing

Figures 7.4 and 7.5: Framework statements initially and ready for implementation testing

	Before intervention							Intervention	After intervention				
FINAL version	Minimum of 12 weeks prior to event. Tasks to be completed at this time are flexible in terms of order and timing dependent on location/local priorities	8 weeks prior to event	4 weeks prior to event	3 weeks prior to event	2 weeks prior to event	1 week prior to event	1-2 days before event	Day of event	1 week after event	4 weeks after event	8 weeks after event	12 weeks after event	Comments
Identify audience for training (which group/groups)													
Identify key learning topic/learning needs for the target audience													
Identify topic for the training session													
Identify key stakeholder groups associated with the planned training and include them in the planning													
Topic is relevant to audience professionally and/or personally													
Format for event identified e.g. face-to-face or online☑													
Budget set for the event including identification of money available to release/backfill participants (if applicable)													
Timing/duration of event (day of the week and time of day) identified													
Maximum capacity for the event identified													
If the event is repeatable, the number of events is identified (if applicable)													
Identify an alternative format for cascade for non-attenders (if applicable)													
A venue/online platform identified ☑													
Date set for the event													
Expert speaker(s)/facilitator(s)/provider identified (if applicable)													
The venue complies with accessibility requirements and has good transport links (if not online)/parking available													
The venue/online platform booked/secured													
Other events in the local area/ public or religious holidays do not clash													
Calendar of events made available (if applicable)													
Creation of event material/modification of material complete (see * elements below)													
Aims of event correlate to tangible changes in practice													
Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call													
Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed. ☑													
Online booking platform set up (including ** plus contact details, special requirements, venue details)													
Mode of advertisement identified ☑ and marketing material prepared including **													
Advertising includes:**													
o Aims/rationale of event													
o Topic including driver for the topic													
o Skills to be acquired													
o Potential impact on individual practice													
o Potential impact on individual practice													
Communication/advertising of the event completed through stakeholders													
Check that equipment needed at the venue are available e.g. IT													
Communicate with venue about room layout for event (if applicable)													
Ensure required resources for event are ordered to get to the venue													
Arrange/order catering and/or refreshments ☑													
Evaluation form for event planned/developed (if applicable) ensuring elements from*** are included ☑													
Contact details downloaded from booking platform. Create attendance list													
Pre-work/pre-reading distributed (if applicable)					For new registrants								
Reminder sent to registrants													
Presentation referenced to local/national priorities or guidelines													
Copies of slides/workbooks made available (if applicable)*													
Case studies used*													
A mixture of learning formats/pedagogical approaches used*													
Contact details collected for follow up evaluation survey													
Assessment of learning given or signposted (if applicable)*													
Opportunities to network/breaks are given*													
Time allowed for questions and answers*													
Appropriate tools given to support learning*													
Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable)													
Certification of learning given (if applicable)													
Evaluation tool completed*** – at event													
o Good elements													
o Least positive elements													
o Relevance to practice													
o Learning outcomes achieved													
o Speaker/facilitator feedback													
o Organisation of event													
o Proposed changes to practice from event													
A follow up email is sent with key points and contact details for further questions													
Evaluation tool completed for follow up - either email or post													
Final evaluation report created													
Evaluation shared with stakeholders													
Lessons learnt and identified to support future interventions													

Figure 7.6 The final PRACTICE framework ready for implementation testing

*

- Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable)
- Assessment of learning given or signposted (if applicable)*
- Opportunities to network/breaks are given*
- Time allowed for questions and answers*
- Appropriate tools given to support learning*
- Copies of slides/workbooks made available (if applicable)*
- Case studies used*
- A mixture of learning formats/pedagogical approaches used*

**

- Aims/rationale of event
- Topic including driver for the topic
- Skills to be acquired
- Potential impact on individual practice

***

- Good elements
- Least positive elements
- Relevance to practice
- Learning outcomes achieved
- Speaker/facilitator feedback
- Organisation of event
- Proposed changes to practice from event

☑ Ensure an equality, diversity and inclusion impact assessment has been considered for these elements

Figure 7.7: Key for use with the PRACTICE framework to identify statements with an asterisk

After the completion of the think aloud interventions, looking back at the statements from table 7.4 that scored less than 0.78 at initial content validity all but two of the statements have been amended for clarity. Only ‘certification of learning given (if applicable) and ‘maximum capacity for the event identified’ remain unaltered. Thus, these statements were deemed as less relevant but the low relevancy does not appear to be due to their clarity, as they were deemed clear through the ‘think aloud’ process. Full details can be seen in table 7.13. Despite the change of order of some of the statements from the original PRACTICE framework, and the removal of the lettering in the final framework, the acronym was decided to be maintained as this reflects the original design and gives the framework an identify.

Initial Statement	Initial CVI score and profession	Final statement
Complete a training needs analysis	0.67 (pharmacist) 0.75 (combined)	Identify key learning topic/learning needs for the target audience
Identification of backfill provided (if applicable)	0.67 (pharmacist) 0.50 (healthcare colleagues) 0.58 (combined)	Budget set for the event including identification of money available to release/backfill participants (if applicable)
Number of repeated events identified (if applicable)	0.50 (pharmacist) 0.67 (combined)	If the event is repeatable, the number of events is identified (if applicable)
A follow up email is sent with key points	0.50 (pharmacist)	A follow up email is sent with key points and contact details for further questions (if applicable)
Certification of learning given (if applicable)	0.33 (pharmacist)	Certification of learning given (if applicable)
Timing of event (day of the week and time of day) identified	0.67 (healthcare colleagues)	Timing/duration of event (day of the week and time of day) identified
Maximum capacity for the event identified	0.67 (healthcare colleagues)	Maximum capacity for the event identified
Other events in the local area do not clash	0.50 (healthcare colleagues) 0.75 (combined)	Other events in the local area/public or religious holidays do not clash
Pre-work distributed (if applicable)	0.50 (healthcare colleagues) 0.75 (combined)	Pre-work/pre-reading distributed (if applicable)

Table 7.13: Comparison of initial statements scoring less than 0.78 at content validity compared to final framework statement. Yellow indicates unchanged statements

7.2.3.4 Implementation and testing

Finally a face-to-face event was organised and delivered following the PRACTICE framework. Face-to-face was chose as from the studies in this thesis, this was the preferred method for receiving learning. The aim of this stage of the development and validation was to ensure that the framework was usable to organise and deliver a learning event. During each stage of the process notes were taken, with timescale, to validate the framework. As per the framework, the topic was chosen based on pharmacists' need. The topic of 'domestic abuse' was chosen, as suggested by the GPhC for 2019 (See figure 7.8). Planning for the event started in July 2019. The trainer was an employee from Refuge Kingston, and the event was advertised through the RPS and LPC. Guidance was given by the researcher to the speaker with regards to the elements to include in the event, such as case studies. Participants were pharmacists from South London because the event took place at Kingston University.

The PRACTICE framework was implemented, with commentary and dates added for activities completed.

The researcher completed the PRACTICE framework throughout the organisation of the event. The framework was completed in statement order, with statements being completed in chronological order, with the exception of 'date set for the event' and 'expert speaker identified', as for this event, the date was set once the expert speaker had been identified. As the framework can be used flexibly, no further change was made to the final framework.

A copy of the completed framework for the domestic abuse event is presented in appendix 28, and the advert for the event is presented in appendix 29. As part of the framework, in order to evaluate the session, a paper evaluation form was used at the end of the event, along with a follow-up evaluation form being circulated by email.

The event was held on 25th September 2019. At the event, participants were given a paper copy of the presentation to make notes. As per the framework, follow up material was sent to participants via email on 1st October 2019. The follow up material included a digital copy of the presentation, along with further local referral information and other support contact details.

Subjects you might want to learn about

In the course of our work we sometimes identify subjects in pharmacy practice which we think are important to members of the public. The areas we currently recommend learning in are:

- Sodium valproate
- Identifying the signs of domestic abuse and supporting survivors, families and perpetrators

These are not required learning subjects, but you might find it useful to consider them if they are relevant to your practice.

Figure 7.8: GPhC CPD topics for pharmacists 2019

Screen shot from https://www.pharmacyregulation.org/revalidation-resources-pharmacy-professionals[428] As at 09/07/2019

7.2.3.4a Evaluation form design

The evaluation form had 13 questions, mainly open-ended questions in order to capture the details required from the PRACTICE framework, such as personal objectives for the course, how practice may change, the most useful and least useful elements and how the event could be improved. Self-reflection was also included in an open-ended question to identify future CPD needs after the event. There were three Likert scale questions: one looking at elements of preparation and content, on a 5-point scale from not at all to absolutely and one looking at overall impression of the course, on a 5-point scale from poor to excellent, and tick box. A third 10-point Likert scale question, where 1 was not at all and 10 was extremely, asked about the content and completion of the evaluation form itself, from which a mean score could be calculated to measure the validation of the evaluation form as an evaluation tool. It also included demographic questions asking about gender, sector of practice, role and years since qualification.

7.2.3.4b Evaluation form distribution

The researcher was present at the event to welcome the pharmacists and hand out the paper evaluation forms (appendix 30) at the beginning of the event. The participants were verbally informed at the beginning of the event that the data they provided would be used as part of a research project. As per previous PESL events, evaluation forms were completed at the end of the event. Implied consent was given through completion of the evaluation form.

7.2.3.4c Evaluation form analysis

Results from the evaluation forms were entered into Microsoft Excel and tables produced with the scores of the results, along with points identified from the open-ended responses.

7.2.3.4d Evaluation form results

The training session was attended by 16 people, 13 females and three males, with pharmacists working in community pharmacy (n=9), hospital pharmacy (n=3), academia (n=2). The other two attendees were not currently working in practice. All 16 learners completed the evaluation forms (100% response rate). The full results are presented in appendix 31.

Objectives for attendance at the event included recognising signs and symptoms of abuse, and knowledge of the support available and where to refer to if needed. The topic was also mentioned as one of interest.

When asked about the event on a 5-point scale (where 1 was not at all and 5 was absolutely), the most positive response related to the content being pitched at an appropriate level (n=11 saying absolutely). Full results are in table 7.14.

Statements	Frequencies				
	Not at all	A bit	Some	Mostly	Absolutely
Did you find the timing of the event convenient?				6	10
Were you aware of the aims of the course before attending?		2	3	6	5
Were you aware of the drivers for the topic prior to attendance?	1		5	5	5
Did the course meet its specified aims/objectives?			1	6	9
Did the course meet your personal objectives?		1		6	9
Was the content pitched at an appropriate level?		1		4	11
Was there a good balance between theory and practical application?		1		8	7
Has the course helped meet your learning needs?		1	1	5	9
The handouts/material given were useful		1		6	9

Table 7.14: Feedback on the event

When asked about anticipated impact of the event on professional practice after the event, greater awareness of signs and symptoms, referral pathways and support available were noted. The most useful course elements included use of real examples, group work, signposting information and support available and increased knowledge about local information. Conversely, when asked about the least useful course elements some participants (n=2) thought the information was too specific to London Borough of Kingston.

When asked to rank the overall impression of the course on a 5-point scale (where 1 was poor to 5 being excellent) there were 13 positive responses out of 16, scoring very

good or excellent. The course tutor was deemed excellent by 9 and very good by 4, and the opportunity to ask questions was also seen to be positive. Full results regarding overall thoughts of the session can be seen in table 7.15.

Overall comments about the event were broadly positive outlining engagement and that the session was a positive experience, although comments echoed previous findings that more time to practice application of knowledge would be useful. Although examples were shared, and case studies had been used, attendees asked for more case studies, as had been identified in chapters 3 and 4, as well as the opportunity to practice having conversations.

Statements	Frequencies				
	Poor	**Fair**	**Good**	**Very good**	**Excellent**
Overall impression of the event		1	2	5	8
Overall impression of the course tutor(s)			3	4	9
Overall impression of the venue		1	2	5	8
Opportunity to participate in activities		1	3	4	8
Opportunity to ask questions			2	5	9
Opportunity to practise the skills learnt		5	6	2	3
Opportunity to think about how to apply the learning into practice		1	4	7	4

Table 7.15: Overall impression of the event

Opportunities for future CPD, as a result of the workshop included more reading around the resources, and understanding of local providers, updating materials and updating signposting folders within work settings with correct contact information.

All but one of the attendees would recommend the event. The reason for no was given as ‘does not say much more than CPPE safeguarding course.’ Reasons for recommending included that it was thought provoking, with useful information and that the topic was an important social issue.

When looking at the evaluation form itself, to validate this tool, the questions on the evaluation form were rating it as an average of 8.3 out of 10 for ease of answering and 8.2 out of 10 for encouraging reflective thinking.

No additional changes were made to the framework at this stage.

7.2.3.4e Follow up Evaluation form design

The follow up survey was set up using Microsoft Docs and consisted of 7 questions, including open-ended questions asking about what participants remembered from the event, and exploring implementation into practice, one 5-point Likert Scale question ranking from not at all to absolutely, about application of learning in practice after the event, and tick box responses, asking whether they had received the follow up email and whether the learning points had supported CPD. It also included demographic questions. Data from the follow up survey were entered into Microsoft Excel for analysis, along with points identified from the open-ended questions.

7.2.3.4f Follow up Evaluation form distribution

A link was circulated by email to those who provided their contact details on the evaluation form six weeks after the event. The cover letter which explained the purpose of the follow up evaluation (appendix 32), was sent with the link to the post-event survey (appendix 33). The initial survey was sent on 7th November 2019 and a reminder email was sent on 21st November. Implied consent was given when completing the follow up evaluation form.

7.2.3.4g Follow up Evaluation form results

The follow up evaluation resulted in eight responses, therefore giving a 50% response rate (eight out of 16). Full results can be seen in appendix 34. The responders were three males and five females. With regards to sector of practice, five responders were community pharmacists, two worked in hospital and one was an academic. Years of qualification ranged from 1 to 35.

When asked what they remembered about the course, most responses focused on the information they received, such as different types of abuse, local contacts and services available. Of the responses, seven out of eight said they had received the follow up email with the key learning points, and five responded that they had used the learning to support their CPD, with one additional response stating that they had ‘maybe’ used the information. When asked about the event, half (4/8) said that the topic was ‘absolutely’ relevant to practice, with six out of eight (75%) responses being positive. Again, six out of eight (75%) responses were positive for being more confident after the event. Being more knowledgeable after the event was positive in

five out of eight cases. Half (4/8) gave positive responses about sharing information learnt with their team. However, only two responders (25%) gave positive responses about seeing a change in practice as a result of the event, and 2 (25%) had also put changes into practice (See table 7.16).

Statement	Frequencies				
	Not at all	**A bit**	**Some**	**Mostly**	**Absolutely**
The topic covered was relevant to my practice		1	1	2	4
I am more confident after the event		2		3	3
I am more knowledgeable after the event	1	1	1	3	2
I shared the information learnt with my team	2	1	1	2	2
I have seen a change in my practise as a result of the course	3	1	2	1	1
I am putting the intended changes in practice I stated at the event into	3		3	2	

Table 7.16: Follow up evaluation responses about the event

When asked to describe anything that has been done differently or implemented after the course, respondents mentioned awareness, updating and sharing information, although one colleague had yet to complete anything.

When describing barriers to implementation of learning, the biggest factor was limited opportunity, as no cases of domestic abuse had been encountered.

When measuring a change in practice as a result of the session at follow up, only a month had been given. As domestic abuse cases are currently rarely referred, as seen in a previous study in the USA,[429] this may explain the low application rate. This was also echoed in the free text responses. When looking at relevance of the topic to the role, the results in this study echo the previous PESL study. Therefore the time given on the framework may not be suitable for this topic, so the framework needs to be used flexibility to support the topic being covered.

It would be interesting to resurvey the participants after the COVID-19 pandemic to see whether learning was used, as there has been an increase in domestic cases seen in practice during the pandemic,[430] and pharmacies have been used as ‘safe spaces’ for victims.[431,432]

No additional changes were made to the framework as a result of the evaluation of the event, but an explanation of use was added, and this will be described below.

7.2.3.4h Reflection on the PRACTICE framework usage

Whilst the framework was completed in chronological order, except for two statements, the framework was not designed to be rigid, so suggested instructions need to be included with the framework, to remind users that the statements are there as a guide, and should be completed in the order that is best for their individual event. Engagement for the event was low, but this may have been affected by the topic, as in chapter 4 is was seen that law and ethics topics, and regulation had lower interest than clinical topics or new services (table 4.17). From this particular event application of learning into practice was not high. As seen in the PESL chapter (chapter 3), the topic affects application of learning into practice. Cases of domestic abuse would be rarely seen in practice, so application may take longer than is seen in the follow up survey, sent 8 weeks after the event. The majority of attendees used the learning to support CPD, a finding that echoes chapter 3. However, even for those who did not use the event to support CPD, sending a follow up email and survey encourages reflection on practice, even if no change has been made. Self-assessment is a key element of CPD which is being supported by follow up questions.

Therefore, on reflection, there needs to be consideration by users that the time scales given on the PRACTICE frameworks are suggestions only, and can adapted dependent on the event. When running the event a comment was received that content was similar to another available course. This course had not run recently, and is also predominantly online, but a consideration to be taken into account for organisers may be to give a list of similar courses, when advertising the event, from working with local stakeholders. Whilst nothing will be added to the framework at this stage, if future sessions raise the same concerns a statement to this effect could be added. The framework acknowledges the need to identify repeated events, but not courses, as based on previous findings face-to-face events were deemed to provide opportunity for discussions and networking not available in online resources or courses, thus this was not deemed as a source of clash but rather complementary to the learning. A series of considerations for using the framework need to be created.

When reviewing the statements on the framework, they are applicable to use in face-to-face events, but no statement is face-to-face specific, so could also be used for organising, delivering and evaluating an online event.

The final framework, including instructions and considerations for use can be seen in appendix 35. The framework stayed as was seen in figure 7.6 with the addition of instructions below:

The aim of the framework is to support planning of learning or training interventions. This can be used as a spreadsheet, or paper-based document.

PRACTICE supports achievement of the main elements of planning and evaluating a learning event:

- ***P**lanning*
- ***R**esources*
- ***A**dvertising*
- ***C**apacity*
- ***T**opic*
- ***I**ntervention*
- ***C**PD*
- ***E**valuation*

This tool was designed primarily for pharmacist training interventions, although has also been validated for use by other healthcare professionals, and for other educational interventions.

Please use the framework as a support document to support the planning of training interventions, as a checklist and reminder tool. Not all statements will be applicable to all learning events. Whilst listed in a chronological manner, some statements may be completed before others. Time scales are also given as suggestions, although these may be adjusted to suit your individual learning event.

For online use, the time scale linked to a statements is red. This can be changed to amber or green to track progress of your project, if applicable. Comments can also be added, where needed, to add date of completion, or other issues.

This framework is not exhaustive, and other activities may also need to be completed.

7.3 Discussion

Pharmacists, along with other healthcare professionals, have a need to engage in lifelong learning throughout their careers in order to maintain and improve patient care.[204] One of the primary ways in which they engage in learning is through attendance at or participation in training events. The aim of creating the PRACTICE framework was to support organising and delivery of learning events, to provide

guidance for providers and support consistency of approach, to ensure events are planned with participants in mind and to support application of the learning acquired into practice. As there are multiple providers who organise and deliver learning events this leads to variability of experience, and variance in the ability to apply learning into practice.

Previously, there was no validated approach available to organise and deliver a learning event. Providing a structure for learning events to support mandatory requirements or personal interest ensures consistency, quality and supports positive outcomes for patients, with well-trained pharmacists being able to provide public health services more proactively.[126] As seen in previous studies, planning prior to implementation is key to a successful outcome[132] especially when activities are designed with application of learning into practice in mind. [235]

When looking at previous frameworks that were explored in the introduction to the chapter, studies identified different elements that support learning, but there is no previous holistic framework for learning events. The PRACTICE framework addresses the issue of quality assurance, raised by Mestrovic *et al*.[201] by providing a consistent approach to planning and delivery. Farrell *et al*.[132] and James[237] provided lessons learnt when organising and running events, but again, failed to provide a breakdown of activities to be completed by an organiser of an event.

In order to address the fact that no previous framework existed, taking into account literature, and evidence from studies, the PRACTICE framework was created.

7.3.1 Reflection of design and validation strategy

Validating the PRACTICE framework, following a previously used model for validation,[50] although some steps were modified, helped to ensure a robust methodology. Successfully using the completed framework to run a pilot session also showed that it can be used successfully in practice. Although the PRACTICE framework was created primarily for pharmacists, validation showed the PRACTICE framework could also be used for organising events for other healthcare professionals.

Utilising multiple methods during the validation process allowed the use of different individuals, and allowed different foci at each stage, i.e. overall viability, content relevance, clarity and usability, ensuring robustness of the approach.

Using a range of individuals at different stages of the validation process enabled feedback from multiple stakeholders, with different knowledge and skills, helping to shape the finished product. Previous studies have shown the benefit of partnerships supporting learning.[153] Experts in pharmacy learning were used to ensure that the framework is suitable for use in organising and delivering a pharmacy related event. Using those not involved in pharmacy interventions supports validation for the use in other professions and ensured that there is no pharmacy related jargon included.

An iterative development process was used throughout the validation. This allowed changes to be made throughout the process to refine and adapt the PRACTICE framework. Adding timescales encourages preparation and planning, and helps to create SMART objectives, ensuring the statement is specific, measurable, achievable, realistic, but also time bound.[433]

As seen from the results, at each validation intervention fewer changes were identified. This shows that this was a successful process and that the framework was understandable, methodical, and usable. Although a structure was followed for the process overall, the validation approach was flexible and agile, allowing the process to follow the thoughts of the individuals involved.[434] The think aloud approach showed fewer changes throughout the process, with the design and wording being tweaked throughout. Interpretation of words differs by individual, so allowing multiple stakeholders to read and interpret meaning resulted in jargon free, clear English.[435]

Using multiple methodologies for validation is a benefit to allow feedback from different stakeholders in different ways, to gain a full picture about how the PRACTICE framework may be used in different settings, for different professions. Using a completed framework in practice then also allows continual tweaks to be made. Validation can be seen as a continuing process that is never fully complete, as long as the validation is making the most of the evidence available at the current point in time.[436] Having the aim of the project at the heart of the validation is also key to ensure it is fit for the desired purpose, and will be usable by stakeholders in the future.

7.3.1.1 Challenges and benefits of validation approaches

Gaining a time slot at a development day has both challenges and benefits. The challenge was to be free on the specified date, and not knowing in advance how many would attend. In addition, face validation may be subjective in some cases, dependent on thoughts and experiences.[157] However, the benefit is that a specific forum was identified to have a group of experts who were involved in education and training and who understood the PESL concept. Face validation through the use of guided questions allowed participants to engage as much or as little as they wanted to. Content validity index was used to validate the framework, echoing a previous study.[50] This focuses on positive responses to a Likert Scale, so although scoring can still be subjective, there is reduced variance as scores for 3 and 4 are included. The CVI was also done prior to the think aloud process, so validation may be different if this had been done after the finalised version created as a result of the think aloud interventions. Cronbach's alpha, which measured internal consistency, would be less valid in this situation, as that is used as a reliability method for psychometric tests, which is why this study did not use this approach.[437]

The think aloud approach allowed experts to articulate their thoughts on individual elements and the framework overall. Using a range of individuals, with different backgrounds and focus gave a more rounded picture and allowed the challenge of individual elements. The think aloud is an open approach. Limitations of the methodology used are that interventions were not recorded, as suggested in the literature,[427] but notes were taken and any suggestions questioned to gain more understanding if needed, to ensure clarity of understanding by the researcher. Additional challenges came where participants suggested changes to statements that had been previously amended from previous feedback, but ideas were probed and amends made as needed.

Organising, delivering, and evaluating an event following the PRACTICE framework allowed the theory of validation to be put into practice. The framework was easy to follow and complete. The topic picked was of relevance to the profession, as guided by the regulator. As seen previously in the PESL study, topic is one of the key factors in attendance at events. However, the topic chosen did not render itself to application, as few cases as seen, therefore there is limited opportunity to fully appreciate whether

the framework could be enhanced. Organising only one event following the PRACTICE framework is a current limitation. In addition, the currently piloted event was run as a face-to-face event. The researcher also organised the event, so had an understanding of the statements in the framework, which may have created some researcher bias.

7.3.2 Potential use of the PRACTICE framework for other healthcare professionals

Whilst the predominant audience in mind while creating and validating the PRACTICE framework was pharmacists, other healthcare professionals were involved in the validation, to explore further use outside of pharmacy. As further validation was carried out, it was still deemed appropriate to continue validation for use both with pharmacists and other healthcare professionals. Where other professionals were involved, overall, there was agreement that the framework could be used, although some variation was seen. When looking at the content validation responses there were differences between pharmacists and other professions. This echoes previous findings as presented in chapter 5 of some of the differences in training provision. For example, healthcare colleagues were less concerned about backfill provision for training, as more work in NHS settings, versus pharmacists who predominantly work in community practice, and are independent contractors.[8] Pharmacists scored lowest on the statements related to the need of certification of learning, as the GPhC do not require certification to be demonstrated, whereas others are required to demonstrate this, as seen in chapter 5.

7.3.3 Lessons learnt from implementation

During implementation, the PRACTICE framework was followed, with actions recorded along the way. All but a couple of statements were completed in chronological order, therefore the framework was easy to understand and apply, so initial validation processes created a framework that was fit for purpose and achieved the initial aim; to help plan, deliver and evaluate a learning event. Whilst the PRACTICE framework was trialled using a face-to-face intervention, the statements could also be applied for an online event. Having the words ‘if applicable’ next to many of the statements allows flexibility of usage, and allows the user to have confidence that they can adjust the framework to suit their individual needs. South London was

the site for intervention, as in previous studies, but this has allows the users who have been involved in the design and validation to take forward training across this geographical location with confidence.

7.3.4 Future work

The overall PRACTICE framework has now been piloted, and was used successfully for pharmacists, so appears to be promising from researcher-based validation. Future organisation and delivery of events according to the framework will continue to support validity of the tool. The PRACTICE framework also needs to be trialled through organising and delivering an online event, to compare results. In addition, to support engagement for all, the PRACTICE framework would be enhanced by linking it to an equality, diversity and inclusion impact assessment. This would continue to build on the aim of the framework to ensure everyone is included and is supported to participate in events and apply their learnings into practice.

The think aloud approach has limited previous usage in pharmacy literature. A few studies utilising the method can be found, for example when assessing e-prescribing, where think aloud was used to understand how a process worked in practice.[438] However, no studies could be found using the think aloud method for validation of a protocol or procedure. The think aloud is suggested for use as a good method to learn about and identify issues in any process or protocol.

Future organisation and delivery of events according to the framework will continue to increase validity. This framework will be shared at the lifelong learning in pharmacy conference 2020, now postponed until 2021 due to the Covid-19 pandemic. The PRACTICE framework has also been shared with colleagues who organise learning events, for them to use whilst planning events, and so further external feedback can be gained. The PRACTICE framework, once published, will also be shared with the training providers outlined in chapter 1. Plans for publishing the framework are underway.

7.3.5 Limitations

The PRACTICE framework was only completed in practice once, and in only one geographical location. It was also implemented only by the researcher. In September 2019, there were plans for additional trials of face-to-face events, but due to multiple

factors this did not take place. The whole picture of training is changing. The LPF structure is undergoing a restructure, and then due to the Covid-19 pandemic, all face-to-face training events have been postponed for the foreseeable future. Therefore, the framework has also only been trialled in practice for pharmacists, and for face-to-face delivery. The validation also only occurred by pharmacists and related healthcare professionals located in one geographical location. The validation in this study followed a previous paper, although the think aloud replaced focus groups. However, in hindsight it would be interesting to repeat the content validity again on the completed framework, or just complete this at the end.

7.4 Conclusion

A framework for the organisation, delivery and evaluation of a learning event was developed and validated; the PRACTICE framework. It was designed to support organisers of learning events to provide consistent experiences for pharmacists and other healthcare professionals, while supporting learning and its application into practice. The framework provides a systematic but flexible approach to planning, providing suggested timescales for activities and providing a check list to ensure all elements have been considered and actioned.

The framework, although designed primarily for pharmacists, has been validated by other healthcare professionals, and can be used by anyone organising a learning event. The PRACTICE framework will support achievement of lifelong learning and work towards professionals having a consistent experience of learning. When used in practice, the PRACTICE framework was easy to use and follow. For full validation, future work includes trialling the PRACTICE framework on additional events, and in different settings and possibly countries.

Chapter 8: Summary of thesis

8.1 Review of the research

Lifelong learning is essential for pharmacists and other healthcare professionals, both in GB and globally. Lifelong learning for pharmacists in GB is supported through completion of CPD for pharmacists where it is mandatory to record the outcomes of 4 learning experiences. The mandatory CPD requirement can be achieved through attendance or participation at learning events, or through other means.

When reviewing the current situation at the start of this thesis, it was seen that learning events had limited consistency, both nationally and internationally. There was limited quality assurance and also limited evaluation of the events and their impact into practice.

The thesis showed an evident increase in CPD requirements globally, thus emphasising how impact into practice is required to improve health outcomes. To achieve this, learning events need to support learning needs which need to be relevant to practice.

This research was completed with pharmacists in South London and globally, and healthcare professionals practising in GB. The principle aim of the research was to develop and validate a framework to support the organisation and delivery of lifelong learning events to support consistency of experience, regardless of provider.

The objectives outlined in the research were:

- Identifying different formats or models used by pharmacists for lifelong learning globally, and identifying preferences for the differing models. (Chapter 2)
- Identifying factors that influence the perceived success of a face-to-face lifelong learning event from the perspective of attendees. (Chapter 3)
- Establishing current participation in and preferences of pharmacists in terms of format and provider, plus motivators and barriers, for participation in CPD activity, and support needed for application of learning. (Chapter 4)
- Investigating current reality in GB for lifelong learning of healthcare professionals and healthcare regulators or support bodies, in terms of provision, uptake and attitude. (Chapter 5)

- Identifying current practice of lifelong learning including mandatory CPD/CE globally, from registered pharmacists, exploring current models in place. (Chapter 6)
- Present the development and validation of a framework. (Chapter 7)

Mixed research methods were used to address the aims and objectives of the thesis.

8.1.1 Key findings

To investigate the experience of attending a learning event, an evaluation form, consisting of 14 questions was used at the end of PESL learning events. To follow up on the events, and triangulate the data, participants were also invited to participate in an interview, as well as a follow up questionnaire.

When looking at data received from 600 evaluation forms from PESL events in chapter 3, topic being relevant to role, interesting topics and CPD opportunities were the most common reasons for attendance. From the qualitative data based on 11 interviews, it was established that personal commitment, including personal, family and work impact on attendance at events. The interviews also identified that the topic, as well as being relevant to role should also be linked to clear session objectives, along with perceived benefits for practice. Linking to topic, the content of the session should be evidence based and current, and its delivery is also key to the implied success of the session, so an expert speaker or facilitator enhances the experience and helps to engage the audience in learning. The interviews identified that participation is reduced when attendees are not aware of the events so communication is crucial to success.

When looking at application of knowledge into practice after the event, patients and service provision were the themes most commonly stated. Over half of attendees indicated they would complete a CPD cycle after the event, with a statistical significance seen of more inclination to complete CPD after attendance at a lecture over a workshop. However, from 122 responses at follow up, over half of the respondents identified that their preferred format of face-to-face learning was workshop over lecture.

Only a small handful identified that no action had been taken as a result of event attendance (5.8%, n=25). When looking at application of learning into practice the biggest barrier was time with over half of respondents stating this. To support application into practice, nearly three quarters asked for a copy of the presentation

from the event, and over half requested case studies and follow up emails when surveyed. This finding was echoed from interviews where it was seen that to support application of learning into practice, reference tools are required, such as case studies, presentation notes or further activities that can be discussed with colleagues or patients.

In chapter 3, when reviewing attendance data for face-to-face events, it was found that more attendees travelled to evening events from work, with almost a half being within two miles of their work address for their learning event compared to only a quarter being within two miles of home. From the interviews convenience of location to be close to work or home at a convenient time was deemed an important factor affecting attendance.

Building on this initial data, to gain a wider perspective on learning experiences and preferences, a survey was used, targeted at pharmacists working in South London, along with interviews (chapter 4).

Of 338 survey responses received, most respondents (86.7%) had participated in a learning activity in the previous 12 months. By format, the most commonly used was an e-learning package with 62% having used this method followed by over half (54.8%) who had attended a face-to-face workshop. However, when looking at preference of learning for active participation, a face-to-face workshop was preferable to e-learning. Between one and two hours was seen to be the preferred length of time for a learning event. Learning individually was found to allow flexibility of approach regarding timing of learning, but had the drawback of limited interaction with others.

When reviewing motivators for attendance in the survey, topic was the main factor, followed by interest, regulatory requirement and role. From the interviews (n=19), when looking at elements supporting participation at learning events, similar findings were found as in chapter 3. Motivators and enablers included regularly planned events, and making the topic relevant to practice. Timing and length of event were again found to be important for increasing participation. Advertising is needed, along with an engaging topic, which is applicable to practice and has a national or local relevance.

The biggest barriers from the survey were time and venue, plus finishing work or getting home too late. From the interviews, barriers were noted as family and work commitments, such as finishing too late, as well as trying to get a healthy work-life balance.

For application of learning into practice, similar to results in chapter 3, from the survey almost three quarters of participants wanted to receive a copy of the presentation with over half also wanting to receive case studies and follow up emails. Again, similar to chapter 3, the interview responses matched the results of the survey where participants wanted tools such as a copy of the slides or a handout, and assessment to support application of learning into practice.

Chapter 5 aimed to establish an understanding of requirements for mandatory revalidation or CPD requirements for healthcare professionals in GB. To achieve that, a mixed method approach was used incorporating information from a search of the regulator websites, along with semi-structured interviews with a mixture of registered healthcare professionals and representatives of professional bodies and training providers.

Using the same interview schedule that was used for healthcare professionals, pharmacists who are registered in countries globally were also interviewed to understand different requirements for mandatory CE/CPD and how these are achieved in practice, through exploring providers, regulation, current options for learning and continuing to build on the understanding of learning format preference, and other elements that support or deter participation in learning events (chapter 6).

When comparing the CPD and revalidation requirements of pharmacists in GB to other healthcare professions in chapter 5, the websites of the NMC, GMC, GPhC, GDC and HPCP were all reviewed. It was found that nurses, doctors and pharmacists have revalidation requirements, which all include a CPD component. Dentists and registrants of HCPC are all subject to CPD requirements. The timings of CPD and revalidation cycles differ across the professions, with doctors and pharmacists being annual, and nurses every three years. For CPD requirements, these also differ ranging from number of cycles to complete, through to number of hours completed, akin to CE.

From the interviews, it was identified that different tools are used in learning events but case studies are common. Evaluation forms are commonplace, and some professions, such as nurses and doctors use evaluation forms as verification of learning. All professions agreed that a blended learning approach is a positive approach, although personal preferences did affect participation in various activities.

When looking globally at learning requirements for pharmacists in chapter 6, echoing previous studies from the literature search completed in chapter 2, it was clear that a mixture of requirements of CE/CPD or no mandatory system exist. Certain countries, such as USA, may have a mixed approach of mandatory requirements dependent on the state a pharmacist practices in.

When examining formats of learning events that take place around the globe, face-to-face learning is the most common, although an increase in online provision is occurring. Face-to-face activity comprises of multiple activities, including conferences, postgraduate programmes, or courses. Pharmacists were positive about a blended approach to learning, allowing personal preferences and choice to participate in online or face-to-face events. It was noted that certain topics may be better suited for an individual format with fact based knowledge updates being suitable for online, but skills based learning being more optimal when completed face-to-face.

Globally, the same issues were seen as in GB pharmacists, with barriers and motivators for participation being similar. Online learning provides flexibility and overcomes barriers such as distance and time constraints, whereas face-to-face has the benefit of being able to share ideas and network, plus have hands on experience where applicable. Barriers for face-to-face echo the previous interviews citing geography and time. The negative aspects of online were identified as being a tick-box exercise on most occasions.

Similar to healthcare professionals in GB, case studies were a commonly used tool at learning events to help with application of learning into practice, and evaluation form was again the most common evaluation method, although online evaluation is also used.

8.1.2 Framework design and validation

The creation of the framework triangulated all of the findings from the different methodologies used into a needs assessment for inclusion, also using information identified from the systematic literature review presented in chapter 2. From the findings the following were key elements that were determined to be included in the created framework. The key elements identified for inclusion in a framework for designing, delivering and evaluating a learning event were:

- Clear outcomes are needed linked to application of knowledge after the event
- Tools to support application of knowledge into practice should be established
- Sharing examples of how to use the knowledge gained in practice is useful
- All stakeholders should be involved in a local area when planning events
- Topics need to support local or national priorities
- Holding multiple events is useful to maximise attendance
- When publicising events, the following should be covered:
- The topic, including:
    - the driver for the topic
    - the impact of the learning and why it is needed
    - what skills will be obtained
- The speaker and their experience
- How participants will be able to apply their learning after the event
- A clear strategy for publicity of events is needed to cover the target audience
- A calendar of events is needed
- Timing, dates, length and format need to be determined
- The cost of the event and given budget is required
- The topic identified should be delivered by an expert speaker or facilitator
- Tools to support application of learning into practice are required
- Identification of whether backfill will be provided
- Certification of learning should be considered
- Evaluation of learning is crucial
- Specific questions should be included in the evaluation
- Case studies are a useful tool to support application of learning

After the PRACTICE framework was created, an iterative agile method was used to validate it. Primary validation was completed using face validation methods, through sharing the initial framework with experts at a development day; content validation occurred through scoring of the elements from the framework. A GANTT chart was created to add time scales to elements after face validity. To further validate the framework, a think aloud process was followed to allow experts to articulate their thoughts on each element of the framework to allow an iterative approach to tweaking and finalising the framework, ready for use in practice. End users were used to ensure the framework was fit for purpose, and understandable and usable. These methods confirmed viability, relevancy and clarity.

To determine usability of the framework when used to organise, deliver and evaluate an event, it was followed in practice, with the lead researcher planning, overseeing the running of, and then evaluating the event following the elements of the framework in mostly chronological order and a systematic fashion.

The initial face validation confirmed the PRACTICE framework as viable and likely to be a useful tool for those organising learning events, content validity by pharmacists gave the overall framework an ACP of 0.92 which is over the 0.90 recommended. When looking at the ACP achieved by other healthcare professionals it was just under 0.9 at 0.89, and when combining the results from both groups overall the framework scored an ACP of 0.9. Of 46 statements, when looking at calculated scores for individual statements, all statements received an individual content validity over 0.78 except for 5 statements for pharmacists, and 5 for healthcare colleagues, with only one statement being on both lists. There were 5 statements that had calculated scores of less than 0.78 when pharmacist and healthcare professional results were combined, but no additional statements than those previously seen were represented. For pharmacists, 33/46 statements were scored as 3 or 4 out of 4 showing a positive validity score. Seven think aloud interventions, including a pilot using an expert resulting in changes being made, helped to shape and hone the framework ready for testing in practice. A key element of the PRACTICE framework was to incorporate evaluation as a key element of the learning event. When evaluating the developed evaluation form, it was given an average of 8.3 out of 10 for ease of answering and 8.2 out of 10 for encouraging reflective thinking.

Whilst running an event to trial the framework in practice, it was easy to use and follow, and the majority of statements were completed in chronological order. Timings of implementation of tasks can be flexible, and may be affected by topic. Certain topics may take more time to have an impact of practice if they are not seen regularly. The framework, however, encourages reflection on practice through a follow up, so even if no action has been taken, the participant can reflect on potential impact. The statements are applicable to use in face-to-face events, but no statement is face-to-face specific, so could also be used for organising, delivering and evaluating an online event.

8.1.3 Limitations

There are a number of limitations from this thesis that need to be taken into account.

The large majority of participants for all research, excluding on global pharmacists and other healthcare professionals, concerned pharmacists from one geographical area, South London, which may limit the findings, although in most cases the sample size did allow for the results to be extrapolated.

Certain elements may have been missed from data capture where information was not asked, such as pharmacy ownership during the PESL evaluation form. Non-attender data was also not followed up. Pairing of data was also not completed from PESL evaluation forms and the follow up survey, so actual application of knowledge into practice versus intention could not be confirmed.

When interviewing other healthcare professionals and global pharmacists, only 1 representative from each profession/organisation or country was interviewed, so although data was gathered, this may have been tainted by individual perceptions or experiences. All participants who agreed to participate were interviewed, but pharmacists from various countries failed to respond, so findings from additional countries were missed.

Whilst a framework has been created for learning events, in both the PESL chapter and in the PRACTICE framework chapter, interventions were face-to-face, so no large evaluation of online events, or trialling of the framework for an online event has been carried out. The PRACTICE framework was only completed in practice once, due to

the stop of events from COVID-19. With the temporary stop of face-to-face events during a pandemic, limitations of this thesis may be that there is a changed learning environment which may emerge as the new normal. Findings captured feelings at one point in time, so the appetite for face-to-face events in the future will need to be re-evaluated. During the COVID-19 pandemic, although opportunities could be found to trial an online event, pharmacists are overwhelmed with pressures.

The researcher was involved in the planning and running of events for validation of the PRACTICE framework which may have also potentially provided unconscious bias to the results identified.

8.2 Conclusion

Overall, it was seen that there is no one size fits all in terms of preferences for learning, with face-to-face activity being preferred, although online activity is increasingly used. Preferences are influenced by individual motivators and barriers.

The studies in this thesis identified that there is more technology being used for learning events, both in GB and globally, however face-to-face events (excluding during a pandemic) are still prevalent, and (until prior to a pandemic) were still the most preferred method of achieving learning, to support lifelong learning, and the completion of any mandatory CE or CPD requirements.

Currently there are a range of providers for learning events in GB. Having a structure for learning events in place is beneficial for quality assurance and ensuring that regulatory requirements are fulfilled. A model that encourages reflection on learning and then application of that learning into practice supports the move towards CPD that is being seen globally. In GB, this supports the revalidation process by showing impact of learning on practice. The GPhC does not specify the format that needs to be used for revalidation. It was seen that for face-to-face learning events, individuals are receptive to either lecture or workshop style events, dependent on individual preferences. However, it was identified that sharing of experiences supports the learning process during events, supported by the use of case studies to encourage application of learning into practice. Online learning is increasing, and whilst not the preferred method, the use of this method is increasing, with further opportunities for participation, therefore a flexible approach is needed for learning events.

Barriers and motivators for attendance of all learning events are also individual, although time, cost and location are common. Awareness of events is also a common barrier.

Motivators include the topic being covered, and also where the aim of the learning encapsulates actions for application into practice. Supporting the mandatory requirement of achieving CPD is also seen as a benefit of attending learning events. Assessment of learning, and tools to support application of learning into practice are seen as important to participants.

When looking at mandatory requirements for lifelong learning amongst other healthcare professionals in GB and pharmacists globally, in GB CPD is the commonly used model used by regulators for recording learning, and actions resulting from the learning. Learning supporting patient focused outcomes is the ideal. Across the professions in GB, there is a flexible approach seen to participation and engagement with CPD as this can be achieved in many ways, not just through attendance at events. Where events are run there is variety in time, day of the week and length. Like pharmacy, there are a number of organisations available for other professions to access to achieve desired learning. Globally for pharmacists there are various models of CPD/CE, but there is an appetite for lifelong learning, even where mandatory systems are not in place, and face-to-face events are also common globally, although, similar to GB there is an increase in online provision, especially in westernised countries, and where geographical locations make it harder to attend in person.

As a result of the findings, the PRACTICE framework was created as a protocol to organise, deliver and evaluate a learning event. It allows a suggested series of steps to be followed, with suggested time scales, to give consistency to planning, whilst also allowing flexibility. The framework was validated with pharmacists in mind, using end users and experts in South London to ensure their views were taken into consideration, it was fit for purpose and to ensure they were familiar with the framework. However, although the PRACTICE framework was created with feedback primarily from pharmacists, this thesis has also brought together findings and validation from other healthcare professionals, so the framework has future potential to be used by other populations.

During the writing of this thesis, the role of the pharmacist is continuing to adapt with the role of the pharmacy workforce expanding and changing, and changes occurring to undergraduate and foundation pharmacy education. Further work also needs to be completed to establish if this framework has the potential to be used in early training of pharmacists, along with other healthcare professions and pharmacists globally.

The PRACTICE framework fills the gaps identified in chapter 1 regarding lack of follow up evaluation and supporting application of learning into practice. It also supports quality assurance and consistency of experience for participants. Whilst this thesis primarily concentrated on face-to-face interventions, due to the running of PESL initially, there is nothing in the framework that cannot be translated to an online event. This framework helps to ensure tasks are SMART, and events planned thoroughly to support achievement of lifelong learning for participants.

8.3 Recommendations

When using the PRACTICE framework the following points need to be considered:

- The framework is designed to give structure but is also flexible, so can be adapted to personal needs
- The topic may affect the timing of the follow up evaluation, as some topics may be less seen in practice
- Following the framework elements will enhance engagement in learning, and will also enhance quality assurance and support reflection on practice
- The organiser can add notes to the PRACTICE framework to review actions, and potentially share with others

8.4 Future work

Work from this thesis has so far resulted in four peer reviewed publications, with an additional two currently in the peer review process. In addition, two correspondence articles were accepted, and two conference items have been presented, with one further conference acceptance, as outlined below. Publications are listed on page viii. A paper from chapter 7 is currently being drafted to ensure work from throughout the thesis is shared, and to allow the PRACTICE framework to be shared with a national and international audience.

This thesis presented a framework to support planning, delivery and evaluation of a training event. Future work will include:

- Introducing the PRACTICE framework to an international audience. Plans were in place to introduce the framework at the lifelong learning in pharmacy conference taking place in Dublin in July 2020. This has been postponed until July 2021. It is intended that we will submit the PRACTICE framework for peer review and publication in an international pharmacy journal to disseminate the findings
- Trialling the use of the PRACTICE framework for an online learning event with pharmacists in GB, to identify any similarities and differences from the completed proforma for a face-to-face event, and tweaking the framework as required
- Trialling the use of the PRACTICE framework for face-to-face and online learning events with other healthcare professionals in GB, and identifying any changes needed to the framework to suit this population
- Trialling the use of the PRACTICE framework for face-to-face and online learning events for pharmacists in countries outside of GB, and identifying any changes needed to the framework to suit this population

8.5 Reflections on the impact of COVID-19 on learning events

As of April 2021, the COVID-19 pandemic is still ongoing, and whilst restrictions are easing there appears to be anxiousness by some to go back to mass events. However, regarding learning events, as the findings of this thesis show, face-to-face learning is preferred but online events are good for knowledge updates. Online lectures are easy and accessible, and are likely to stay in some format ongoing, for knowledge updates. A blended learning approach is already starting to be seen by some providers, such as CPPE who are starting to provide some of their return to practice workshops face-to-face whilst keeping some content virtually. Online workshops have been rolled out, and the benefits of these include the ability to bring together a wider audience from a larger geographical area, but these rely on good internet connections and that all those present will engage in the process using their cameras and microphones. However, building relationships is not as easy online, as it is hard to have smaller one-to-one conversations. As interactive workshops were found to be the most wanted and

beneficial for application of knowledge throughout the thesis, it is likely some face-to-face events will return, those who are willing and able to participate. This will be particularly important for service-based activities where practical hands-on experience is required.

Future work will be to update and recirculate some of the questions from the questionnaire used in chapter 3, to identify experiences of learning during the COVID-19 and preferences for going forward, to see if and how views have changed amongst pharmacists. This will then inform future practice and delivery of learning events. The PRACTICE framework, being agile in nature, will continue to be updated as required, as new findings emerge.

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Appendices

Contents

Appendix 1: Pharmacy Contract information, including descriptions (chapter 1)

National pharmacy contracts:

Various contracts for the opening of new pharmacies exist. These have varied over time. The control of entry regulations were issued as part of the 2005 Pharmaceutical Services Regulations.[1] Between 2005 and 2012 new pharmacy contracts could be issued based on the new regulations if they were:[2]

- In an approved retail area of 15,000 square metres or more
- Intending to open 100 or more hours per week
- Consortia where a pharmacy was needed as part of a one stop primary care centre
- A distance selling pharmacy (DSP) offering no face-to-face care

In addition, there are dispensing appliance contractors (DAC) and essential small pharmacies local pharmaceutical scheme premises (ESPLPS).

As of 2012[1] the contract process changed again, so a new pharmacy could only open based on a local need, identified in a document called the Pharmaceutical Needs Assessment (PNA). Only distance selling pharmacies were allowed to open without a need being identified in the PNA. Pharmacies opened under one of the conditions above are required to still adhere to these conditions. Each Borough is required, under the Health Act 2009, to create a Pharmaceutical Needs Assessment (PNA) every three years, to outline the local needs of the population and their pharmaceutical care needs. This is done by outlining current provision of community pharmacy and identifying any gaps that can be used for future pharmacy contracts to be issued. [3]

The requirements to be contained in the PNA were outlined in The National Health Service (Pharmaceutical and Local Pharmaceutical Services) Regulations 2013.[3] A PNA also highlights the available local hospital pharmacy provision.

Locally, offering a more general picture of public health, local authorities are also required to complete joint strategic needs assessments (JSNAs) which outline the needs of the local population, to ensure locally commissioned services are responding to the demographic of the area. [4]

Definitions:

100 Hour Pharmacies: Pharmacies received a contract based on their ability to provide pharmaceutical services for 100 hours a week.

DSP (Internet pharmacies): These pharmacies do not offer a face-to-face service, but offer a mail order or internet based service. These can be accessed by patients from anywhere in the country.

LPS: These pharmacies do not have another local pharmacy within 1 km but are believed to offer a vital service to their local community. However, there was a viability issue as, without financial aid, they were in jeopardy of closing, therefore attracted an additional finance deal from the NHS.

Dispensing Appliance contractor (DAC)s: Appliance contractors do not provide drugs, but provide services to people who need appliances such as stoma and incontinence care aids, trusses, hosiery, surgical stockings and dressings. DACs are not considered as a community pharmacy so where they are present they are in addition to the number of community pharmacies stated.

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Appendix 2: Evaluation form from PESL events

Pharmacy Education South London (PESL) Evaluation form

Date: **Venue:** **Event Topic:**

Pharmacy organisations across South London have collaborated to provide pharmacy teams with learning programmes relevant to the development of roles to support local and national NHS priorities.
Please take a few moments to fill in this form and let us know how well we have managed this.

Gender : Male ☐ Female ☐

Age: <25 ☐ 26-35 ☐ 36-45 ☐ 46-55 ☐ >55 ☐

Are you currently working as: Pharmacist ☐ Medicines Support staff ☐

Dispensing Assistant ☐ Technician ☐ Pre-registration trainee ☐

Pharmacy student ☐ Other (please specify) ☐ .....

Years since qualification (if applicable): 1 ☐ 2-10 ☐ 11-20 ☐ 20+ ☐

How did your hear about this event?

Colleague/Friend ☐ RPS email ☐ RPS website ☐ LPC email ☐

CPPE email ☐ Other (please specify) ☐ .....

Did you receive enough details about the event learning outcomes before attending the event?

Yes ☐ No ☐

If you answered 'No' - Please add any comments that will help us to provide relevant details for future events.

What made you decide to attend the event?

Topic relevant to my role ☐ Topic relevant to my future role ☐

Interesting topic ☐ Social interaction with pharmacy colleagues ☐

CPD opportunity ☐ Opportunity to learn as a pharmacy team ☐

Update knowledge and understanding of patient needs with this condition ☐

Other (please specify) ☐ .....

About the learning experience
Please circle a rating of 1,2,3,or 4 for the following (1=Not at all, 4= Very/A lot)

How much did the learning event increase your understanding of the topic? 1 2 3 4

How thought provoking was the learning event? 1 2 3 4

How relevant was the learning to your role?. 1 2 3 4

How much do you expect the learning event to change your practice? 1 2 3 4

How much did you enjoy the learning event? 1 2 3 4

PTO

What was the most postive aspect of the learning event?

What was the least postive aspect of the learning event?

How will you use the learning gained to change your practice/ your team?
Please tick all that apply

Delegation of team roles	☐	Proactively deal with patients/carers with this condition	☐
Improvement of services	☐	Improved working relations with other health/ social care providers	☐
Complete CPD entry	☐	Supporting team members learning needs	☐
Development of new services	☐	Other, please specify……	

Your speaker
Please circle a rating of 1,2,3,or 4 for the following (1=poor, 4= excellent)

How able was the speaker to stimulate discussions?	1 2 3 4
How able was the speaker in engaging and supporting your learning ?	1 2 3 4
How effective was the speaker's time management?	1 2 3 4
How well did the speaker relate the learning to your practice?.	1 2 3 4
Overall, how do you rate the speaker?	1 2 3 4

Do you have any comments about the facilitator ?, If yes, please share below.

Outcome based learning plan.
As part of your implementation of learning, please record one significant change that you will make on your return to your Pharmacy that will have an impact on the patient/group of patients.

For future planning please take a moment to share topics you would like PESL to focus on:

If you are happy to share your details with the project team for ongoing evaluation of the programme, please add your contact details.

Name:

Email:

Telephone:

Thank you for taking the time to share your thoughts. For more information contact: yourpesl@gmail.com.

Appendix 3: Interview schedule post PESL events, including consent form

Kingston University
Penrhyn Road
Kingston upon Thames
Surrey KT1 2EE
020 8417 9000

The Optimum supplementary education and training model for pharmacy professionals

Letter for participant

Dear Sir/Madam,

My name is Ricarda Micallef and I am currently undertaking a PhD to explore the optimum training model for supplementary education and training of pharmacy professionals.

I would like to invite you to take part in my research to evaluate pharmacy education and training provision. Your valued responses will provide me with an insight into current education and training provision, and help propose future models for education and training.

This interview will take no longer than 30 minutes.

Participation is completely voluntary and all the information gained will be maintained in a strict confidential manner. No identifiable information will be disclosed in the reporting of the project, with all respondents allocated randomised numbers to ensure anonymity. Any information you provide will only be accessible to myself and the project supervisor and will be stored confidentially and later destroyed.

I would like to thank you for taking the time for reading this correspondence; your participation would be truly appreciated. Please do not hesitate to contact either myself or my supervisor if you have any queries or require assistance.

Yours Sincerely,

Ricarda Micallef

***Student**: Ricarda Micallef MRPharmS*
***Email**:r.micallef@kingston.ac.uk*

***Supervisor:** Dr Reem Kayyali*
Associate Professor in Pharmacy Practice
***Email**: R.kayyali@kingston.ac.uk*

WRITTEN CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Statement by participant

- I confirm that I have read and understood the information sheet/letter of invitation for this study. I have been informed of the purpose, risks, and benefits of taking part.

Title of study: <u>The Optimum supplementary education and training model for pharmacy professionals</u>

- I understand what my involvement will entail and any questions have been answered to my satisfaction.
- I understand that my participation is entirely voluntary, and that I can withdraw at any time without prejudice.
- I understand that all information obtained will be confidential.
- I agree that research data gathered for the study may be published provided that I cannot be identified as a subject.
- I agree for this interview to be recorded/not recorded (delete as appropriate)
- Contact information has been provided should I (a) wish to seek further information from the investigator at any time for purposes of clarification (b) wish to make a complaint.

Participant's Signature----------

Date ----------

Statement by investigator

- I have explained this project and the implications of participation in it to this participant without bias and I believe that the consent is informed and that he/she understands the implications of participation.

Name of investigator ----------

Signature of investigator ----------

Date ----------

Good morning/afternoon, my name is Ricarda Micallef, a senior lecturer in Pharmacy practice at Kingston University. I am conducting research into further education and training experiences for pharmacy professionals and how we can optimise these in the future. Thank you for agreeing to give your time for this interview, as a follow up from a Pharmacy Education South London event you have attended. This interview should take no longer than 30 minutes.

Which topic(s) have you attended through PESL?

Dementia, Hypertension, NOAC, Diabetes, alcohol, antiplatelets

What was your primary reason for attending the meeting(s)?

Education, social, personal interest, speaker

Please can you tell me what you remember about the learning event(s)?

Describe the experience. Speaker, venue, format of the training, activities,

Describe how you have applied your learning after the event(s)

Can you give an example of something you did, for example, complete CPD entry, talk to others, nothing

Please share any examples of actions you have taken to change your practice after the event?

Introducing a new service, education of others, patient interaction, MUR/NMS consultation

How likely are you to recommend future PESL events to colleagues and why?

Topic/location/format

Which providers or training programmes do you currently use for your Education and Training needs and why?

RPS/CPPE/employer/specialist group

Which education provider would be your first choice to fulfil your education and training needs and why?

Format of training/speakers/specialist in field/frequency of meetings/availability of material

How do you best like to learn?

Reading/writing/workshops/individual

What formats of learning would you be happy to undertake with others?

Workshop/podcast/seminar/conference/lecture

What formats of learning are you happy undertaking on your own?

Reading books/reading journals/completion of a workbook/e-learning

When you don't attend learning events, what are your reasons?

Topic/timings of event/no accreditation/personal commitments

Speaking to friends and colleagues, what reasons do they share for not attending training events?

Topic/timings of event/no accreditation/personal commitments

How could we increase attendance at learning events for pharmacy professionals?

Time, topic, format

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

Pharmacy team/healthcare professionals, including doctors, nurses, midwives, dentists./ patients/voluntary groups

Why have you answered how you did?

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

Appendix 4: Follow up questionnaire post PESL events

1. Which Topic(s) have you attended through PESL (April 2014-April 2016)? (Please tick all that apply)

Dementia friends	
Hypertension	
NOAC	
Inhaler technique	
Diabetes	
Alcohol	
Anti-platelets	
Consultation skills	
Minor ailments	
Substance Misuse	
EPS and SCR	
Eye Health	
Safeguarding	

2. How have you applied the learning from the event? (Please tick all that apply)

	Did not attend	Delegation of team roles	Proactively support patients/carers with this condition	Improved working relations with other care health/social providers	Improvement of services	Complete CPD entry	Supporting team members learning needs	Development of new services	Completed an MUR/NMS consultation	Not applied any learning
Dementia friends										
Hypertension										
NOAC										
Inhaler technique										
Diabetes										
Alcohol										
Anti-platelets										
Consultation skills										
Minor ailments										
Substance Misuse										
EPS and SCR										
Eye Health										
Safeguarding										

3. Please share any other examples of how you have applied your learning

4. Please share a case study of how you have applied your learning

5. What are the barriers to you applying your learning? (Please tick all that apply)

Learning not relevant to current role	
No patients with that condition	
Not supported by pharmacy team	
Time pressures	
No tool to support the application of learning	
Other (please specify)	

6. Please share your thoughts on what makes a topic 'relevant' to you

7. What resources would you find useful to use after an event to help apply your learning? For each of the options you select also state what timescale after the event you would find useful.

	What tool(s) would be useful	1 week	1 month	2 months	3 months	6 months	1 year	Annual newsletter with summary of all events
None								
Copy of the presentation								
Case studies								
Flash cards								
Follow up email with a reminder of key points								
On line assessment								
On line 'chat' area where you can share ideas and ask questions								
Other (please specify)								

8. What is your preferred face to face learning method? (please tick ONE option)

Lecture	
Workshop	
No preference	

9. How would you like to be contacted about future events? Tick all that apply. For each option you select please also select how often you would like reminders of upcoming events through this method

	Weekly	Monthly
Email		
Text		
Tweet		
Facebook posting		
Newsletter		
Other (please specify)		

10. Once you have signed up for an event, how you would prefer to be reminded about the event?

Email	
Text	
Tweet	
Facebook posting	
Other (please specify)	

11. Please list any topics you would like to see in future events

Appendix 5: Free text responses from evaluation forms

topic	what was the most positive aspect of the event	what was the least positive aspect of the event	Do you have any comments about the speaker? If yes, please share	outcome based learning plan
Hypertension	going through guidelines			
Hypertension				encouraging black people, especially over 30 to check their BP
Hypertension	Enjoyed going through the guidelines in community pharmacy. Often you don't get a chance to use them	a little long	very skilled	want to interest myself and read up on the subject
Hypertension	Well organised presentation. Real-life examples			Monitor the dossett patients, looking for opportunities to do MURs. Measuring BP accurately
Hypertension	enjoyed speakers experiences	Like more detail on the resistant hypertension treatment out of curiosity, but I know not suitable for community pharmacy, no complaints!	very informative and good experience and basic revision	teach colleagues new info to help with competences
Hypertension	treatment of patients of hypertension diseases			consultation engagement with patients
Hypertension	review the knowledge about hypertension treatment in UK	the time of the day it was		I understand the medicines better so can explain the issues to my patients
Hypertension			very good explaining things in detail	help recruit patients for NMS and health checks
Hypertension	updated my knowledge			have enthusiastic MURs for this group of patients
Hypertension	the knowledge of the speaker			realise why particular meds have been prescribed
Hypertension	case studies			will be very useful in my NMS and MURs
Hypertension	Patient scenarios. Stages of hypertension and preferred drugs	Speed was fast. Lots of information to listen to/take in		better, more informative MURs and NMS
Hypertension	very informative			impact on MURs - tips
Hypertension	to update the current treatments			
Hypertension	the speaker was clear and concise	quite a bit of waiting at the start		more attentive to blood pressure monitoring

Hypertension	patient reactions to bp medication	evening session		NMS
Hypertension	the teaching was evidence based and current			more involve in treatment plan reviewing patient
Hypertension				shared learning with team
Hypertension	increased my knowledge - current guidelines	none	excellent facilitator - enjoyable lecture	will be able to support my patients with more confidence
Hypertension	gained knowledge about hypertension		excellent knowledge	
Hypertension	new NICE guidelines regarding treating hypertension	none	good communication and interesting	not to give (or question) suitability of ACEi in black/afro Caribbean patients
Hypertension				lifestyle advice and BP measuring techniques etc.
Hypertension	to get basic information about hypertension		excellent	give as much counselling as I can to the patient
Hypertension	updated on most things			increase NMS and MURs
hypertension	case studies			engagement with patients on hypertensive medication and get involved in healthy living pharmacy
Hypertension	knowledgeable expert speaker - thank you			
Hypertension	as a community pharmacist I see hypertension in and out hence it helps to do MUR and NMS			
Hypertension	case studies			
Hypertension	support for MURs			
Hypertension	getting the information and having a practical example	none		improve on the MUR with patient
Hypertension	looking at discussing how patient is getting on with their meds and lifestyle			enforcing patients more in relation to smoking cessation etc.
Hypertension				follow up closely the prescriptions and the items prescribed to be able to help patients understand better their conditions and medications
Hypertension	pharmacy support staff welcome and pitched at level that all could understand and relate to	it would be nice to have specific adherence/counselling tips to pass on to patients, e.g.	very knowledgeable and used experience from practice	discussing side effects with patients and how to overcome these or optimise therapy

		where to easily access outcome data		
Hypertension				make better use of NICE guidelines during MURs and NMS
Hypertension	NICE 2011 guidelines			Better BP monitoring. Better understanding of hypertension in different ethnic groups
hypertension	the case study/example of previous experiences made the learning more digestible			I will be able to look out for combinations of drug therapy that has been prescribed
Hypertension	interaction and case studies		excellent knowledge and practical advice	actively counsel patients on hypertension
Hypertension	approach of the lectures is very constructive starting with early background, going towards treatment with examples			
Hypertension	case studies			
Hypertension	using patient cases to reinforce the use of anti-hypertensive drugs and medicines optimisation in practice	some of the slides were difficult to read (colour and text clashed)		
Hypertension			Absolutely excellent with delivery. Learned so much	
Hypertension				start a BP clinic
Hypertension	hearing about case studies			
Hypertension	updating my knowledge			
Hypertension			some slides difficult to read	lots of adherence tips
Hypertension			Is the material available to support CPD?	support for NMS/MURs
Hypertension	study cases and interaction			
hypertension	how to do BP check appropriately, how to engage with patients to see if medicines are taken as they say they take them			Improve on how to engage further with patients when giving lifestyle advice during MURs and NMS. Shown how to engage more with patients

Hypertension	case studies gave real life scenarios that we would come across and hints and tips on how to handle			ensure I explain the side effects of the drugs more thoroughly on hand out
Hypertension	good talk			
Hypertension	The diagnosis and treatment of BP levels. How to check BP correctly			
Hypertension	Interactive working on case studies. Good speaker	Small group. Could have done with more people		
Hypertension	case studies and talking through the NICE guidelines			use the information gained about 1st dose hypertension during MURs and NMS to reassure customers/patients
Hypertension	help with MURs			
Hypertension	Relaxed environment. Very informative	No handouts provided. A copy of the slides may be beneficial		I will use this to improve NMS service offered
Hypertension	new guidelines	beginning part with graphs	xxx is always very well versed	pass on info to others in team who do BP checks
Hypertension	case studies			
Hypertension	case studies discussions	More MUR tips would have been beneficial, but because of time constraints that could have been difficult. Excellent presentation		more MURs on hypertensive patients
Hypertension	Very informative. Case studies very good			better advice to patients
Hypertension				Good outcomes. Lots of info
Hypertension	case study			
Hypertension	excellent update		always excellent	review use of bendro during MURs more
Hypertension	it taught me that blood pressure patients are still not always treated aggressively enough, the case studies were brilliant	It would have been nice to show us how to use a BP monitor properly up close.	clear, concise, interactive and very helpful	
Hypertension	knowing about which drug to start			
Hypertension	how to measure BP and treatment			
Hypertension	a good refresher		brilliant	look at drug combinations with co-morbidities and refer accordingly

Hypertension	xxx is an excellent trainer			
Hypertension	raised areas I need to refresh my knowledge on			inform more patients of the risks of untreated high BP during MURs and NMS
Hypertension	case studies			do more MURs and NMS
Hypertension	good evidence based presented, nicely referenced	Too geared towards community pharmacy. Please provide more info about drug selection and hypertension in diabetes, MI and whether approach is different or not		
Hypertension	found case studies useful			
Hypertension	Current treatment patterns and guidelines. Useful tips			interaction during MURs and NMS
Hypertension	Great speaker. Knows her subject well. Wanted to know about updated guidelines which was covered well			
Hypertension	good speaker		speak slower	understand why people need to take BP meds i.e. increased risks
Hypertension	speaker and interactive approach		great talk	more reading of local formulary
Hypertension	tips about taking BP and different scenarios and treatment			check BP at least once a year for patients taking medication
Hypertension	proper procedure of taking BP			will try and make the patient more comfortable
Hypertension	An expert speaker. Excellent			provide BP monitoring
Hypertension	the case studies were very good	not enough time to cover all the topics		
Hypertension	lots of knowledge gained	rushed towards the end		increased knowledge on hypertension diagnosis thus I will be able to advise patients on treatment stages
Hypertension	practical application to day to day practice			
Hypertension			some terms too technical for support staff and hard to understand	
Hypertension	refresher on NICE prescribing guidelines			advise patients they can take some meds at night

Hypertension	case study discussion			use training as part of BP monitoring and NMS service
Hypertension	understanding logic behind current NICE guidelines	could have been longer as lots to cover	very informative and knowledgeable	review starting doses of ACEs prescribed for hypertension
Hypertension	case studies		Well spoken. Easy to understand	
Hypertension	very friendly atmosphere			look at the NICE guidelines
Hypertension	very informative		Excellent. Very informative	Optimising hypertension medication. Monitoring parameters very important
Hypertension		time of meeting	great	better MURs/NMS
Hypertension	Good duration. Timing just right		Excellent. Very informal	
Hypertension	overall excellent			
Hypertension	very helpful and case studies		fluent and competent	
Hypertension	current treatment and recommendations of hypertension		very good	
Hypertension	Relayed all the information relevant. Not spending ages doing scenarios			
Hypertension	use of case studies to highlight cases			actively engage patient in discussion about their blood pressure during MUR/NMS
Hypertension	the interactions and opinions of others	understanding the majority of the figures		more information for patients through health checks
Hypertension	NICE guidelines. Good case studies explained	Small room. Slides too small		introduction of lifestyle and bp clinic
Hypertension	short and relevant			
Hypertension	case studies			
Hypertension	interesting and dynamic			
Hypertension	opportunity to listen to an expert with feedback, opened eyes as to new strategies to engage with others			
Hypertension	case studies, not just theory, location	room a bit small		assess CV risk
Hypertension	having an expert speaker			use in NMS and MUR services
Hypertension	general overview			
Hypertension	brief clinical knowledge	timing		implementing practice of BP and measuring it
Hypertension	learning about abpm			good practice for MURs

Hypertension				discuss with patients what queries they have about their medicines
Hypertension	the knowledge and the practical way it was put forward to be useful to me personally and in my practice in pharmacy			
Hypertension	use of ACD system			ask hypertensive patients if they are taking medication correctly
NOAC			very good	
NOAC	got to learn about NOAC	graphs not explained properly		I will let the pharmacist know what I learnt today
NOAC	explaining how patients are moved from warfarin to NOAC	it was not interactive	it could have been more interactive if we were asked questions	
NOAC	the data/statistical info was well explained and it was relevant to my development as a future pharmacist	there was no food so we had to order pizza so we started late		
NOAC		too many graphs		
NOAC		stats and figures - needed more time to explain		pay more attention to anticoagulants in my studies
NOAC	introduced to new drugs		very informative	
NOAC	understanding the comparison of the effects of warfarin with NOACs and aspirin	not having enough knowledge of NOACS before to be more involved		more aware of spotting NOAC contraindications and aware of types of NOACs available
NOAC	Really good speaker. Delivered it well and explained everything well		very good	being more careful and aware of patients age and renal function when being prescribed NOACs
NOAC	learnt about new drugs			
NOAC	information	food delay	less abbreviations for students	
NOAC	the person	Power point!		
NOAC		presentation of the graphical evidence was quite complex (for me anyway)		
NOAC	the speaker was very bubbly and confident which made the presentation more enjoyable	being hungry until that delicious pizza got here	very engaging	I will have greater insight into the action of warfarin

NOAC	good info and in depth			will do better NMS and MURs on my patients
NOAC	gaining more knowledge on novel anticoagulants as well as refreshing my previous knowledge on anticoagulants and issues surrounding its use	late start to the session		I will implement during my pre-reg
NOAC	engaging topic		very well spoken	
NOAC	consolidating learning in an engaging manner		very engaging	I will be checking prescriptions more accurately if for NOACs to ensure dosing and counselling is appropriate
NOAC	very engaging and informative	no presentation handouts for note taking	very engaging and enthusiastic	will be more vigilant in patients that may be contraindicated or need to be cautious with NOACs
NOAC	location	speaker sometimes mumbled		
NOAC	awareness for the alternatives to warfarin	late arrival of food	very bubbly and enthusiastic about the topic	
NOAC	latest up to date information			
NOAC	interesting topic	background of the presentation hard to read sometimes		
NOAC	to be updated on the 'in thing' in pharmacy		thank you and well done	I will be paying more attention when dispensing the NOACs and will be able to give more information and advice to my patients
NOAC	warfarin vs NOAC			make sure no dose of NOAC is missed
NOAC	learnt a lot about the differences and side effect profile of these new medication			be more vigilant with patients on these medication
NOAC	the indication and side-effect of NOAC			conduct NMS on patients prescribed NOACs
NOAC	learning and the benefits of the new drugs	uncertainty in active uptake by doctors and patients	very good	
NOAC	interesting and informative for future discussion			

NOAC	excellent speaker		excellent presentation	MURs for NOACs - encourage adherence
NOAC	interesting topic and xxx was very good at presenting the PowerPoint			
NOAC	updating my knowledge			advice appropriately during MUR/NMS
NOAC	very informative			more reading and talking with patients
NOAC	very easy to understand, simple and clear slides showing information, but nor overly complicated			
NOAC	xxx was excellent. I learnt so much more than from reading			talk to other Lloyds pharmacists about the medicines
NOAC	I am now able to distinguish between the different NOACs and tell their place in AF therapy		made the subject very interesting	this is outside my field of practice but increasingly this is going to be used and I need to be aware of it
NOAC	you can see the whole picture about NOAC and warfarin	the time of the day it was		I will be able to explain to my patients what the differences are between the NOACs and warfarin
NOAC	It was quite thought provoking. I have a lot of follow on studies to do regards guidelines/evidences	the statistics	very vast with the information	speak to counter assistants as regards possible side effects that patients may present with
NOAC	Excellent speaker. Interesting topic			
NOAC	the fact that dabigatran creates acidic environment for the drug to be absorbed and also it is not as effective as rivaroxaban and apixaban			MUR on patients taking NOACs
NOAC		too much trial data		
NOAC	being able to be more knowledgeable on the topic	the timing of the event	very engaging	counselling patients better
NOAC	It was my first RPS learning event and I am highly impressed. A great way to learn about an important clinical area in a short time			I will use this topic for an upcoming departmental presentation
NOAC	to understand the use of novel anti-coagulants in comparison to warfarin			improved MUR service to patients
NOAC	dosage of NOACs and mode of action			ensure any patient on NOACs is aware of the dosage regime
NOAC	enhanced my further knowledge of NOACs	very low turnout		

NOAC	Well informed speaker. Interactive approach			educate my pharmacy team to provide accurate information
NOAC	Opportunity to ask questions. Interactive		excellent presentation, venue and refreshments	ensure all NOAC patients have cards
NOAC	novel anticoagulants	very educational		complements my role 100%
NOAC	useful for dose information and risk/benefit comparisons	room too hot	very good speaker	review potential NOAC use in patients with renal disease
NOAC	comparison with warfarin in primary care setting			explaining different with warfarin and the need for compliance
NOAC	covered a lot of complex information	a lot of information to digest in 90 minutes		effectively clinically screen any prescriptions for NOACs
NOAC	information and effectiveness			
NOAC	how to improve my patient care			
NOAC	understanding mode of action of NOAC			identify patients needing NOACs
NOAC	a very good speaker			when doing NMS will be more aware of s/e, diet, starting dose
NOAC	learning outcomes		very stimulating	
NOAC	good general overview in an hour		she knows her stuff	be aware of patients over 80 on dagibragran and confirm dose reflects licensing
NOAC	NOAC			better understanding of NOAC and to advise patients
NOAC	comparison with warfarin and new agents, costs and bleeding	looking at charts		interaction with patients on NOAC
NOAC	able to use information for MUR and NMS	too many cases	would be beneficial if PowerPoint could be received in advance by email	
NOAC	New anticoagulant. Action etc.			
NOAC	a knowledge on NOACs	too much evidence of trials		Better conversations with patients. New drugs therefore more support we can provide for patients
NOAC	learnt lots	a bit boring		
NOAC	learning about NOAC in detail			
NOAC	all of it			
NOAC	seeing trial data comparing the 3 agents		the speaker filled the session very well	

NOAC	correct dosage to be used per patient as dose is determined by age, renal function, creatinine clearance	looking at lots of charts		engage patient to do an MUR to check compliance
NOAC	Practical issues. Identifying areas to be aware of when doing review at practices			support audit at practice
NOAC	learning about effectiveness of other anticoagulant, side effects and how to reduce side effects			
NOAC	learning about practical considerations for patient when taking NOACs		it was useful to get a background to PESL and future events	this information will be sent to the rest of the team
NOAC	Data analysis of NOACs shared at event. Up-to-date knowledge of NOACs and indications of use		excellent content and delivery	
NOAC	Meeting other people. Up to date information	Over time. Couldn't read all the slides		
NOAC	general overview of anti-coagulants			think more carefully about interactions
NOAC	short and compact			MUR
NOAC	Easily understandable information. Relevant and practical			Be aware why people are taking warfarin. Advise people starting on rivaroxaban the importance of taking their tablets every day
NOAC	the knowledge, enthusiasm and practical elements to the presentation			the effects of non-compliance/missed doses
NOAC				I will change the way I do MURs for anticoagulation patients
NOAC	comparison trial information			
NOAC	all of the presentation		excellent presentation	identify patients and check compliance
NOAC	review of the controlled trial data and good understanding of meds			
NOAC	clinical expectation from patient and questions asked			use the knowledge gained in MURs and NMS
NOAC	good practical points covered	slightly too much info on trials		targeted MURs
NOAC	updating knowledge and patient examples		excellent speaker	check patients are prescribed the appropriate drug
NOAC	learning opportunity			NMS opportunity. Adherence

NOAC	practical points about the topics and how it affects my professional practice	Some slides are cluttered with too much data. Simplifying it will help		My questioning of patients in terms of bleeding will help me if referral is required or not. Emphasis will be put on adherence
NOAC	pro and cons of NOACs vs warfarin			more aware of doses of NOACs on age
NOAC		very good session but food was spicy and no drink		
NOAC	knowledge of speaker and clear slides	Late starting. No drinking water		
NOAC	filled in gaps in my knowledge, will help me to aid patients in a more practical way		superb	improved counselling to patients
NOAC	coverage of the topic was very good in my opinion			
NOAC	very interesting	not big attendance	very expert and knowledgeable	
NOAC	very informative			better advising patients
NOAC	learning more about this topic which was lightly touched at university			Inform the rest of the pharmacy team on this topic. Everyone in the team will have a greater understanding which can benefit patient care
NOAC	presentation		excellent	confidence in conducting NMS and MURs
NOAC	Shared learning. Opportunity to ask questions			awareness of commonly seen side effects
NOAC	the expert speakers knowledge	the low attendance		ensure I pass on the information learnt to those who have contact with patients
NOAC	run through of clinical trial data to reinforce current licensed indications and non-inferiority to warfarin			re-emphasis of adherence needs for patients on anticoagulants in general
NOAC	evidence of different clinical trials			provide patient advice when required
NOAC	comparison between warfarin and the newer agent			use the learns for my NMS/MUR patients to encourage compliance and reporting of side effects
NOAC	Comparing NOACs. Pharmacological features of NOACs			
NOAC	all about NOACs			watch out for NOAC medication

NOAC	understanding/rationale of chosen NOAC		very clear	
NOAC				improve working relations with other health care providers
NOAC	expert opinions on NOAC	venue and food		
NOAC	the clinical aspect			creatinine clearance calculations
NOAC	much better understanding on NOACs			
NOAC	information about new oral anticoagulants and indications			ask about side effects during MUR
NOAC	understanding the role of the new NOACs			
NOAC	Great presenter. A bit short of time			
NOAC	greater understanding of the evidence for NOACs and possible reasons not to use them/side effects and dose adjustments required			Consideration of how these can be used in patient groups with medicines adherence issues or supported by social care for administration of medicines.
NOAC	relevant and up to date	evening after a long day		better MURs
NOAC	learnt a lot more about NOAC			
NOAC	learning about comparisons with warfarin			
NOAC	relating to practice and real life examples			share the information with tutor
Respiratory	hands on devices learning - very useful		excellent trainer, very engaging and good delivery	check inhaler technique of patients with COPD and asthma
Respiratory	the presentation and tools			learnt about the correct techniques of using different inhaler devices
Respiratory	case studies and vignettes	after work event		more MURs directed at inhaler technique
Respiratory	close to work			emphasise the fact that so few healthcare professionals know how inhaler devices actually work
Respiratory				how to use inhaler properly
Respiratory	meeting others	A bit rushed for case studies. Would have been good to have book pre-event		better understanding of stages of COPD
Respiratory	experiencing handling the inhalers			
Respiratory	the interactive part			

Respiratory	learning facts about inhalers e.g. 80% is ingested and only 20% goes to the lungs	slightly long		MUR improvement on inhalers
Respiratory	hands on experience with inhalers	no books		
Respiratory	using inhalers	large group		
Respiratory	the tactile aspect i.e. working with all types of inhalers	everything was engaging, so nothing negative	very engaging and stimulating	able to counsel patients on inhalers more accurately
Respiratory	her delivery was very good	not having previous knowledge	brilliant	
Respiratory	difference between MDI and DPI			
Respiratory	demonstration	nothing		
Respiratory	it was interactive			
Respiratory	this is information I can use straight away	not enough resources		
Respiratory	inhaler use - gentle inhalation and hard inhalation			
Respiratory	learnt lots, lots of demonstrators			
Respiratory	learnt a lot			
Respiratory	the different inhalers		lovely lady, thank you	
Respiratory	CPPE resources			
Respiratory	learning more about topic	not having previous knowledge		MDI = gentle. DPI = forceful
Respiratory	The way that the whole event was presented. Very interactive		very easy to follow and thus understand	
Respiratory	activities that engaged us	hours, long	very fun and amazing	start session earlier and finish by 8:30 please
Respiratory	the practical aspect as it enforced learning	nothing, but maybe useful to have someone demonstrate each of the inhaler types	very positive and engaging	
Respiratory	access to specific evidence			
Respiratory	It was very helpful with the level of interaction and learning with the other attendees. I was happy with the event as a whole			

Respiratory	I like that there was interactive aspects as well as knowledge		very well explained, clear	
Respiratory	different inhaler types			
Respiratory	hands on learning and group work			
Respiratory	the presenter was very funny and engaging	the demonstration was very packed		I will learn COPD theory
Respiratory	free food with playing around with inhalers			
Respiratory	allowing us to use the inhalers			
Respiratory	practice on inhalers	the statistics		
Respiratory	everything			
Respiratory	interactive - kept me engaged	event too short		
Respiratory	using inhalers			
Respiratory	demonstration of use of inhalers	group discussions	excellent	
Respiratory	Entertaining, lots of useful knowledge. I learnt how to communicate with patient	not enough books		
Respiratory	being able to interact with inhalers			go through how to use inhaler again
Respiratory	being able to take a look at the inhalers and learn how to physically use them	not enough books		
Respiratory	finding out how a patient needs to breath in to benefit from their inhalers			tell patients to breath gently when using MDIs and forcefully when using DPIs
Respiratory	learning different kinds of inhalers		amazing and very engaging	I will now advise my patients on MDI to breath gently and DPI to breath hard
Respiratory	proper way to use different types of inhaler			good counselling
Respiratory	having a go at the inhalation and realising whether the rate of inhaling is appropriate	rushing through the case study with no discussion	very good and engaging	more care in telling people how important the rate is when using inhaler
Respiratory	observation and use of in check device	too quick - no time for sharing/discussion in clinical session		consider putting info on label about how to use the inhaler
Respiratory	use of inhaler technique different for each inhaler			teach inhaler technique to staff to increase use of inhaler correctly
Respiratory	case studies	difficult to find in hospital		counselling patients better
Respiratory	recognising the inhalers			

Respiratory	the practical session - finding out how to use the inhalers			
Respiratory	revision about COPD learning points			revise learning on COPD guidelines
Respiratory	inhaler technique	time allowed to complete work		coaching on inhaler technique
Respiratory	the update on the management of COPD			
Respiratory	practicing the use of all the different types of inhalers to deliver better respiratory MURs			better delivery of respiratory MURs
Respiratory	demonstration of different inhaler types			advise on how to breath slowly if using MDI and to breath forcefully if using DPI
Respiratory	using the in check device and using and discussing the placebo devices		very engaging	
Respiratory	use of placebos	loss of science		
Respiratory	well-presented course material and learning booklets			recap inhaler technique with all my patients
Respiratory	having the opportunity of hands on experience with a number of inhalers			
Respiratory	discuss experiences/cases with other colleagues around COPD/asthma			
Respiratory	hands on demonstration of devices			ask patients if they have any difficulty in using their devices
Respiratory	inhaler workshop		very positive and interactive	
Respiratory	practical inhaler use			I already attended the event and going to work through the book on my own
Respiratory	the practical aspect of it			actively counsel patients
Respiratory	practical session and discussions	counselling on inhaler technique	very inspiring speaker, practical and friendly	
Respiratory	hands on and practical work			right technique of inhaler
Respiratory	the tutor		would definitely go to talks given by her	
Respiratory	practical use of inhaler			
Respiratory	being able to use the inhalers was a real help to me in helping to understand the technique and I will definitely be using in my future practice		brilliant teacher	when I give inhaler technique advice to children on my wards I will be better equipped with knowledge to pass on

Respiratory	the discussion on impact of inhaler training			
Respiratory	practicing inhaler technique	more time practising with inhalers		using my in check device in store with ALL my MUR patients with asthma/COPD
Respiratory			no tea/coffee	
Respiratory	Playing with the inhalers. Learning about the inspiratory flow meter			
Respiratory		re-learning to use the different devices		
Respiratory	case studies			improved counselling
Respiratory	using the different inhalers			helping patients with inhaler technique
Respiratory	inhaler technique			
Respiratory	MDI inhaler technique			
Respiratory	Interactive. Great opportunity to play around with the inhalers and check how they work			will try my best to counsel patients on use of inhalers when newly prescribed
Respiratory	learning inhalation techniques for different inhalers			check inhaler technique
Respiratory	practical demonstration of inhaler techniques	getting to the hospital		conducting MURs for respiratory patients
Respiratory	getting to try inhaler			ensuring all patients have good inhaler technique
Respiratory	all of the topics			
Respiratory	in check device			
Respiratory	going through each inhaler and their techniques	Length of the training. Maybe start a bit earlier or keep it shorter		I'm going to change questioning for each patient. Can you show me how you use your inhaler? Instead of 'do you know how to use it?'
Respiratory	learning how to use the different types of inhaler			will try and help patients who use inhalers if they are using the proper inhaler technique and if not, will it help by showing them the right technique for the inhaler
Respiratory	Practical use of inhalers. Case studies, video			
Respiratory	seeing the inhalers for real			I will not hesitate to ask patients to show me how they use their inhalers

Respiratory	learnt a lot	food didn't turn up		counsel patients on inhaler technique better
Respiratory	the in-depth learning about inhalers as I don't get opportunity to do so before			I will be helping patients more pro-actively as I have a better knowledge of this area now. I would also quickly screen through to see if any patient needed a review
Respiratory	understanding how significant inhaler technique affects patients medicine optimisation by the relevance if the studies carried out			I will be able to give better and more effective consultation sessions with the patients about their inhalers
Respiratory	greatly improved knowledge			
Respiratory	the inhalers (placebo) devices to see			ask people to show me how they use their inhaler
Respiratory	Understanding how difficult respiratory flow rates can be to get right. Practising with devices			
Respiratory	using and practising with inhalers			explaining aero chamber
Respiratory	hands on experience with inhalers		Entertaining. Enjoyed thoroughly	counselling patients with hands on experience
Respiratory	demonstration of inhalers		very engaging	use information learnt for patients
Respiratory	trying inhalers			how to use all the inhalers and all the facts
Respiratory	inhaler technique demonstration			get manufacturer to send me placebo and use it to do training for my other colleagues
Respiratory	Very eye opening and informative. Information was easy to digest		Very easy to listen to. Clear, concise and engaging	checking inhaler technique at appropriate opportunities
Respiratory	practice with inhaler technique			I will use the information to provide better service in MUR/NMS
Respiratory	noting my own inspiratory flows			inhaler technique
Respiratory	inhaler techniques		excellent	using the learning for MUR to help patients with inhaler technique
Respiratory	COPD treatment and symptoms			
Respiratory	able to fill up certain points which I was not aware of			able to apply knowledge
dementia	signposting to further studies on dementia			

dementia	activities carried out, involved me further and made the event more interesting	I didn't learn about the diagnosis techniques of dementia		
dementia	how to help people to live with dementia in the community	how to make early diagnosis of dementia	focus on carers to help them	
dementia	opened my eyes to the patients aspects of dementia and how frustrating it can be			
dementia	interesting general information for a non-pharmacist (engineer)		presented well and confident about the topic	
dementia	learning a lot more about dementia		enthusiastic	
dementia	opportunity to discuss topics with others			
dementia	interactive			
dementia	The emphasis on emotions vs memory. CPPE books very good material		did very well considering took the session at the last minute	
dementia		To be dementia friendly or champion?		
dementia	interaction with other pharmacists	finding York house		respond more effectively to needs of dementia patients and carers
dementia	task where we wrote memories down, and one was taken away, highlighted very clearly what happens to patients			
dementia	group discussion			do not have patients
dementia	joint exercises			obtain information and leaflets for patients
dementia	excellent presenter, interactive, practical studies for discussion			improved signposting, improved information for patients
dementia	positive advice to aid patient care		excellent delivery of dementia facts and practical advice	give our dementia patients better care and understanding
dementia	it is possible to live well with dementia	it can be very sad		more info for customers to raise awareness
dementia	the leaders positive attitude and enthusiasm			

dementia	using the games to improve awareness and change my perception of the disease	it was quite clinically focussed for the second half which made it quite difficult for everyone to participate fully		
dementia	Understanding more about dementia. Different types. Five points of dementia	it was quite clinically focussed for the second half which made it quite difficult for everyone to participate fully		
dementia	group work and open discussion	start time was a rush from work		make the patient feel more safe and able to ask for help
dementia	the person is the focus, not the dementia			
dementia		dementia friends		
dementia	the studies			
dementia	Changed my way to respond and care for a dementia patient. Dementia does not define the patient		very good	will treat patients differently
dementia	came away feeling I can make a big difference and pass on very useful knowledge to patients			
dementia	an eye opener and understanding of the emotional needs of sufferers of dementia		appeared to be knowledgeable with the subject	
dementia	changed my thinking about dementia patients altogether	I need to read more for my benefit and understanding	Thank you. It was very motivating	see my patient more differently
dementia			To the point. Good	look out for symptoms in patients and clients and help them
dementia	learning how emotions are separate from learning events in the context of dementia	Late start. Clinical aspect seemed rushed	very good	greater focus on emotional needs of patients with dementia
dementia	to view dementia with a positive effect		good	
dementia	awareness			
dementia	is how the patient feels and making them feel happy, safe and secure even		loved the book case analogy	look at dementia patients with new eyes and provide support

	though they may not remember the situation			
dementia	understanding how dementia patients feel and how to understand them		excellent	Identify these patients and offer advice, care, support to improve the life of the patient and make sure they are happy. Explain to carers/relations the importance of how the person feels, and make sure the patient is happy
dementia	turning negative thoughts into positive ones			find out more details about local dementia services
dementia	case studies			
dementia	it has changed my perception of the state of mind of the patient and their position	maybe we could have someone talk about his experience caring for someone with dementia		I will give patient based advice that can be practical rather than clinical based
dementia	hearing expert speaker			
dementia	Clinical part. Bookcase analogy			improve my practice
dementia	bookcase learning theory			
dementia	exercises			
dementia	bookcase analogy			
dementia	learning about dementia information			use my knowledge on dementia in my work situation
dementia	explanation of how patient is affected and feels	it would have been good to also cover treatment options		ensure we know where to signpost and have info/leaflets available
dementia	emphasis on how to support people with dementia			
dementia	topic relevant to my role			
dementia				attend a dementia MUR
dementia	becoming a dementia friend			
dementia	looking more in-depth at dementia patients perspectives	looking at the negative aspects		be more understanding of patients with condition
dementia	emotion feelings of the individual			
dementia	All was good. Like points for action			I work for the CCG. I will look at providing signposting info folder to distribute around Croydon pharmacies

dementia				I have more understanding of the condition. Can signpost
dementia		long		good start to better understanding dementia
dementia	different/positive approach			better understanding
dementia	Becoming a dementia friends. Bookcase analogy was wonderful		very well presented and promoter of dementia friends	Have a listening ear and try and engage with patients and carers. Treat patients as individuals
dementia	gaining more information on dementia and learning how to help people with it	NA. Was all positive/thoroughly enjoyed it	very clear and understandable	How I deal with dementia patients. Especially making sure I leave them feeling positive and happy
dementia				ACT in store is signing up to be a dementia friends champion so will be able to share and discuss info to implement in our service
dementia	very informative		good facilitation	understanding to give patient a positive experience
dementia	the analogies used to help describe how a dementia sufferer may feel			proactively help any dementia sufferers from helping them come in to the pharmacy, picking their bags up for them etc.
dementia				making more time to listen and advise patients with dementia
dementia	increasing awareness of the emotional aspect of dementia which changes my outlook on dementia			inform colleagues and ask them to become a dementia friend
dementia	different types of dementia			
dementia	first part and the clinical session			talk to healthy living champions
dementia	increasing awareness	not many people attended		different approach
dementia	bookshelf analogy/emotional part of condition			try to increase awareness amongst staff to needs of dementia patients
dementia	understanding the disease better and how emotions are unchanged	lots of information to get through in time	well done	be far more aware of the emotional experience dementia patients have and how it may affect their future behaviour and help pharmacy teams
dementia	learning about how to help people with dementia	the time of the day it was		help people who come into the pharmacy with dementia
dementia			makes every topic interesting	be more understanding of the condition

dementia	interesting and informative			read more on drug therapy
dementia	changed perception of dementia patients and reminded me it is a very individual condition			brief store team on the simple actions we can take to help our patients that may be suffering and signpost to Alzheimer's society
dementia	understanding dementia a little more			Wear the badge. Encourage the health champion to become a dementia friend
dementia	Changing perceptions of dementia. More positive now	no talk of how to help manage medicines for people with dementia		
dementia	Very enthusiastic presenters, tutors. Great atmosphere. xxx was great and xxx also		simply great	
dementia	meeting people		good	
dementia	group work		Thank you.	thought provoking
dementia	Interaction between group members and leads was very positive and encouraging. Subject is also very relevant to working and social life		made the subject very lively	review patients meds and discuss forward planning with relevant patients
dementia	Discussion			better understanding of my patients
dementia	understanding how it is to live with dementia		as a non pharmacist I found it quite easy to engage in the session which was very useful	
dementia	interactive/lovely	limited time for discussion		exercise the ability of being a 'dementia friend'
dementia	case studies at the end			more open to discuss
dementia		start time is always a challenge for me after work		signpost patients to various support groups
dementia		coming from far		engage more with patients
dementia	become dementia friends. 5 things to know about dementia	evening session		I deliver medication training for social care, I will be more involved with their dementia patients
dementia	dementia friends - very interesting	too quickly		
dementia	better understanding of dementia			be more aware to support patients with dementia
dementia	having fresh ideas to see dementia in a more positive light			

dementia	feeling more positive about dementia	received book 1 too late to read		encourage staff to become dementia friends to improve knowledge of dementia care
dementia	difficult subject discussed well	big subject, little time		
dementia				much more helpful to dementia patients. Watch out for changes in their meds and make sure to give information about the use of their medicines
dementia	very well explained about understanding meds of dementia patients			be more proactive with other patients
dementia	I'm now a dementia friend		absolutely fantastic. Kept me engaged	speak to my pharmacy team on what I learnt and how to also become dementia friends
dementia	becoming a dementia friend			communicating with patients about their disease more comfortably
dementia	relevant and informative			as I have a number of dementia patients in my practice, I will be taking a more active role
dementia	how to turn dementia into a positive/make patient feel better by changing structure			speak to staff about how to deal positively with dementia patients
dementia	5 facts about dementia		excellent, as always	discuss with pharmacy team and encourage them to become a dementia friend
dementia	meeting was very good			educate my staff on how to help people with dementia/
dementia	helpful advice on supporting individuals with dementia			

Appendix 6: Examples of application of learning after PESL events

A – dementia friends, B - Hypertension, C - NOAC, D – Inhaler technique, E – Diabetes, F – Alcohol, G – Anti-platelets, H – Consultation skills, I – Minor Ailments, J – Substance misuse, K – EPS and SCR, L – Eye Health, M – Safeguarding

Extra actions ticked	Sessions attended	Example of application of learning
	A, D, H, M	improved professional satisfaction
	A, B, E, K, L , M	helped me to help dementia patients and understand how to deal with a friends problem
	E, M	keep eyes open for strange behaviours' - safeguarding event
	NONE	Implement into everyday practice
B, D, F	B, D, E, F, L	teaching others
	D	At university in OSCEs
	D	At university in OSCEs
	A, C, D, K, L	EPS - used EPS tracker to find prescriptions
	D, F, J, M	better communication with patients
G, J, K	G, I, J, K	Teaching - SCR/EPS in dispensing practicals and hospital simulation and medicines reconciliation. Substance misuse in law and ethics workshops. antiplatelets in patient counselling sessions
K, L	A, D, F, K , L	developed understanding of it
L	A, D, F, K, L	diabetes consultation with eye health in community pharmacy
	K	better understanding of topic which will aid my teaching and research
	D, J	Confident in showing inhaler technique in MURs/NMS. signposting more patients for EPS
	D, H, I, J, M	EHC signposting
	A-M	able to advice patients carers of those with dementia and what service are available to be referred to
	A, D, F, I, J	Beforehand preparation is useful. Also PESL is comprehensive collection of all the relevant check list.
C, J, K	A, C, D, J, K, L	Education
C, I, J, K, L	C, I, J, K, L	I have worked several time in different pharmacies and have utilised what I gained at the Pharmacy. Also, since I am a student, i t has been useful in my studying of obtaining a greater understanding of the condition.

C, D, F, G, H, H, I, J, K, L	A, C, D, F, G, H, H, I, J, K, L	Each event has different theme, which in general are related to my studies at University. I used my learning from these events as additional information to support my studies. With some information not taught in University, I used it to fill in missing details about specific topic such as antiplatelets, inhaler techniques, minor ailments, eye health, NOAC etc. For example, what I gained from the EPS/SCR event was useful in my hospital placements as I was able to access SCR of one of the patients and having that knowledge about SCR puts me in a more advantaged place. Another one is consultation skills where I was able to apply these in my assessments such as Red Flags at St George's, practicals, and OSCE where I am required to demonstrate good consultation skills.
A, J, L	A, J, L	As final year student I used the information for revision and learning
	A-G, J-L	PESL sessions helped me with my studies at university.
	A, G, J-L	It has helped to compliment the studies I do at University and given me extra knowledge
	B-E, G, L	Improves my professional credibility as an industrial pharmacist
	A, D, K , L	Provided with a better general understanding of the topics
A, D, E, F, H, I, J,	A, D, E, F, H, I, J,	In improved OTC and prescription intervention consultations with patients, carers and sometimes other healthcare professionals
H, M	A-M	Completed CPPE e-assessment. Personal management of a chronic condition

Appendix 7: Case studies after PESL events

Dementia Friends	Dementia friends gave me the confidence to support patients with dementia
Dementia Friends	Supporting a carer looking after their partner with Alzheimer's by being able to signpost the right care options needed to assist their needs.
Dementia Friends	Had to remember not to do everything for them - have patience with that patient
Dementia Friends	Volunteered for one week at a care home and was more understanding of patients with dementia and supported them by listening to their stories
Hypertension	Hypertension - started offering a blood pressure checking service in the pharmacy. trained my staff on how to use it; what my target levels should be etc.
Hypertension	Hypertension - patient reluctant to take medication. explained how it affects the body and she decided to take her medication
Hypertension	I checked a patients pulse after attending the hypertension and rang GP as I was very concerned. Patient was admitted to hospital that day thanks to the intervention
NOAC	Transferring a patient on warfarin to a NOAC in general practice
NOAC	Patient new on NOAC medication given information about drug use cautions side effects etc. when none given at hospital/surgery
Inhaler Technique	Measured inhaler technique of elderly patient on long term ICD and salbutamol. Poor technique led to an MUR led to the GP prescribing spacer, which has improved the asthma and has less problems with recurrent infections
Inhaler Technique	Asthma care plan and technique check
Inhaler Technique	Inhaler technique training informed my planning around training needs for GPs and PNs in my locality/CCG
Inhaler Technique	Patient counselling for inhaler techniques. CPD cycles
Inhaler Technique	Applied learning gained from Inhaler Techniques session at a community pharmacy placement. I counselled a newly diagnosed patient with asthma how to use their salbutamol inhaler under pharmacist supervision.
Diabetes	Used events to train staff
Anti-platelets	The antiplatelet evening improved my knowledge with a MUR with a specific patient
Anti-platelets	Anti-platelet event helped me alongside my studies and I was able to apply it my clinical examinations.
Minor Ailments	New minor ailments service
Minor Ailments	Ensured I had stock of all lines supplied for main MA services. Reviewed training with staff to expect patients to ask about help with particular conditions. MA service still not implemented in Bromley
Minor Ailments	Raising awareness about minor ailments Patients are enjoying benefits of this service
Substance Misuse	Future consultations and learning
Substance Misuse	Counselling on taking oral methadone and children
EPS and SCR	Using EPS tracker, before sending patient away
EPS and SCR	Used SCR training to access SCR of patients on holiday to give supply of medication that had left at home.
EPS and SCR	Used SCR as part of PURM service
EPS and SCR	Informed all staff about SCR
EPS and SCR	Used info of SCR for project/research
EPS and SCR	After the EPS and SCR event I have used the information to update lecture notes for use in the next academic year, using the latest information
EPS and SCR	Check SCR for emergency supplies of patients that are not registered
EPS and SCR	SCR: A patient came to me that her medication has been stopped but no information from GP. This was confirmed using the SCR record
SCR	Use SCR to improve patient experience by avoiding unnecessary visits to surgery.
Eye Health	Responding to symptoms eye health
Eye Health	MUR patient who suffers from glaucoma
Eye Health	Better diagnosing/ recognition of minor eye issues
Safeguarding	Patient under 13 years of age wanting EHC. I knew policies and procedures to follow
Safeguarding	Safeguarding helped to information my training role for EHC

Sexual Health	Knowledge on HIV risk in London means that I always consider this issue with younger patients. During a recent EHC consultation I discussed HIV risk with a worried patient and provided signposting.
Hypertension. NOAC. Diabetes. Antiplatelets. Eye health	I can bring in real life anecdotes about medicines use when teaching the drug development process

Appendix 8: Explaining relevant

- A topic is relevant to me if it is within the field of my studies and it relates to improving and building me to care for patients and not harm them
- a trigger is if a patient has asked for some advice and one felt that the consultation needed improving
- any patient related topic is relevant
- Any topic that has an impact on patient care is relevant
- Anything related to pharmacy is relevant to me, specifically anything I'm not aware of and need to learn about or improve my learning.
- being able to implement into everyday practice
- Broad desire to keep current with the profession
- Broader commissioning issue. understand how community pharmacists can improve health of patients with those conditions
- Can a Pharmacist help, and if so, in what way?
- clinical knowledge and skills to apply knowledge in practice
- clinical/communication/current topics/funding cuts/carter report
- common conditions encountered in pharmacy
- consultation skills
- current learning need for work/recent experience
- current target
- depression
- Especially for MURs. Any disease states seen in community pharmacy - always something new to learn!
- future career progression
- Has to be relevant to my current or possible future practice
- If it is patient focused and one which I can apply learning from easily
- if used in practice at least once a day
- Implementation in pharmacy environment
- Improve patient care. better understanding
- improve understanding and awareness
- Interest in subject, need for skills/qualification for running service
- it helps me to develop my learning and add on to what I have been learning
- Lack of knowledge around the topic
- NOAC/antiplatelets
- on conditions where patient counselling required/prevalent
- patient satisfaction
- Practical and clinical topic presented by fellow pharmacist.
- practice - day to day
- public health - helping people
- regularly seeing patients for condition
- related to pharmacy
- related to services I provide
- relevance to pharmacy
- relevant to my job
- relevant to my practice
- relevant to my practice
- responding to symptoms

- Something I come across in my daily practice or if it is a new service or a regulatory requirement
- something I do every day
- specific to my job
- The sector I work in And my own knowledge gaps
- topic relevant to role
- topics relevant to the sector I work in
- topics that cover most common health conditions
- Topics that have are common and widespread.
- use it at work
- used in working practice
- using it to help patients

Appendix 9: Interview transcriptions from PESL interviews

PH1: 12th May 2015

Hospital pharmacist

Which topic(s) have you attended through PESL?

I attended the NOACs session with xxx, and I know I signed up for antiplatelets but then something came up. So I think the only one I attended was the NOAC session because some of the others happened when I was on maternity leave.

What was your primary reason for attending the meeting(s)?

My primary reason would have been for making sure I was aware of current evidence and practice for using those types of medication, especially for the NOACs as they really came to the fore while I was on maternity leave, so when I came back there was 3 drugs out there that I was familiar with but I hadn't really got to grips with what they were used for, so it was a real education to know what they were for.

Please can you tell me what you remember about the learning event(s)?

xxx is a really good speaker so I remember her engaging speaking, I remember what she did in terms of giving us evidence for the NOACs, when we would use them in practice, the different indications, she then did a significant bit on leading risk and adverse effects of NOACs, and what I remember around the event itself, I remember thinking that the venue was very good, it was the one at Beckenham, and the room was quite a good size, um, yeh, easy to find the venue. The first half was definitely a listen and talk, but she was very happy for people to interject and ask questions as we went along, but towards the end it became more of a discussion with people raising their experiences, 'so this scenario happened, this is what I did.' In terms of numbers there were not ever so many, there may have been ten of us, but that in some ways it isn't great, but in some it is as you can have discussion.

Describe how you have applied your learning after the event(s)

I know I did a CPD entry on it. My role I suppose now is not as patient hands on. I manage a team who is very patient hands on, so I know we are a team have dealt with a number of patients who are on NOACs for various reasons so I have been able to be involved in discussion with the team about if this is the right thing to do for this patient because of the risks, or we think it is safer for this person to be on warfarin for these reasons, and I have been able to facilitate, or just be involved in that discussion. I think going to that session has made me feel more confident about being able to do that.

Please share any examples of actions you have taken to change your practice after the event?

It is about confidence. To be honest, I don't know if my colleagues have been. They weren't at the one I went to but I know another session was held here so they may have gone to that one. The event itself did not come up in the discussion.

How likely are you to recommend future PESL events to colleagues and why?

Yes I would, obviously I signed up for a second one. I thought it was very useful. What was good was there was a mixture of hospital and community as well as primary care based pharmacists. It was good to have a discussion to find out what are the issues and what care issues you have so I definitely would recommend the events as they are well organised and helpful speakers.

Which providers or training programmes do you currently use for your Education and Training needs and why?

Um, I, one of the ones, I am not sure if they would view it as training, but I am part of the specialist pharmacy services South East and East of England pharmacy network, because I am a community services pharmacist, there is a network. I think they have 3 meetings a year where we get together and have a meeting together. It comes under the umbrella of the medicines use and safety network for specialist pharmacy services. They run some day meetings, so they run one specifically for the community services pharmacists, so that is extremely relevant to me, looking at topics that are current and often problematic for you and how are you going to use that in your area. The medicines safety network itself run a medicines safety day. I know there is one coming up in June on medicines optimisation, with resources from NICE guidelines, so I have been to those sessions which aren't directly for community services pharmacists. They are useful as people come and share pieces of work they have tried to do around and you can pick up ideas and also network, so they are not necessarily talked at events but more workshoppy type events. I find workshops useful to try and think how you are going to apply, get your head into how you will apply this locally in that kind of workshop, getting the opportunity to discuss it with colleagues. You might find we are implementing something in slightly different ways. What else? I still like to just be able to sit down and read an article. I am a member of the RPS. I do get my PJ and I read the articles I am interested in. As I say, because I am not hands on every day I find it useful, those learning or review articles on a particular disease or drug group as it makes you/reminds you what you do know but updates you on maybe what you don't see every day. And, I have gone to some of the RPS events. This is a while back now, they did some events on medicines optimisation. That was an RPS event, run, that was a day session they were trying to pull together different practice areas for pharmacy, so again that was quite useful. It is the same principle I suppose, having people in a room together who can brainstorm. I have used CPPE. Not on a regular basis, but if I think, 'that topic might be useful' then I will pick up. I have never been to a CPPE event, and that is usually because of the location or the day just doesn't quite work, but I have used their learning packages like the consultation skills package. I have looked at it myself, but also as a department, the training lead here has split it into chunks and we have done morning sessions together which have been quite useful.

Which education provider would be your first choice to fulfil your education and training needs and why?

I suppose for me it is the specialist pharmacy group, because it is, we might look at something like the NICE guidelines it is then focused into our practice, so it is very relevant to what I am doing on a daily basis.

How do you best like to learn?

I never would have thought I used to be a workshop type learning person. When at University I was very much listen to the lectures and rewrite the notes for the information to go in, but I think now I am working and trying to apply the knowledge, I think it is good to have a mixture. As I said, going to that PESL event was very good as there was some teaching effectively but then a discussion around how that would work in practice for us. Again, as community services pharmacists they do have arranged sessions, where people will present something but then there is discussion around how something will work in practice. It is good to have a mixture, to help you remember what you are being told when you have a chance to think about how you will apply it in practice,

What formats of learning would you be happy to undertake with others?

I think that workshop based is quite useful rather than just reading an article as you are there listening to someone. You have to focus on it, and you have less distraction, but you need to have the time to do it.

What formats of learning are you happy undertaking on your own?

Mostly I will read articles, if it is just me. I haven't really used e-learning type packages that much, but would be keen to try out. Oh, I did, I think I was trialling it really rather than participating, but there was a webinar based think that Graham Davies ran on medicines optimisation, so I did that. That was useful. Future learn. I looked through that. Although it wasn't necessarily new knowledge for me it was a useful way to deliver material. Confession, I did sign up for some of the RPS webinars that were around medicines optimisation and transfer of care, but again the timings just didn't work but I think I would look to use that but I haven't really engaged in it yet!

When you don't attend learning events, what are your reasons?

I have two young boys so just family to look after, so the evening events are good but then things come up but I don't rule out evening events if they are local. As I said the Beckenham venue is very near to me, but location was great as it is ten minutes away so in an evening that is fine. Weekends are a bit more tricky but I have attended things at the weekend. It is mostly around organisation and trying to fit everything in that prevents me from getting to them. Location is also very important. If it was miles away it would be more difficult

Speaking to friends and colleagues, what reasons do they share for not attending training events?

I think some people would say it is just not for them, I don't need to know it or it is not of interest to me. I think people would say time and life and trying to manage work life balance,

Does topic have an impact on attendance?

I think it does. I guess the further up the scale you get, I mean my job is community services but it is very broad, as you are not a specialist in cardiology or paediatrics, so you need to have your finger in lots of pies which is why most topics are of general

interest to me. I know some of my colleagues, especially if the topic was not in their area of interest they might be less inclined to go as they would feel it wasn't really affecting their day to day

Do you have any examples of topics that you feel would appeal to the wider?

That is hard for me as I think things should appeal even if it is not your specialism, you will still see a patient who has that condition that may or may not impinge on what you are trying to do. Obviously at the moment there are lots of things around medicines optimisation which I think everyone needs to have a general interest in, so I guess you could do general topics rather than medicines specific topics, but then some people find those too broad

After a learning event, what tools would you like to be provided with to support a change in your practice?

I suppose, you know, if it is a presentation, it is useful to have a copy of the slides so you can go over them. In terms of applying learning, I guess it depends what the session was, but if it was a driven from the front, spoken session, then it might be quite useful to have three or four bullet points, of 'have you thought about doing this?' or 'what about that?' pointing you to how you might go about applying. It is about application, especially if it is, you are not working directly in an area. In terms of, if we go back to the specialist pharmacist network, what is good about those sessions, is that, if we have had discussions they will produce a resource out of it, so they will put in contact details of people who have done certain projects so you can go and network or even like we said, a series of questions of 'have you thought about?' for your area, which are quite helpful. You don't get them on the day but generally a few weeks later. If they realise something is going to be big then it might take a month. It comes into your inbox and it reminds you you wanted to look at it. Sometimes when you take something home it goes into the pile and you don't look at it

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

As pharmacists it is definitely useful. As pharmacists sometimes we can be very insular, even between ourselves across hospital and community, so it is useful to learn together. Other professionals, sometimes I have been involved in events here when we have done a joint event with GPs. So there are GPs, practice staff and administrative staff from the practice, community pharmacists and ourselves having discussions around transfer of care. Those are really useful as you suddenly realise that what you thought was obviously actually wasn't. They aren't really taught but more discussion based. They are, it is useful to learn with others as it opens your eyes to where they are coming from, and the barriers. We… that session in particular was just a lunch session so the community pharmacist bit with us was a bit longer, but the GPs came in a bit later for a few hours, but again, location wise, it would just be the locality rather than miles. I think I've led teaching sessions for nurses and doctors in the community services setting and I find them really useful. O.k. you are the one leading them but by using the opportunity to discuss and ask questions you still learn new things and it is useful to be a greater mixture as it would be even more eye opening. In terms of initiation of the sessions, some of them would have been me saying 'would

you like me to come' and others would have been them saying 'please would you come and run a session on…'

Any other comments?

I don't think so. I think it is good this piece of work is happening because, as you say, you go through your undergraduate and pre-reg and then you sort of 'fall off.' I know the society are trying to stop that with frameworks, but no, thank you.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH2: 14th May 2015

Community Pharmacist – 20 years qualified

Which topic(s) have you attended through PESL?

I have attended hypertension, the NOAC one and diabetes. Dementia, unfortunately I couldn't make it and antiplatelets I thought would be similar to NOACs so I didn't attend that one and alcohol I missed as well.

What was your primary reason for attending the meeting(s)?

Personal interest and CPD really, keeping up with what you are meant to be doing. Sometimes it is time commitments. Obviously you look at your diary and see if it is workable

Please can you tell me what you remember about the learning event(s)?

I went to Beckenham Beacon. Nice venue, good speakers, small room. To be honest a very small number of people turn up. I am wondering, is it they don't actually realise it is happening? Which surprises me, as it is always a very good speaker, well organised, that is why I am keen to go again. The reason I go and it is good is in Beckenham is that my pharmacy is in the Beckenham area, it is local topics to the area, whereas living in Croydon I could go to South West as well, but it is about local topics. They are structured differently, but I like the way there is a speaker and often case studies to discuss and have engagement. That is why I like to go to these workshop things. xxx is the expert. I guess that subject does lend itself more to lecture but she does go through case studies, but obviously, if you are not in contact with those medicines it is more interest, whereas diabetes and hypertension are more real to life, yeh

Describe how you have applied your learning after the event(s)

CPD cycles, yes, yes, that's one of the things I do definitely, as I got called up last year and I was actually surprised that I had done quite a lot, so I am trying to be conscientious and keep up. With the hypertension and diabetes, obviously they are issues that are close to heart, which are day to day and very much relevant to our daily role, so doing MURs particularly and NMS, and using it in them, definitely

Please share any examples of actions you have taken to change your practice after the event?

It is more about general health advice and things. The diabetes one was particularly helpful with that.

How likely are you to recommend future PESL events to colleagues and why?

Oh very much so. I am happy with the way they run, just disappointed that more people don't realise they are happening.

Which providers or training programmes do you currently use for your Education and Training needs and why?

Mainly CPPE. Mine is mainly time commitments, when I was first married I used to go to every meeting going as I used to sit on an LPC, but now, it is mainly CPPE and PESL ones and local. We are part of a group called BBLG, a small group, so we go to their meetings, so basically what is local to the business, to our local area.

Which education provider would be your first choice to fulfil your education and training needs and why?

Depends on the topic really, to be honest. BBLG is quite essential for services we are running in the pharmacy but I think they are all equally important so I try to get to all of them.

How do you best like to learn?

Workshoppy style and interaction, yes, speakers.

What formats of learning would you be happy to undertake with others?

Being with others and engaging, a bit of both of lecture and workshop, a balance is needed

I have tried the webinar which is nice because it is in the comfort of your own home, in your own time, which is an option as well, but I think I like a balance. You have had a long day at work, but once you go to an event and you get there you do feel engaged. I remember where we went to one recently about smoking cessation. Hearing a motivational speakers motivates you with some tips and you learn from the others on the table, so yes, I prefer going out really.

In terms of timings, 2, 2 and a half hours I think. At the most. Normally if you go to focus groups they are half 7 to 9 o'clock. You sort of switch off after about 9 o'clock I think.

What formats of learning are you happy undertaking on your own?

I use CPPE distance learning material, if part of running a service, like for example, in the last few months I have just caught up with my sexual health training, so as part of that we had to do safeguarding, and for the flu vaccination service we had to do it, so safeguarding and emergency hormonal contraception I have had to catch up through distance learning.

I did listen to one podcast, as sometimes when you do the distance learning you listen to one. I know the webinars are live and you can do the questions, that is the difference, but I think I prefer the webinar.

I just the webinar quite interesting. I think I listened to the one about the new contract, and, because they were important issues that were pertinent to us. No, no. Hang on, it was about GPhC inspection, so it was quite an interesting one, as they had different speakers and people were asking. It was new and relevant. I am becoming a bit more choosy about what I do. I think, before, when you are new into pharmacy you want to learn everything and you have the time, but now, it is a balance.

When you don't attend learning events, what are your reasons?

I think it is personal commitments, but I think it is also sometimes motivation. People not realising they actually do need to keep up. Sometimes they may do webinars or do reading, but sometimes I doubt that, and people don't realise it is an important part of their role.

I think I can do it at work, there are quiet times, but I personally choose to do it at home. I like to sit down and have my time. I don't want to be disturbed by a phone. When I am at work I would rather be doing other things, but I know a lot of people do it at work because they don't want to do it in their own time, so it is a personal thing. I think the point it, you need to do it! So whether you read a magazine while you are having your lunch. When I sat on the LPC I was very passionate about pharmacy so I read 'pharmacy.' It got to a stage where I thought I have to start doing things for myself, so I now do other things

Speaking to others, what are their reasons for non-attendance?

I haven't spent much time talking to people. I have thought about possibly joining groups and things over the time, but they tend to be with people who are your friends. It is a tricky one, so I have tended to do things on my own to be perfectly honest and I think the newer generation may be would be more to do with IT related because that is the way we are going, but I prefer meeting people.

How could we increase attendance at learning events for pharmacy professionals?

It is a tricky one, because you mention incentives and things, but I don't think that is the way to be doing it. You should be doing it as part of your role and keeping up, but unfortunately, until things are made mandatory people won't come, so I think it is just trying to motivate people

After a learning event, what tools would you like to be provided with to support a change in your practice?

What I have started to do, what I have found is, you are tired, you take it all in, you think you know it but then you walk away and think you don't so you have to have notes or summaries, which we sometimes do get provided, but what I do is afterwards, after about a week is sit down and write some notes, reflect on what I have done to make it worthwhile CPD. Obviously, there is the thing of doing CPD for the sake of doing CPD, getting your nine done. We all do it, but I think that is a good idea, or just a summary, asking people how they want it. I personally have to sit down and actually think what I have taken from it. What my 'to dos' are. Otherwise, there was one, while I was reflecting on this, I went back to my CPD records last night and had a look, and for the hypertension one I don't think I took notes and so I didn't write up a CPD because obviously, when I thought about it, I hadn't taken it in properly, or enough to make it worthwhile. I could have done a short one but I have found this is a useful tool for me, to actually sit down and reflect. I am trying to be a bit more conscientious on my day off to set aside time for CPD, even look at it every now and then. I used to say to myself on the first day of the month to write something, or thought about planning for the next one. Every couple of months we have meetings so that is why it is good

to have the three, CPPE, PESL, BBLG, as there is always something coming, and so now, we have these, then in the summer we will have flu vaccination training, then there is always something, health promotion campaigns. We have the health champion thing going on so there isn't a campaign going on at the moment, but there is always something to be doing

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

I think we all would be as pharmacists, definitely. Because locally you are still a team, and we are all working together on the same issues. I think there is always hesitancy going to meetings. I have been to some CPPEs where there are GPs but it is always the same ones. Same story for them as well, but, yes I would.

For topics I think you would have to stick to the long term conditions. They are sounds areas aren't they? Diabetes would be good. Obviously they have to want to come as well. Maybe get one of the experts. You have these specialised GPs.

Sometimes I feel, if staff are invited, it is at a pharmacist level. It is not always relevant. It is a tricky one, staff training. I went to an ELLA ONE training event but they need to be incentivised. They won't come without. Pharmacists will. I have been to meetings where I have though this is a little bit too much for them, they don't understand, so it has to be broken down, maybe a half and half meeting, I don't know

Any other comments?

I am pleased with the way things are going. I am pleased you are doing PESL. As long as we get the summary of notes, or slides, it is good. There is no easy fix. It is giving people suggestions

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH3: 14th May 2015

Community Pharmacist

Which topic(s) have you attended through PESL?

Anticoagulants, diabetes, alcohol, consultation skills, think one was dementia. It is very close in Beckenham hospital, just up the road, a couple of minutes away

What was your primary reason for attending the meeting(s)?

Keeping up to date with the latest things, and the LPC tells us about them, and tries to steer things to local views or relevant topics

Do you think the topics have been relevant?

Yes, they are sort of general at the moment, but not sure if they will be different from the feedback. I know the alcohol one was, because it was linked to a campaign as part of the LPC.

Please can you tell me what you remember about the learning event(s)?

Um, I know with the dementia training that was linked in to the dementia friends' website so we got the pack on that and cascaded it to staff as well, then with the anticoagulants, there are new anticoagulants, I can't remember the specific ones, that was one. The consultation skills was more workshop, so more involved, so just bits. I prefer the more lecture based as that is stuff I wouldn't hear otherwise, whereas the workshop stuff I could pick up through other things. The putting things into practice around other healthcare professionals, that's quite good with workshops.

Describe how you have applied your learning after the event(s)

I know with the alcohol training that tied into the campaign so we had promotional packs we could order from the Department of Health so we did that and displayed them in the pharmacy. We got in the alcohol scratch cards, so we used that, and whenever someone was waiting for a prescription we got them to use. If they scored above the range we could give them a leaflet and tell them about their alcohol use.

Please share any examples of actions you have taken to change your practice after the event?

Just trying to think…. I guess with the dementia one we have got the staff to get involved with that, to improve their knowledge about dementia, especially in this area as we get a lot of elderly people. I can't remember exactly which ones, but for at least half of them I definitely did complete a CPD cycle. I guess I use the social skills, in terms of MURs, just trying to get more information out of people.

How likely are you to recommend future PESL events to colleagues and why?

Yes, I would. It would mostly be to do with the topics. I know some people prefer one topic to another. Again, I would.

What is it about topic?

Update myself on certain area, especially areas I am not very familiar with, like antiplatelets, which are a weak spot for me. I am aware of warfarin, but not really the other ones so that was good to do, just areas where I feel I need more knowledge

Any comments about location?

I live five minutes away so it is good and very close. I live on the boundary of Bromley and Croydon. The Croydon ones are at Mayday, which is harder to get to, because of traffic. Yes, good venue.

Which providers or training programmes do you currently use for your Education and Training needs and why?

CPPE. They have the similar sort of thing – workshops for them, the NPA have their training events and also their websites and the company occasionally send us updates. I think they are the main ones. Obviously, there is the journal and stuff, so reading and things but, in terms of events they are the main ones

Which education provider would be your first choice to fulfil your education and training needs and why?

In terms of convenience, PESL I think. Also, because of a regular schedule.

How do you best like to learn?

I prefer to do it on my own, that is my main one. I haven't mentioned it much but I do. Just keeping up, like if I see an article that is very interesting, I sort of base learning around that.

What formats of learning would you be happy to undertake with others?

Workshops and lectures mainly.

What formats of learning are you happy undertaking on your own?

I have done a webinar. I don't think I have come across any podcasts. They are not really advertised that much. For webinars, I don't know if I had the right technical set up, there was one where you joined it and it was part workshop where you join in, but I didn't have the right headset, which was compatible with it, so that was a bit awkward, but, yeh, I would have to think about that and if it was the right setup for me, in terms of webinar. In terms of the others, I have not come across any podcasts yet but I would be willing to give it a try. I guess it depends on level of interaction because, like I said, the webinar I did, in order to interact you needed the headset so it was a bit difficult as I didn't have the right equipment. There was one from the GPhC involved in the new inspections so that was like a broadcast rather than interactive, so that sort of thing is easier.

When you don't attend learning events, what are your reasons?

I think the main one is advertising. With a lot of the ones I have attended I only heard about them a week or so in advance. I don't know how better to distribute the information. I know it is on the society website but I know not everyone is a member. I don't know if there is a standard way of distributing them. Obviously if it is in a big list on an email you could miss it. Maybe go through the LPC as a way of distributing. That

is how I found out about the last minute ones, but only a few days before rather than more in advance basically. If they could do it more in advance that would be good.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

No. I guess PESL is more frequent than other programmes, so maybe, if they think they have been to one or two that might be enough.

How could we increase attendance at learning events for pharmacy professionals?

I guess in the description it is the main headline, so maybe a bit more information about exactly what they are going to go through. I know some people may just look at the headline and think they don't know what it is.

After a learning event, what tools would you like to be provided with to support a change in your practice?

Possibly a summary after. A lot of them have the slide shows, but maybe, like a summary page of what we went through, just an outline of what we went through. Maybe within about a week.

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

Yeh, not sure how, as each field has different things they do, so not sure how or if it would be relevant to what I do, but I am open to it, but not desperate. I think if we focused on what each profession does that would be good, or if we focussed on something that needs to be joined up possibly. In terms of topic I guess, like I mentioned, the general areas, stop smoking or alcohol, as that involves everyone, that kind of thing. Just generalised health or healthy living topics.

Any other comments?

No

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH4: 14th May 2015

Hospital pharmacist – Independent hospital (oncology centre)

Which topic(s) have you attended through PESL?

It was just to antiplatelets with xxx

What was your primary reason for attending the meeting(s)?

Mainly the speaker, because I have heard her at other things before and I just felt I really enjoyed listening to her, so, cardiology has always been my area of interest, but now I am not working in cardiology I thought I am not keeping up to date with that

Please can you tell me what you remember about the learning event(s)?

I remember the venue being quite nice, near Waterloo, and the atmosphere was quite relaxed. I quite enjoyed her lecture, definitely. I think there was a little bit of a discussion towards the end which was also quite nice, with some questions from others of what they have come across and what they wanted to know. Yes, that's it.

Describe how you have applied your learning after the event(s)

I haven't. I said I would complete a CPD cycle too but haven't yet.

Please share any examples of actions you have taken to change your practice after the event?

I think, actually one thing I have realised from that event, is, I was a little more relaxed about stopping antiplatelets but it made me realise it is really critical not to. I was pretty used to, especially after an MI, if the patient had a nose bleed I would stop the antiplatelets, but now I never do. I think this was something that stayed with me. I did discuss one patient with xxx after the event. I perhaps understood better now why things were done the way they were done. He was being kept on antiplatelets where his platelets were very low and he was being topped up with platelets but it probably did made some sense. Apart from that, it was true, it was not always relevant because of the area where I am working

How likely are you to recommend future PESL events to colleagues and why?

Definitely, wherever I can get on the tube, as I don't drive,

Please tell me more about the importance of location

Yes, I know some of the events, CPPE events, happen in hotels somewhere outside London, so you can't get there easily you know, but otherwise it is not a problem

Which providers or training programmes do you currently use for your Education and Training needs and why?

I use CPPE every now and then. Recently there was an event on palliative care which I attended. That was near chase farm hospital. It was good. I thought it was going to be a little more about choice of drugs and, but maybe this is more for community pharmacists, maybe, as in hospital it may not be something I see when seeing patients on the wards.

Which education provider would be your first choice to fulfil your education and training needs and why?

I think, whenever there are evenings run by drugs companies I go. Someone at the hospital will get an email or letter about the event happening. The hospital provide no structured training. But we organised our own learning. So for example, tomorrow. We were meant to do it yesterday, but tomorrow morning, just for half an hour we will meet to go through some case studies. This is just our team meeting together. There isn't really a formal structure to training. One of the pharmacists is doing her masters in oncology so she chooses some of the case studies to go through which is good. I am a member of BOPA but not really used them for training. I know there are 2 events coming up which I will try to attend, but I haven't actually attended any of their training. There is some stuff going on online, but actually, a long time ago I did use one of the online trainings, but that was a long time ago. And, maybe I will attend one of those study days. I think I would trust CPPE, because the ones I have attended I have liked, um, but I don't really know. The topic is the most important thing. Something I find interesting.

How do you best like to learn?

I think if I am learning something completely new, something I haven't come across before, I think I would prefer to do it on my own, just to do the reading, but if it is something where it is not particularly new, as a refresher, I would prefer to hear it from someone, like in a lecture, and then it is good to discuss it.

What formats of learning would you be happy to undertake with others?

Learning with others is about sharing and discussion. I would remember that 'someone said this' and 'someone said that.' case studies are good too, especially if we have questions. What we are trying to do is that you do the reading on your own and then we will try to ask each other questions to see if you actually know the answer, but we need to see how we will apply it, as especially when it comes to making decisions

What formats of learning are you happy undertaking on your own?

In terms of reading, I mean, it would depend on what it is. If it was oncology related I have some websites I would trust like the cancer alliance or other cancer networks. I don't think I would go back to textbooks but I would probably now go online as I prefer online. I don't think I have done any library studying for years. I remember registering for one webinar which I didn't manage to do but this is something I would like to try. I think they are just more interactive. I think I remember more. I think it is to do with the speaker, and the way things are said, which makes you remember, but it is also about being about to talk about it and repeating similar information and discussing it, to make sure you understand it. If I am on my own I can read but it is not the same.

When you don't attend learning events, what are your reasons?

Time and obviously working hours, and let's say, in this job. I finish more or less on time but in my previous job I never knew what time I would finish, so I might register for something but suddenly I had to stay 2 hours longer, and on call. Often there were

events I couldn't attend as I was on call. I imagine there are other people too, that have family and other responsibilities.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

For me, if I could, I would attend as many as I could, so do people think it is not interesting, not relevant? Or is it just, I don't know.

After a learning event, what tools would you like to be provided with to support a change in your practice?

Copies of slides, but I have found, sometimes I get copies of slides and do nothing with them. I just remembered I attended the clinical pharmacy congress, I forgot about that, so now we got an email to say the slides are available. I am just thinking from last year I didn't look at a single one, even though on the day I said I would look at some. But, what I find very useful, and sometimes we do this with my colleagues is when you get sent questions, or multiple choice questions or something to check your learning, because then, it is like a game, or an exercise you might do, just to check. I think a week after, as a day after is probably too close and you would still remember. I think a week.

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

Actually, one of the sessions we organised with my colleagues, a doctor came, who is new here and it was brilliant, as because she had a lot to add, and she could explain things, because she has a different approach and she wouldn't always just focus on the drugs so it would be amazing, because even though meeting with other people from other professions it is good to get different opinions. Actually, just thinking about methods. During the pharmacy congress I have just remembered we had a session with the Simman. It was the first time I have seen it but it was a brilliant way. I just felt that you so much from the event as you actually had this dummy attached to monitors and you could see the impact of drugs which you had just administered, and it also made me realise how focused on the drugs I am, for example while I was thinking about drugs to give him I didn't think to give him oxygen, so it kind of makes you realise, but because there were people there to explain this, there was a critical care nurse there with me, so it was brilliant. I guess it could be brilliant if we could meet with doctors and nurses. For group learning, a topic like palliative care would be good. That is such a multidisciplinary area that would be amazing, if we could for that. I don't know if anything specific

Any other comments?

I think it is so true that there is so little structure, and we are left. Yes, we can go to sessions, and we are having to do CPD but that is like, you just deciding what to do yourself. I think in a way, for me, even though it would be hard, I think it would help if we had some sort of test, yeh. I don't want to say exam, but some sort of test at some point, because something that would keep you motivated, and it wasn't just me trying

to look in various places. Whenever I have had an exam I worked hard, even though I moaned, I was grateful I did this work as someone was actually checking it. See, the way doctors learn, they are constantly being assessed. When I did my clinical diploma, I knew I had to do that, and that was much more effective than just recording, or not, my CPD. In terms of assessments, I think the ones I have had. OSCEs were difficult and stressful. It was a good assessment but we weren't really getting any feedback, so, you do it and discuss it, but if it was a proper OSCE with feedback it would be really useful.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training

PH5: 17th May 2015

Community pharmacist and contractor plus CPPE tutor

Which topic(s) have you attended through PESL?

I've attended the hypertension, the NOAC and the antiplatelets events

What was your primary reason for attending the meeting(s)?

For all of those courses the talks were being run by xxx, who I have a lot of respect for, and I knew that by going I would learn a lot as she is the guru of cardiology and medicines, so that was my main reason for attending

Please can you tell me what you remember about the learning event(s)?

Yes – it was a really good summary of the latest guidance, which you sometimes read but don't always put into practice or relate to your work. So the hypertension one in particular was very useful to realise the change in prescribing in antihypertensives and helped me to realise why we are seeing some drugs more often in the pharmacy, in my day job, and with the antiplatelets and NOACs there has been a lot of change in indication and prescribing, so particularly the NOAC one has been extremely useful because she covered some of the counselling points that are needed for some of the newer agents, and helped me come up with some of the answers that patients might question me on, so very useful. Antiplatelets was useful as well, as we do have people who are combinations, and that has always been a worry whether people should be on them or not, so the new guidance on how long people should be on them, the cards showing people what they are on it for and it would help people to remember sometimes how long they should take them for.

Describe how you have applied your learning after the event(s)

Yes. I know for the hypertension one, she talked about how to take blood pressure measurements and what to do if you get error readings, and one of the reasons you may get error readings with blood pressure monitoring is if people have got abnormal rhythms of the heart, so literally the next day after the event a patient came in for a blood pressure check, and the readings kept coming back as 'error', so I decided to check his pulse, which is something I wouldn't have done if I hadn't been to the training course the night before, and his pulse was very irregular, so I rang up his GP straight away and expressed my concern about this patient. The GP visited within a few hours and within a few hours he was in hospital. Actually he had a life threatening condition, so it was useful I had done that. He wouldn't have survived probably if we hadn't done that. I probably saved his life. Indirectly, so I think, sometimes people might think 'I know enough about hypertension' , do I really need to come along, but there is always one or two pieces of information you might forget, or you haven't kept up to date with so it is really worth having these sort of events, especially with expert speakers, as I find these are really useful as I find it is good hearing it from the experts

Please share any examples of actions you have taken to change your practice after the event?

No, I think it just helps to highlight. I think the speakers have been useful in that they do try and relate it to your patients, so for me as a community pharmacist, I know xxx really did try and help us to think about MURs and what we should do, and what to talk about with patients when they are on antiplatelets, and that has helped with the new medicines service in particular. I know from my point of view I have run the diabetes and alcohol events as a facilitator for PESL, the diabetes one in particular was such a broad topic, which actually could have been run as a series, so what we ended up doing when I was facilitating was having a flip chart and writing down things we wanted to know more about. After a couple of times of running that, the things that shone out that people wanted were more learning about insulins and the different types, pen devices, the different types of lancet devices, needles, and I think people wanted to see visual examples of this. And also, people wanted more support for people who are making that change from tablet to insulin, so frequency of blood testing for example came up as a question, questions on the DVLA and how to help people with that change. They were the big things that people wanted help with.

I have done a CPD cycle for hypertension. I haven't yet for the antiplatelets, but the diabetes one I ran myself I have.

In terms of MURs and NMS I think all of the topics have been good in the sense that they all helped us to support the key services. The hypertension, antiplatelets, NOACs and diabetes really helped me to, when doing the MURs or new medicines service to give up to date information, and answer questions and queries from patients. For the alcohol event, that is useful for a health promotion point of view, while we don't run an official service, it is the sort of thing that crops up in a lot of the services, for example someone who wants to give up smoking may be drinking as well, so it kind of links in with that, sometimes the minor ailments. You may get some repeater people in who are concerned about perhaps, or even during an MUR, when you are doing the lifestyle information the information comes in very useful too then

How likely are you to recommend future PESL events to colleagues and why?

Very likely. I do think we need to get more people coming, and a mixture of people coming. I think what would be really useful is to get a lot more pharmacy teams involved in the training. When I go along I tend to see the pharmacists, the odd technician, but really it should be a whole team learning opportunity, so I think we really should be promoted that a lot more.

Which providers or training programmes do you currently use for your Education and Training needs and why?

A combination of lots of different people. CPPE, RPS, pharmacy management, and I belong to a buying group call pharmaplus who sometimes run training events related to independent community pharmacy and services. They tend to be the main ones. I prefer to go to workshops, face to face social interaction, but there are times I sometimes cannot make an event and you don't want to miss out, so a webinar is one of those good things that I like because I can do it from home. I don't need to worry about childcare or rearrange lots of things, so they would be my preferred learning models. I have great intentions with distance learning packages, you start off with great intentions reading some bits but it is not my preferred style of learning.

Which education provider would be your first choice to fulfil your education and training needs and why?

Whichever, but local, because I like to meet other local pharmacists. Local to me is important as I like to meet local colleagues and it is a networking opportunity, but for me the topic, if it is relevant to me, if it is relevant to an identified learning need for me, if I know there is a change I need to keep up to date with. Those would be the reasons.

How do you best like to learn?

I think a combination. I do like to learn from the experts. I think it is good to gain their knowledge, but actually sometimes you may not think about how to use it in practice or how you might use it to talk to patients, so I prefer a combination of expert speaker and then role plays or case studies would be the ideal model.

What formats of learning would you be happy to undertake with others?

Workshops and case studies to help apply the learning. One thing I haven't mentioned is conferences actually, which, in the last year or so I have been going to quite a few, mainly for the networking opportunity but also I find them really useful to share best practice. Because sometimes you sit there, especially as a community pharmacist alone in your pharmacy thinking you are doing a great job, and you meet others who are doing an amazing job, or others who aren't doing such a great job, so it helps you to benchmark yourself, so it is a very useful tool conferences. I like to attend the breakout sessions but again I find the networking pre and post the most useful, and I am also very inspired by some of the guest speakers they have, who aren't always pharmacy related, but sometimes help you to think outside the box, which is what we need sometimes in our insular world of pharmacy.

What formats of learning are you happy undertaking on your own?

I have been on two different types of webinars. One that is just speaker driven and you just listen to the speaker and they go through their slides, like a lecture, but I have also done the CPPE online focal points, which are very clever with their IT so you listen but do the case studies with other people in a group virtually, which I think is an amazing model, because I felt like I was in a workshop but sitting at home. I think that is a model people need to explore, although I think the IT would be quite expensive and it takes some understanding of it, but possibly it would be a way to target those people who can just not come out.

I have been interviewed for a few podcasts and listened to a few podcasts so both I guess. It is a really good way to hear stories from another person's point of view and it is probably something I should do more of

With reading, it is one of those things with great intentions. When I get time I tend to flick through journals. They tend to sit on my lunch table in the pharmacy so staff and I sit and read through them when we are having lunch, but I can't say I religiously read any journal

When you don't attend learning events, what are your reasons?

I think there are people, possibly contractors, so I know as a CPPE tutor who my pharmacists are around my area and they don't always come to my events, and when I question them it is sometimes that they think they know it, some of them have been qualified for many years and feel their knowledge is up to date, even though it might not be, and so that might be one of the barriers, not realising you need to keep up to date. Another barrier is personal commitments, our jobs are getting more stressful, so for many pharmacists, especially community pharmacists, you are in your pharmacy 8-7 you need a personal life and you need to be able to go home and relax. Going out in the evening is not always something that is at the top of people's priority list. I think we need to be respectful of that and put on events that are relevant.

How can we make the events more relevant?

For me, I am inspired by peoples stories, so, if I heard a story about how someone went to a lecture then saved someone's life for example!, or went and suddenly decided to do MURs on the topic, or managed to get their 400 MURs from something they picked up from a conference, so I think we have got to create some inspiring stories to get the people who don't come to come.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

That has been a criticism that some people didn't know about the events. I think we need to hit it from all angles, so using all the networks we have, RPS, CPPE, CCG, emails. The more times people get emails from different directions the better. Using the website and social media, which I think is the newer way of communicating messages.

After a learning event, what tools would you like to be provided with to support a change in your practice?

One of the things I piloted as a CPPE tutor was for people to stay behind for ten minutes after the event to complete a CPD cycle. I am sure there are lots of people who are behind on their CPD entries and actually that is a really good way to consolidate your learning, and actually if you leave the bit blank about how you will support a patient it might inspire you to actually support a patient and you could fill that in, so I think that is a way to inspire people to change their practice. I really, although it may be unattainable, peer review kind of face to face, so if you have learnt something, to network and share with colleagues, so you can say how you would do this differently, would be good, but I always find the email a week later, thank you for coming, with the key learning points is an extra reminder to people that they went to that, so I should do that, is a good thing. And if you were promised any references it is useful. A quiz is a good idea to go back and think 'did I learn that', so good idea

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

I have to admit I think that is the way forward. Pharmacy is far too insular. I think learning with other healthcare professionals is important, not just for ourselves, but for others to realise our potential, what we do and our knowledge base. I think there are so many advantages of doing something like that, as it would give us a different look

on things, and it is sort of like that walking in your shoes, so if you see it from a doctors or nurses point of view it may change the advice you give the patient, so I think there are people who might not see that full circle, so it would be worth doing

For topics, I think consultation skills, because, it is all very well us becoming patient centred, but if the GPs and the nurses the patients are seeing aren't we are facing a battle in our pharmacies where the patients don't want to take the drugs and we are trying to be patient centred, so I think that is a really key topic. But some real national drivers. I know dementia and diabetes are big topics for south London where GPs are really trying to target and focus on supporting the patients better, so definitely some joint learning on those topics would be really good.

Any other comments?

I think we have just got to encourage more people to come. You end up seeing the same faces and yet there are over 1000 pharmacy professionals in south London we see very few coming to our events, so I think 'bring a friend' would be a good idea. There are some people, which I can't believe, who are scared to come to events alone, so if we all said we would bring a friend next time it might be a friendly way to introduce them to learning .

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH6: 17th May 2015

Community pharmacist – working for multiple

Which topic(s) have you attended through PESL?

I have attended the dementia workshop, the NOAC and hypertension

What was your primary reason for attending the meeting(s)?

My own personal CPD, to network with colleagues in south London and to look at any new updates on the subject areas concerned.

For the in most cases I went for general updating, but dementia, where it has become publicised and something that dementia friends are trying to push, it was something that is happening in our community, but otherwise it was topics that were education and training purposes.

Please can you tell me what you remember about the learning event(s)?

I remember the format in which the objectives were set out, what objectives I was particularly interested in learning, I remember taking notes and the handouts that come out of it, CPD certificate I have achieved.

Hypertension and NOACs would have been more lecture style, whereas dementia was more workshop style. The workshop style was most interactive which I thoroughly enjoyed because we participated in our groups, and were able to contribute our thoughts and learn from each other. I enjoyed the lecture style, directly from the lecturer, xxx, when she was doing the hypertension it was just as beneficial although it would be nice to have some discussion throughout too.

Describe how you have applied your learning after the event(s)

Yes, so, we are doing adhoc hypertension services for patients who may have changes in their blood pressure tablets, giving them the opportunity to have their blood pressure taken along with their medicines review, so it is an adhoc service. It has also given me, as well as my pre-reg who came along, more confidence to speak to patients and to implement a new medicines service much more effectively, giving more confidence to find out more.

I did roughly speaking I believe about 7 CPD cycles as a result of these PESL, only because one has led to another and I have kept it with very SMART objectives, so very specific, on what I wanted to learn and what the outcomes were, which as a result led to more looking at the bigger picture of anticoagulation, support therapies, how we can from pharmacy, use our teams to support these patients who are coming through the doors. I have educated other pharmacists as well.

Please share any examples of actions you have taken to change your practice after the event?

You know rivoxiban, which is a new medicine, has recently been put on the formulary, so we are seeing a big increase in patients being prescribed it in primary care,

specifically Kings, and as a result we are now taking the opportunity to do new medicines services more confidently, whereas beforehand we may not have had as many examples being used, and we may not have advised patients as we would have done without the knowledge

How likely are you to recommend future PESL events to colleagues and why?

Very likely. I feel that it is a necessity for our pharmacy staff to be partaking in these events, not only for the networking opportunity, but for the education opportunity, and for the fact that PESL are very much at the heart of what is going on, in terms of educating pharmacists and pharmacy teams, coming from government or charitable basis, which are seen as high news readership, so we are going to get more patients, so we need to be better informed, to provide advice to patients in these subject areas.

Which providers or training programmes do you currently use for your Education and Training needs and why?

I subscribe to the royal pharmaceutical society, and I go to LPF meetings. I am also an LPC forum chair for Lambeth, not only do I help chair but I attend LPC meetings as well, for the purpose of education and training. Not to forget CPPE as well as a key training provider as well as accreditation provider. There are a vast array of providers.

Which education provider would be your first choice to fulfil your education and training needs and why?

My first choice would be CPPE. Only because of their accreditation and their comprehensive training systems which I have grown accustomed to as my preferred learning style, because it is workshop based as well as e-learning based. My second one would be PESL as it is up to date information that is provided and it is a comprehensive approach of provided information from lecturer to trainee.

How do you best like to learn?

Mainly face to face

What formats of learning would you be happy to undertake with others?

I like workshops. I prefer workshops and I learn a lot, but I have a varied learning style. I like a bit of everything, but mainly workshop based. I prefer liaising with other peers to learn from, but also lectures to learn directly from the tutor.

I like conferences, but I think it is mainly a process of obtaining freebies really, apart from obviously when there is some information being disseminated but then that is more lecture, top down. I do like webinars as that is something that can be recorded and I can do it in my own time. As you are aware pharmacists tend to have a lot of time used up as a result of working, 10-11 hours a day, so doing something in my own time would be something preferable for me, so it doesn't impact on my work time which tends to be very busy anyway, and I can do it in quiet moments, like learning at lunch when I have quiet moments.

What formats of learning are you happy undertaking on your own?

I have done CPPE distance learning packages for consultation skills, which I have completed, I have done emergency contraception, safeguarding children, vulnerable adults, risk assessment and substance misuse, so quite a big chunk of information I have gathered from CPPE, as well as the MUR accreditation. So I have done a few e-learning. I have also attended a few focal groups on asthma and COPD, which are good, as well as workshops, like gout. I have done that

To be honest I have not tried any podcasts but I have heard a lot generally, something you can hear while you are in the tube, but I don't really have experience.

I am very much an avid reader of the PJ, C and D, pharmacy magazine. I like articles that are of interest to me. I tear them out and keep them in a file for reflection from a later on prospective and I use these articles as well to provide some information to pre-registration trainees, to give them up to date information, and services.

Any comments on topics?

My sort of topics are aspects of pharmacy practice in terms of therapeutic areas such as diabetes, blood pressure, anticoagulation services. Things that might affect me as a professional, doing my job, so service based articles, updates on MURs, now they have encompassed discharge from hospitals, cardiovascular as well. I am also very much in the mind of how I can drive the business, so looking at my soft skills, HR issues, looking at how to look after my staff, mentoring, motivating, my softer skills and qualities which might impact on me and others to do a better job.

When you don't attend learning events, what are your reasons?

Barriers tend to be time requirements, as things tend to be in the evening time, and after a 10-11 hour day then having to go to a meeting or training session seems to be making the day even longer. Lots of people have family commitments, children, elderly members of the family they may look after. Also the inclination of that you think you don't need to learn any more after getting your MPharm. That is a misconception because it is part of our CPD, so I think it is mostly our personal lives that come into play

How could we increase attendance at learning events for pharmacy professionals?

I think, in this technological age, we need to use technology more so. More or less everyone has a smart phone of a sort, so using webinars, and I would be interested in learning more about podcasts and how they could be used more for myself. Also learning at lunch, being able to do things when there is a lull in workload during the day, having evening sessions, but considered these along with weekend sessions, but, again, that is protected family time, so I don't think there is any one way of getting more people to attend, I think there are multiple ways to get attendance.

After a learning event, what tools would you like to be provided with to support a change in your practice?

Application is first and foremost when putting the knowledge into certain aspects and using it, so using maybe flash cards, or at the end providing some quick tip points which you could use in practice and utilise when in practice. 'not to forget' when doing

an MUR for example. Small things like that which you could then incorporate into practice, as after a short period of time of doing it it will become habitual, it becomes a habit.

I think it would be better to have it at the event because if it is sent to you it may not be opened or looked at so it is something that if you can take it away they can have it at hand and say keep it in the pharmacy or my staff can review it and it will be a prompt. Prompts will help people to think about what they can do and let the client know they are using these prompts but it is for patient satisfaction and putting all aspects into practice

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

Absolutely. I think it is key. Services are becoming more integral and more services are occurring amongst other professionals so we need to work with other healthcare professionals to provide a better quality of service for our patients at the end and by working together we need to be able to know each other, so this sort of networking, joint training, would be, I think, if not done is a missed opportunity in terms of integration on the high street. No man is an island, we need to be able to work together and communicate and have referral processes, but for that to occur these networks need to be established.

I think we need to start off with what we know, and I think doctors, nurses need to be aware of the MURs we have done and what they mean and how they benefit the patient. Doctors and other practitioners are actively referring patients for an MUR. Once we have established that we have a direct line of communication, so once that happens the Doctor can say, 'while you have your MUR get your flu vaccination as well.' 'If you are getting your MUR done why don't you speak to your pharmacist about smoking cessation'. So once that link is established, anything can go down that line, so people are referring pharmacy first. We need to establish that link

Any other comments?

I think more needs to be invested in education and training, and not just for the pharmacists, but more around the team at large. The healthy living concept needs to be brought towards that as well so all members of staff are actually participating actively for the benefit of the patient, the communities in which they serve, so when considering where to place education and training, within our industry to encompass all members of staff, not just pharmacists.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH7: 19th May 2015

Pharmacy student

Which topic(s) have you attended through PESL?

I have attended a topic on Dementia, NOAC, diabetes, alcohol and antiplatelets at Kingston University

What was your primary reason for attending the meeting(s)?

I just wanted to expand my knowledge on these topics, because they are very useful for my MPharm course. Also just to get that extra experience of listening to other speakers that you wouldn't really get in a lecture theatre.

Please can you tell me what you remember about the learning event(s)?

I especially remember xxx, who ran antiplatelets, which I have been to a couple of times for her events and I always enjoy her and remember everything she says as she is really good.

I like the workshop ones, especially the diabetes one, because we were given a workbook and we had to go through some scenarios. That really helps consolidate your learning and it is much more interesting, much more easier to learn when you are doing workshops rather than just sitting down and listening to a speaker, but both are very good. It is good to have experts but also be able to discuss.

I remember that we got chances to network as well, so when you are eating we got a chance to speak to other students who were there and pharmacists as well. If you wanted to you could speak to the guest lecturer as well, so a good opportunity to learn from each other

Describe how you have applied your learning after the event(s)

Especially when we were emailed the slides, as I love to look back at the slides and go over them to see if there is anything I missed. I can save them and go back to them if I want to in the future. Any of the case studies for the workshops which I did not complete during the workshop I would try and finish them off at home. Really useful.

Please share any examples of actions you have taken to change your practice after the event?

The antiplatelets and the diabetes was a help in my revision. I think that with pharmacy you have to find other ways of learning and broaden what you want to learn as there is so much more than you know and what there is out there, so with the LPFs it is about getting more learning

How likely are you to recommend future PESL events to colleagues and why?

very likely. I think it is really useful because it is a good experience and you are more than likely to learn something new, even if it is a topic you have already covered. So I think I would definitely recommend it.

Which providers or training programmes do you currently use for your Education and Training needs and why?

As a student I get most of my learning at University. I have attended the BPSA conferences, they are good and I also attended one that was run by the RPS in Surrey in Cobham, Hilton hotel and that was a nice long day conference which was interesting as well. It was covering a few different areas. One of it was about fever in children; I can't remember the other one.

With the BPSA I like how they have sessions on the BNF so they will do mini quizzes on the BNF and give prizes for whichever group wins. It is just that extra practice of using the BNF and that helps and I think that would be a good thing to incorporate into the PESL events

Which education provider would be your first choice to fulfil your education and training needs and why?

For me, close to home, so anywhere in London I wouldn't mind, probably around an hour's journey by public transport. I wouldn't want to go outside of that

In terms of the topic I find most interesting or something we have covered at Uni, I feel would benefit me, or something I don't feel confident in where I would like to expand my knowledge I would go for those over other topics. With me I have an interest in cancer but I haven't attended anything related to cancer, so mainly diabetes, antiplatelets, cardiovascular, long term conditions, but if there was an event on cancer maybe I would be interested

How do you best like to learn?

I think it depends on the speaker. If the speaker is a really good speaker and they are engaging the audience, and I feel if they are repeating things as well that consolidates your learning then in that case I really like listening to guest speakers, but really I prefer the cases you do in workshops because they just really help you to apply the learning, gives you that extra practice

With the BPSA it is like a conference and you come together in a lecture theatre but you will also have a group or workshops as well. There might be sessions where you choose which workshop to attend and there may be groups we split in to but in the same lecture theatre, where we do the BNF type questions.

What formats of learning would you be happy to undertake with others?

I have only really been to lectures and workshops. I can't think of anything else I have done

What formats of learning are you happy undertaking on your own?

I haven't been on any webinars but I have been wanting to try them so maybe in the future. No podcasts. There are not many e-learning things I could do, especially with CPPE as I am not a pre-reg so I am limited in that respect, because of my current student status but in the future I will definitely give them a go.

For reading I really like PJ online, because they give you CPD articles as well. That helps you learn as well. There is always the BNF that gives you general information but I mostly go for the PJ

For websites EMC is good for access to SPCs, patient information leaflets and things like that, but that's it really.

When you don't attend learning events, what are your reasons?

I think I would say it is mostly timing. A lot of people live quite far and travel a long way to university. A lot of these events start at 7 onwards, finishing at 9, which would mean you get back very late. With me I don't mind so much as it takes me about an hour to get home, but I know a lot of people would prefer an earlier time

Speaking to friends and colleagues, what reasons do they share for not attending training events?

They like the topics. I know some people haven't attended the Kingston university ones, but have attended the same topic at a different location closer to them, so I think someone went to Croydon, so it is location and timing which is the main barrier.

How could we increase attendance at learning events for pharmacy professionals?

If the time was pushed forward to 6pm. Maybe advertisements need to be clearer, as many people may not check their emails or, I don't know, they may see it but ignore it. Maybe if there were leaflets to be distributed in lectures, then they would no with no excuse

After a learning event, what tools would you like to be provided with to support a change in your practice?

A quiz would be good, a little test thing, to help you remember what you know and don't know and will help you. Probably the day after because then it is fresh in your mind. Maybe online or given as a sheet during the evening

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

I would be really interested in that. I think it is really good that the other healthcare professionals see what we do as pharmacists as well as there is a lot of respect out there at the moment and it would just increase those relationships and build stronger relationships, so people understand what people do. We could understand better how doctors prescribe and get their thoughts and ideas and they would understand our points of view. I think it just brings everyone together creating one network of healthcare professionals, rather than separated

For topics I would say long term conditions and chronic conditions, because some doctors may not be prescribing as well as they could. They could get advice from pharmacists. It is just learning together. I think that would help.

Any other comments?

Just make it more engaging. Rather than having the same format for every evening maybe have a quiz here or there. I remember one of the evenings we had the remote clicker things. If we have a different thing every time it just makes it more interesting, and mixes it up a bit

PH8: 21st May 2015

Pharmacist working in a GP surgery

Which topic(s) have you attended through PESL?

I attended quite a few actually. Dementia was one of them. Diabetes, hypertension, um, there was an asthma one as well

What was your primary reason for attending the meeting(s)?

Continuing development of my profession. I work at the forefront in different fields. I work in a surgery and I also do the odd session in community, so it's like trying to keep up with what is going on. As I said I do learn better in a group

Please can you tell me what you remember about the learning event(s)?

I thought they were organised well, there was plenty of food, but the speakers were very good and it was open and interactive, and I am one of those people who learns better by seeing, as opposed to reading lots of books. I am a practical hands on person. So they suit me very well, and, as you know, I always attend your sessions.

I preferred both, but I liked xxx presentation. She is an excellent speaker, and she knows her subject inside out and it is a subject I deal with a lot, hypertension, so for me that was excellent, but the dementia one was equally very good as it was an eye opener. I just remember the bookshelf, which was a different concept for me to think about dementia, I was surprised at the time that I hadn't thought of it myself. You need colleagues in the field to bring it to your attention. So, yes, I thought it was very useful. Actually I brought some of my staff with me from the practice, and they enjoyed it, you were accommodating, even though I hadn't registered them!

They were small groups, which made it more comfortable, and the learning material. We were sent the slides, and anything we asked for was sent too, especially the inhaler slides were very useful. In fact I used them, especially with the GPs sometimes, they are not sure which or how they work, so it makes it a lot easier if you have got a graphic presentation of something. Yes, I did find that very useful.

Describe how you have applied your learning after the event(s)

Yes, the diabetes one, that was really useful actually, as I remember going back to the practice and there was this chap and he had been recently diagnosed at the hospital, but he hadn't started on his insulin and he came into the practice not knowing what was going on, so at least I was well armed to reassure him and show him what to do with his pens, which he wasn't very happy about to start with, because they are very daunting. It was very useful. I think the speaker had hands on knowledge about it so she was able to impact it in very simple language and it is what stuck in your head

Please share any examples of actions you have taken to change your practice after the event?

Basically it just gives you, sometimes you work in isolation, it gives you opportunity to talk to someone else in a different field and just network, and compare what is going on.

How likely are you to recommend future PESL events to colleagues and why?

very much so, very much so. I would always attend CPPE. I feel that sort of learning is better for me. When I am working in the community I always tell them where I am going, I do. Unfortunately when they work from 9-9 it is very difficult for them to get out, so, but I have done, and I will do.

Which providers or training programmes do you currently use for your Education and Training needs and why?

I would do it online as well. I use choices quite a lot, patient.co.uk a lot, British hypertension society. I am member so I tend to use their resources. I have been to Queen Marys as a part of a contraceptive. Is it the SWAGNET? Not sure which one, but I know someone emailed me. Leanne Bobb, I can just remember her name. I went to Queen Marys as they had an event, and as I do deal with contraception I found that very useful. Being in a practice you are exposed to a lot more education opportunities if you are in community it is a bit more limited, isn't it?

Which education provider would be your first choice to fulfil your education and training needs and why?

The pharmacy ones, because I think that the pharmacy ones that are organised for pharmacists, and not for nurses. So CPPE and PESL as well, definitely PESL because they were so local to me, so I found it really easy to go to yours, as coming out to Kingston is a bit more difficult. Location is key, and parking is key, because at the end of the day when you have worked for 8-10 hours, then looking for parking is not ideal.

Any comments about topic?

I find that I need to, there was one of the topics, dermatology that I am very poor on that, and I would like to see some sort of event where you have multiple slides. Somebody talking you through those slides and telling you about it. It is just those things, minor ailments that walk through the door, you can't make out what they are. I find rashes the worst.

How do you best like to learn?

learning with others is my preferred style, but I always like to back that up when I get back on the computer. I do like to use websites and patient orientated websites, because that in itself makes me use the language the patients use.

What formats of learning would you be happy to undertake with others?

It is just the fact that you can bounce ideas and you don't feel alone, and sometimes you are confused about something and you think you are the only one, but you are not, as everyone else is in the same boat, and it helps.

What formats of learning are you happy undertaking on your own?

I have tried webinars, but the only webinars that I have had to use were to do with management. If I could hear the speaker then that was good. It is technical problems, and being able to ask the questions if the microphone wasn't working. I did that with the CQRS, which is what the NHS uses to record data in practices, and it was

introduced last year, and that was the only training available, web based training with webinars. Actually I used another one that came through.

In terms of podcasts I normally listen to inside health on radio 4, I find that very useful as it is quite up to date and topical. Other than that I can't say I have accessed any CPPE podcasts.

I have done quite a lot of e-learning. Sometimes I go back. I think the last few I have done were substance misuse, that is going back a couple of years maybe. I did older people e-learning. That is quite a long process as you have a 10 hour window before you can even attempt it

Speaking to friends and colleagues, what reasons do they share for not attending training events?

When I have asked my colleagues they always say it is because they can't get time off for them, or they are working on that day and can't get a relief person. But having said that I think continuing professional education has to be proportioned to someone, webbased and face to face and it has to be that way because if not you won't interact.

How could we increase attendance at learning events for pharmacy professionals?

That is a tough one, a very tough one. In a way I think the multiples, some are very good. Boots have a CPD day, they spend a lot of resources on that and that works but it is for Boots staff only, but when you go to other multiples like sainsburys and tescos, sometimes they are just left to their own resources and that makes it very difficult, unfortunately I see pharmacy moving more and more towards the multiples, and if they don't have a vested interest in you as a person they don't want to invest, and sadly I think that is very sad. I think it needs to be mandatory for them to give you time off for study leave as other professions have. GPs have 6 weeks study leave, so why can't our profession? We have a lot of catching up to do.

After a learning event, what tools would you like to be provided with to support a change in your practice?

I think any aide that would help you to do that would be great. Um, I think if there are some programmes that can be used to go and access and reinforce the knowledge you have learnt, would, again, be very useful. It is like learning a language. They have all these flash cards. I am trying to learn French at the moment, and I find that very useful. I know I get it wrong, but I know I can go back and click on it, and it will tell me the same answer again, and I think sometimes pharmacy needs to be do that. Going back to my rashes, a rash sometimes looks the same. You can go back and thing, molluscm, when it is actually measles

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

I do attend meetings with the GPs from time to time, but I think pharmacists are better at learning together in their own groups because there is a big difference of the learning needs of a GP compared to that of a pharmacist, so I think the cross over isn't as much as we would like, not at the moment, but I think if we do step up a bit as a

profession we will be there. The gap will get better, especially if we get more prescribers, or pharmacists being called up to certain standards , then I think there would be ground where we could work together a lot more. I think there is a long way to go.

In terms of topic I think chronic diseases are where we sometimes struggle, take blood pressure measurements. Patients have to have their blood pressure taken in anyone over the age of 45, and they have targets, but some of those people are well and you will never see them in general practice, but If pharmacists could do it in the community that would be great, and share that result, then the data is there.

Any other comments?

I still think that the CPD revalidation as it stands at the moment, it needs to improve. It needs to put pressure on people to attend certain CPD events and it has to be a mixture in some form, 30, 30 or whatever way it fits, but we have to look at how we work together. I went to the clinical pharmacy congress conference at the excel centre on the 24th and I found that fascinating, but as you say, it is always the likeminded people you find there. The variety of topics was fascinating. I was surprised how many. One of those was codeine addiction and how people think they are taking the tablets and that is fine, how they think they are managing the pain and they are not. They are actually addicted to codeine. It is very difficult to get them off it. I found that fascinating. Then there was one of the topics, the pharmacists in GP practices, so that was topical, chronic liver disease. You don't hear about it much. Anyway, I did find it very good.I think they had three of four theatres. Networking too was good. And also, they sent you an electronic certificate that you had attended, and I could use a lot of those topics for my CPD at home. I have started cycles, yes, and they also send you the notes and slides to look at, but I am a notes person so I write my own notes.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH9: 27th May 2015

Part time community pharmacist/academic and CPPE tutor

Which topic(s) have you attended through PESL?

Consultation skills, I have done the antiplatelet one as well. Was wound dressing PESL? No, that LPF. Respiratory as well.

What was your primary reason for attending the meeting(s)?

Just an interest in the topic I think. It came up and seems like something I really wanted to go to, something I could learn from. It wasn't necessarily something I maybe was going to because I had research or the topic was a CPD need, but when it came up it was something I really wanted to go to at the time. It was the topic

Please can you tell me what you remember about the learning event(s)?

So the antiplatelet one, so really good and I am using. That has come up. We have been doing presentations lately and some of the facts that they have been giving have been coming round to that, but because it isn't a topic I use regularly or I am not a clinical specialist it has probably waned a little bit but I know I have got the information to hand if I need it, as I have the slides from that and that is really good and I have an awareness and a better understanding. The respiratory one was good as I knew a lot of the devices already, but there were some extra bits that came from that, and for me, from the teaching aspect it also helped for me to see what other people were doing with the devices to watch.

I liked the ones that were at the university, as location was really good. Speakers. xxx is amazing. I really enjoyed her. And the activities that we did. In terms of consultation skills, I was running it rather than taking part, but actually just watching people enjoy the role play, as normally that is something people don't like, was good.

Describe how you have applied your learning after the event(s)

As I was saying, it is more about the teaching aspect, having a better understanding of the drugs, especially the newer drugs that are around, getting my head around those, so I can better listen to the students and correct them, or to direct them on the right path. I did complete a CPD entry for the antiplatelet one. I haven't done for any of the others.

Please share any examples of actions you have taken to change your practice after the event?

I have taken some ideas and I will be working on some new material over the summer, so most of that will happen next year.

How likely are you to recommend future PESL events to colleagues and why?

Of definitely, so amazing. So easy for people to access, because it is, especially, do we talk about marketing later? I know that is tricky, especially if people aren't on the RPS website then that makes it harder for people to know about the events, if they are

not on social media then they are missing that aspect too, so, it would be good to create a better awareness of other people too

Which providers or training programmes do you currently use for your Education and Training needs and why?

I guess, obviously CPPE, easy access. I think, for me, if there is a topic I need to research or take interest in it is self reading of the internet, or NICE guidelines. RPS websites, in terms of other websites, WebMD, patient.co.uk, but that is more the reading aspect of it.

Any conferences?

Oh yes, clinical pharmacy congress and I am going to the pharmacy education conference soon.

Which education provider would be your first choice to fulfil your education and training needs and why?

I suppose even in the past, CPPE as it is easy to access, but if events are available at the time definitely anything that is local topics. Topic and location and timing as well. Timing is if it comes up and I have an interest in it at the time because maybe something will come up and I think it is not really relevant, but then something will happen at work and I will think 'oh, it would have been really good if I had gone to that event.' Whatever work I am doing at the time makes it relevant, so it is key initiaitves, so it is driven and people recognise it is suddenly a need, so palliative care, that might just be a topic, but suddenly you have initiatives that are coming up. Dying matters, then suddenly you think actually that is really topical and relevant and I might learn something I could share with patients and carers.

How do you best like to learn?

Well, I much prefer events where we are talking things through. Reading I don't really absorb that much. I take the key points, but I don't necessarily remember it for that long, whereas if someone has talked about it, and we have discussed it I am far more likely to remember it for a longer time, so definitely a discussion topic, rather than a lecture. I prefer the lecture style myself because in a discussion if you are speaking to others with the same amount of knowledge as you and you don't necessarily get more out of that, unless someone is building on it.

What formats of learning would you be happy to undertake with others?

I like to be with others, but I would like to learn from an expert.

What formats of learning are you happy undertaking on your own?

I did an RPS webinar. I like them because of the timings. At the time I was on maternity leave, so I could be at home and I didn't need to worry about leaving the house or childcare, and it was nap time so I had peace and quiet but then you have got the distractions of comments coming up and it goes out of sync, and maybe some technical glitches, so they are not my favourite, but it depends on what stage I am of my life, so they are convenient if I could be at a desk with peace and quiet. Podcasts are good, but because they are not at a set time I would put it off and put it off, so

unless I was interested or had a reason to be listening I wouldn't commit as much as I could, whereas a webinar is a set time and you have to be on. With a podcast you think 'I can listen later' and later never comes. E-learning is o.k. In my previous job a lot of my learning was e-learning because that was how we were given the information, but I don't retain that and its, you have information given, and you are flicking through, but its not necessarily laid out in the best way. It gets a bit frustrating, maybe the technology is not great, but its got its uses, and it is good for certain types of information, for a lot of the health and safety information it was great – easy to flick through and easy to answer the questions at the end and you know you will retain a little bit of that, but for me personally, e-elearning is not my favourite.

When you don't attend learning events, what are your reasons?

I think at the end of a very long day people are tired, they have childcare issues or they need to get home for a certain reason. I think location makes a big difference. I know if you can get somewhere really easily it is less of a barrier after a long day. I also think, back in the day, I used to be quite nervous about attending on my own, didn't necessarily know people so I would think, I don't know if I should be going to this, especially in pre-reg times, you think, I don't know if this is for me because pharmacists are going to be there, so I think clarity on who should be coming is very important to reduce barriers. Definitely location and marketing, then I think people at the end may forget. They may have signed up to it then think 'that was tonight', so reminders are important as well. But also, having a system in place, like CPPEs fining. It is amazing how. I had 27 signed up and 25 attended. It might have been half that number if there wasn't that so I think that people take free education and training for granted and I think it is amazing and should be available and is important but there does need to be some sort of way we may sure people do attend.

How could we increase attendance at learning events for pharmacy professionals?

Definitely finding other ways of marketing. I don't quite know what that looks like because I know you need to be able to infiltrate organisations. So maybe infiltrating organisations is a good start so you get the big players, so maybe just putting posters up in those larger organisations, but it is those smaller pharmacies, how do we get the buy in from them and how do we market to them. Emailing, I think people ignore it when you get too many coming through, and you gloss over it, or take notice any more, so we need to do something a bit differently. If it is on a website if people don't go to the website they are not going to see it, so is there a way we could have an app or something, I know that is still social media and technical but is there an app that could push notifications through to peoples phones?

After a learning event, what tools would you like to be provided with to support a change in your practice and application of learning?

Again it depends on your field and if you are going to get a chance to use that knowledge, but maybe, it is about, you have learnt the knowledge once, but you might not get the chance to use the learning again, so how do we keep it fresh, so quizzes is a good idea. The CPPE e-quizzes are great, they are quick and somehow I am just drawn to doing it, even though I think, I don't know why I am doing this! But it is a

challenge and makes me think I am bettering myself, so something like that to keep the topic alive is important, but applying the learning is very individual. I am not sure what else there is

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

So I think it has got its place. There are some topics where you would get more out of it with other pharmacists, whereas, some aspects will be better to have doctors and we would get more out of it, like there is a campaign like smoking or inhaler technique, but those things would work really well in conjunction, and it is definitely important as it is about building relationships too. I think if you had, especially GP buy in, you would have a lot more pharmacists coming to those events, as they are looking to build those relationships.

How about other members of the pharmacy team?

For me, my big passion is the pharmacy technicians, as they get left out, however, they get a lot, because they are on the register and developing themselves, whereas your dispensers, who are just as important as part of the team, and there is no recognition for them, and there is no development, so that is a very important population when it comes to sharing knowledge but if they haven't been there they won't be as passionate as you are.

Any other comments?

I think it has moved forward amazingly and I think it is on the right track that we have a lot more happening. I think the collaborative working is really good because I think if there are too many events happening people won't necessarily know which one to go to or which one to choose, so actually if a lot is going on, working together and advertising it all together, even getting people to know what is happening as a whole in an area is very important.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

CCG pharmacist, LPF lead.

Which topic(s) have you attended through PESL?

Most of them. I have attended dementia training, hypertension, anticoagulants, antiplatelets, consultation skills and inhaler technique training. I think that is everything.

What was your primary reason for attending the meeting(s)?

My primary reason, as the LPF lead to support the programme, to make myself known and to promote the programme, but also from a personal interest and keep general skills up to date. I have a particular interest in respiratory medicine as that is where I work, but it is also good to have an overview of what is going on so I can discuss these with my colleagues and keep up to date.

Please can you tell me what you remember about the learning event(s)?

I remember them all being very good and good quality, professional and the content being good. I suppose I am biased in terms of the venues because I am involved in selecting them, and I involved in selecting the topics and speakers as well, but xxx is obviously a very excellent speaker who is knowledgeable on her expert areas and very passionate about what she does. The CPPE stuff is fine, I remember one of the CPPE tutors, xxx I think her name is, being very to my taste in terms of her approach and delivery style and being very enthusiastic but otherwise most of the CPPE stuff is quite pedestrian.

Do you remember anything about the format of the events?

I would say most of the stuff is lecture style delivery. I suppose some of the CPPE stuff does do a bit of interactive action set type learning, but what I recall is mostly it is lecture.

Describe how you have applied your learning after the event(s)

I guess I talk more about the subjects I learn rather than do. I am not patient facing in my role, so I don't really apply the learning in a patient care type situation but I do talk a lot about the stuff I have learnt with colleagues and peers, and also at a strategic level at the HESL primary care forum and with the local pharmaceutical committees and CCGs thinking about the role of pharmacists and what they do and how they can support patients who have these conditions. I haven't completed any CPD entries. I have CPD I wish to complete but I haven't actually written it down, but obviously the CPD process goes on as an active process in terms of documenting it all.

Please share any examples of actions you have taken to change your practice after the event?

Things that stood out. I suppose my knowledge of dementia changed significantly. I didn't have any particular knowledge about dementia. It isn't something we really do at university, or something we do as a core topic in pharmacy practice as such because the therapeutic options are quite limited. There are a few anticholinergic

drugs and that's it, so from a pharmacy medicines perspective dementia is not a big topic, but I suppose the personal side of dementia, the caring side of dementia that cold face pharmacists are involved in and thinking back to when I was in a patient facing role and coming across patients on my hospital ward who had dementia, how could I have managed that differently if I had known then what I know now. It would have made a big difference, from that that perspective, yes, but day to day application not much. My role is really about how I get the messages to a wider the population. I have had multiple conversations with multiple people about these topics.

How likely are you to recommend future PESL events to colleagues and why?

Recommend them, absolutely. I would recommend them to people who like to attend training in their own time, in the evenings, so it is not for everybody. I do recommend them regularly to my colleagues, peers and others and I do it because I personally like them as they are a good opportunity to meet people from different walks of life, different jobs, different areas, and you meet people and you always learn something, even if it not learning about the topic it is about how somebody else applies that information in a different way, and I quite like those, because you don't really get to meet pharmacists on a professional level outside your immediate sphere of work and I think going to meetings are as good for that as learning about the topics themselves.

What topics do you think for future meetings?

Relevant topics, so anything that is linked to a national commissioned service, so MURs, NMS, anything that is linked to core contract stuff, or linked to delivering a service, IT at the moment is one that comes to mind, anything that is linked to locally commissioned services, whether that be through CCGs or local authorities, or anything where there is a perceived gap and for me it is really about making sure the topics are relevant to pharmacists and the pharmacy team, but also to the NHS, so actually the topics have got to be prioritised in a way as there are loads and loads of things that people might want to do and they are all very interesting but how we prioritise and select them for training has got to apply the 70:30 rule, you have to do 30% of topics that will apply to 70% of people, otherwise what is the point.

Any thoughts on location?

Not particularly. I think people who are interesting in the topics will travel and I think as long as you have got a fairly reasonable spread across the patch to meet the needs of the people. It is hard with meetings because those that are motivating will will already go to those venues, so how do you reach the people who would like to come but don't come, so I think it is a difficult question to answer to be honest, but I like the ones we are currently using.

Which providers or training programmes do you currently use for your Education and Training needs and why?

Me personally, I would attend workshops, conferences, run by local NHS, for example the CCG might hold an evening event on a topic then I would support but also attend. I also go to pharmacy management workshops and conferences, RPS conference on occasion, clinical pharmacy congress is the one I try to get to every year to focus heavily on clinical pharmacy which is my background and my area of expertise. I might

also go to ad-hoc conferences on specific topics, which is usually driven by my PDP. CPPE, locally that is done through PESL, so I wouldn't necessarily go to anything additional unless it was particularly relevant to my job, but CPPE don't tend to do much in terms of primary care pharmacy, so it isn't something I really tap into that much. I am a member of the primary care pharmacists association. They tend to have one or two meetings a year, but to be honest, it probably sounds quite arrogant, but in Lambeth we initiate a lot of the primary care agenda, so in terms of learning stuff it is not a huge amount, I am probably more interesting in going to a commissioning conference rather than a primary care pharmacists conference. That is more keeping with my role.

Which education provider would be your first choice to fulfil your education and training needs and why?

I don't really have a preferred. For me, it is more about the content than delivery style. Who provides it might have some bearing because of the way they provide it. Some providers have a consistent way of doing things that might be my learning style but generally I look at the content.

How do you best like to learn?

I am a very visual person. Put me in front of a book and I get bored really easily. I do read because I have to read journals or whatever but my preferred learning style is probably watching videos, listening to lectures, anything that is stimulating, interesting and visually appealing. I don't like anything that is essays on a powerpoint, I like to see images and things that demonstrate visually how something works. Also, action sets, talking to people, peer to peer learning, communication of any kind.

What formats of learning would you be happy to undertake with others?

This is my preferred. If a lecture is stimulating enough that is o.k for me as long as I get a chance to interact, discuss things and at least it is engaging, I don't have much preference, whereas a workshop there is receiving information and then having a chance to discuss with others. With conferences, usually the content is very fresh, it is cutting edge stuff. It is also about finding out information and you get a chance to learn from other people outside your immediate day to day stuff as you always learn something new and different from doing that, and it is also a day out of the office, getting a free lunch, a glass of wine afterwards. It is the social aspect as well.

Webinars are o.k. You have to be quite motivated because I have done webinars and online tweet chats and I think you need to be quite motivated because you think 'I must do that' and you put it in your diary, then you get to the day and suddenly you have 101 things going on and actually your motivation to attend inverted commas goes, because when you attend an actual workshop or conference you physically have to go somewhere. If it is in your diary you know you have booked in some travel time, whereas, if you are at your desk and have a webinar booked in, you are working on your computer and suddenly it is ten past seven, you think 'I have missed the start', is it really worth it? It is that whole kind of, webinars and online chats seep into your work life and personal life as you can do if from home or the office and you don't always think to segregate that time properly. For me that is the difficulty. I don't have a problem

learning through webinars or online and I think that is the way forward, but I think for me personally, it is how do I separate everything else that goes on in my life.

What formats of learning are you happy undertaking on your own?

Podcasts don't interest me. Boring. Reading is not my first choice. I subscribe to a number of online journals, but I don't tend to read magazines or paper, I tend to get things electronically, so I suppose in terms of written material, what comes into my inbox is the pharmaceutical journal for general pharmacy stuff, health services journal for general NHS and commissioning stuff, the UKMI daily news letter comes to my inbox. I get NICE newsletters. I get primary care pharmacist association newsletters, that kind of professional networking information newsletters. From the UKMI newsletter I will then tap into things like the lancet, BMJ, primary care respiratory journal, whatever is relevant. I don't really think the source is important, filtering is key as there is so much information out that that you have to really filter out what is rubbish, and getting to the top of the pyramid as to what is most useful, without having to read reams and reams of rubbish.

What is it that makes something relevant for you?

Relevance to my job primarily, other stuff is interesting, but my job is what pays my salary and lets me do what I do, so that is most important.

When you don't attend learning events, what are your reasons?

I think in the pharmacy world the biggest barrier is time. Pharmacists generally, particularly in community pharmacy don't have time during working hours to take time out for education and training events, so everything education and training related tends to happen, unless you are work for a large multiple or something, tends to happen in the evenings. So I think, people go to work for a very long day, 10 hours quite frequently, and are then expected to go to an evening event, maybe 1 or 2 miles away, maybe further away, and then spend 1 and a half to 2, in some cases longer, doing training, so it makes for a very long day for people, and that is quite off putting. I know I haven't done things before because of that. You think personal life and social life versus doing a training event, and o.k. it might only be every one or two months but people do get put off by that, and people think why should I invest my own time, when they have seen colleagues, like GPs, nurses, pharmacists in the hospital sector, getting training during their working hours. That is very off putting for a lot of people I know.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

No more comments

How could we increase attendance at learning events for pharmacy professionals?

I think that is a challenge. There is only so much promotion you can do. Online training, maybe it is worth trying day time events and seeing who turns up, weekend events as an alternative. I think you need different styles for different people, there is no one answer.

After a learning event, what tools would you like to be provided with to support a change in your practice?

I think in terms of this kind of training, a lot of my training, personal for me, in terms of my job and what I do is more about critical thinking, so for me, it is probably more of a recap, a very brief summary of the key learning points I am meant to have learnt during the session so I can go back, and think, these are the key 6 things I should have learnt from that meeting, or what I did learn so I can reflect on that, to help write my CPD cycle. Because a lot of this training is about applying it to patient care, that is not what I do, so, for me, a quick summary is what is important. I don't want reams and reams of paper, or powerpoint slides as I will never read them. What I want is a quick, what did I learn, and maybe I can use that to refer back to at some point.

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

Very interested, I think that is the future. It is quite an interesting question because particularly other health care professionals, that might answer the challenge we have of getting around the evening versus day training, because, then suddenly, if there is a topic, dementia or respiratory or whatever that is relevant to a whole team of professionals, getting those people into a room at the same time is a challenge, but suddenly it isn't just our challenge, it is the NHS challenge. How do we do that as a wider team and think actually how we can benefit a lot from working alongside doctors, nurses, physios, dieticians, on a regular basis so they feel part of that team, and actually working alongside and challenging each other. Learning from other I think is very very important. How we do that is the challenge. But in terms of your question, yes, I am very interested. In terms of the pharmacy team that is really important. The pharmacist can't do everything so how do we empower and skill up those people who work in a pharmacy to do beyond the manual and menial, and make them part of the patient journey, to ensure that we get the most out of the pharmacy team and the patient gets the best experience possible.

I routinely learn with other healthcare professionals, it is what I do in the CCGs. Our job is to interact with GPs and practice nurses in particular, but also hospital and community pharmacists. In terms of practical experience of that, loads. Every time I go to visit a GP practice to talk about targets, or a new guideline, that is education and training. It may be service delivery and targets but it is also showing people this is how you do it and overcoming challenges. If they think they can't do it, I give them a solution. That is education and training. But particular examples. We run a protected learning time for GPs and practice nurses on respiratory. Pharmacists are invited but can't come as it is daytime and protected time is for GPs only, but that's about shared learning. It is a massive benefit. We also had one the LPF ran a couple of years ago on inhaler technique training which was a weekend event, which attracted GPs and practice nurses, alongside pharmacists, to teach them how to use inhalers. That went down really well as well.

Any other comments?

no

PH11: 5th June 2015

Community Pharmacist. Independent contractor. LPC committee member.

Which topic(s) have you attended through PESL?

I have done the NOACs, I have done diabetes, antiplatelets and I have done dementia as well.

What was your primary reason for attending the meeting(s)?

Well, interest, education basically. Personal interest.

Please can you tell me what you remember about the learning event(s)?

Well, the NOAC one was quite a brilliant one as it was an eye opener, with the new prescriptions coming through, as I, it is a knowledge base. I am from the generation where NOACs weren't launched, so we weren't taught it at university. Antiplatelets we have had, warfarin we were taught as were the other antiplatelet drugs so we knew about all of that, so certainly NOACs was useful for you. In terms of diabetes, we did the gliptins and the LP4s and all of that was brilliant, so that was good as well. All of the new drugs were useful to know about.

I went to Croydon Mayday. It is easy to get to, literally 2 minutes from my work so a no brainer.

Describe how you have applied your learning after the event(s)

Well in terms of the NOACs, certainly, it has helped my MUR situation, as I am now more armed and I can advise patients accordingly, so it was useful. Diabetes, again, we are in a London setting so we are inundated with patients who are on the new changes in diabetes management so it is useful to explain to patients. I had one patient who thought the new injectable preparations were all insulins, so I had to explain to them that now, so it was useful as I can now speak with confidence.

I have done all of my CPD cycles too.

Please share any examples of actions you have taken to change your practice after the event?

In terms of patients, each time I have done the MUR, a classic one is the dementia. I have a friends mum, who was prescribed the new dementia drugs and she didn't really know much about it so I sat down with her and explained everything, and so far the mum seems quite amenable. She sort of latches on to people and if she feels comfortable with me. She has actually taken me on board, it is great, she is now listening to me rather than her daughter so taking her medication.

How likely are you to recommend future PESL events to colleagues and why?

I push it to all my, we have a pre-reg programme here so I have an email list of pre-regs, some who are managers now and I just, everything that comes into me, I bump it off to them to say, come now. They are really relevant topics, the speaker is really good, they are well researched, and what I like about PESL is that it is supported by

all pharmacists, so you have interaction with hospital pharmacists as well. With regards to consultation skills it was brilliant because it was with all the mayday hospital pharmacists, because we did little break out groups and I was in a team of 3 hospital pharmacists, and you don't often get a chance like that to get interaction between secondary and primary care.

Which providers or training programmes do you currently use for your Education and Training needs and why?

Well, because of my LPC hat, my prescribing hat and various other health and wellbeing board hats, I end up going to various meetings, but I also go to PESL definitely, I go to pharma company meetings, because I am close to a medical centre I go to the GP organised medical training in the evenings as well. Glaxo smith cline has a good programme, as does Novartis, there are more focused towards the GPs but I am always there.

Which education provider would be your first choice to fulfil your education and training needs and why?

God, it is difficult to say, PESL is always close to my heart, so anything pharmacy related is always my first option.

How do you best like to learn?

I prefer workshops where we do case studies. I get more mileage from that than from anything else. The way I like it is a short lecture to introduce the topic and then break out sessions where you discuss certain scenarios, pick up issues, then conclude. I go to LPC conferences, pharmacy conferences. I am not very keen on them, as they tend to be miles away, Birmingham, nothing in London, so that is a bit of a pain, but it is one of those things, as part of LPC role I have to attend those.

What formats of learning would you be happy to undertake with others?

I would rather attend, where the mobile is off, no one is disturbing me, and I am doing something constructive. I go to at least 2 meetings a week, sometimes, like this week I have done 3 already.

What formats of learning are you happy undertaking on your own?

I read the PJ, particularly the clinical booklet that comes in with it, as I find that really interesting, as it is thorough and good CPD points. I am not that IT based, so I struggle with webinars, as when I am at home I cannot focus anyway.

When you don't attend learning events, what are your reasons?

So not to divorce my wife! She is at home with the kids. I try to get a work life balance. It is difficult, I have kids who are going through exams, so it is trying to juggle, I have elderly parents as well, so it is trying to juggle and trying to keep the profession going as well.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

To be honest, I don't really blame them in a way, because it is so hard, pharmacy has become a horrendous profession. I wouldn't advise anyone to take it on now, and I find when you finish work you are shattered, and then to have a meeting after that to sit down and listen is difficult and hard to motivate. People are disillusioned with the profession so they are doing it because they have no other option.

How could we increase attendance at learning events for pharmacy professionals?

Certainly, the format that PESL has is brilliant, because it is workshops, trying to decrease the number of evenings, but increasing relevance of the meetings, so it is worth your while going out. When I see people who attended PESL meetings they say it was good. CPPE focal point types of workshops are very good as they again do case studies and discussion which is brilliant. The quality of the presenter is fundamental.

The topic has to be uptodate and current issues, say a new drug launch. Like I attended ella one training, where there is a change in legislation. It was brilliant. We had over 120 who attended. It was the pharma company, because it was very relevant to their profession. I saw people I have never seen for years there, and these people I would expect to see at things like PESL but they don't turn up because they didn't feel that was relevant. But ella one because it affects their profit margin, and they have to sell it, they all came in droves.

I think a bit more advertising. I think instead of having a log in through the RPS website, a simple click and in is a better option, even my staff who come say they have to log in, put your password, and it just adds another job on top of your day job.

After a learning event, what tools would you like to be provided with to support a change in your practice?

I think follow on emails are very useful, and contact from people, almost like a forum base to discuss what was taught and how to apply. I have done a health coaching course through Croydon CCG and that was brilliant, because what we did was set up an email group of all the 12 people who attended, and that was nurses, doctors, and we now have a little discussion group which we use and put stuff on there, not just from the health coaching, but from our day jobs, a discussion group, so I find it quite useful, so maybe it would be good to have some sort of blog, people have iphones nowadays, so you can get them to engage more openly.

Attachments of all slides, but often in the meeting you talk of certain, NICE guidelines for example, or you talk of a prescribing policy of a certain CCG, and put that in there, so you get one relevant email, and I would then save that and it would be useful reference point and it would help signposting too as it would have all the email links within and I would make a folder on my computer and say this is all the bits, NOACs for example. It would give added value to what you just learnt, because we don't have many now, so CPPE has cut down, PESL only has 3 or 4 topics, so limited in your locality, so you want to make it as such that you have to get bang for your buck.

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

It is brilliant, as they bring in different perspectives, things we may not have been aware of, and it helps them understand where you come from as well which opens up, I mean with the healthcoaching, when we were with the nurses we were really, you know, like for example, they are so used to talking to patients in their rooms, whereas we, with the services we do don't always engage patients on a one to one basis in a consultation room, and trying to get the information out in the time we tend to have a real pressure of things to do, and the nurses have 5 minutes fixed, whereas we don't have a fixed time, as often you get disturbed every few minutes, when you need to check a prescription.

Topics?

I mean the big ones, the big hitters, I would suggest looking at the prescribing booklets for the various CCGs and seeing what are the big topics there, and making a course based on that topic, as it is relevant to everyone, and you would have a CCG input as well which would be brilliant.

Any other comments?

No, I mean it is just a tough job, we have to get our profession up. The young tend to be missing at times, so we need to get them in, and the older ones are lost to apathy so we need to get them engaged, to be in one room, but we need to get them there.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

Appendix 10: Survey questionnaire (chapter 4)

Perceptions of pharmacy education and training

Introduction

My name is Ricarda Micallef and I am currently undertaking a PhD to explore the optimum training model of further education and training for pharmacy professionals.

I would like to invite you to take part in my research to evaluate supplementary pharmacy education and training provision. Your valued responses will provide me with an insight into current supplementary education and training, and help propose future models for education and training.

There are many organisations that offer supplementary education and training (E and T), for completion in addition to any formalised or mandatory training. This may include workshops, conferences or other learning events. Supplementary education and training is self chosen and self-driven to support personal CPD requirements.

This questionnaire is designed to understand involvement in current supplementary education and training that you undertake. This is defined as education and training that is self-driven, and in addition to that expected of you to complete your role.

The collection of data will consist of a relatively short initial questionnaire, which should take you between 10 and 20 minutes. If you agree to participate in a follow up interview this will be expected to take no more than 30 minutes. The follow up interview can take place by phone or in person, at a time, date and location convenient to you.

Yours Sincerely,

Ricarda Micallef
Student: Ricarda Micallef MRPharmS
Email:r.micallef@kingston.ac.uk

Supervisor: Dr Reem Kayyali
Associate Professor in Pharmacy Practice
Email: R.kayyali@kingston.ac.uk

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Perceptions of pharmacy education and training

* 1. Have you taken part in supplementary Education and Training Activity in the past 12 months?

Yes No

If you answered 'yes' please continue to question 2
If you answered 'no' please click 'next' at the bottom of the page and go to question 4

2. Who organised/ran the education or training activity(s)? (Please tick all that apply)

- [ ] Employer
- [ ] General Pharmaceutical Council (GPhC)
- [ ] Centre for Pharmacy Postgraduate Education (CPPE)
- [ ] Royal Pharmaceutical Society (RPS)
- [ ] Local Practice Forum (LPF)
- [ ] National Pharmaceutical Association (NPA)
- [ ] Local Pharmaceutical Committee (LPC)
- [ ] The United Kingdom Clinical Pharmacy Association (UKCPA)
- [ ] Association of Pharmacy Technicians UK (APTUK)
- [ ] London Pharmacy Education and Training (LPET)
- [ ] Pharmacy Management
- [ ] Specialist pharmacy network (This may include, but is not restricted to UKMI, BOPA, BPSA, PCPA)
- [ ] A Higher Education Institution
- [ ] Self-driven
- [ ] Patient Group/organisation
- [ ] Other professional body
- [ ] Other (please specify)

3. What formats have you used to complete your supplementary education and training activity in the past 12 months? (please tick all that apply)

- [ ] Downloadable presentation
- [ ] Completion of e-learning package
- [ ] Participation in a webinar
- [ ] Attendance at a conference/network meeting
- [ ] Attendance at a workshop
- [ ] Attendance at a lecture/seminar
- [ ] Completion of a workbook
- [ ] Podcast
- [ ] Reading book(s)
- [ ] Reading journal(s)
- [ ] Reading manual(s)
- [ ] Peer review
- [ ] Formalised qualification
- [ ] Other (please specify)

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Perceptions of pharmacy education and training

4. Are you a member of any of the following professional groups? (please select all the apply).
If yes, please indicate whether you have used for supplementary education and training (E and T)

	Member but NOT used for E and T	Used for E and T
Academy of Pharmaceutical Sciences (APS)	○	○
Association Pharmacy Technicians UK (APTUK)	○	○
British Oncology Pharmacy Association (BOPA)	○	○
British Pharmaceutical Nutrition Group (BPNG)	○	○
British Pharmaceutical Students' Association (BPSA)	○	○
Commonwealth Pharmaceutical Association (CPA)	○	○
International Pharmaceutical Federation (FIP)	○	○
Guild of Healthcare Pharmacists (GHP)	○	○
Higher Education Academy (HEA)	○	○
Institute of Pharmacy Management International (IPM)	○	○
Joint Pharmaceutical Analysis Group (JPAG)	○	○
National Pharmacy Association (NPA)	○	○
Neonatal and Paediatric Pharmacists Group (NPPG)	○	○
National Association of Women Pharmacists (NAWP)	○	○
Palliative Care Pharmacists Network (PCPN)	○	○
Pharmaceutical Analytical Sciences Group	○	○
Primary Care Pharmacists Association (PCPA)	○	○
Primary and Community Care Pharmacy Network (PCCPN)	○	○
Royal Pharmaceutical Society (RPS)	○	○
UK Radiopharmacy Group (UKRG)	○	○

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	Member but NOT used for E and T	Used for E and T
United Kingdom Clinical Pharmacy Association (UKCPA)	○	○
The College of Mental Health Pharmacy (CMHP)	○	○
Other (please specify below)	○	○

Comments:

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Perceptions of pharmacy education and training

5. From previous experience, how would you rate the quality of supplementary education and training from the following providers?

Please select an answer between 1-5. (1 = poor quality, 5 = excellent quality)
Please select NA if you are not aware of this provider or have not attended any training given by this provider.
If you have multiple employers please use the comments box to add more detail or ratings

	1	2	3	4	5	N/A
Employer	○	○	○	○	○	○
General Pharmaceutical Council (GPhC)	○	○	○	○	○	○
Centre for Pharmacy Postgraduate Education (CPPE)	○	○	○	○	○	○
Royal Pharmaceutical Society (RPS)	○	○	○	○	○	○
Local Practice Forum (LPF)	○	○	○	○	○	○
National Pharmacy Association (NPA)	○	○	○	○	○	○
Local Pharmaceutical Committee (LPC)	○	○	○	○	○	○
The United Kingdom Clinical Pharmacy Association (UKCPA)	○	○	○	○	○	○

Comments:

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	1	2	3	4	5	N/A
Association of Pharmacy Technicians UK (APTUK)	○	○	○	○	○	○
Comments:						
London Pharmacy Education and Training (LPET)	○	○	○	○	○	○
Comments:						
Pharmacy Management	○	○	○	○	○	○
Comments:						
A Higher Education Institution	○	○	○	○	○	○
Comments:						
Patient Group/organisation	○	○	○	○	○	○
Comments:						
Other professional body	○	○	○	○	○	○
Comments:						
Specialist Pharmacy network/organisation (please specify in comments box)	○	○	○	○	○	○
Comments:						
Other (please specify below)	○	○	○	○	○	○
Comments:						

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6. For supplementary education and training group events, what are the barriers for you to attend? (please select all that apply)

- [ ] No interest in subjects on offer
- [ ] My employer supplies all the training I require
- [ ] I prefer to complete my training through non face to face methods
- [ ] Not needed for my job role
- [ ] No link to a pharmacy service
- [ ] Childcare issues
- [ ] Caring responsibilities
- [ ] I do not get paid to attend
- [ ] I do not get accredited to attend
- [ ] I am not contractually obliged to attend
- [ ] I do not require the training to do my job
- [ ] Venues are too far
- [ ] I finish work too late
- [ ] I would get home too late
- [ ] Not advertised with sufficient notice
- [ ] Format of learning does not appeal
- [ ] Previous bad experience
- [ ] Other (please specify below)

Please add any further comments to support your answer in the space provided

* 7. List the main driver(s) for you to engage in a supplementary education and training event

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Perceptions of pharmacy education and training

8. How likely are you to participate in the following education and training activities?

Please select one option between 1 and 5. (1 = Not at all likely, 5 = Extremely likely)

	1	2	3	4	5
Weekday daytime events	○	○	○	○	○
Evening events	○	○	○	○	○
Weekend events	○	○	○	○	○
Attending a conference	○	○	○	○	○
Downloading a podcast	○	○	○	○	○
Downloading and reading material	○	○	○	○	○
Attending a lecture	○	○	○	○	○
Attending a workshop	○	○	○	○	○
Participation in a webinar	○	○	○	○	○
Peer working in specialist area	○	○	○	○	○

9. How long would you be prepared to spend on the following activities as one off events?

Please select the closest to your preference. Please select NA if you would not participate in such an activity.

	Less than one hour	Between 1-2 hours	Over 2 hours	N/A
Weekday daytime events	○	○	○	○
Evening events	○	○	○	○
Weekend events	○	○	○	○
Participation in a webinar	○	○	○	○
Downloading and listening to a podcast	○	○	○	○
Downloading and reading material	○	○	○	○
Attending a lecture	○	○	○	○
Attending a workshop	○	○	○	○

10. How often would you like to participate in the following activities?

Please select the closest to your preference. Please select NA if you would not participate in such an activity.

	Weekly	Monthly	Every 3 months	Every 6 months	Annually	NA
Weekday daytime events	○	○	○	○	○	○
Evening events	○	○	○	○	○	○
Weekend Events	○	○	○	○	○	○
Participation in a webinar	○	○	○	○	○	○
Downloading and listening to a podcast	○	○	○	○	○	○
Downloading and reading material	○	○	○	○	○	○
Attending a lecture	○	○	○	○	○	○
Attending a workshop	○	○	○	○	○	○
Attending a one day conference	○	○	○	○	○	○

11. After participation in a learning event, what tool(s) would you like to help you change your practice?

- ☐ None
- ☐ Copy of the presentation
- ☐ Case studies
- ☐ Flash cards
- ☐ Follow up email with a reminder of key points
- ☐ On line assessment

Other (please specify)

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Perceptions of pharmacy education and training

12. How interested would you be in the following topics for future education and training events?

Please select an option between 1 and 5. (1 = not at all interested, 5 = extremely interested)

	1	2	3	4	5
Clinical Topics	○	○	○	○	○
New Pharmacy services	○	○	○	○	○
Revalidation	○	○	○	○	○
Law and Ethics updates	○	○	○	○	○
Pharmacy regulation	○	○	○	○	○
Managerial skills	○	○	○	○	○
Leadership skills	○	○	○	○	○
Communication skills	○	○	○	○	○
Mentoring	○	○	○	○	○
Technology updates (e.g. EPS)	○	○	○	○	○
Research	○	○	○	○	○

Other (please specify)

13. What are your preferred learning methods?

From the choices below please list your top three preferred learning methods, where 1 is your most preferred method, 2 is your second most preferred and 3 is your third most preferred method.

1. Reading a downloaded presentation
2. Participation in a webinar
3. Attendance at a conference/network meeting
4. Completion of e-learning package
5. Completion of a workbook
6. Attendance at a workshop
7. Attendance at a lecture/seminar
8. Listening to a Podcast
9. Reading book(s)
10. Reading journal(s)
11. Small group discussion
12. Role play/ patient simulation
13. Laboratory based activity
14. Peer review
15. Mobile application(s)
16. Video Websites e.g. YouTube
17. Information websites
18. Social Media
19. Other (please specify)

1st preference	
2nd preference	
3rd preference	

14. How interested would you be in attending learning events with the following:

Please select one option between 1 and 5 (1 = not at all interested, 5 = extremely interested)

	1	2	3	4	5
Pharmacy team members	○	○	○	○	○
Pharmacists from other sectors	○	○	○	○	○
Nurses	○	○	○	○	○
Doctors	○	○	○	○	○
Other health care professionals	○	○	○	○	○
Patients	○	○	○	○	○
Voluntary sector/charities	○	○	○	○	○

* 15. If you are currently in contracted employment have you had an appraisal in the past 12 months?

Select NA if you are not currently in contracted employment.

◯ Yes ◯ No ◯ NA

If you answered 'No' or 'NA' please select 'next' at the bottom of the page and go to question 17

16. If yes, were your professional learning and development needs discussed?

◯ Yes ◯ No

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Perceptions of pharmacy education and training

Demographic Information

17. What is your gender?

◯ Male ◯ Female

18. What is your current role?

◯ Pharmacist ◯ Pharmacy Technician ◯ Medicines Counter Assistant

◯ Pre-registration pharmacy trainee ◯ Dispensing Assistant ◯ Pharmacy student

◯ Other (please specify)

19. For registered pharmacy professionals, how many years is it since your initial registration?

◯ 1 ◯ 2-10 ◯ 11-20 ◯ 21-30 ◯ 31-40 ◯ 41+

20. What is your age?

◯ Less than 25 ◯ 26-35 ◯ 36-45 ◯ 46-55 ◯ Over 55

21. What is your current sector of practice? (please tick all that apply)

☐ Community ☐ Academia/Education ☐ Government

☐ Hospital ☐ Industry ☐ Student

☐ Primary care ☐ General Practice

☐ Other (please specify)

22. What is your professional status? (please tick all that apply)

☐ Student ☐ Employed ☐ Not currently working

☐ Pre-registration trainee ☐ Locum ☐ Retired

23. How many hours a week do you work on average?

◯ 0

◯ Up to 15

◯ Between 15 and 30

◯ Over 30

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There are many models of learning and learning styles. We all learn in different ways. Although we may use a variety of methods for learning we are likely to have preferences.

24. From the following, how would you rank your preferred learning methods?

Please rank 1-4. (1 = strongest preference, 4 = least preference)

- [ ] Visual (learn by seeing and visualising)
- [ ] Auditory (learn by listening and verbalising)
- [ ] Read-write (learn by reading and re-writing notes)
- [ ] Kinaesthetic (learn by doing and problem solving)

25. From the following, which best describes your learning preference?

Please rank 1-4. (1 = strongest preference, 4 = least preference)

- [ ] Activist (learn from new experiences, discussions and brain storming)
- [ ] Reflector (learn from self-assessment and peer assessment)
- [ ] Theorist (learn from models, concepts or theory)
- [ ] Pragmatist (learn by thinking how to apply learning to reality)

26. Which of the following best describes how you prefer to achieve your learning?

- ◯ Interpersonally (through social interaction)
- ◯ Intrapersonally (through independence or self-interaction)

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Perceptions of pharmacy education and training

27. If you would be happy to take part in a follow up interview please supply your contact details below:

Name	
Email	
Phone	

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Appendix 11: Previous participation by demographic

Have you taken part in supplementary Education and Training Activity in the past 12 months?

	What is your age?						
Answer Options	**Less than 25**	**26-35**	**36-45**	**46-55**	**Over 55**	**Response Percent**	**Response Count**
Yes	31	112	57	47	27	86.4%	274
No	6	16	11	5	5	13.6%	43
answered question						**317**	

Have you taken part in supplementary Education and Training Activity in the past 12 months?

	What is your gender?					
Answer Options	**Male**	**%**	**Female**	**%**	**Response Percent**	**Response Count**
Yes	102	85.7	178	87.3	86.7%	280
No	17	14.3	26	12.7	13.3%	43
						323

Have you taken part in supplementary Education and Training Activity in the past 12 months?

	What is your current sector of practice? (please tick all that apply)								
Answer Options	**Com-munity**	**Hospi-tal**	**Primary care**	**Acade-mia/Ed-ucation**	**Indu-stry**	**Gene-ral Pra-ctice**	**Gove-rnme-nt**	**Response Percent**	**Respo nse Count**
Yes	174	80	27	26	4	2	2	87.4%	277
No	26	10	1	1	1	3	1	12.6%	40
answered question									**317**

Have you taken part in supplementary Education and Training Activity in the past 12 months?

	How many hours a week do you work on average?					
Answer Options	**0**	**Up to 15**	**Between 15 and 30**	**Over 30**	**Response Percent**	**Response Count**
Yes	3	14	60	199	86.8%	276
No	4	4	8	26	13.2%	42
answered question						**318**

Appendix 12: Previous participation by provider by demographic

Who organised/ran the education or training activity(s)? (Please tick all that apply)							
	What is your age?						
Answer Options	**Less than 25**	**26-35**	**36-45**	**46-55**	**Over 55**	**Response Percent**	**Response Count**
Employer	15	66	32	25	5	52.0%	143
General Pharmaceutical Council (GPhC)	10	8	5	7	3	12.0%	33
Centre for Pharmacy Postgraduate Education (CPPE)	16	51	26	25	14	48.0%	132
Royal Pharmaceutical Society (RPS)	15	27	12	18	8	29.1%	80
Local Practice Forum (LPF)	4	14	13	11	10	18.9%	52
National Pharmaceutical Association (NPA)	3	1	3	4	5	5.8%	16
Local Pharmaceutical Committee (LPC)	2	12	5	11	4	12.4%	34
The United Kingdom Clinical Pharmacy Association (UKCPA)	2	6	2	2	1	4.7%	13
Association of Pharmacy Technicians UK (APTUK)	0	0	0	1	0	0.4%	1
London Pharmacy Education and Training (LPET)	3	10	4	5	6	10.2%	28
Pharmacy Management	1	9	7	7	2	9.5%	26
Specialist pharmacy network (This may include, but is not restricted to UKMI, BOPA, BPSA, PCPA)	0	11	1	2	3	6.2%	17
A Higher Education Institution	4	17	6	5	1	12.0%	33
Self-driven	8	32	21	18	11	32.7%	90
Patient Group/organisation	2	9	4	3	4	8.0%	22
Other professional body	2	5	3	5	2	6.2%	17
Other (please specify)	2	12	8	11	8	14.9%	41
answered question							275

Who organised/ran the education or training activity(s)? (Please tick all that apply)				
	What is your gender?			
Answer Options	Male	Female	Response Percent	Response Count
Employer	54	89	50.9%	143
General Pharmaceutical Council (GPhC)	12	21	11.7%	33
Centre for Pharmacy Postgraduate Education (CPPE)	48	86	47.7%	134
Royal Pharmaceutical Society (RPS)	27	54	28.8%	81
Local Practice Forum (LPF)	17	35	18.5%	52
National Pharmaceutical Association (NPA)	5	12	6.0%	17
Local Pharmaceutical Committee (LPC)	14	20	12.1%	34
The United Kingdom Clinical Pharmacy Association (UKCPA)	4	9	4.6%	13
Association of Pharmacy Technicians UK (APTUK)	0	1	0.4%	1
London Pharmacy Education and Training (LPET)	12	16	10.0%	28
Pharmacy Management	9	18	9.6%	27
Specialist pharmacy network (This may include, but is not restricted to UKMI, BOPA, BPSA, PCPA)	1	16	6.0%	17
A Higher Education Institution	16	19	12.5%	35
Self-driven	30	63	33.1%	93
Patient Group/organisation	7	15	7.8%	22
Other professional body	5	12	6.0%	17
Other (please specify)	12	30	14.9%	42
answered question				281
skipped question				42

Who organised/ran the education or training activity(s)? (Please tick all that apply)	What is your current sector of practice? (please tick all that apply)								
Answer Options	Community	Hospital	Primary care	Academia/Education	Industry	General Practice	Government	Response Percent	Response Count
Employer	86	43	14	17	1	0	1	51.6%	143
General Pharmaceutical Council (GPhC)	27	6	0	4	0	0	0	11.9%	33
Centre for Pharmacy Postgraduate Education (CPPE)	98	23	14	18	3	1	0	48.0%	133
Royal Pharmaceutical Society (RPS)	51	20	8	11	2	0	0	28.9%	80
Local Practice Forum (LPF)	32	11	11	16	2	1	0	18.8%	52
National Pharmaceutical Association (NPA)	16	0	2	2	0	0	0	6.1%	17
Local Pharmaceutical Committee (LPC)	33	0	3	3	0	0	0	12.3%	34
The United Kingdom Clinical Pharmacy Association (UKCPA)	2	8	2	2	1	0	0	4.3%	12
Association of Pharmacy Technicians UK (APTUK)	1	0	0	0	0	0	0	0.4%	1
London Pharmacy Education and Training (LPET)	11	13	7	2	0	1	0	10.1%	28
Pharmacy Management	18	6	6	2	0	1	0	9.7%	27
Specialist pharmacy network (This may include, but is not restricted to UKMI, BOPA, BPSA, PCPA)	3	9	3	3	0	0	0	5.4%	15
A Higher Education Institution	15	14	4	7	2	0	0	12.6%	35
Self-driven	55	30	12	10	0	0	1	32.9%	91
Patient Group/organisation	17	4	3	2	0	0	0	7.9%	22
Other professional body	10	4	4	2	0	1	1	6.1%	17
Other (please specify)	23	9	5	3	3	0	0	14.8%	41
answered question									277
skipped question									40

Who organised/ran the education or training activity(s)? (Please tick all that apply)	How many hours a week do you work on average?					
Answer Options	**0**	**Up to 15**	**Between 15 and 30**	**Over 30**	**Response Percent**	**Response Count**
Employer	2	5	35	99	50.9%	141
General Pharmaceutical Council (GPhC)	0	4	7	22	11.9%	33
Centre for Pharmacy Postgraduate Education (CPPE)	1	5	27	98	47.3%	131
Royal Pharmaceutical Society (RPS)	1	8	14	58	29.2%	81
Local Practice Forum (LPF)	1	2	10	38	18.4%	51
National Pharmaceutical Association (NPA)	0	0	2	15	6.1%	17
Local Pharmaceutical Committee (LPC)	0	1	5	28	12.3%	34
The United Kingdom Clinical Pharmacy Association (UKCPA)	1	2	2	8	4.7%	13
Association of Pharmacy Technicians UK (APTUK)	0	0	0	1	0.4%	1
London Pharmacy Education and Training (LPET)	0	1	5	21	9.7%	27
Pharmacy Management	0	1	8	17	9.4%	26
Specialist pharmacy network (This may include, but is not restricted to UKMI, BOPA, BPSA, PCPA)	1	1	3	11	5.8%	16
A Higher Education Institution	1	1	3	28	11.9%	33
Self-driven	0	7	22	61	32.5%	90
Patient Group/organisation	0	1	4	17	7.9%	22
Other professional body	1	1	1	14	6.1%	17
Other (please specify)	1	2	8	30	14.8%	41
answered question					**277**	
skipped question					**41**	

Appendix 13: Free text responses about providers

Employer

comprehensive support, dedicated time for training

content good but venues always overcrowded

none provided

Limited to staff/management type training

Basic mandatory training

Absolutely no investment in pharmacists at all (BMI Healthcare private hospital)

online mandatory training... Zzzz. Didactic and boring

nothing is run specifically by my employer although I am given the freedom to attend training or access training elsewhere

Most statutory or mandatory training

I m self employed.

Training undertaken is mandatory training rather than for professional development

The team prepare and deliver E&T on topics of interest and we invite outside speakers to our team meetings

Teaching is provided but rarely what you are looking for or relevant to your current practice, it would be useful if they asked us what we would like to taught

All training is provided by external bodies

GPhC

not specific, often open to interpretation, low level of support

do they provide anything?

Not seen any courses

CPPE

self led, no driven targets or motivation

the workbooks are great but often are not challenging for experienced pharmacists - i want a summary of new therapies

good for intro but there is no depth or being evidence-based

Events are open to pharmacists and technicians - so are pitched at NVQ 2-3 NOT postgrad level

Workshop therefore quality is driven by those you learn with rather than from.

variable quality, some are outstanding others are less useful

Mainly aimed at community pharmacists

Good quality resources, wide variety of subjects

Often find I have the same or greater knowledge as the presenter but normally of very high quality.

very community foccused, which is fine but does not suit my needs

Meetings Management

RPS

poor levels of resources and support

like the webinars given by specialists but in an hour it is a little challenging for all concerned. A series of talks for a particular subject would be more beneficial. Doesn't have to be the same speaker.

only recently re-joined so can't comment too much

PJ is ok if reading is your method of learning (personally an activist)

Mainly for reading guidance

Attended face to face session on medicines optimisation which is was good netwroking opportunity

Very useful, particularly the clinical pharmacist, usually has a background article in a specialist area that i am about to rotate in. I use it regularly.

Facilitation skills

LPF

practically run by the CPPE but even more simplified - see above comments. Having said that, there are practical elements within one course I found useful, the practical session on using inhalers.

? Where can I access this training?

But can be variable

Various refreshers inc. NOACs and anti-platelets

NPA

very succinct, wide range of resources

not a member

LPC

Do they do training?

UKCPA

Great usually - but this year they cancelled my study days

I like them. Think they are very well run. They lack financial support or attendance power to attract grants/funding which is a shame

UKCPA conferences are great

Joint meetings with Older people Pharmacy Network

Well delivered sessions from expert pharmacists

A member but unable to attend courses as funding limited and too expensive to self fund.

The conferences are great, otherwise very little communication from them.

LPET

Undervalued. A great team.

Attended as part of pre-registration year some time ago but remember sessions were very useful at the time

PESL excellent content & speakers

Out of area so rarely see information

Especially if specifically focussed on your work area

Pharmacy management

multiple formats for information, easy access

not a member

My employer

Have attended several of their workshops - excellent and practical

Would really like a teaching structure where we could learn and participate in.

A Higher Education Institute

Independent prescribing course post grad Hertfordshire University
it depends on the institution. If it's not too commercially run, then usually very decent. Sometimes, it feels like we are part of a conveyer belt of students to raise money

UCL and King's
Diploma course through JPB diploma (London School of Pharmacy at the time) - useful development sessions and networking
Some teaching sessions are great but generally no curriculum guide or starting point for learning. A background guide to each speciality that we could build on from experience would be great.

Specialist organisation

PHARMADOCTOR

Hep C national network/ BAPEN

to join you have to have qualifications

South West London HIV & Sexual Health Clinical Services Network

National association of women pharmacists

College of Mental Health Pharmacy

Medicines Use and Safety Network meetings

UK ophthalmic pharmacy group

HIVPA

Has greater relevance to role and usually pitched at a more appropriate level

CMHP

drug company sponsored HIV talks

NPPG

PrescQIPP

Older Peoples Pharmacy Network
PCCPN development days and E&SEE specialist pharmacy services community services network events very useful to gain knowledge and understanding, networking etc.

British Oncology Pharmacy Association

Often not aware & issues with finding the time

BOPA

Appendix 14: Format used in the previous 12 months by demographic

What formats have you used to complete your supplementary education and training activity in the past 12 months? (please tick all that apply)

	What is your age?						
Answer Options	**Less than 25**	**26-35**	**36-45**	**46-55**	**Over 55**	**Response Percent**	**Response Count**
Downloadable presentation	13	43	17	16	12	36.7%	101
Completion of e-learning package	19	63	39	33	17	62.2%	171
Participation in a webinar	4	25	18	18	11	27.6%	76
Attendance at a conference/network meeting	12	59	32	24	16	52.0%	143
Attendance at a workshop	17	55	29	30	20	54.9%	151
Attendance at a lecture/seminar	12	42	27	19	17	42.5%	117
Completion of a workbook	7	34	13	9	9	26.2%	72
Podcast	2	8	2	1	2	5.5%	15
Reading book(s)	4	30	11	10	8	22.9%	63
Reading journal(s)	14	52	28	30	22	53.1%	146
Reading manual(s)	2	12	6	6	7	12.0%	33
Peer review	1	14	7	5	3	10.9%	30
Formalised qualification	3	19	7	6	1	13.1%	36
Other (please specify)	0	3	1	4	0	2.9%	8
answered question							275
skipped question							42

What formats have you used to complete your supplementary education and training activity in the past 12 months? (please tick all that apply)

	What is your gender?			
Answer Options	**Male**	**Female**	**Response Percent**	**Response Count**
Downloadable presentation	40	63	36.7%	103
Completion of e-learning package	61	113	61.9%	174
Participation in a webinar	24	52	27.0%	76
Attendance at a conference/network meeting	37	106	50.9%	143
Attendance at a workshop	54	99	54.4%	153
Attendance at a lecture/seminar	41	78	42.3%	119
Completion of a workbook	28	45	26.0%	73
Podcast	7	8	5.3%	15
Reading book(s)	29	35	22.8%	64
Reading journal(s)	50	98	52.7%	148
Reading manual(s)	18	15	11.7%	33
Peer review	11	20	11.0%	31
Formalised qualification	10	27	13.2%	37
Other (please specify)	1	7	2.8%	8
answered question				281
skipped question				42

What formats have you used to complete your supplementary education and training activity in the past 12 months? (please tick all that apply)

	What is your current sector of practice? (please tick all that apply)								
Answer Options	**Community**	**Hospital**	**Primary care**	**Academia/ Education**	**Industry**	**General Practice**	**Government**	**Response Percent**	**Response Count**
Downloadable presentation	70	29	12	10	1	1	0	36.7%	102
Completion of e-learning package	120	38	20	17	3	0	0	62.6%	174
Participation in a webinar	46	15	16	13	1	1	1	27.0%	75
Attendance at a conference/network meeting	82	37	19	21	3	1	1	50.7%	141
Attendance at a workshop	102	34	20	20	3	1	2	55.0%	153
Attendance at a lecture/seminar	71	35	11	19	4	1	2	42.8%	119
Completion of a workbook	54	16	8	8	0	2	0	25.9%	72
Podcast	12	3	3	1	0	1	0	5.4%	15
Reading book(s)	44	17	3	7	1	1	0	23.0%	64
Reading journal(s)	90	39	19	19	4	1	0	52.2%	145
Reading manual(s)	29	4	3	2	0	1	0	11.9%	33
Peer review	16	11	6	3	1	1	0	11.2%	31
Formalised qualification	16	16	4	6	2	1	0	12.9%	36
Other (please specify)	5	3	0	0	0	0	0	2.9%	8
answered question									278
skipped question									39

What formats have you used to complete your supplementary education and training activity in the past 12 months? (please tick all that apply)

	How many hours a week do you work on average?					
Answer Options	**0**	**Up to 15**	**Between 15 and 30**	**Over 30**	**Response Percent**	**Response Count**
Downloadable presentation	1	3	18	78	36.1%	100
Completion of e-learning package	2	7	38	126	62.5%	173
Participation in a webinar	1	5	13	56	27.1%	75
Attendance at a conference/network meeting	2	5	34	100	50.9%	141
Attendance at a workshop	1	4	36	110	54.5%	151
Attendance at a lecture/seminar	0	5	19	93	42.2%	117
Completion of a workbook	1	2	14	55	26.0%	72
Podcast	0	0	3	12	5.4%	15
Reading book(s)	0	2	11	50	22.7%	63
Reading journal(s)	2	10	35	98	52.3%	145
Reading manual(s)	1	1	7	24	11.9%	33
Peer review	2	1	5	22	10.8%	30
Formalised qualification	0	1	4	29	12.3%	34
Other (please specify)	0	0	4	4	2.9%	8
answered question						277
skipped question						41

Appendix 15: Interest in different topics by demographic

How interested would you be in the following topics for future education and training events? Please select an option between 1 and 5. (1 = not at all interested, 5 = extremely interested)							
	What is your age?						
Answer Options	Less than 25	26-35	36-45	46-55	Over 55	Rating Average	Response Count
Clinical Topics							
1	1	0	2	3	0		
2	2	3	2	1	1		
3	2	10	10	8	7		
4	10	34	16	15	8		
5	22	80	37	25	13		
	1.00	1.00	1.00	1.00	1.00	1.00	312
New Pharmacy services							
1	0	3	1	5	2		
2	3	6	3	7	0		
3	3	22	6	10	9		
4	15	48	22	7	6		
5	16	48	31	23	14		
	1.00	1.00	1.00	1.00	1.00	1.00	310
Revalidation							
1	3	9	10	3	5		
2	3	17	9	7	3		
3	12	34	10	8	8		
4	11	35	20	21	5		
5	7	28	13	11	9		
	1.00	1.00	1.00	1.00	1.00	1.00	301
Law and Ethics updates							
1	3	5	3	6	0		
2	3	12	6	8	8		
3	5	33	16	12	8		
4	14	45	23	14	6		
5	12	31	18	12	9		
	1.00	1.00	1.00	1.00	1.00	1.00	312
Pharmacy regulation							
1	0	6	4	8	5		
2	2	17	7	8	3		
3	12	36	20	10	4		
4	14	38	18	16	11		
5	8	28	16	10	7		
	1.00	1.00	1.00	1.00	1.00	1.00	308
Managerial skills							
1	4	7	4	8	4		
2	2	7	7	6	8		
3	12	32	23	14	8		
4	11	47	15	15	9		
5	7	34	16	9	2		
	1.00	1.00	1.00	1.00	1.00	1.00	311
Leadership skills							
1	3	8	3	4	6		
2	1	3	6	6	4		
3	12	25	19	11	6		
4	14	56	17	19	9		

5	6	34	20	12	6		
	1.00	1.00	1.00	1.00	1.00	1.00	310
Communication skills							
1	4	6	5	5	6		
2	2	7	7	6	2		
3	13	38	20	17	8		
4	9	45	17	14	9		
5	8	29	17	10	6		
	1.00	1.00	1.00	1.00	1.00	1.00	310
Mentoring							
1	2	8	3	9	1		
2	6	14	7	6	8		
3	10	31	26	14	11		
4	13	48	14	14	6		
5	5	24	16	9	3		
	1.00	1.00	1.00	1.00	1.00	1.00	308
Technology updates (e.g. EPS)							
1	0	11	4	6	1		
2	3	10	9	9	4		
3	16	34	15	7	7		
4	12	48	20	17	12		
5	5	22	19	13	7		
	1.00	1.00	1.00	1.00	1.00	1.00	311
Research							
1	0	11	10	7	5		
2	3	17	16	14	7		
3	14	36	12	8	10		
4	13	33	13	10	4		
5	7	25	13	11	4		
	1.00	1.00	1.00	1.00	1.00	1.00	303
Other (please specify)							0
answered question							**315**
skipped question							**2**

How interested would you be in the following topics for future education and training events? Please select an option between 1 and 5. (1 = not at all interested, 5 = extremely interested)				
	What is your gender?			
Answer Options	Male	Female	Rating Average	Response Count
Clinical Topics				
1	3	3		
2	5	4		
3	16	21		
4	32	53		
5	61	120		
	1.00	1.00	1.00	318
New Pharmacy services				
1	5	6		
2	6	13		
3	21	31		
4	39	60		
5	48	87		
	1.00	1.00	1.00	316
Revalidation				
1	17	13		
2	18	23		
3	23	50		
4	36	58		
5	22	46		
	1.00	1.00	1.00	306
Law and Ethics updates				
1	8	9		
2	19	20		
3	27	49		
4	38	66		
5	27	55		
	1.00	1.00	1.00	318
Pharmacy regulation				
1	9	15		
2	17	22		
3	32	51		
4	36	63		
5	22	47		
	1.00	1.00	1.00	314
Managerial skills				
1	13	16		
2	14	16		
3	38	53		
4	33	64		
5	20	49		
	1.00	1.00	1.00	316
Leadership skills				
1	15	11		
2	6	14		
3	34	41		
4	39	76		
5	24	55		

	1.00	1.00	1.00	315
Communication skills				
1	16	11		
2	9	15		
3	33	64		
4	35	61		
5	25	47		
	1.00	1.00	1.00	316
Mentoring				
1	13	13		
2	21	20		
3	35	58		
4	33	63		
5	14	44		
	1.00	1.00	1.00	314
Technology updates (e.g. EPS)				
1	7	16		
2	17	19		
3	29	51		
4	42	68		
5	23	45		
	1.00	1.00	1.00	317
Research				
1	14	20		
2	28	29		
3	29	52		
4	21	53		
5	21	42		
	1.00	1.00	1.00	309
Other (please specify)				0
answered question				**321**
skipped question				**2**

How interested would you be in the following topics for future education and training events? Please select an option between 1 and 5. (1 = not at all interested, 5 = extremely interested)									
	What is your current sector of practice? (please tick all that apply)								
Answer Options	Community	Hospital	Primary care	Academia/ Education	Industry	General Practice	Government	Rating Average	Response Count
Clinical Topics									
1	3	1	0	2	0	0	0		
2	8	2	0	0	0	0	0		
3	25	7	3	4	0	1	1		
4	47	26	6	2	2	2	2		
5	115	52	19	19	3	2	0		
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	313
New Pharmacy services									
1	3	6	0	3	0	0	2		
2	10	6	2	1	0	1	1		
3	26	15	5	4	2	0	0		
4	49	44	8	5	0	2	0		
5	111	15	12	13	3	2	0		
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	310
Revalidation									
1	19	9	3	1	1	2	1		
2	24	11	4	2	1	0	1		
3	38	28	4	4	1	1	0		
4	61	24	7	9	1	2	1		
5	48	12	9	11	1	0	0		
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	300
Law and Ethics updates									
1	8	6	3	4	0	1	0		
2	19	13	3	1	2	1	1		
3	33	32	6	8	2	0	2		
4	71	25	8	4	0	2	0		
5	67	11	8	10	1	1	0		
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	312
Pharmacy regulation									
1	7	9	5	4	2	1	1		
2	14	19	5	1	1	2	1		
3	46	28	5	7	1	0	1		
4	72	22	7	5	1	2	0		
5	58	7	6	10	0	0	0		
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	309
Managerial skills									
1	22	4	0	5	0	0	1		
2	21	4	2	1	0	0	1		
3	55	23	11	10	1	0	1		
4	58	32	10	8	2	3	0		
5	41	23	5	3	2	2	0		
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	310
Leadership skills									
1	19	4	1	2	0	0	1		
2	14	3	1	0	0	0	1		
3	49	17	8	4	0	0	0		
4	68	36	12	12	1	2	1		

5	46	26	6	9	4	3	0		
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	309
Communication skills									
1	17	4	1	3	0	0	2		
2	11	8	4	2	0	0	0		
3	65	23	11	5	0	0	0		
4	60	30	7	7	0	4	1		
5	44	21	5	10	5	1	0		
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	310
Mentoring									
1	21	1	1	1	0	0	1		
2	28	5	5	3	0	0	1		
3	54	27	11	6	2	0	1		
4	50	40	7	9	1	4	0		
5	42	13	4	8	2	1	0		
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	308
Technology updates (e.g. EPS)									
1	10	7	2	3	0	0	1		
2	19	7	3	6	2	0	0		
3	45	31	4	3	0	1	1		
4	72	30	11	9	1	2	1		
5	51	12	8	6	2	2	0		
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	311
Research									
1	25	3	5	0	0	0	0		
2	43	13	6	5	0	1	0		
3	53	20	6	6	2	0	0		
4	36	29	6	7	1	4	1		
5	34	20	5	9	2	0	2		
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	303
Other (please specify)									0
answered question									**315**
skipped question									**2**

How interested would you be in the following topics for future education and training events? Please select an option between 1 and 5. (1 = not at all interested, 5 = extremely interested)						
	How many hours a week do you work on average?					
Answer Options	0	Up to 15	Between 15 and 30	Over 30	Rating Average	Response Count
Clinical Topics						
1	0	1	2	3		
2	0	1	2	6		
3	1	2	12	22		
4	1	7	23	53		
5	4	7	28	138		
	1.00	1.00	1.00	1.00	1.00	313
New Pharmacy services						
1	0	1	3	6		
2	0	1	9	9		
3	2	2	12	35		
4	1	5	14	77		
5	4	8	28	94		
	1.00	1.00	1.00	1.00	1.00	311
Revalidation						
1	0	1	3	26		
2	1	3	9	27		
3	1	3	15	53		
4	4	6	18	65		
5	0	2	19	45		
	1.00	1.00	1.00	1.00	1.00	301
Law and Ethics updates						
1	0	3	3	10		
2	1	2	4	32		
3	1	2	18	54		
4	4	5	21	73		
5	1	6	20	53		
	1.00	1.00	1.00	1.00	1.00	313
Pharmacy regulation						
1	1	3	5	15		
2	1	1	10	27		
3	0	4	14	63		
4	3	4	23	68		
5	1	4	14	48		
	1.00	1.00	1.00	1.00	1.00	309
Managerial skills						
1	1	2	8	17		
2	2	4	7	17		
3	1	4	20	64		
4	0	4	21	70		
5	3	2	10	54		
	1.00	1.00	1.00	1.00	1.00	311
Leadership skills						
1	2	2	5	16		
2	0	2	5	13		
3	2	5	18	49		
4	0	6	23	83		
5	3	1	15	60		

	1.00	1.00	1.00	1.00	1.00	310
Communication skills						
1	2	2	7	16		
2	0	3	6	14		
3	2	5	21	67		
4	0	4	17	74		
5	3	2	16	50		
	1.00	1.00	1.00	1.00	1.00	311
Mentoring						
1	1	2	5	18		
2	2	1	13	24		
3	3	5	23	61		
4	0	7	17	71		
5	1	1	9	45		
	1.00	1.00	1.00	1.00	1.00	309
Technology updates (e.g. EPS)						
1	1	3	4	15		
2	0	0	8	28		
3	1	4	15	59		
4	1	7	24	75		
5	4	3	16	44		
	1.00	1.00	1.00	1.00	1.00	312
Research						
1	1	2	9	22		
2	1	4	11	41		
3	4	2	22	51		
4	1	4	16	51		
5	0	5	7	50		
	1.00	1.00	1.00	1.00	1.00	304
Other (please specify)						0
answered question						**316**
skipped question						**2**

Appendix 16: Survey interview responses (Chapter 4)

PH12: 27th May 2015

University lecturer. Non-attender at PESL events.

Good morning/afternoon, my name is Ricarda Micallef, a senior lecturer in Pharmacy practice at Kingston University. I am conducting research into further education and training experiences for pharmacy professionals and how we can optimise these in the future. Thank you for agreeing to give your time for this interview. This interview should take no longer than 30 minutes.

Which providers or training programmes do you currently use for your Education and Training needs and why?

So I use a number of different resources. So in terms of reading I would read the pharmaceutical journal and they have some CPD articles. Also the chemist and druggist has lots of different articles that I read, and because I sometimes write for the chemist and druggist I sometimes use the icat system at Kingston, so pubmed, to access different articles on pubmed, that maybe back up and add evidence base to the thing I am writing about. In terms of events I haven't been to any recently, but in the past I have been to CPPE events and I have found they have been quite useful because you can interact with other pharmacists and other health care professionals. I have also worked for Boots, and Boots would have done quite a lot of in house pharmacist training as well, so we would have had a lets connect event once or twice a year, which covered a lot of CPD topics, most recently dementia. In house training with Boots was the main place I went for my training. Recently since I changed jobs I have had to look for different places.

Any conferences?

I haven't really. I have a pharmacy education conference coming up but I haven't actually been to any. Oh, actually I went to one, I think the pharmacy conference in Birmingham, I went one year, that was interesting just going round and seeing what new products were about and also to listen to the owner of Day Lewis and his journey

Which education provider would be your first choice to fulfil your education and training needs and why?

I think I would always try and read around a topic first, and get a bit of information from the PJ, the C and D or a research article, online on pubmed, and once I have done that and established a bit of an interest and get some information I would then look for a physical provider of training so I could attend a workshop or event to further cement the knowledge

How do you best like to learn?

I think reading just gives me a bit of background about the topic, but I think that is not enough to fully meet my learning needs so I would have to attend some sort of course,

or share experiences with another pharmacist, in a face to face scenario helps me to cement my knowledge.

What formats of learning would you be happy to undertake with others?

I prefer workshops to lectures, as at least that way you are working together, you are not just listening, you are doing something active to learn, maybe scenarios and you are trying to think of real life events and how you would apply. I think putting things into a perceptive of life helps me to learn which is why a workshop is good

What formats of learning are you happy undertaking on your own?

I don't tend to do webinars. The only reason is they don't seem to have, my understanding of webinars is that they are at a fixed time, and maybe that particular time just doesn't suit me. Podcasts, are they where you just listen to something? To be honest I haven't really used webinars or podcasts. E-learning, particularly when I worked for Boots there was a lot of e-learning to be done so I would have done quite a bit, but since then I haven't done any of that, and I tend to read journals really.

How would you choose your topic?

I suppose it is whatever interests me, because I am working at the university, if I have a particular topic I am going to be teaching soon I might like to learn a bit more about that topic in advance of me teaching it, that usually influences, so relevance to my job.

How would you choose the location of an event?

If it was an evening event I would like it close, so within about 15 minutes of my home, if it was a weekend event, and a day event, I don't mind travelling a bit further for that. For an evening event, I would only be inclined to go somewhere very close.

When you don't attend learning events, what are your reasons?

Again, location. I notice that with some of the CPPE events, some of them are maybe areas, that may not be too far away, but are areas I am not familiar with, for example I haven't been to Hounslow before, so when I see one in Hounslow, it feels to me that it is very far away, even though it actually isn't. sometimes I have commitments in the evening with friends, and I don't want to give up those, and maybe also, not having someone to go with. If I knew someone that might be going to that event as well I might be more inclined to attend, but not having that has meant I haven't gone.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

I am not sure. Sometimes frequency of events as well. Sometimes there are so many events on that you almost don't know, you are trying to decide which one you should go to, and it turns out that because there are so many so frequently it turns out that it is difficult to choose, so I don't choose anything.

How could we increase attendance at learning events for pharmacy professionals?

I think maybe making it fun and interactive, maybe something that is going to make people come out in an evening, almost a social event, with a bit of learning alongside that, with food, or maybe a glass of wine. Something just to make it a social occasion to meet other pharmacists and to network in a relaxed environment, but also to learn something as well. It is good to meet other pharmacists, either in the same area or different areas as you can learn a lot from each other, and you can take different skills or learn from the skills others have and apply them to your profession too.

After a learning event, what tools would you like to be provided with to support a change in your practice?

It is difficult, as I know previously attending Boots events, I would have gone to the training day, and the very next day would have gone back into store and it would have been very busy, so I wouldn't have had a chance to implement the stuff I have learnt. I think maybe a follow up or a quiz. Maybe a quiz before to test my initial knowledge and then a quiz after to test what I have learnt. Also some sort of CPD certificate that acknowledges I have been or attended and I have gained some skills, or an accreditation or qualification. Potentially a qualification would be good. Maybe if I am working towards something, maybe, not just one off events. Things leading to something might be more beneficial. I think 7 days would be optimum for the after quiz to allow me to deal with any issues of going back to work and it would need to be emphasised at the event that there will be a quiz and that it needs to be completed as well.

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

I think that would be really good, just in terms of building the relationships between the different professions. Doctors and nurses work very closely together and I suppose, especially in a community pharmacy where I have worked it doesn't feel like pharmacists and doctors and nurses are so well connected. In hospital maybe there is a closer relationship, but I think for community pharmacists especially it would be very beneficial to have training events where there were doctors, GPs especially and practice nurses so we can all learn from each other and learn about each other's roles so we can support each other as I think there is an element of we don't understand what each other does.

Any particular topics you think would work for multidisciplinary working?

I think, particularly now, things like EPS even so that we all have an understanding of how it works from the others point of view. Common conditions that are targeted on MURs and NMS, respiratory or hypertension, those conditions that community pharmacists are particularly targeting, if we could work together we could see what benefits we could provide, and really highlight pharmacy and what we could provide.

How about learning with other members of the healthcare team?

I don’t think that would have benefit at every single event, but maybe at team bonding events or things that will get the team working together. Maybe a pharmacist with an ACT or senior dispenser can be of benefit, to help to build the relationship, and it helps the dispenser to find out more about what they are doing, and what drugs they are dispensing and what the drugs are for

Any other comments?

No, thank you.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH13: 7th June 2015

Community pharmacist. Also works in GP practice. Non-attender at PESL events.

Which providers or training programmes do you currently use for your Education and Training needs and why?

CPPE and those are the only providers. Otherwise it is just reading a journal. I do their online training and the ones we received in the post. No face to face unless they are run by CPPE for local services.

Any conferences?

No.

Which education provider would be your first choice to fulfil your education and training needs and why?

CPPE. Because I can access them online and do them in my own time.

How do you best like to learn?

Oh… um… probably individually, but I think group discussion as opposed to group teaching would be even better, so a period of individual learning through reading followed by the ability to sit round and discuss.

What formats of learning would you be happy to undertake with others?

Workshops over lectures, but I would rather do things on my own.

To attend a face to face event I would have to be very interested in the topic, or it would be something I would have to attend to be able to provide a service.

What formats of learning are you happy undertaking on your own?

Reading I would read the clinical pharmacist, some of the BMJ articles. I think those are the two most common ones. And also, I guess, things like NICE guidelines, so updates.

No, I haven't tried webinars or podcasts. Podcasts, maybe, but webinars it would depend on the time, because the limiting thing with podacsts, I mean webinars, is the time they are on, being able to be in front of a computer at the time.

How would you choose your topic?

Probably, obviously, if it is a service related one, whatever the service is delivering, and if it was interest, it would be whether or not I had a good understanding of something or needed a better understanding if something, whether I needed updated, or a lot of development that I felt I hadn't managed to keep on top of.

How would you choose the location of an event?

If they are miles away I would be less likely to go to them. If they were in the evening close to home, if during the day it wouldn't matter so much, but still probably close to home.

When you don't attend learning events, what are your reasons?

Um, distance, and possibly what extra will I get from a face to face meeting, that I won't get on my own, and depending on the size of the group and topic, um, I don't know, yeh, I think that is what would make the difference.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

.timings, length of day, not being paid to attend, you are attending all of these things after work, you are not getting reimbursed for them. Mainly it is timing. After a long day at work, finishing at 6, to go and sit in a meeting from 7 or 7:30 til 9:30, and getting home at 10:30 is usually the reason my friends have said to me, and they are reluctant to attend.

How could we increase attendance at learning events for pharmacy professionals?

Um, I think it needs to be topical, and might need to start with local groups, that move around, and it has got to have an incentive to it, or a shorter meeting, actually, that makes the difference. Usually there is a lot of information, but I think if I knew I would only be at the meeting from 7-8 or 7:30-8:30, as opposed to 7:30-9:30 I think I might be more inclined to go, as I still know I will be home before ten. I think a shorter, more concise meeting, or a shorter meeting, 2 weeks apart to complete the same thing, might make a difference.

After a learning event, what tools would you like to be provided with to support a change in your practice?

Um, handouts are usually useful, or flow charts, depending on the topic, so I guess, with the introduction of new drugs, a flow chart looking at the process and at which point each of those drugs would be used in patients care, so a lot of it is based on what NICE do anyway, but I think at the end of it, to come away with something that shows where the medicine fits into the pathway or disease, would be used in MURs, and it also gives you an idea of how the prescriber is prescribing, because quite often they will be using something very similar to make their decisions, or possibly not using it, which, I would like a clinically validated tool, to use it for my MURs to say 'you have missed a step' or 'have you considered this?'

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

Very. Well, in part, because I now work in a doctors surgery, so, some of what I have to do, is both working with them and finding that the learning or discussing together has helped understanding each other's roles because then you start to build trust in the different professions and recognise what they can and can't do, and what their limitations are, and to a certain extent, their strengths and weaknesses I guess. So you can sort of work out where you fit in that jigsaw. It is also about gaining the confidence so you are more working together at the end of the day.

Any particular topics you think would work for multidisciplinary working?

Well, hot topics, diabetes is a big hot topic, dementia and I guess COPD because there is a lot done with asthma but a lot less with COPD. Diabetes is a bit of a hot topic, especially where I work, apparently we are all really bad at diagnosing it, or making sure people have the right HBA1C levels, and there is a lot of work that could be done for people who are not engaging with the service, as it means they are probably not engaging with their doctor, and they don't come and pick up medication, so being able to work together and knowing exactly what has been tried will influence what you say to a patient and how you try to engage them to a service, and also things have changed, so it may be that they are suitable for other treatments

How about learning with other members of the healthcare team?

I think other members of the pharmacy team are important as, if the dynamics in the pharmacy don't work well then it will fall apart, so I think it creates a safe environment to simulate things and feedback how things can be done better or without being in an environment if something done incorrectly someone could be affected.

Any other comments?

Not that I can think of right now

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH14: 8th June 2015

CCG Pharmacist. Non-attender at PESL events.

Which providers or training programmes do you currently use for your Education and Training needs and why?

Um, there seem to be quite a few that have just appeared actually. Normally I would go to CPPE, and they offer variety, either workshops, paper based or online. Then we have London Pharmacy Education and Training (LPET), which I have begun to utilise a bit more, there is pharmacy management, which is Ted Butler associates. They tend to do more of the skills, rather than the clinical skills, particularly around how the NHS works and those type of things. Then we have also used NEOVITAS, a new company, we have taken up more around the negotiation skills and interpersonal skills, time management, rather than clinical skills. We have done critical appraisal skills with LPET. We have done basic and the advanced. A lot of it probably isn't relevant to us, but we have been working with them as they, again, have offered us bespoke training if we have had new staff in, and again, they have used David Erskine to come and run sessions on BNF chapters, GI, asthma, those sort of things, whatever we needed at the time.

Any conferences?

Um, I don't go to that many. I have gone to a few drug company sponsored ones, which I take with a pinch of salt, but at least you get information, and to know where to go to get independent information, if that makes sense.

Which education provider would be your first choice to fulfil your education and training needs and why?

Um, probably the CPPE, because they have the widest variety and is clinical, which is what I need more of, so that would be my first port of call. Having said that, it may change now that these other companies tend to offer more bespoke training. Pharmacy management used to be, that they ran the courses they did, and you could turn up or not, now they are organising bespoke training for your organisation or group, so, yeh, that might come in.

How do you best like to learn?

I prefer to learn in a group, and talking, rather than sat learning. I need to be more activity based.

What formats of learning would you be happy to undertake with others?

Workshop and role play. If I think about my team though, they are complete opposites, and they prefer paper, sit down and read it.

What formats of learning are you happy undertaking on your own?

I have tried, not podcasts, but I have tried a webinar, one they sent out to the GPs, but the IT is never great in the NHS and I have never known it to work smoothly, lets put it that way! I have missed more than I have taken part in, if that makes sense.

For reading, it depends, as I probably have a huge range. I get the medicines awareness daily, and dependant on what crops up there I tend to go elsewhere, or if I am working on a particular area, like AF, I would use that as a port of call and then go to articles and that sort of thing.

How would you choose your topic?

In terms of CPD, I sort of have a plan for the year, so it started off with AF, probably because I was doing my prescribing course on it, so that was that focus. Now, the needs of my team are such that the areas we work in are heart failure, then pain management, that was picked up mainly as a results of work and the needs of the business, so to speak. Personally it is as a result of a query, or something that is of interest to me, so what I haven't a clue about I will go and find out, so I have been doing quite a lot on stoma, because I have had a few patients that have the most bizarre ordering patterns, so that made me think, I don't know if that is normal, and I didn''t really know anything about it to be honest, so I have gone away and done my research but that is more personal, because it is a small number of patients it doesn't have a massive impact at work, but I would like to know.

How would you choose the location of an event?

Not necessarily location, it tends to be timings now. I have travelled all over, I have been to Birmingham for things last year, so if it is of real interest the location is not so much of the problem as the timings. Before I had a small person I would do the evenings quite happily but now that becomes more of a challenge, so everything that happens in the day tends to work better.

When you don't attend learning events, what are your reasons?

It is either that is doesn't seem particularly relevant, it sort of has to be in my top five of personal interest. I like to know who the speakers are and the agenda in advance, because sometimes you turn up and it is not at all what you thought, so if you have someone from a different angle to what you wanted covered, and I would also, ideally, like it to be someone independent. I have gone to company sponsored events but you have to take it with a pinch of salt, and realise you will get a particularly skewed view, so that would put me off. If it was a massive conference, I went to one recently that covered everyone in Europe so you had really good speakers, so that was worth going to. I went to another one run by Omnicare in Euston and it was just like I had turned up to a drug company sponsored, and I would probably not go back there again, as I felt brainwashed and that put me off, in that respect.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

I think it is more location. People don't want to trek miles and miles. Close to home. Most of the team I work in quite like evening meetings and they have families, but I guess it just depends if you have someone else to look after the kids I think. If you think you are going to get a particular spin, or it is not relevant, or unlikely to be relevant in the next year.

How could we increase attendance at learning events for pharmacy professionals?

I don't know, it is really difficult. I think the other thing is its volume of work and you have the greatest intention and you have it booked in, and then, as I say, it falls down the priority list, so what you thought was priority four weeks ago, has fallen down the list. Say you had a crisis here you have to finish off, or you have meetings to prepare for, and you just think, I won't bother going, so I think it is really difficult, because I don't think people book with the intention of not going, but then on the day, or a few days before the priorities have become, such that. I don't know if the charging works. I know in some places you get the place for free, but they say if you cancel within, the last three or four days, you will get charged £50. I don't know if that makes a difference, at least I don't know if it makes people plan ahead a bit better if they aren't going to go, I am not that involved to know, but that might work although it probably isn't what you want me to say! Yes, I think that is probably the main problem – sitting in the office thinking about the day job.

After a learning event, what tools would you like to be provided with to support a change in your practice?

(skipped this question)

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

I always think that is really really beneficial. We do, I probably should have said at the beginning, 'team learn' sessions, I think it is, where we have an afternoon where the GPs, pharmacists, nurses, practice staff, all go out, and the surgery is shut, and that is really really useful, just getting things from a different perspective.

Any particular topics you think would work for multidisciplinary working?

Um, I think there are probably a few, at least from a pharmacist point of view, where we can have more of an input, so asthma, because I think everyone has an assumption that somebody else is doing something, and probably nobody is doing anything. And then diabetes is the other one, just because it is the whole consistency of message. Patients are very good playing one off against the other, so if you doctor goes on and on about your cholesterol and your nurse goes on about your blood sugar and you pharmacist goes on and one about your blood pressure you are going to pick the one

you do best at and stick to that message. I think it is about everyone working together and understanding that we all play a part. Those types of long term, chronic diseases are probably the easiest, where everyone can play their role.

Any other comments?

No, I think, as a profession we are very lucky, because I don't think anyone else gets the support we do, or the free support. I might feel that more in a CCG than if I was a community pharmacist but I know nurses, and they don't seem to get, everything seems to be drug company sponsored. If you have nothing to compare with you won't see that, and so I think we are very lucky. I think the most important thing is that it gets done, so we have to live with them. I think we are also in the curve of doing our CPD, it only seems to be now that nurses are picking up on that and revalidation process, so we have it inbuilt, so if we turned round now and said we were going to pay someone I think it would be nice but we don't really know why, because it is what you should do isn't it, as a professional responsibility. Again, maybe I am bit skewed working in a CCG because you are given time to do the CPD, which again probably doesn't happen in community pharmacy for example.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH15: 23 07 2015

Community pharmacist. Non-attender at PESL events.

Which providers or training programmes do you currently use for your Education and Training needs and why?

CPPE

Any conferences?

I attend the Sigma conference, usually attend the clinical pharmacy conference and the commissioning show. It is in June, obviously targeted at GPs, doctors and commissioners, so, and there is normally a key note speech by the health secretary there. We are not that important!

Which education provider would be your first choice to fulfil your education and training needs and why?

CPPE because of the vast amount of topics on offer and there is a lot, I suppose as part of the LPC we get access to the PSNC education too. I have access to lots. CPPE seems to have the topics of the day, I mean covered in the sense that they are relevant for the time, whatever is happening at the time. It is current and up to date, in the sense that whatever thought processes for commissioners and for the profession perhaps.

How do you best like to learn?

I would, preferably workshop based would be the best for me, apart from I haven't attended any because of time pressures, so online stuff is the default option if you like.

What formats of learning would you be happy to undertake with others?

I prefer workshops. I don't really like lectures. I have tried some free courses on webinars. Webinars, my staff did the prescription endorsement and found it very useful, I did one, did a number with Avicenna, but didn't terribly find them... they were to one way

What formats of learning are you happy undertaking on your own?

Online from CPPE. No podcasts.

How would you choose your topic?

It is totally driven by the service. So, because as a business, if there is a service available, that we have been commissioned for I would access the training, whichever way, whether that is by the commissioner or CPPE, whether it is anyone else. It is about the outcome.

How would you choose the location of an event?

As I have said, I go to sigma conferences which are far afield, like Ireland, Mauritius, Cancun. But, for conferences I have been to London and locally. It depends on topic, relevant and urgency.

When you don't attend learning events, what are your reasons?

O.k. if my staff are going I may not attend. Generally I do because I bring them with me but if I don't think it is going to be relevant or if I am too tired, when it is the time of the week when it is just not possible.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

I haven't spoken, well, a lot of people haven't, people give very vague answers, but I have a feeling that people aren't attracted to the topic or don't think it is relevant for them, or, the importance of that has not been, they have not understood the importance of why that topic needs to be done. If you think about it, the GPhC or the old society accredited, CPD came along, and everyone rushed to get their 9 CPDs done and it was easy as CPPE were offering it. They could get their 9 done and bingo! Locums do it. They don't get involved in their business so all they do is clinical topics, so contraception or whatever, diabetes, so, it depends on where they are in the cycle.

How could we increase attendance at learning events for pharmacy professionals?

Well, a – the topic has to be relevant. If you have a monthly learning, or every 2 month learning about prescriptions, then you know optimising medication you will get a full house as it is relevant to contractors, and it is important as it is financial. If there is a service which a lot of them cannot deliver for whatever reason they will not be doing for their training. I think, initially, trainers, everybody tells people 'we will get you your 9 CPD cycles if you come here' but people aren't motivated to do that anymore, I don't know why, so there are a multitude of reasons. Another reason is the hours, working hours. A lot of pharmacists do different times, when you see a number that says we prefer Tuesday, Wednesday or Thursday, then, as soon as the football, the European football or whatever comes, no one will turn up. They are not thinking some times. A lot of them perhaps don't want to work on their own, or they may be forced to. They may not want to work outside of their working hours, be forced to study, so unless they get protected time, especially employees. So these courses, attendance at courses if usually after work so it is a struggle. I don't know from the attendance list today, how many are from multiples?

After a learning event, what tools would you like to be provided with to support a change in your practice?

After a learning, how soon after? It depends on the learning. Today we are learning about conflict, it is pointless having a quiz, because what questions would you ask? But if it was a clinical topic perhaps, a topic about emergency contraception for

instance, would a questionnaire a week later help initially? Is it part of the accreditation, can we bully them or not! Is the training we are going to give you the answers for this course. Like flu training, we have to do, event though we have been delivering the service for the past 7 years you still need to do this, so if you don't do it you don't get accredited. So there is a carrot or stick. Is there a right way to do it, to bully someone into learning? No. I think people, after studying, that is a different reason totally, they may be motivated to be a good pharmacist but they don't see any career path ahead of them, so they are very, I suppose, despondent about it. it is a question of how we keep motivating. I am finding it hard with my staff as they still have their lives to live.

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals? Any particular topics you think would work for multidisciplinary working? How about learning with other members of the healthcare team?

I do it anyway, it is good to work for multidisciplinary working, things like this. Dementia friends. I read yesterday morning there are a million members now. Those kind of things, and, I, if we have a learning event at work if there is everybody there I think they feel a buy in in the whole thing. I feel, when my staff go with me they don't have as much experience as I have, but they are pretty daunted, working with other people, initially, so barriers need to be broken. Communication between professionals if important. It is like students, when they come in they are all very nervous, and a week later they are best mates. They tend to learn quickly so if you bring them in every three months, or whatever.

Any other comments?

For pharmacy, I always though we knew everything, and didn't need learning, but there is always learning. A comment I have about CPPE. I mentioned about they are relevant and they are, but the actual course isn't relevant. The material is not relevant to our working environment. It depends if you are specialising in something. A lot of it, and sometimes it is good for CPPE, like at the moment we are doing chlamydia training, so you have to learn about sexual health, fine, you have to learn about chlamydia screening, fine, you have to learn about PGD, fine, then she says 'learn about difficult conversations.' There is a CPPE course on difficult conversations. That is a London wide sexual health requirement. Who thought of that? That is the one where you have to write an essay. Have you seen the course? Kerri-Ann had to do it today, ask her! She said there were some interesting bits on it but, it is virtually irrelevant for chlamydia treatment, but until she hands in that certificate she won't be accredited to treat chlamydia. And that is what I find about this default, position on some of the courses. Like emergency contraception in pharmacies – you learn about contraception. You need to do the 12 hour learning course on CPPE. It tells you about the coil. How many coils are we going to fit? But a bit chunk of the course is about the coil. All we really need to know is about giving the levonelle, and so, that needs to be looked at, but even if locally we can negotiate a course, these guys, the commissioners are now saying it is a London wide requirement. So people haven't thought it through. It is easy

for them, as commissioners they are saying ‘you can do this’, but now everyone is saying it is a London wide requirement. They are crazy. No one has looked at the content of the course.

I have also been asked, cajoled, you know the nursing trainers, south London has given them good money too, they want more joint working. Dr Melanie Plant is leading it, but it was the nurses who would like the pharmacists there, Melanie Plant may not, but we have a pharmacist here anyway. In fact this course came out because of what happened at our shop, so they money is good. Another course to run would be pharmacy first aid, then you would get a lot of people turning up.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH16: 22nd September 2015

Hospital locum pharmacist. Non-attender at PESL events.

Good morning/afternoon, My name is Ricarda Micallef, a senior lecturer in Pharmacy practice at Kingston University. I am conducting research into further education and training experiences for pharmacy professionals and how we can optimise these in the future. Thank you for agreeing to give your time for this interview. This interview should take no longer than 30 minutes.

Which providers or training programmes do you currently use for your Education and Training needs and why?

Ah, right. I have used, I have taken a clinical diploma course through the university of Belfast and for, um, other things I use CPPE and UKCPA. Those are the two main organisations I would choose. Um, UPCPA because, their workshops tend to provide the sort of, improvement in knowledge that I need and they are tailored more to the work I do. CPPE for convenience because I can access things online in my own time, I can do when I want, and some of them, they have small, bitesize, um, courses you can do, those I like, just for the convenience of it, and ease.

Any conferences?

Yes, I do actually. I go to the clinical congress every year.

Why do you go to that?

It is free. And the cost is significant there because I am self employed. If I don't work I don't earn, so if I have to factor in high costs, you know, conference fees as well as transport and accommodation if I have to stay overnight I don't get reimbursed for any of that, so cost is a significant factor for me, but also, the congress is, it provides, there is so much there, that the, all the lectures that go on are all up to date and all of them are relevant to my practice, but also, what you get when you go to congress, is you get access to most of the talks free of charge for a year afterwards so even if I miss anything you can catch up later.

You mentioned relevance to your job. What makes something relevant to you?

Um, so, I work as a clinical pharmacist in a hospital so things that, are, basically about clinical aspects of treatment, so updates in therapy, the newer therapies around, new ways of treating patients, that's what makes something relevant to me. It is about practice, basically about information that improves my practice.

Which education provider would be your first choice to fulfil your education and training needs and why?

UKCPA, um, like I said, it tends to be more relevant to what I need, than CPPE, because CPPE tends to do, it's, a lot of content of CPPE tends to be broad. In recent

years they have done a lot more to try and target hospital pharmacists but UKCPA is for clinical pharmacists so is always more relevant to me than what the CPPE provide.

How do you best like to learn?

Combination, reading and interaction. I like interactive learning where I can, um, be with colleagues and we talk through problems and everyone comes up with various solutions and we discuss, you know, our current practice, to, you know, convert knowledge and skills.

What formats of learning would you be happy to undertake with others?

I prefer workshops.

What formats of learning are you happy undertaking on your own?

I tend to read on my way to work as I have a commute, I tend to do it while I am communiting, or I would do it when I am at home, and if I really need to I would go to a library so it is quiet and I have no distractions to do that. I would read journals mostly and I don't tend to read books about pharmacy, I don't tend to do that. Mostly journal articles.

Have you tried any webinars or podcasts?

No, no, no. I am a bit oldy when it comes to technical stuff. I would, I do want to, and in recent years I have actually bought a new laptop which would be better at doing things like that but I just, I have never made the time to do it. Also sometimes when they happen is not convenient for me to take part, that is also about timing. Some of them, I have realised, you can access later, so those are good. Convenience is key

How would you choose your topic?

Yes, it is about what I am doing at the moment. If I am covering, say, in years past, covering surgical wards, so anything that was relevant to surgical pharmacy I would have gone to or things that are more specific to surgery, like VT prophylaxis like the new anticoagulants, that is quite relevant in surgery, for the prevention of clots, where the type of pharmacy I was practising at that point, so it really does depend on where I am working.

How would you choose the location of an event?

Closer to home the better because it is easier to get to and it is a shorter commute. Places that are located further away, I think I, if I had plenty of notice to arrange it and I could plan my transport there and it wasn't unreasonable then I would actually go. But, to go further away from home there would need to be a lot of time for me to plan my journey there.

When you don't attend learning events, what are your reasons?

Um… so, location, cost, not being able to take time off work. Yes, those three really.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

Similar. Any other barriers? I think some people, especially in the NHS, because we don't have study time built in, it is a factor similar to me. If they have to pay out of their own pockets for these things and they don't get time off work, and they have to fight for the time off work it is really, that's. I think we have similar barriers.

How could we increase attendance at learning events for pharmacy professionals?

Um. I think if they are more. I think in house events are always better than having to go to, um, another venue away from work. If people are at work they are definitely more likely to access something, rather than if they have to go away from work and do it in their own time, say like a weekend or something. But, if they have to go away, if there's an allowance within your work place to have some time off, paid time off to go to conferences, workshops, things like that , and your employer contributes towards the cost, people would go more. There would be a greater uptake of learning events. And also, if the courses, were, they tend to be set at one level, so either advanced or general or things like that. If, I think, for, the newly qualified pharmacists, they don't feel that a lot of the courses are focused for them, so it is just basis, when you are finding your feet, but also, you tend to have beginners and then advanced. There's no intermediate level. You know, you have been practicing for a while, and have an idea, but you need a good refresher and something to challenge you as well.so I think targeting the courses to different groups, depending on qualification and practice, to update current knowledge as well if very important. I don't think many courses at the moment manage that.

After a learning event, what tools would you like to be provided with to support a change in your practice?

Um. I think it is having other people to actually discuss it with, it helps more, because that is the sort of learning style I like. If I have a follow up with people I met on the course of something, to talk things through, to go through the targets I set myself, and it I haven't met those targets how can I actually achieve them. Because of the way I learn I try to learn things that are relevant to my practice, if things change at work it sometimes falls to the wayside, but to help me achieve things it is what happens in my workplace that determines it more than anything else.

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

I am quite interested in that, because it is, um, good to, um understand the perspective of all the members of the team, because everyone practices, you all have different

roles, so it is good to understand, um, how, the inputs from everyone, however…, what I have found is, when you have a workshop, or a session where you have all the members of the team present, you do have to factor in that your pharmacist, because you have the highest level of knowledge there, you may not feel you have learnt as much as you want to, because you have to make sure that your technicians and assistants can also participate and it is not way above the level of understanding that they have of the topic, and they need to be able to get involved as well, so I think that is a barrier, in that, if you are trying to target the whole team there are certain things you won't be able to do within that. I think different members of the team find that frustrating for different reasons.

How about cross profession, working with nurses, doctors, etc.?

Definitely, because I think one of the issues we have is that, um, we all don't understand what each other does, and particularly pharmacy has a problem in that the nurses and doctors don't really understand the role of a pharmacist and the role of a pharmacy technician. They don't even know the different between them. I think if we had more sessions together it would help them understand us better and would help us appreciate their roles better too.

Any particular topics you think would work for multidisciplinary working?

I don't think there is much that wouldn't be. I think, I don't know. No particular ones as I don't think there is one particular topic that we would work on together that wouldn't be relevant .

Any other comments?

In terms of education and training of pharmacists, I think it is all, I think there is a gap that once you qualify, if you are in community that you may not feel well supported to actually continue your learning once you have qualified and started working. So I think that if you join something, like The Society, it is, the onus is on you to continue your learning and I think some people find that, if you are not very disciplined that is difficult. I don't know if there are ways of encouraging people to get involved more. I think that is about it really. I think the sense of isolation is a barrier to some people actually, but also the stresses of work, especially now, where everyone is trying to get 120% out of their staff, so it is time pressures and trying to have a life.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH17: 08 10 2015

Pre-registration trainee. Non-attender at PESL events.

Which providers or training programmes do you currently use for your Education and Training needs and why?

So, as part of my pre-reg we have our own training, we have a learning department, and also a couple of the LPF events, local ones around the area. Recently I went to an event at the RPS headquarters, so it ij just how to get the most out of the year.

Any conferences?

So, yeh, this year was the first time I went to the RPS conference in Birmingham. I have been to another conference, I don't know if its suitable. I went to a pharmacy education conference in Manchester as well. I went to the pharmacy show last year, and hopefully this year looking at going as well.

Which education provider would be your first choice to fulfil your education and training needs and why?

I would probably say the RPS as they are sort of the professional body, so they probably have a lot of contacts and they are quite specific to pharmacy, so they can try and arrange events on different careers or subjects, especially the LPF you can centre it round a particular theme. I have been to a couple of CPPE events, um, a couple at the University, so alcohol, respiratory. I found they are quite useful as well. I am looking at becoming a CPPE tutor in the future hopefully.

How do you best like to learn?

I prefer group activity based and workshops. I find it is good to have the knowledge and try to apply it to different situations and learn from other people. It is more interactive.

What formats of learning would you be happy to undertake with others?

So, the way I like to revise, event during pre-reg is I like to use flash cards, so I try to make them, then before an exam we will probably get together for a coffee or something and try to go over the key cards on the day of the exam. It is good to get outside ideas or to test each other and recall facts.

What formats of learning are you happy undertaking on your own?

I haven't been to any webinars yet. I am looking at, trying to book myself onto, a webinar on gathering evidence, so I hope to do that in a couple of weeks. I have used some podcasts. I would say one or two for pharmacy, and they do quite a lot for pre-regs', especially on you-tube. There is one from, there is someone called 'the pre-reg guy', even on twitter as well there are a couple of accounts they do some pod casts. I

would say twitter is learning with other people as you kind of speak with others, as you are working with them and gathering your thoughts.

How would you choose your topic?

So I would probably say if it is relevant to my own practice. So, during pre-reg, for example, respiratory learning about different types of inhalers, so counselling, or refreshing, or if I haven't covered a topic for a while, so maybe if I have learnt it during university and I need a refresh I would go over it, or it is an opportunity to network so being with like-minded people or people with specialist areas, try to speak to them and get their insight, or try and build contacts really.

What makes something relevant?

That's tricky. Probably is something is mentioned in the news that would be relevant, or if, for example, if it is a new service, so for example, for the flu vaccination, that is quite new, well, where I work we do the flu vaccine, so it is quite good. Recently, the next event I am looking to go to is supervised consumption cos most of the pharmacies I work at provide that service. I need to undertake the training to do my job.

How would you choose the location of an event?

o.k. so. If it is convenient. I do go into London, in the last couple of weeks I have been to London a couple of times. As long as it is near by the train station it is convenient. Um, also, if other people are going as well, if you know other people going you can go with them in a group, not feeling on your own. Also, it depends on working hours. If I finish on time I can come, otherwise, it is a bit of a restriction trying to go.

When you don't attend learning events, what are your reasons?

I think if I am ill I probably wouldn't go, or maybe if it is fully subscribed and there are no places left so I am unable to go. Time is a massive factor.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

I think they can't be bothered. They have to put effort into it. They just need, or they are not sure what it is about, so they need to know what is in the event, what are the advantages so you can undertake CPD, learn knowledge, write it up. Working is also a big factor, so you get to meet other people and it is good, as every time you see them you can kind of recognise them, speak and catch up.

How could we increase attendance at learning events for pharmacy professionals?

Probably one way, although I don't think you can is make it compulsory. Not sure if it is possible, but for students, I don't know if they can commit, but if they get extra credits, or, like, with some of the tests, it is usually worth 1 or 2% if they turn up or do

a reflective piece. Once qualified I think CPD is the main factor, also how will it benefit me, that will be a key factor.

After a learning event, what tools would you like to be provided with to support a change in your practice?

So, I would probably say definitely quizzes. Um, referring back to the presentation, um, also, the resources in the presentation, if the speaker has given any, to go back and assess them. Um, yeh, that's it.

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

So, I am quite, urm, I really support that idea. Especially in my final year I did a dissertation on interprofessional education, especially I know for the GPhC that is a key area they are looking at and enhancing the pharmacy degree, so each of the students is going on a placement working with nurses, and even during my pharmacy degree I have got the opportunity to shadow nurses, so I got to visit Kingston Hill where they have a simulation ward so it is good to learn, and kind of see what they go through.

Any particular topics you think would work for multidisciplinary working?

So various clinical topics, COPD, um, probably the cardiovascular conditions, diabetes, so mainly the big long term conditions. I would say even between doctors and pharmacists I still feel they don't know what we do, so I even come across the example where a junior doctor came into the pharmacy for half a day, and she has learnt so much, especially in terms of the drug tariff.

How about learning with other members of the healthcare team?

I think that is brilliant, especially during my pre-reg I have learnt from observing my tutor. They delegate to us. As a pharmacist you can't do everything, so it is easier to delegate and try and support them by trying to complete the task fully or give them training on how to, um, for example, at the last pharmacy I worked at, we had a member of staff who went on, was a smoking cessation trainer. They led the service. Of course they were needed in terms of giving the medicines.

Any other comments?

I think there needs to be, I expect it is being looked at, but there needs to be more placements for pharmacy students, even with nurses, doctors as I feel they get more placement hours and opportunities. Even as part of their course they do, nurses do 12 weeks or more every year. Hopefully that is being looked at when they look at restructuring the course, and also trying to, I think, pharmacy students should try to increase their skills, both interpersonal and knowledge. When I qualify I think it should be more linked up, so it should be more interprofessional focused, and I think it needs to be more clinical based, especially in the community, because there is a lot said that most community pharmacists are business minded, but pharmacists still do use their

clinical skills and run services that do help patients, even a couple of them become independent prescribers so they can run clinics.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH18: 2015

Hospital pharmacist

Which providers or training programmes do you currently use for your Education and Training needs and why?

What sort of programs? I have just completed the independent prescribing qualification if that would count. I did it because my company has set up an walk in centre for out of hours service.

Which education provider would be your first choice to fulfil your education and training needs and why?

Usually supplied by the CCG and NHS England, and for my IP I had to go through the University of Hertfordshire. The CCG does borough training. If there is any training it is probably because there is a new service provided, so the requirements are for training courses. i choose training mainly to be able to provide new services. It is mainly based on the learning needed for the actual service, so I don't normally go to additional training unless it will benefit a service, so it needs to be necessary information.

How do you best like to learn?

Generally face to face I guess, mainly interactive workshops.

What formats of learning would you be happy to undertake with others?

Um, I like to require all the information online, but the problem is there is no interaction, so if you have questions there is no one to ask if you have problems. Lectures are not really personal so I don't really prefer lectures.

What formats of learning are you happy undertaking on your own?

Online training, e-assessments.

When you don't attend learning events, what are your reasons?

Maybe wrong hours, too far away and probably unnecessary information for me and for practice.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

Based on probably the same reasons. Inappropriate material, not what they need for functioning in the pharmacy, wrong time of day, um, travel problems, yeh.

How could we increase attendance at learning events for pharmacy professionals?

Probably some incentives I guess, um, maybe, probably paid for cover, or something like that. For community pharmacy they have quite long hours, so if you have to attend, lets say, I do 8:30 to 7 o'clock so if you then have to go for training 7:30 til 9 then you have to go to work the next day, it is quite tough, and if you don't get paid for it, there is no real reason to go, is there?

After a learning event, what tools would you like to be provided with to support a change in your practice?

Um, some handouts would be good, but I would also like a summary of what the actual objectives were after the learning event. Powerpoint presentations are o.k. but it also requires notes with it. Powerpoints are too brief, because when you go back to it it doesn't help the understanding very well. I will go back to it if it is relevant.

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

Yeh, I would be interested. It is always good to meet up. Connection is really important now, as all healthcare providers should be linked. It is a great tool for communication with each other but it needs to be in the right areas, so if you have GPs, nurses, occupational health for the same borough. This will help practice if that is the case, to link to the borough board.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

PH19: 2015

Hospital pharmacist

Which providers or training programmes do you currently use for your Education and Training needs and why?

o.k., so at Moorfields it is slightly different maybe to some other hospitals. we rely a lot on distance learning, so for our pharmacists we enrol them in the certificate and diploma in pharmacy practice, but we do the distance learning course rather than I know some other hospitals do the JJB or enhanced training. We mainly use Belfast of any of the other distance learning providers. And for our pre-reg's of course the main thing would be LPET, and for our technicians and assistants we enrol them on the buttercups programme, so that is for their NVQ and different levels. So that is the main training providers we use. We also have internally, in house mentorship and training if you want an in house mentor. These are the sort of main ones we go with. Apart from that the hospital may provide you with a study day, but it depends on what the topic is. Distance learning for pharmacists, LPET and buttercups are the main ones. I think the pharmacy department at Moorfields it is a small team, and being a specialist hospital, we don't actually see many of the patients, um, that, you would normally see in a general or teaching hospital, so specifically when it comes to certificate and diploma for pharmacists, um, quite often the enhanced training or the JJB or other learning programmes, um, a lot of it is work based, so they will say things like 'on your ward, find a patient with liver problems.' We don't have these patients or see these patients. So we are very limited with the types of patients we can see in the hospital, therefore we sort of rely on cased based learning and more of the theory, rather than actually seeing patients in our day to day practice. Quite a lot we don't actually come across these patients.

Which education provider would be your first choice to fulfil your education and training needs and why?

For me personally, I think the topic and speaker. The topic needs to be something that is relevant to my job, relevant to what we provide, relevant to the hospital. Something that would catch my eye. Also based on the topic the speaker may make something more attractive probably, if they are the expert in their field.

How do you best like to learn?

Um, kind of depends on what I am learning I guess. Probably I would say reading, although or attending a seminar or lecture, rather than workshops or anything like that.

What formats of learning would you be happy to undertake with others?

Um, probably a conference or lecture.

What formats of learning are you happy undertaking on your own?

Um, either reading or research, something like that.

When you don't attend learning events, what are your reasons?

Um, personal development. Something that will make me do my job better. it needs to be relevant to my current practice. *(think the pharmacist heard do, not don't).* oh, if I don't attend, it is not relevant, for my own sort of development or my current job.

Speaking to friends and colleagues, what reasons do they share for not attending training events?

Um, I think it is often a lack of time, because it depends on the format of the learning. If it is something you need to attend you need to take time out of work to attend conferences or seminars, it is about being able to get time off to do that. Currently that is why there is a preference for things you can complete in your own time. I think time is the main factor.

How could we increase attendance at learning events for pharmacy professionals?

Um, I think, better advertising. A lot of the time such things are only sent to certain people and it doesn't reach us, so a lot of the we are not aware that a seminar or something is going on actually, so, if, people are made more aware, and a summary of what it entails may make you go. Also as managers, it is to make time for staff to attend such things and be supportive of them I think.

After a learning event, what tools would you like to be provided with to support a change in your practice?

Um, after a learning event, so how am I going to implement the change? Probably just reflection on what has been learnt and observation of what is currently taking place in my workplace and seeing if anything does need changing and inputting. A mixture of reflection and observation, and implementation. For me personally I would probably do my own reflection on the event, so, um, a summary would be good, or maybe handouts or something like that to give me an idea or summary of what was discussed, but I think it is down to the individual to take away from that learning what they can and try to implement it to their work place.

How interested would you be in learning with other members of the pharmacy team or with other healthcare professionals?

Other healthcare professionals. Not only the pharmacy team, but everybody else as well. I think it gives you, I mean, the way we are functioning currently, it is not the pharmacy team working on their own, or pharmacists working on their own. You need to integrate and be part of the wider team. The only way you can do that is by having some shared learning goals. I know some might be quite specific to pharmacy, or nursing or doctors, but when it comes to patient care it requires an input from

everyone, not just pharmacy, so I think learning with other members of the healthcare team will enable us to reach that.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

Appendix 17: Interview schedule learning from others (Chapters 5 and 6)

Kingston University
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The Optimum supplementary education and training model for pharmacy professionals

Letter for participant

Dear Sir/Madam,

My name is Ricarda Micallef and I am currently undertaking a PhD to explore the optimum model for supplementary education and training of pharmacy professionals.

I would like to invite you to take part in my research to evaluate education and training provision in healthcare professions. Your valued responses will provide me with an insight into current education and training provision, and help propose future models for education and training.

This interview will take no longer than 30 minutes.

Participation is completely voluntary and all the information gained will be maintained in a strict confidential manner. No identifiable information will be disclosed in the reporting of the project, with all respondents allocated randomised numbers to ensure anonymity. Any information you provide will only be accessible to myself and the project supervisor and will be stored confidentially and later destroyed.

I would like to thank you for taking the time for reading this correspondence; your participation would be truly appreciated. Please do not hesitate to contact either myself or my supervisor if you have any queries or require assistance.

Yours Sincerely,

Ricarda Micallef

***Student**: Ricarda Micallef MRPharmS*
***Email**:r.micallef@kingston.ac.uk*

***Supervisor:** Dr Reem Kayyali*
Associate Professor in Pharmacy Practice
***Email**: R.kayyali@kingston.ac.uk*

WRITTEN CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Statement by participant

- I confirm that I have read and understood the information sheet/letter of invitation for this study. I have been informed of the purpose, risks, and benefits of taking part.

Title of study: <u>The Optimum supplementary education and training model for pharmacy professionals</u>

- I understand what my involvement will entail and any questions have been answered to my satisfaction.
- I understand that my participation is entirely voluntary, and that I can withdraw at any time without prejudice.
- I understand that all information obtained will be confidential.
- I agree that research data gathered for the study may be published provided that I cannot be identified as a subject.
- I agree for this interview to be recorded/not recorded (delete as appropriate)
- Contact information has been provided should I (a) wish to seek further information from the investigator at any time for purposes of clarification (b) wish to make a complaint.

Participant's Signature----------

Date ----------

Statement by investigator

- I have explained this project and the implications of participation in it to this participant without bias and I believe that the consent is informed and that he/she understands the implications of participation.

Name of investigator ----------

Signature of investigator ----------

Date ----------

Good morning/afternoon, My name is Ricarda Micallef, a senior lecturer in Pharmacy practice at Kingston University. I am conducting research into further education and training experiences for pharmacy professionals and how we can optimise these in the future. Thank you for agreeing to give your time for this interview, to help understand in more detail current provision of education and training for healthcare professionals. This interview should take no longer than 30 minutes.

Please can you tell me how you become a pharmacist in your country?

Length of course. Is there a pre-registration year. Who do you register with

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

CPD requirements, CE, peer review

How does your profession/country currently provide supplementary education post registration?

Online, face to face,

What support, if any, is given to support education post registration?

Protected study time, funding, backfill costs

When does learning traditionally take place?

Evening, daytime, weekend

Which providers are used for supplementary education and training?

What do you think is the best model for supplementary education and training and why?

Online, face to face, cost, convenience

How is learning recorded and verified?

Regulator call, self-driven, online or paper recording

What tools or resources are currently used to help practitioners apply their learning into practice?

Flash cards, online assessment, case studies, peer learning groups

Are there any tools that are not currently utilised that you feel would be of benefit to support application of learning?

Flash cards, online assessment, case studies, peer learning groups

How does evaluation of learning events currently occur both at a training event and afterwards?

Questionnaire Assessment, follow up phone call or interview

Who carries out the evaluation?

Provider. Employer. Independent body

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

Previous experience?, positives, reservations?

What positive aspects of learning together do you see?

Increased understanding, cost savings, one message for all

What are the challenges of learning together?

Time, specialisms, lack of understanding of role

Who should lead joint learning?

One profession, joint working group, LETB

Which topics do you think would work?

Clinical, regulation, IT

Which professions should be included?

Medics, dentists, pharmacists, nurses, other AHP, support staff

Who do you think should fund joint education and training?

Do you have any other comments?

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

Appendix 18: Interview transcripts – professionals from GB

Nurse

How do you become a nurse in the UK?

o.k. there are, I suppose, we are not an all graduate profession, so the key route in is through the 3 year BSc Honours route which requires you meet the various entry requirements and come on the course without a degree then following the three years there are various modules which are, our current course is every year has 3 30 credit units theory modules and 1 30 unit practice module. If you have already got a degree in any subject we do accept you on our postgrad diploma which is a shortened 2 year course. The nursing and midwifery council, you see, the EU requirements say you need to have done, I think, 4200 hours in practice, and, we certainly, for our shortened 2 year course we use a variety of means to, um, get them out of that full amount. After you have finished everything and you have successful passed and completed our exams, assessments etc. in house you go straight onto the register. You register with the Nursing and midwifery council

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

Every year you pay £120 for the privilege of being on the register, every three years you have to, it has just come into a revalidation document, which I have just done, so you have to show that you have doing your required practice hours. Now practice means wherever you normally work, so for me, education, a nurse on the ward it would be clinical. You also need 5 examples of evidence from colleagues, patients, to say how wonderful you are and then you have got to reflect those things and you discuss this with another qualified nurse and you sign on the dotted line and off it goes. they will check a percentage. I have just forgotten! You also have to show you have done a certain amount of hours of CPD. I think it is 20, or something like that, out of 35, 20, it could be less than that, have to be, oh, how do they term it? Um…. Discursive stuff

How does your profession/country currently provide supplementary education post registration?

It can be anything. It can even be going to a conference, so as long as you get a certificate of attendance you are fine.

What support, if any, is given to support education post registration?

This is where it differs from Trust to Trust. My own module is a CPD module that I run on tissue viability and it takes people from anywhere. UK, International, Wherever anyone fancies coming from. And I have noticed that some trusts say we will pay the fees and you do it in your own time, other trusts say we will pay the fees and we will give you some study leave. Others do a combination. We are getting students who are coming in for the odd module here and there who are self-funding and doing everything in their own time.

You talked about funding there. Would there will be any free courses people could go on and who would provide those?

Right – funding is interesting in terms of nursing at the moment. At the minute we have a contract with Health Education South London. Health Education South London I suppose, goes out to Trusts and you have x amount of money to spend on CPD and here is the contract. It is up to you who you do it with. So we have people who come in through the contract, some who have spare cash which is supposed to be for education, we get asked to do bespoke courses so, for instance, at the minute I am being asked to go off to mental health trusts to do a bespoke study day on tissue viability, or people might come who are self-funding. That is going to change in the future, so it is going to be an interesting game. Nurses can also do the MOOCs and various things, which, in effect, are free.

Which providers are used for supplementary education and training?

We do have the royal college of nursing, and they do put on courses, but they do tend to have a fee. Mainly the educational institutions

When does learning traditionally take place?

It is a bit of both of evenings and during the day, but weekends aren't common. During work hours are the most common but some places will start to put on more into the evening, but it is very rare to do weekends although I think they are there.

What do you think is the best model for supplementary education and training and why?

If you had asked me this in 2003 I would have said online purely. But then I did an MEd in learning and I thought, oh, actually, not everything should be online. It isn't helpful. I think there should be a good combination of both. At the moment I am into flipped learning and I think for nursing that is the way forward as it gets them going out and looking at the evidence, and in my experience, qualified nurses aren't necessarily up to date. There is an expectation that you will sit on a sit and they will just mop up whatever comes out and when you start questioning them about what does the evidence say, they have no idea and they refer a lot to 'whatever the doctors says.' And in my own area, the doctor may not actually know. So, for me, whatever we can do that encourages nurses to go online and get out there to see what is out there is brilliant, but again, coming back to face to face, but also discussion forums too, they can check we are all on the same page and have understanding.

How is learning recorded and verified?

Just getting a certificate.

What tools or resources are currently used to help practitioners apply their learning into practice?

They are probably more of the case study approach, certainly, in undergraduate there is a move to go to case based stuff. In post registration there is a lot of use of cases, and that is in many forms. So in my own module we have factious patients that have an overview and have a picture of a wound when we do things. The other areas like

emergency nursing, they have vignettes, so they have models that are falling to pieces or whatever and then they have to problem solve. So that is quite, something that is happening quite a lot. And certainly in terms of clinical skills, you could argue that clinical skills is one of the signature pedagogies within nursing, full stop.

Are there any tools that are not currently utilised that you feel would be of benefit to support application of learning?

I think, there probably are, I can't think. If there were I would probably be applying them. I mean I know that things like, for qualified nursing CPD, looking at problem solving skills, looking at, I am thinking of critical analysis, we should probably get more of that going on.

How does evaluation of learning events currently occur both at a training event and afterwards?

They do an online. Certainly with our university they do an online questionnaire. It is done, they do it on the final day we book a computer room to 'encourage' them to do it. Then it goes to the quality office and the quality office sort of tell us what the quantitative and qualitative things are. But I also do something separate to that so I don't get any surprises, so we sort of do a little verbal one looking at what have been the highlights of the module, and what are the areas they would like me to relook at.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

I think it is becoming more and more accepted. I think one of the problems, I will look at this in two parts. I think one of the problems is, from our university perspective is that we are in schools. The courses that are linked very much to the school, so there is a barrier there. When we are validated we are validated through the university, but there, it is not validated for nurses, but then again, our advertising links through to nurses. Having said that, on the tissue viability module I have a lot of medics coming on there. I have also had podiatrists on there. Um, I have healthcare assistants although I am not sure what they gain from it, because it is not really aimed at that level so from my perspective it is not a problem. I think we should do this more and more. My worry is, no, my concern, is for that to happen to need to break down the barriers in the school.

If I was a nurse on the ward what do you think their perceptions are?

I think multidisciplinary working they are absolutely fine with it. No problem at all. I think coming into a classroom and learning, for some nurses, in an interdisciplinary environment is actually a challenge. And I don't know why it is the critical care areas, but certainly in the critical care areas there are a lot of people used to doing journal clubs with medical colleagues, um and other colleagues, where as other colleagues aren't. if they don't know they are from different disciplines there isn't an issue. After a while it becomes apparent, and then, depending on what the discipline is, the nurse can feel a little bit overwhelmed, as there may a hierarchy.

Who should lead joint learning?

I think it depends on what the topic is, because I think there are some topics that nurses should lead on, there are some that pharmacists should lead on, some that medical staff should lead on, there are some that physios should lead on. So I really think it should depend on the topic. But having said that, there should be, in the module team for want of a better word, there should be representatives from all disciplines to make sure every disciplines voice is heard in the planning. It also needs to be at the right level.

Who do you think should fund joint education and training?

That is a difficult one. I would love it say it really should be HESL. That would be my want. I think that isn't going to happen, but if we go down to self-funding then the people like the NMC would somehow have to write this in that this is a requirement, because otherwise, what we are seeing in nursing, is a lot more trusts wanting a studyday because it is cheaper. But what you can learn in a studyday is very little and they are expecting a studyday on one thing and they are expecting that the people who have then been on that are the experts, and, for me, that is going to start to get worse, because if funding is going centrally it is going to be, education is going to be the loser.

Do you have any other comments that you think would be useful?

I think, what we are doing well is we are starting to experiment more. Now I have to be honest, I don't really know what goes on that much in pharmacy. I have been invited to various sessions that SEC have done online , but I have never been able to get to, but when I have looked at the recording I have actually thought 'this isn't new.' So I think we are doing a lot of good things. We are doing, well, in our university we have done a MOOC. I am not sure I am totally convinced about MOOCs but that is where we education is going. We are there. We are in a string position with our school, because we have Kingston and St Georges, so we should be able to get support from both, although in reality it isn't always as easy as that. I mean I do enquiry based learning and flipped classrooms and so we are moving a lot within that. However, having said that there are a lot of people we need to take with us. I think another area we do well in is simulations. Certainly in CPD, we have got suites and mannequins and far more complicated stuff so we can help qualified nurses.

Doctor

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

In UK, the pre-entry requirements vary I think, but I presume they are still predominantly science based subjects, you know, with accommodation for arts degrees. There are two main entries – one is school leavers and one is graduate entry. Once you have got your grades there is an interview process, aptitude test at the interviews, and then, with the requisite grades, you then go into a five year undergraduate course if you are a school leaver and a four year course if you are a graduate entry and you meet the specific requirements.

How does your profession/country currently provide supplementary education post registration?

Crumbs, I may not know this very well, but, within the registration foundation year which runs over 2 years, the requirements is for attendance at various training courses and that is ticked off in the portfolio and you will not be able to progress without demonstration of those requirements. It is a number of events, which is a core thing, and they have a number of procedures you need to do, various work based assessments they need to demonstrate they have done, so they might need to do an examination, an investigation, a procedure, traction, and that is shepherded through their educational supervisor.

Who provides it?

It is run through the deaneries, so that is the post-graduate schools basically. They are across the different regions.

Is it predominantly face to face or is there virtual learning as well?

Oh, there can be online learning, but I think a lot of it, well, the ethos is that it is work based essentially, so as they go round doing their work they will grab someone to say ‘how did I do’ and they will enter that into the big portfolio and they will tick that off. There are numbers of these that they have to do in a year to be signed off. And then, there is ongoing, if you like, supervision, through the clinical supervisors, they are the people you work with, and they educational supervisor.

What support, if any, is given to support education post registration?

It is protected time, and backfill time, I am not sure it is relevant. There is a study budget for whatever they do, I think it is nominal, £500 or something, I don’t know the exact. But in terms of the training that is mainly in house, in the various hospitals, so we might host a thing, but you have to turn up to so many of them, I think the requirement is 70% or something like that, so what you will find is that the ward is void of a certain grade of doctor at the time on a certain day, and that is covered by above or below rather than their colleagues

When does learning traditionally take place?

Mainly during the day, not really at night for the juniors. It changes completely when you are more senior to be your own business. The registration years, the F1 and F2 foundation years, that is very structured, obviously, because you have to do that. That is true of the common bits but you then specialise. When you specialise it is whatever it is to demonstrate whatever.

Which providers are used for supplementary education and training?

It is provided through the deaneries. There are private providers, but at the more junior levels it is all structured.

So it is mainly health education England then?

Yes

What do you think is the best model for supplementary education and training and why?

I don't really have any thoughts. (pause). Um, my own view is that there is added value in face to face, not just necessarily with the trainer and trainees, but amongst the trainees, as there is a shared learning if you have a group of people together. It might just be a group of people sitting around together having lunch but there is something. You do share stories and there is some added value in that. Of course that is less efficient for the learner and the provider, so, I guess a mixture of the two would be very useful. Personally I am not very good at these things, but for the new kids, I guess webinars and stuff like that are good.

How is learning recorded and verified?

Yes, that's all rolled into the appraisal and revalidation. Each year they will have to show they have done that and the report from the supervisors will be put into your portfolio to be submitted to the GMC, or whatever it is.

What tools or resources are currently used to help practitioners apply their learning into practice?

I know there is a lot of support for various things, for example, you know, there are online modules and that sort of stuff. If you go to the study days it is fairly standard. Handouts. Each deanery have online support at the higher level, at specialist.

How does evaluation of learning events currently occur both at a training event and afterwards?

Because a lot of the training is provided at training years is implicit to their year, so the feedback comes through, very formal processes, so it lights up, so we all get beaten up if you get a red flag. Then the provider who commissions us, so that would be the deaneries or core people will come and say 'sort it out.'

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

I guess it depends on the purpose of it. I don't think it is useful for the sake of it. I think it has to be for a very specific reason, rather than for the sake of it, for social, cultural or political reasons. So, a very good example of where I think it works really well is, you know, simulated, high level, simulated emergencies, where people are running around and you do need to co-ordinate between the practitioners and the doctors, anaesthetists, and of course, that is not just interprofessional, but a combination of senior and junior people. So, you know, throwing in a student in there is useful.

Who should lead joint learning?

I have very clear thoughts on this. I think it depends. At the moment, to a large extent, it is, although this may be my bias, medic led. But importantly it depends on the topic at hand. So some topics there may be no immediate direction from anyone, but there may be other topics that have some aspects that will need more input from one or the other, so there might be some issues that are more nursing driven, there may be some things that are more pharmacy driven, and obviously there will be some things that are more medical driven. I think that needs to be catered for in the IPE/IPL or whatever you want to call it.

What are the biggest positives and negatives?

Well I grew up without it, so I am very sceptical about it, this is why I signed an anonymous form! One can't ignore the political reason why we are doing it, I do have IPE responsibilities, but I don't see, Deuche Bank rolls out a lot of its, spends a lot of money trying to get the backroom staff respect the front room staff, and the marketing people, so we need to know it works well, rather than making people feel more important. A lot of it is just a natural journey, I think we just arrive there. I don't have any problem walking down a corridor with a scientist and a scientist walking down the corridor with me, and beating each other up to try and get a collaboration, so a lot of this is historical that we just have to, you know, understand things, about the social context of different people. Having said that though, I think because, healthcare roles are so diverse and dare I say it specialised, I think it is quite important to recognise the roles and boundaries between them, and where they overlap and synergise so I do think it is useful. But as I said, a lot of it is, I didn't have it. I may be a more complete practitioner if I went to IPE but I sit there in a room and I think I probably can listen to what the OT has to say and the rest of it, and that is just a journey of maturity, does that make sense.? I mean, we talk, I don't think we have a hierarchy about this. There will be a specific bit where I need to ask you for your specific expertise. There will be a time when you need to come to me. That's life, and, I don't need to do a whole pharmacy degree to understand the things I don't understand about your world. I will just say 'Ricarda, can you help me out with this?' That would be my view.

Which professions should be included?

No, I think it is case by case. My view is pretty dull. But why shouldn't it include the accountant or finance manager. Things might run better if we had IPE. But the problem I have with this is, no, not problem, difficulty, especially in healthcare, diminish our own individual expertise and cultures, so, as the leaders from above make us producers of

units of healthcare output it is very important, whatever course we run has a pharmacy flavour, and whatever medical course runs, has a different flavour, because these courses all come from specific backgrounds and have all evolved very rich and specific reasons. We shouldn't lose that. Pharmacy is different from nursing, which is different from medicine, and we shouldn't lose that. There is a different subtle emphasis of something that adds to the richness when we all sit round the table.

Any other comments?

I think one of the things, I don't know how it works, but I think the world is moving so quickly, that we mustn't. Part of the education, part of the education needs to be the achievement of learning, however that works.

Pharmacist GB

Please can you tell me how you become a pharmacist in your country?

If someone wants to become a pharmacist they first need to do a GPhC accredited degree, which is a 4 year course, an MPharm, at a variety of different universities across the country. They can feed into this doing a foundation, and then they can do an MPharm. You need to do the set number of years on an accredited course, and then a one year of pre-registration placements, in an accredited premises with a tutor, although there are some accredited integrated routes too.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

Well, more recently they have introduced revalidation for pharmacists, which includes recording and submission of 4 CPD records, which is to include planned and unplanned entries, of which at least 2 have to be planned CPD, and also submitting a peer discussion and a reflective account based on 3 of the Standards for Pharmacy Professionals. Before revalidation it was 9 cycles a year, but it was called every 5 years, whereas now it is an annual submission.

How does your profession/country currently provide supplementary education post registration? When does learning traditionally take place? Which providers are used for supplementary education and training?

A variety of routes. Some people may just do things around written things. If people are part of the Royal Pharmaceutical Society, they can use the Pharmaceutical journal and just access articles. There is the centre for postgraduate pharmacy education (CPPE) through Manchester who do a lot of distance learning or workshops, and events there. There is a variety too of meetings, through the RPS, local meetings through LPFs. Evening meetings. There are other meetings that people might go to run by people like UKCPA or Pharmacy Management that might be during the day. There are a variety of settings where people can pick up information. It can be flexible. If you only have evenings to do things people can do that, or they may want to learn in a more passive way by picking up an article, or plan to read articles, but some may go along to workshops, and do work based activities too.

What support, if any, is given to support education post registration?

It is normally done in peoples own time.

What do you think is the best model for supplementary education and training and why?

Its interesting, as lots of it is down to peoples personal preference. A lot of people don't have much flexibility due to hours of work and what they do, so as much as they might want to go along to an evening meeting, where others might feel supported there, they might need to be in their pharmacy stores til late, by which time there is no enthusiasm to go on and do the things that are seen to be less of a requirement, so something a bit more passive might be o.k. I think face-to-face from a supporting background, in my view, is the best way. It is the way I feel that I get things best. I do do reading, but something it is a bit.. this is the latest update on this, whatever. I prefer to be able to

go along to a session and get practice experience and people feeding in what they are seeing on a day to day, whether that is on a practical or process element or service provision or whether it is a clinical topic. But whether that is suitable for everyone, as I appreciate not everyone can be that flexible. It might also require funding.

How is learning recorded and verified?

You submit it to the GPhC through MyGPhC, which is part of their website, and you go into your own record and there are certain places to complete and upload your record. It is an online system only, but basically you put it in. you can enter it when you like throughout the year, and you can submit when you feel it is ready for them to look at it. You can complete more than the required amount during the year, and then just click on the ones you want to submit when you are ready. Only 2.5% of submissions will be looked at annually.

What tools or resources are currently used to help practitioners apply their learning into practice?

Sometimes, for certain things. I am a big UKCPA fan, and often they give you grids to help you think about the elements you need for CPD, and to fulfil the requirements for the GPhC requirements. It helps people to think about why they are there, what they got out of the session, that is the learning, what they want to reflect, what are you going to do with this information. You didn't just come for the food! What have you learnt. Just asking questions to help you think about what you are going to go away and do. Sometimes you have to hand it in, but certainly at day things I have gone to you are free to keep it. I would normally go away and put that into the website.

The only assessments I have seen would be when I have used CPPE things when you do e assessments and get certificates. It might be an assessment of what you thought for others, but not really an assessment of what you learnt.

How does evaluation of learning events currently occur both at a training event and afterwards?

Usually you get an evaluation form at the end. The only way you are going to get data is by getting people to fill it in when they are physically there. Sometimes you get it right from the beginning so you can tick things as you go along or it might be right at the end.

Who carries out the evaluation?

If it is a CPPE thing they take away the whole evaluation, or the facilitator of the meeting would take it. Pharmacy management take it away and have a look.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

I think, it is interesting for pharmacists. It depends on where they are from. For example, those in a hospital setting probably already do a lot of IPE type training within their workplace, so ward rounds, pharmacists, doctors, nurses would all be part of this, or physio depending on the condition. In the community I think people would appreciate it but might be hesitant, but I am just thinking around here, if you could get

the community nurses in with the community pharmacists there are a lot of things going on where there are lots of parts of 'we want this, we want that.' It would be good to be able to talk to people if it felt like a non-threatening environment for them.

What positive aspects of learning together do you see? What are the challenges of learning together?

I think there are challenges of timing. I know in the local area there are lots of community nurses who are part time, and a lot of people who are working 5 hours within the school day, so there are availability issues to come to evening things. However, having said that, I always used to come to evening things when my kids were little. You can somehow work things around. So it would just be timing. Not everyone would want. Community pharmacists would need to come in an evening and community nursing may not always want it to be in an evening, so some people may not come to CPD.

Who should lead joint learning?

That's an interesting one actually. I would rather that it was an education provider than an organisation, such as a CCG because I feel people can be a bit more open if it is somewhere that they are not being managed or commissioned, or something like that. So I feel from an education point of view, people would value it more. I know certainly the move to the venues of things that run at out University, people like the fact they are coming to a University. I know that might be difficult to replicate across the country though. And culturally, moving things out of pubs and things, even if it is a function room, there is an issues, culturally there is an issue where your venue could be. Say, it was a CCG, or maybe a hospital setting, but who is going to lead on it, it would be helpful being an education provider.

Which topics do you think would work?

I think there is a host really. It depends on who your audience is. I think if you are thinking about, I know I am being specific about nursing and pharmacy but I think we have said that all of our patients have physios so other community roles. I think you could do it around conditions, but I think we could also do things that are more basic conditions. We always think of super duper clinical things but there are also more basic topics in the community, for example, catheter related infections, dressings, barrier creams. Sometimes it could be practicalities, or why something might be on a particular formulary or something like that. So I think some more practical, how things function might be good.

Who do you think should fund joint education and training?

Interesting. I don't know how it kind of works. Obviously the CPPE works through the University of Manchester and that is funded through Health Education England. I think it needs to come out of that sort of setting but how to proportion it, or whether money has to come out of somewhere else I don't know. Funding is always going to be so tricky

Do you have any other comments?

I wish we could, I am very pleased you are doing this. I think we need to include more, as some people feel very isolated, particularly community pharmacy. And i feel once people do come along to things you can sort of nab them in and if they come to one thing they might come to others. It is getting them to come to the first thing that is quite hard. I think we are leaving lots of people behind who are feeling sort of threatened and I think that is really difficult. I don't know how we get people through the door as people are so busy.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

Paramedic

How do you become a paramedic in the UK?

So when I joined in 2001 you just did a short course which was a technician course and that got you out onto the road as a technician then at some point, I think you had to do two or three years, you went back and you did another course that was about 12 weeks or something, plus a hospital placement and you got a paramedic award by the IHCD (*Institute of Healthcare and Development) but now we are just running the last batch of foundation degrees, but to register with the HCPC you now need to start on a BSc so it has gone totally BSc. That is 3 years. You come out at the end registered with the HCPC.*

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

So the HCPC set the CPD requirements for the profession but there is nothing specific to anything about medicines. I would have to look the specific requirements up! But one needs to engage in CPD and record it. Every 2 years you need to register and about 5% of people are selected to submit their CPD portfolio.

How does your profession/country currently provide supplementary education post registration?

There is a variety of different things that you can do, so a lot of it is attendance at courses and sort of higher education things then you have to write up how it applies to what you are going to do. So we had this campaign recently that not all paramedics wear green, so you get research paramedics who are registered as a paramedic but their CPD profile would be different from someone who is clinical.

Which providers are used for supplementary education and training?

So the ambulance services themselves do a lot of stuff but we are such a widening profession now that we can go to all sorts of places. So the trust also offer courses but it has become so wide recently that people are looking at all places. So I went to an independent provider on Monday and did a technology in learning course.

What support, if any, is given to support education post registration?

So if people are employed by an ambulance trust it is basically in their own time. There is no time available for it. But because I work for a university I am slightly an anomaly that I get 20% of my time devoted to CPD.

When does learning traditionally take place?

A bit of everything really. I mean HEMS Helicopter Emergency Medical Service do clinical governance days and they bring in some of their cases and the flight paramedics talk about some of the cases and where it has gone wrong and we have a chat. They take place during the day but equally there is a lot of stuff that happens in the evenings for a few hours. EDs (emergency departments) put on things as well for people to attend and they invite the paramedics.

What do you think is the best model for supplementary education and training and why?

I think both are really valuable. I think online is more accessible if you work shifts so you can do it whenever you want but I don't know if the update is that good on them. Face to face tends to cost more and then you have to get there when you are free but I think once you are there you tend to engage better with the material and you are there because you really want to be there. It is a bit of both really and I think people do a bit of both.

How is learning recorded and verified?

So, for CDP it is no good to just go to the course. You have to write up a little paragraph about what you got out of it and how you are actually employ that in your practice and what it means for your patients or me for my students.

What tools or resources are currently used to help practitioners apply their learning into practice?

No, it tends to be up to you really to apply it.

Are there any tools that are not currently utilised that you feel would be of benefit to support application of learning?

Um, no, because we are all very specific. I think it should be part of an annual evaluation by your boss which says, come on and tell me what CPD you have done and what did you get out of it.

Is there any assessment of learning then?

No not really. It is just that 2 year thing hanging over your head if the HCPC catch up with you and you are one of the 5%!

How does evaluation of learning events currently occur both at a training event and afterwards?

There is always one. I am not sure the take up rate is very high on actually giving them back, but what can you do?! They ask you what you go out of it, what were the good bits, what were the bad bits, how could they improve in the future.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

You mean with doctors, physios? Yes, I think it is improving, so I think, especially like ED they are working out we ARE a team and we are part of that team so they need to include us in their teaching and in their development. Things have definitely moved on in the past few years.

What positive aspects of learning together do you see?

The positives are it is about patients. So no one works in isolation in a clinical environment. We all work as part of a team and every team has their strengths and weaknesses and how they are with that patient and other stakeholders. It has just got to become teamwork and the NHS is just really stripped of cash at the minute and it is up to us to provide a cost efficient service and the only way we are going to do that is by using the team approach and strategy.

What are the challenges of learning together?

It is tricky. It takes time to make these connections and for someone to advertise them and it is just hard work.

Do you see hierarchy between professions?

With doctors, yes. But I think that is the way that they are taught that they are superior profession but not really with other sectors. Maybe we are still viewed a little bit like the traditional ambulance man with a cap but it is slowly eroding and we are a profession in our own right.

Which topics do you think would work?

All sorts of stuff. There are lots of good airway courses on at the moment, um and my sister is a physio so she goes to some of them and there are all sorts of people on those and there are lots of critical care paramedics now which do a lot of high acuity stuff which involves a lot of airways so a lot of the courses lately will be multidisciplinary.

Could you give me a breakdown of the profession?

I think 100% of our graduates went to the LAS (London ambulance service) and ambulance trusts but we have people working for the Red Cross, St Johns and then there are people who work in doctors surgeries, emergency departments, private ambulance providers, um, they are going into intensive care units now. Helicopter, like united Arab emirates, a lot of people going over there to provide emergency care.

Do you have any other comments that you think would be useful?

Um, I have literally, recently been involved in the college of paramedics and they have recently gone for independent prescribing so they are going to the commission of human medicines, this month, actually to try and present and get independent prescribing. And one of the things I learnt from them, from the medicines management group in the LAS is that I need to be teaching a lot more about the legislation around paramedics and the medicines. I do teach a little bit about the legislation but when I have been to those two groups they made me realise I do need to tighten that up, so I have meetings with the co-coordinator as people really need to get a grip as to where they stand legally with stuff. I have broken the law in the past and I didn't really realise that I was actually supplying medicines because I thought I was being kind but I didn't realise I was breaking the law so other people must be doing it inadvertently. So it is my place to tighten them up.

Dentist

How do you become a dentist?

I did my A-levels and then I wasn't really sure what I wanted to go in to. I wanted to go into a medical profession, so I thought, why not dentistry. I had had a lot of braces work and I was familiar with the environment. The course is very intense. It was tiring, it was stressful. We had a lot of drop outs. I didn't expect it to be so full on. Also, because, for us, we are quite localised in the mouth, for the first two years was medical, so it was the same as medicine, and then the third year we branched out and it was more for us. So I wasn't prepared for learning about the whole body in such depth, doing like biology and the labs, and we looked at anaesthetics, and did stuff with cadavers and dead bodies, a lot of that. That's' why – yeh, physiology to the maximum. It was intense but good training. It is 5 years. To work in the NHS you have to do a one year pre-reg equivalent. If you only do private you don't have to do that year, but for NHS you must do one pre-reg year and then pass it. To pass they check your clinics, and how you work in a practice, under the watch of a dentist, so they sign you off for everything. So once a week we would have study days. So you have to get your hours in as well and make sure you pass the case presentation at the end of the year.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

It is every five years. So we have to do radiology, the infection control, make sure we are up with our injections, um, I think the same as with yourselves really. Hours of CPD.

How does your profession/country currently provide supplementary education post registration?

So there is different types. One is verifiable, so we have to make sure we have a certificate for that and that would be courses. We get emails about courses that are put on. And then the non-verifiable is just us learning ourselves – reading brochures, practice meetings, our own type of interest. So for myself, I am doing a masters now as well, so that comes as part of the verifiable to a certain degree because I get logged for actually going in and doing work. I think most of the verifiable has to be, you have to go and be at a lecture and be signed, but I think they do do a lot of verifiable now, they have started to introduce it more on line as it is easier for people.

What support, if any, is given to support education post registration?

Mostly in our own time. You can take time off work but basically when you are self-employed it is a bit difficult, you know, I work for a company so it is in their interests too. To get the time off, they need us to do it too to keep us registered, so it is a bit of give and take.

When does learning traditionally take place?

Evenings mainly.

Which providers are used for supplementary education and training?

The BDJ (the British Dental Journal), you have to be registered with them. They do a lot of, they send you emails to say this is going on and this is going on. They have BDA (British dental association) events as well, so as a dentist you get told there are big conferences going on, you just pay and go. There are always other little little ones, there are the online CPD, that if you have registered with a company online you just do it through that, depending on what suits you.

What do you think is the best model for supplementary education and training and why?

Online is amazing. Online is so good coz you can just do it when you want. Some of it you can start it and then pause it, and go back to it. And making the time to go after work is very difficult, and travelling, you don't know if it is local to you. And cost of travelling can be a bit much.

How is learning recorded and verified?

For verifiable we log, and we have a certificate so we file it. The non-verifiable, whatever you do, at the end of the month, end of a couple of months, you just pop it in the plan. The thing is the GDC (General Dental Council) might randomly decide to choose you and say they want to see all your verifiable, so you can't just attend one, you need to be able to back it up.

When you attend do they give you any tools or resources to help practitioners apply their learning into practice?

No really, no. it would be good if they did. You see case studies in practice, but they don't really give you anything extra, no.

Are there any tools that are not currently utilised that you feel would be of benefit to support application of learning?

Handouts and things during lectures would be quite good and you struggle scribbling it all down. I am one of those people who like to have all the facts, especially if you are paying for it, you want to be able to make sure you have something to show that you, you know, did it. It is mainly seminar/lecture. We don't have much, say, if I wanted to improve in a certain area of dentistry, you might do a practical workshop, but you wouldn't really do that otherwise. You would have to pay more for that.

How does evaluation of learning events currently occur both at a training event and afterwards. Do you fill out evaluation forms?

Not really, no.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

Saying that, with radiology, we sometimes get medics, but in uni it was great, because we had people who had done medicine, or had done optometry, or even pharmacy, who had come in to do dentistry so it was interesting talking to them, and you actually learn a lot, so I think that would be quite good if they were overlapped – say with yourselves in pharmacy, I do have to call my brother sometimes (a pharmacist) to check things on prescriptions or to ask, so to have pharmacists there to tell us,

perhaps, how we should be prescribing certain things which can make their life easier, I think that would be quite good, yeh, it doesn't really happen at all at the moment, no.

What are the challenges of learning together?

If it was invalid, so you have got there and were overloaded with things that weren't going to be relevant to you. I think that would be the main disadvantage.

Which professions should be included?

Anyone in our field – anyone who works in the NHS I think would be quite good. Nhs/private a mixture of both as they understand how the profession is. With technicians, we used to at uni, with technicians we speak to them on the phone. We don't have any here but say, I do the endodontics, and we have people who are doing other things, for example, last week we had a talk with an implantologist who came in, so that was good, because it teaches us what we should look for and when we should be referring, and just a refresher.

What qualifications do other colleagues have in the surgery?

Everyone has the BDS (Bachelor of dental surgery) – everyone has to have that, and then if you want to specialise, that is where you branch out, so if there is something you want to go more in to, that is where they do that.

Do you have any other comments that you think would be useful?

I think we can learn from you! I think it is more about how we can learn more about the prescribing. I know that when the pharmacists are good, like the one next door, they gave us a sheet on the changes. Obviously we get it in the BNF, but things that were more specific, saying this is probably what you will be prescribing, or this is how to do it, so I think local relationships are important. I phone them next door sometimes to ask things and it is really really helpful.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

Radiographer

How do you become a radiographer in the UK?

There is only one way of becoming a HCPC (Health and care professions council) registered radiographer in the UK to get the protected title, which is to do an undergraduate degree, BSc Honours in diagnostic radiography or therapeutic radiography, which is a 3 year course. In Scotland it is 4 years. The practice is all part of that three years. Normally in first post, you would start with what is called first post competencies but you would do a year, um, in a preceptorship. You

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

Right, we don't have a set number of points, I know some professions will have CME or CPD points that they have to collect. We just have to show evidence to the HCPC that we are engaging regularly with ongoing CPD and we get audited every 2 years. It is a random audit where you have to present your CPD portfolio. Now, older people, such as myself tend to do that in, independently, hard copy, reflective accounts online as they undertake their CPD and just save it and keep your fingers crossed that you aren't called to produce it! There is a very good online tool called CPD now that the professional body, the College of radiographers make use of and they have available. And most radiographers do use that now.

How does your profession/country currently provide supplementary education post registration?

It is a mixture of everything. We try and encourage radiographers to make their portfolios have a mixture of everything so it would be attending any formalised, um, credit bearing postgraduate programmes, if they are going off to do a masters level degree or PhD that would all be recorded. It is attendance at conferences, um, so all the formalised things. But we would then also encourage them to do independent reflection on learning events that have taken place in the workplace. So reading of articles, dissemination of their own study, their own research. If they have spoken at a staff meeting for example, or they have presented at a multidisciplinary meeting. Then that would all be recorded as well and reflected on and used as data for CPD.

What support, if any, is given to support education post registration?

That is always a very nutty problem. Although of course CPD is a requirement I would say nearly everyone would argue they are not given protected time to undertake CPD. Just occasionally there might be a bit spent on them like attending an annual conference that you might be funded to go to but you undertake regular ongoing CPD, no, no protected time.

When does learning traditionally take place?

It is very much a mixture. Things that are organised on a regional basis and through the college of radiographers are quite often organised at weekends, so there could be an AGM with some study events going on on a Saturday. There could be lunchtime multidisciplinary meetings which can also be used as education events. Sometimes there are study days during the week, but we have found recently, as I have been

involved in trying to organise those that things are not mandatary, so there are some things you have to do for your professional competence, but if you are trying to organise something, for example, we did a study day on the use of the Alexander Technique and ergonomics, and particularly mammographers, working in breast screening, big issue, big problem, RSIs, people off work, we didn't get as good an uptake as we thought we would because people were saying I just can't get time off because the service is so pressurised.

Which providers are used for supplementary education and training?

The royal college is probably the main provider. There are subsections within the profession. There are conferences that are organised by special interest groups, or, um, groups of like-minded professionals who put them on. For example, within breast screening, which is my particular field, we have a bi-annual symposium in mammography which is put on by a group who specifically were set up to organise that. Though it has college support and backing it is independent.

What do you think is the best model for supplementary education and training and why?

Probably to do with my age but I personally prefer face to face. I just feel that when you have the face to face interaction you can make sure that the learning is actually taking place, whereas often, when you are expecting to do something online it can be done in a bit of a rush and be seen as a bit of a tick box exercise. I just have to do it because I have to do it. Um, however, having said that, attendance at study events, per se, doesn't really constitute CPD, it is what did you get from it when you reflect back on it afterwards which would be the important bit, so just turning up doesn't really constitute, whereas if you are doing something online and you have a bit more time you can give more thought to it.

How is learning recorded and verified?

There is no set record. You should be matching against the KSF, the knowledge skills framework, but that is the only regulation. We don't have a minimum number of points or hours. Some of the various accreditations within the profession require a minimum number of CPD event, for example, if you are wanting accreditation as a consultant practitioner radiographer, you would be expected to show, um, CPD reflective diary on a minimum of 12 CPD events when you came to be applying for accreditation to show you are not just working in advanced practice, you are also working in service delivery and research and the other elements you need as a practitioner. The four pillars.

What tools or resources are currently used to help practitioners apply their learning into practice?

Certainly within one of the journals, well both of the journals that the college of radiographers produce they have a CPD tool at the end of it and they give you, um, elements within that paper that you need to reflect on and then record within your CPD so you are guided very much into what have your learnt from this, what value has it been to you, what clinical practice can you take from this, how will you use this in your working life. So that is structured guidance. I think most people follow that. When you

are writing for those publications it is down to you as the author to give the triggers that you expect to be reflected on.

How does evaluation of learning events currently occur both at a training event and afterwards?

No, I think, well not all of the events are done through the college. Those that aren't, most of those providing those events will have their own form or evaluation but that is much more about how the day went, what did you get from it. Now, you can take those and use them for your own reflection, but then, normally there is something physically done at the end of the event for the organisers to look at. Personally, at the end of it I would encourage participants to think what have they learnt and what can they use to record in their CPD portfolios but we don't do anything formally. That's not to say that no one does. We do, when people come for clinical updates, perhaps they have been out of practice for a while or they are certain parts of the NHS, but screening programme radiographers are required to have updates within their skill set as mammographers. When they come to one of the national training centres to have that update, at the end of that we expect them to write up that learning that they got from that day and send it back to us, and until we get that we don't issues them with a certificate of attending that update. It is not just about attending but having learnt something so we need the evidence of that but that is a local thing we do personally at the two centres I am involved with. They normally send it back because they want the certificate to be part of their CPD evidence.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

In the undergraduate programme they take part in the IFP, the interdisciplinary foundation programme, but I think within their first term they do that and that is alongside physios, medics, nurses, those who are doing biomedical sciences, and presumably with the new occupational therapy course that is starting, it will involve them as well. In postgrad education which is where I mainly work we do a lot of cross professional teaching because I am partly funded by the breast screening programme so we deliver a lot of courses to breast screening nurses, breast screening radiographers and clinicians, so things like family history and genetics clinics obviously that would be across the professional boundaries of radiographer, nurse and doctor. Um, which they all seem, well it was unheard of twenty years ago when we started there was a lot of issues, especially from the medics that they didn't particularly appreciate the value to them of being in the same cohort as radiographers and nurses. I think that idea has died a bit now and as the years go by we get a lot of good feedback from all three groups to say how much they learnt from the others. Most see the benefits. There is still a bit of hierarchy.

Do you have any other comments that you think would be useful?

No, I don't think so. It sounds like an interesting project and it would be good to see the outcomes.

BMA

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

Are you meaning in general? So, obviously like most professionals, they have to keep themselves regularly updated, to have appraisals, and to maintain their registration with the registry body, which in the case of doctors is the general Medical Council (GMC). Um, I have to say, maybe I should know this, but I don't know specifically what the hours, or the requirements for how much they have to do. But you'll probably find that on the GMC website and they would give you the specifics, but, um, I think, post graduate. Well, I suppose it depends what you mean by post graduate because doctors are a bit strange in the sense that, post graduate after a five year degree in medicine means they are then a junior doctor but they are still in training, so in one sense, there is no point in them doing continuing professional development as they are still training, and still learning and still being taught and going to lectures and keeping up to date etc. so that can be, you know, quite a long, you know, it is two years of foundation doctor and anything up to ten years they could be doing specialist training, and then, I suppose, the question about post graduate, once someone has become a qualified GP, or someone has become a qualified consultant, that's probably when they need to start to think, I have done everything I need to do to get me to where I am, now what do I need to do to keep myself up to date and registered. So that's probably then when continuing professional development kicks in and they start doing that sort of thing! Remind me what the question was?!

So, when thinking about continuing professional development then, when they have go to that ten year post finishing and got all their qualifications, are they are requirements you know about CPD, or to link to the next question, how would they go about getting that CPD?

O.k. as I said, there are requirements to maintain their registration. They need to keep themselves up to date, and what the actual requirements are, you would need to look at the GMC website. Those individual doctors would know what they need to do. So, a lot of them will do, they will do all sorts of things. They will do post graduate courses, they will do, um, the BMJ, has a big learning site where there are lots of modules, they can do online modules, there are all sorts of specialities and subjects. Um, we, at the BMA, in London, run regular, CPD events so people come along and do two hours in the evening, with lectures and asking questions, and we encourage them to direct all their learning, so people can keep a portfolio of all their evidence, they get certificates, and then their can help them with their appraisal and to maintain their registration.

You talked a lot about face to face and online. What do you think is the best model for supplementary education and training and why?

Well, you know, my background, I am an educationalist, so everyone has a different learning style, and I think some things are better for some people and some things are better for other people, and you need a mix, sort of dynamic and up to date and interesting. Some people will like to do head in a book and theory and others will look to be doing practical and the best is probably a mix of those things, so I think the individual has to find their individual best way to learn, and what sort of learning works

best for them. In the past, and this is me just making an assumption, I would, many people were, you know, a little old fashioned, so liked talk and chalk, or, you know, being lectured at. I mean nowadays its, um, its changed dramatically, with the online options and simulation laboratories and, you know, cinemas in the office and lectures on line. There is a lot more opportunity and I suppose you would come to expect that as that is how they have been taught at school and education where they use computers as well as books and that sort of stuff, so I don't think there is any best way, I don't think one type of learning is better than another, I think you will find most people do well with a balance, um, and also depends on individuals learning style and what they like best.

When does learning traditionally take place?

Well, what we do in London at the moment for our members is we have twice monthly CPD seminars and we talk to, there is a face to face element where people can come along to BMA house, of an evening, about half past 6 for a couple of hours, they come to BMA house and we have a number of speakers who will give half an hour presentation and then there will be a question and answer session afterwards. But we have recently, in the last year or so, also started live webinaring those so that its not just open to those in London or anyone who can get to BMA house. Anyone can be viewing that live, and there is a webinar facility is there so they can see the speaker, they can hear the speaker and they can write to someone who is sat in the room so they can pose questions to the speakers and presenters. So that has increased the amount of people who can get involved and then those who want to, so that is live, but then that night, the recording is uploaded too, so other people can go and watch the recording. So they don't have the interaction with the recording thing, because of course it is a recording, so they can't ask a question, so if they have a query they will need to look it up somewhere else, but it is another type of learning some people find useful. It might be that you watch it after they been and they want to watch it again, and maybe build knowledge and understand what you were learning and perhaps, um, you might do it afresh and then think 'I might need to go and read up more on that,' so go to the CPD article in the BMJ or other modules that the BMJ provides. What I do, after, I organise these CPD events, so after the event, I give everybody, I email all those who attended and all the people who have registered for the webinar, I do signpost them in a number of ways. I signpost them to the speakers presentations that have been put up on the website and they can download those. I signpost them to the recorded event that we recorded. I also have a colleague in the BMJ who will look at the subjects we are looking at that night and she will pull out the modules that are related, so if we were doing, paediatrics, if someone was speaking on paediatrics, she might pull out modules that were related and I would give them those links in the email so that would signpost them to other resources that were available for them to use. That is all free as part of their BMA membership. They can access those and do that, and get CPD points for doing those online and we also give CPD points for attending the events that I have done.

What support, if any, is given to support education post registration?

I have no idea! They will all do something different. I imagine it is mainly in their own time. I mean one of the things you could do, if you want access to people who do CPD

and you wanted to talk to them, you could advertise you wanted to do that, at my events, if you wanted to and you could speak directly to doctors, so you could attend and speak to people or you could mainly produce a little leaflet or you could put something that I put on the emails I send out saying this researcher is interested in talking to you about your CPD and how you do it, if you are interested contact her here. So I mean to get more of a view I would be happy for you to use that opportunity to get in there.

From a BMA point of you, how does evaluation of learning events currently occur both at a training event and afterwards?

We do. After each event we send them another email, in addition to the one I just talked about. We send them a survey monkey, um, and, um, do a survey monkey of everyone who registered or attended and they complete that. And what we do is, we tie completing the survey monkey to them getting their CPD certificate, so I have got a, we pay for an organisation, they are called CPD services, and, what we do is, we divide them with names, title of session and the email address and we get all that. We ask them in the survey monkey what they want on their certificate and that all goes through automatically, so they get an email of attendance emailed to them, so, that doesn't mean they have to sit there and think of things to say just because they need to get their certificate. They could leave the questions blank, but as long as they have completed the bit that says what name do you want and where do you want this to be sent they will get one, so we are not forcing people to give feedback, but we get quite a lot of, you know, suggestions from people who attend for other topics to cover in the future, and on the whole we have a high percentage good to excellent, so positive responses and comments. We very rarely get any poor or bad, maybe once I can think of, where the person was a particularly poor speaker, then that reflects on the whole event really. But on the whole it is generally well received and good positive feedback, and we are getting quite a lot of coverage across the country now. We are getting a lot of people from all areas of Britain.

How long after the session do you send the emails?

Well, normally me and my secretary work on these things the day after. We aim to get these things out the morning of the day after. Sometimes it might be two days if we are off or we are in a meeting, but we try in the main, we try to get them send off immediately afterwards, and we give people a three week window for them to complete it. And this is also about managing large numbers of people, and trying electronic ways of dealing with that so you don't have. I mean, the man power is not there to deal with everyone individually, so you give a three week window, so the people who have done it by then, then go on to receive the certificate. If people haven't done it, we just can't manage. We have had some webinars, and we will only give certificates to those who watch live or do it very quickly afterwards to complete the survey monkey, because if not, as time goes by, you could be dealing with 5 or 6 thousand people having viewed a webinar, and you give a certificate to all of those, it all gets a bit difficult to manage, so we do keep some tight rules on that.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

Well I think, as an organisation, our attitude would be, well, any learning is good learning, and any opportunity to learn is a good opportunity. As long as doctors, and other professionals who might be part of the multidisciplinary team, are gaining the stuff they need to get qualified at the level they need, then, all those opportunities are fine. I mean it wouldn't be any good if you were doing a multidisciplinary learning and the doctors were going on something and it was all focused on physiotherapy, so they weren't getting any of the medical stuff, because then, they wouldn't be getting the stuff they needed as a medic, so in general, our position would be good it is a good thing, and it links to what is going on in the workplaces with deaneries or HEE, so that is a good thing. As for us, you know, the events I put on, they are specifically for our members because it is a member benefit. I mean they pay a large subscription to be a member of the BMA, so it is about meeting that need. Although, if other organisations want to do something, something with nurses or pharmacists etc. I would be keen to look at something like that. I am open to that and I am sure a lot of doctors would be interested to hear the views of other professionals. So I think positive really, as long as it didn't affect people's situations negatively in any way.

I think you have answered the questions about positives and challenges, Any more you can think of?

Yeh, you know, one of the things is about getting people to open up. A lot of people who come to our events, they are middle aged onwards, so they are the sort of people who trained, I think they are the sort of people who, could become, a forgotten group, like nomads, so they will be. These people will have trained in old fashioned ways and they might find it difficult, because they are supposed to be the doctor who knows everything and there is that sort of view of being a doctor. So having to open up and say they didn't know something or they might ask a question that others might think is a bit stupid, there might be some embarrassment over issues there, with other professionals being there. And certainly, not all groups, but probably, the younger, junior doctors now, would be a lot more open to sitting there and talking to their other professional counterparts and asking questions and learning from other people's questions. I think maybe the older doctor may find that more challenging.

Who should think should fund it, and lead joint learning?

Well I suppose we could have different funding arrangements, because ultimately, the organisation I work for, and other organisations often the issue is driven by money. It is a money making thing. So in the sense of the way we do stuff, it isn't a money thing because we are giving people something for their subscriptions so you are maintaining that relationship because you are saying this is a benefit to you, because you pay your subscription and you get all these things as well, and we might put on one off day courses or one off whatever, career sessions and they will be charged so the funding comes from the money you make from providing them. I mean, if it is something that is found in a workplace to be needed. You know some CPD is needed in the workplace then it becomes the remit of the workplace for them to sort it out, with all the support they can get, so places like health Education England, the education bodies probably have a part to play in the funding, but I wouldn't say other bodies, like the BMA wouldn't say it is a benefit to our members so you know, we could probably help. I mean we probably couldn't put our hand in our pocket and give you a large sum of money, but

actually, there are things that are worth money, but aren't money, like providing you with the speakers, or giving you a room, or organising the session for you etc. etc. so, I have done all sorts of things with the deanery in the past where we have put sessions on in London where the deans came and spoke about different things and talked to junior doctors. I mean they wanted to do them and cover these subjects but we provided the organising and the room and facilities at BMA house as we could see that would be of benefit to our members so it was a joint thing, but money is always tight isn't it.

Which topics do you think would work and what professions should be included?

I suppose, I think I said it in an email to you. I think most doctors learn their pharmacological stuff from the BNF and what they are taught in their consultants team, and the consultant will say in this certain situation we will give x, y and z drugs, so there is an obvious, because there must be some benefit to doing stuff between doctors and pharmacists, or pharmacologists or experts, there must be some there. I think where people work in teams, obviously there is stuff there around conditions. In the community there is a lot around these locality teams. There must be stuff there that would benefit the multidisciplinary team to bring people together to learn about stuff. And I suppose that brings in another funding area, like drugs companies. I mean sometimes we poo poo these ideas but, you know, sometimes, if you are going to get something out of it and the drugs company is willing to sponsor and pay and put it on, sometimes you have to bite the bullet and go for it, as long as there is no back handed way, you know, you have to purchase x, y, and z that you don't see happening.

Any other comments you want to make?

No, I don't think so. I may well think of something afterwards and I will send you an email. But, you know. I would be interested to see how you get on and see your results. I am interested in CPD and what we do for our members and looking at how we improve it.

BMJ learning

Can you tell me who would look at British Medical Journal (BMJ)?

I know mainly about BMJ learning, because that is the product I know best, but I can then expand out about general things across BMJ. So BMJ learning, is a BMA member benefit, so we probably cover about two thirds of the doctors in the UK. About a quarter of the BMA members use us. The ones we contact, about 80% use us, but we can't contact everyone, but that's another story! So we are really valued by the BMA membership, and we are the most used membership benefit that they have, so, um, we have, about, globally, we have about 60-70,000 active users and 60% of those are doctors. The other 40% are medical students, nurses, pharmacists. I think pharmacists is about 6%. And from that, last year, we had a million module starts, so they are really engaging with the content well. The people who pay for it themselves tend to do more modules than people who get it free through BMA membership benefit. From a doctor point of view, and nursing actually, we are 50:50 split primary and secondary care, certainly in the UK and I think across the BMJ it is fairly similar, about 60% doctor, and 40% being a mixture of medical students and other health care professionals. I know that for BMJ learning, so I am guessing it is similar.

How does your organisation currently provide supplementary education post registration?

So we have a variety of things. Learning itself is online learning. We have 1700 modules, 1200 of which are available to normal subscribers. The other ones are what we do for our journals, which are only available through our journals. The CPD sort of product is 1200. Half of those modules are interactive, in house 'proper' learning modules. The other half are, read this journal article. We are not so proud of those, but they get really good usage actually, particularly the ones from the BMJ. The modules tend to be an hour long, as everyone is saying they want bite size. They want to be able to pick it up, put it down, and control their own learning, rather than spending an hour on a topic, so we are moving in that direction more and more. We do have a mix in our learning. We do have the very traditional GPs where people want to read and do tests for an hour, and then we have the much younger group that have completely different ways to learn, and they just want to watch a video or something, so we are moving in that direction, without alienating our really loyal member, GPs.

So demographically, does it tend to to be the younger ones who do more interactive?

That is a really good question. I really don't know but I probably have the data. I will have a look. But we certainly believe so. BMJ learning, as a department, also has other products, so there are masterclasses as well, which are face to face learning, um, which, we have about, between 2 and 3 hundred attendees for. We used to do them for specialist, but they weren't that popular, so we tend to focus mainly on GPs. We used to do them all over the country, but the regional ones weren't as popular, so we only do them in London now, and then, I think people are wanting less and less to actually come to the formal setting, that they have to pay for. I think there is a lot of free stuff that the hospitals are doing, and that the drug companies are doing, so that people don't really want to pay for a face to face because it requires quite a lot of effort

on their part. So the events groups are now doing many more webinars, which are quite popular, which they do live, and get about 40 people each time, and then they have a store of them, so you can actually view offline as well. That's all the real educational stuff we do, other than, we run conferences as well. What we tend to see, BMJ learning, we know really, supports, sort of, fully established specialists and consultants, who don't really want to do e-learning, whereas when we look at our conference attendance, it is much more geared towards the specialists, which sort of fits with research generally we have seen which has found that people that are specialised and more senior, the less e-learning tends to apply.

How is learning recorded and verified?

So at the end of every module online they get a certificate. The majority of our courses tend to have an assessment, so you pass or fail. It isn't a tricky assessment. It is usually five or ten questions. Some of them don't. In the UK we haven't bothered getting officially accredited by anyone because, actually, for revalidation, most people don't, fully have to do accredited material, as long as you can justify why you did it. And also, at the end of the course, there is also, alongside the certificate, an e-portfolio, so their activity will automatically be stored in that, but they will also reflect on impact, and we have little questionnaires to do at the end, which is becoming more and more important for appraisals and revalidation. Not just learning, but saying what they are going to do with it, and how they are going to put it into practice. I think that moves hand in hand with the fact that the majority of our modules are now very case based and it is not about learning facts and figures. It is about taking the guidelines you want to learn about or the condition you want to learn about and thinking about how that knowledge will help you in practice.

How does evaluation of learning events currently occur both at a training event and afterwards?

Purely data wise, we look at start rates and completion rates, which kind of tell us if the topic is popular, and the completion rates tell us that the module is of sufficient quality that they want to get to the end of it, and pass rates, so are the questions written to a standard, but most importantly for us, we have huge engagement through user reviews. So as they go through the journey, they don't have to do a review, but about two thirds of them do, and they rate it out of five, so we have star ratings and user reviews which are all reviewed by our customer services team, and we get lots of suggestions for new content, and positives and criticisms about it, which is phenomenally useful for us, so actually, it is mainly the qualitative stuff that steers our direction in terms of content, but we do look at user traits, but I don't think that tells you particularly much, but users telling you what they think is much more important.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your learners? Do you tailor any of your content for a multi-disciplinary audience at all?

So, when we are writing the case studies now, then, we are writing them with a much more multi-disciplinary focus. We have actually got two potential, offerings for pharmacists, which are one in primary care and one in hospital pharmacists, so particularly the one in primary care, is about pharmacists working in primary care, so

actually we sort of piloted it, and the content, the content of the content is entirely applicable, but the feedback was that when the statements say ‘you are a GP’, so we are looking about bringing the multidisciplinary bit in, but also for specialist nurses. I think maybe at the moment we are alienating the professions by our language, rather than the content. For pure pharmacy, run of the mill core pharmacy competencies, we don’t particularly have much content, but where we have been focusing is on those, um, where we are blurring the lines between professions and getting interprofessional working that is our strength, and we use specific content partners for nurses, and we will be looking for pharmacy partners for specific content.

Any other comments?

I think, take everything that medics do with a pinch of salt. Take the good bits and ignore the bad bits, because we are very traditional. We don’t change very easily and there is lots of stuff I think with appraisal and revalidation and the knee jerk reaction that happened after Harold Shipman, I think, I don’t think we have necessarily got it right. I think for pharmacists, we obviously publish the European Journal of Hospital Pharmacy journal and I know they are talking about developing a common European training framework. I think you have a real opportunity with that to actually do things the right way. I think take what we do with a pinch of salt and feel free to throw stuff out.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

CPPE

How does CPPE currently provide supplementary education post registration?

Um, we have a lot of formats available. We have online learning, so we have a number of e-learning courses. Some of these are extended e-learning courses so they will run over an extended period of time, from 8 weeks to 15 weeks. Um, so that has longer engagement with people. We have e-learning programmes which are more bitesize, we have distance learning which we send to people twice a year as hard copy, usually linked to some national priority, or some national learning campaign. We have e-assessments that test knowledge. We have (pause) trying to think now! Face to face we have workshops. We have a series of workshops, usually linked to the national learning priorities. Some of those are expert led. Some of them are peer led focal points where the learning is from and with each other in the room. Um, is that it? We have thelearningpharmacy.com which is open to non-registrants, so that can be used by non-registrants.

Can you tell me about who funds CPPE?

We are funded by Health Education England. Our contract is held with the University of Manchester, and administered by Health Education England North West. And we are funded to provide CPD for pharmacists and pharmacy technicians.

What support, if any, is given to support education post registration?

All learning is done in peoples own time, so there is no funding. It is HEE policy not to fund backfill, so it all has to be done in their own time.

When does learning traditionally take place?

Traditionally in community pharmacy it has been evenings, so after work. But, as community pharmacy opening hours have got longer and longer it means that where people used to go home then come out to learn, they now have to go straight from work. Sometimes that means they are shutting up shop at 7 and then getting to a workshop that starts at 7:30.

Hospital pharmacy is undergoing a transformation at the moment. We had a learning at lunch programme for hospital pharmacy teams which was quite in depth and had a lot of background learning and then people got together for a lunch hour to work through some case studies. But I think the days of having a lunch hour, or even lunch have more or less gone, so we have relaunched our new programme called Optimise, which is, it can be done in about 40-45 minutes, um, so we have enhanced technology and we have used experts in the field and recorded a video of them doing like an online lecture then people come together and they share their learning over about 40 minutes which is a much shorter time and we haven’t called it learning at lunch because we recognise people don’t always get lunch, so they can do it before work, which is quite a popular option or after work.

What do you think is the best model for supplementary education and training and why?

There is definitely pros and cons of each. We have noticed that with our online e-courses that engagement tails off, so if you do an online 8 week course you probably will be engaged with the first couple of weeks, 3 weeks, then something happens, and you think 'I am never going to catch up' and engagement tails off. You know. So we have used the push and pull techniques to engage people so as well as trying to entice them we have tried to push, but I think it is hard to sustain that over a long period. I think with online learning as well, sometimes people just click through, rather than engaging with the learning material, and sometimes, obviously with technology you can force people to fill in things, or force people to click here but it doesn't always work because people just play the system.

Face to face learning, probably more engagement, but then, you do have that 'is learning effective in the evenings' where people have had a long day at work. If they have to take a day off work and there is no backfill.

In terms of uptake is there any difference you know?

Well obviously our face to face courses are limited by numbers, so some courses will be 24 max. Others will be 40, whereas with e-learning and e-courses there is no upper limit. Um, so, I mean it is hard to say really. With all day workshops we will get people who book an all-day one and then not turn up because they have had the offer of a locum or such like.

I know CPPE have a penalty system for non-attendance. Does that work?

To a certain extend. People are aware of it. They are aware that if they cancel at any time within 10 days of the event they will be subject to the cancellation policy. Obviously, you know, we have had people who, for example, have had a car accident on the way and if they just ring us up or something, obviously we won't apply the policy, but just for people who, they, couldn't be bothered to come, yep. Does it work? I don't know, because people still don't turn up.

How is learning recorded and verified?

We have MyCPPE record so if you actually log on to the CPPE website, um, any learning you do through CPPE is automatically recorded there, so any assessments you passed, so if you have taken this assessment and failed or if you have taken an assessment and passed. If you have attended a workshop, downloaded an e-learning etc. it is all recorded there automatically for you. You can make that visible for commissioners or you can hide it if you prefer people not to see it. The fact is that most people will make that visible so potential employers can see it. So rather than having a folder with lots of certificates of attendance you can actually keep it all in one place online. It has your learning going right back.

What tools or resources are currently used to help practitioners apply their learning into practice?

Through the assessment we try to get people to test knowledge and understanding, but we also test comprehension, which is probably as far as you can go with an e-assessment and multiple choice, but you know, if you are just testing knowledge and comprehension then you are testing that someone knows something at a particular

point in time, but it is a greater skill to actually be able to use that and apply it to the case study, so most of our assessments will be a case study and you have got to choose the best option, and all of those options may be feasible and more than one might be something you would do, but one would be the best that you can do. So we do that. Um, during the face to face and focal point workshops and also during the public health workshops we do have a large amount of peer to peer discussion and we will use case studies and we will ask for people to share their learning and what they have learnt, and what they would do in a situation and that stimulates discussion.

How does evaluation of learning events currently occur both at a training event and afterwards?

We have feedback forms that everybody does. But that's probably not true evaluation because if you were going to do proper evaluation you are looking at what difference has that made to one's practice which you can't measure in a two hour workshop. So at the end of a two hour workshop you can only measure at best I think, peoples intentions. So we do try to get people to verbalise at the end of a session so name one thing you are going to do differently as a result of this evidence, because I think there is some evidence that actually saying something out loud you are much more likely to commit to it, rather than just write it down and think about it. So we get people to do that, um. I don't think you can really evaluate outcomes any further. Obviously we do have researchers available at the University of Manchester. They do evaluate, so they do certain programmes, so there is a big evaluation going on consultation skills but that is very much in the information gathering stage.

How about online courses?

Feedback is collected automatically, so once you have finished an assessment there is a link to feedback there as well. We do give people feedback if they have failed an assessment. It will have a question and say you could do with extending your learning in this area, so won't give you the answer but will point you to the relevant resources.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

I think there is certainly merit in it, it is just difficult to get funding from PGE to do that. There is certainly merit in it and we have run a number of interprofessional education events with GPs and so on, both professionals can learn from each other about how we approach things, BUT, we did locally with one of the LPCs something about peer feedback and they actually went into each other's practice and just did observations to learn from each other. But that was actually quite, (pause) I think people found that quite difficult because they didn't feel they could be themselves when they were being observed by a peer. And especially if they were the pharmacist being observed by the GP they found that a little uncomfortable.

What do you think brings that hierarchy?

I don't know. I don't know if it is something that happens right at the undergraduate level, don't know. Some pharmacists still feel they are second class to doctors.

Who should lead joint learning?

HEE fund some projects through the CEPNs, so there is some funding but it has to be a specific project and it has to be linked to some kind of service, so it is not just training for training sake, or learning for learning sake.

Do you have any other comments that you think would be useful?

I suppose, I think we do have a robust quality assurance system. All of our programmes are quite a long time in the development which is good and bad, but one of the good things is, obviously, we draw on the experts. So we get, when we sit in a room to write a learning programme, we get all the experts and we also have patients involved in that process which has been very valuable to have that part, so I think that is a real strength of what we do, so the development process is definitely a strength. I think that, in terms of challenges, I think it would be to make people make the time, and value their learning from something they have to do to something they want to do. And I want to do it for me, because I want to provide better outcomes for my patients, rather than this a burden and something I have to do, to tick. I think, another strength is also our assessments because they are not set up to be hard, but they are set up to find out if you have actually done the learning, and if you have learnt enough to be able to use that in a different situation, because you are never going to get the same case study you have read about in the book. That is never going to happen, you are going to get a variation on that theme.

Can you say a bit more about how CPPE assessments are being used around the country for services etc.?

Um, well, our assessments are being used around the country by commissioners to actually, I suppose, verify, the competence of pharmacists and pharmacy technicians who are providing services. So we have moved away from accreditation model to a more declaration of competence, where pharmacists and pharmacy technicians can actually look at the look at the gaps in their learning, so they can say I am competent in this and competent in that because I have done that learning but I have a gap in my knowledge here so how do I address it. So once they have addressed all the gaps in their knowledge they can actually declare that they are competent to provide the service, but usually the commissioner will say that once you have declared the competence you then then put on that service. But the good things for the commissioner I suppose are that the pharmacy profession takes that professional responsibility, so if things were to go wrong, for example, where there was a patient safety issue, it is not the commissioner who has commissioned the training. It is the pharmacy professional competence so that is why it works very well for commissioners.

HEE

What is the remit of HEE?

As we say on our website Ricarda, we ensure delivery of the future workforce to deliver population health and population healthcare. Um, and of course our core business is undergraduate professional, healthcare professional training. Clearly how we do that is changing and post graduate medical education training.

So post grad it is just medics?

Well, of course we do fund postgraduate other courses, and that continues at the minute, and postgraduate steps into health, like pharmacy for example. And we have different relationships, so it is complex isn't it? We do different things for different professions. Well, as you know for junior doctors we manage their training from degree through to CCT.(Certificates of completion of training) and we have also have a hand in some, but very small scale post CCT development, but of course we also have a link with guardians etc. revalidation. That's small scale. The big bucks are the CCT (Certificates of completion of training) training. For nurses of course we are used to commission and we have two to three years to run through, um, but we still look after quality of training and placements. We don't do that of course for pharmacists who go off after their degree and then we pick them up largely, or broadly I should say.

How does HEE currently provide supplementary education post registration?

Well, what we do, is we don't provide training, we commission it, or find it, and ensure quality of it.

How do you ensure quality?

Through contract and the formal contractual process through supporting education and training supervisors who we fund too, so take doctors for example, a variety of different ways. Through providing training indeed for those who are mentoring. Again it is profession by profession. Group by group. I should also say we set standards.

Which providers are used for supplementary education and training?

Well, of course, it is all NHS providers who have training, both nursing postgraduate, pharmacists, doctors, apprentices. Training providers in the NHS and then a variety of other providers for different groups. Medical schools, HEIs, not so much further education colleges, but expanded apprenticeships. But you will have a different relationship with them because the employer largely have the formal relationship and we will be behind that ensuring standards that are set and met.

Do you give any support?

We don't fund backfill, no. remember, post-employment training is in the interest of the employer and service provider too, so, if you like, that's their contribution. If we were to fund backfill we would have to get extra funding,

What do you think is the best model for supplementary education and training and why?

Thoughts I have are that we need to keep up with new technology and new ways of learning, and sometimes I look at some of our delivery and I think, um, we need to up our game really. What we don't want is kids coming out of school or university then being shocked at going back in time! We are at risk of that I think.

So provision depends on the university and education provider, or course, but I think more about our employers.

How does evaluation of learning events currently occur both at a training event and afterwards?

We do absolutely, regular, an annual cycle of quality, so for doctors we have the general medical council survey every year, out of which comes action plans for each employer and each specialty, which are very detailed. We also have the national student survey which applies to all, so that's our training institutes. When it comes to nursing and the other courses we commission and continue to do, we have contract with evaluation points throughout the year that looks at turnover, student feedback, attainment in previous years, and we have an annual quality setting process with providers.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from HEE?

I think we encourage the professional training. Remember we are not the only body, we have got royal colleges, who will also have a view. We encourage professional training to look at new ways of providing multidisciplinary training, and we are having some progress with that. It is very small. We have had some that have fallen over for a bit and they find another way of doing it, so when it comes to undergraduate I think we still perceive that there should be more of that. But it is bound to be through the placements really, or some universities might do some where they have, they are running, you know, the courses, but not all do, of course, in the same way. So we look for opportunities to build that, but certainly when it comes to post education, when in employment, we encourage multidisciplinary.

What is the appetite from providers?

I don't think they challenge or push back on it, but, of course, the degrees are so well, you know, set up with what they need to deliver and when they need to deliver, finding the opportunity to do that, they sort of say, lets do what we need to do with this degree, then you do it post degree.

Who should lead joint learning?

Well, I think the employers should for a start. The problem we have is we still work in a siloed profession way. Sometimes some of our big employers are far more traditional than smaller ones, and you think, 'hang on a minute!.' Ha.

Do you think there are certain professions who are more for or against it?

Well, our nursing colleagues always feel the hierarchy.

Who do you think should fund joint education and training?

We have to make best use of the funding we have got because there won't be any new. How we get most out of what we have got.

Do you have any other comments that you think would be useful?

One thing I think we have got to do that we are all, um, with the end of commissioning, um, health care professions starting life, is having SHAs or HEIs to do the commissioning, that takes the responsibility away from the employer to regard any education as training and affecting the quality of their service. I think we need to have that conversation more and ensure the employers see that education and training is part of having a high quality workforce providing a high quality service. Whilst we have been around we have been able to do that to some extent, on their behalf, you know.

RPS ex-president. English Pharmacy Board member

How do you register as a pharmacist/other HCP in your country/profession and what professional requirements surround the need to complete ongoing education post registration in your profession/country?

Four year master's degree, followed by a year pre-registration and then ongoing continuing professional development that requires nine records per year, and normally are tested every five years, although with revalidation that's likely to be on an annual basis.

As the RPS, how do you currently provide supplementary education post registration?

So the RPS doesn't have a role in provision. It's a organisation that is there to support you and direct you to other places. It can act as a place where we can provide a CPD recording place, which is what the Faculty does, or the foundation, but actually we refer you to other providers, ideally. Um, to be able to provide that training. Although we have a partnership arrangement with the CPPE, in that respect.

What about backfill, or funding?

That's not within our remit

What about LPFs. What do they provide?

Well. Its an interesting bit to see if LPFs provide education and training, or not. There is some discussion going on with that at the moment, on the basis that, where is the assurance of quality, if it has an RPS badge on it, so we are a bit, we are currently in the position where, um, we are reviewing, whether our relationship as an organisation, is using that avenue. We think there is no reason it shouldn't be, but its probably about transfer of knowledge, rather than pure education and training development, in that point of view. It doesn't mean it shouldn't form part of your CPD, because effectively it is CPD as it is developing your clinical capability, or your expertise within care, but it is not formal education or training.

So, RPS from your perspective, don't provide any education or training under any of the banners?

No, because if you look at it. The foundation and Faculty are general level framework, and advanced level framework, and they both are frameworks, so they are there for you to populate.

Does the RPS have a view on formats for supplementary education and training and why?

Again, I don't think we do. I think the current positon is, and again, that is part of the review that is going on, is that different people use different methods, and there is no single method that is right. Now whether that is online, or that's through face to face, whether that's through social media, whether that's through Facebook, again, it will be individual, and again, part of the problem today is that the range that you have to offer has become more complex, not more simple.

What tools or resources are currently used to help practitioners apply their learning into practice?

In fact, that is really interesting, because what I think is really useful in that respect is the Foundation and Faculty, because the framework identifies areas of expertise that you should have whether as a generalist, or advanced, and in each, the fact that you have that can start to identify gaps of knowledge you may have, therefore there won't be how to fill them necessarily, but it will say these are the areas you need to think about, and do more around, and that is not a tool in a pure sense of the way of provision, but a tool in the way that it helps identify your own weaknesses.

How does evaluation of learning events currently occur both at a training event and afterwards?

So the RPS, because we are not a provider, don't have to evaluate in that sense. We accredit others, so we will look at training programmes that other providers produce and we accredit that training, we have a training seal. Like the stuff we have run around the leadership programme through Health Education South London, is accredited by the RPS, so it has gone through their formal channels, so it has the RPS stamp of approval. For us, that is quite important because we think that one of the things most organisations think about is not being a provider but being an assessor of quality

So, how do you evaluate quality?

So that is done through assessment of the tools they've got, and then looking at where they stand looking against what you would consider good professional practice, so they are assessed almost against our professional standards, so there is almost triangulation of expectations of the pharmacist and the provision that is going on.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

It is an interesting question. The view at the moment it, it is like anything else, you don't know what you don't know. So the perception is, 'why do I need to do this?' it is only when you have done it that you realise the value. If I go back to, it is not quite with an RPS hat on, but have used it in the RPS in terms of thinking, when I did my prescriber training, there was a cohort of hospital pharmacists, community pharmacists and nurses, and we all sat in our little corners doing our training, and then suddenly realised we could work much better if we worked together, but it took time for that to happen, and I think that is the challenge we face to make it happen. I hope that it is the case that what we are seeing in the undergraduate programme, and what we are trying to push, is interdisciplinary training. If you incorporate it there it tends to become embedded, um, and we just need to make it the norm. But it goes back to your thing about care areas, looking at asthma, the right breathe application, and should we be having doctors, pharmacists and nurses in the same room. If you bring them all together at those types of events then they start to see the coalescence. Once you do it, it starts to happen.

You covered some there, but any key positives or key challenges of making this happen?

I think the key positives are you start to coalesce and create networks, understanding each other's area of practice, because, again, one of the key challenges we tend to face is that you don't know what we don't know, therefore a doctor won't necessarily know what a pharmacist does, a pharmacist doesn't necessarily know what a nurse is doing, etc., so if we can help to address that, from a positive perspective. The biggest negative is time, because from a pharmacy perspective we like to have training in the evenings. The doctors and nurses want to do it during the daytime, and that of course is a big problem, because for pharmacists that means we are going to have to have backfill, but that doesn't apply to general practice. General practice have protected learning time, where they all shut their practices, but what actually happens is that they have a contract with out of hours to look after the patients. Pharmacy can't do that, and I don't really know what the solution to it is. Probably something around the more distance learning stuff, webinars, working across. Some of it you can do face to face, but maybe some of it you can do remotely, so you are based in your surgery or based in your pharmacy, and that communication can use todays technology.

Who should lead joint learning?

I think it should be led by the professional associations, so the RPS, the RCGP, the RCN. I think they are the group that can drive that alongside Health Education. I think that one of the opportunities for health education, wherever they are, is to say, actually, you want to do multidisciplinary training, and you can demonstrate it is going to happen, we are more prepared to fund that, that uni disciplinary. So actually you force some of it because you change behaviour as money is based on it.

Which professions should be included?

I think you can go as far and wide as you want, but you start with, all the sectors of pharmacy, and think of that in terms of medicines, then think of that in terms of nursing. I think that is a good place to start. Maybe initially you have a group of pharmacists and a group of GPs and practice nurses, but when you might bring in the district nurses or community nurses, then you might bring in secondary care, as expertise may come from secondary care, rheumatologists, whatever, but eventually you want to broaden it, you want to make as broad as you can. You might want to bring in social care, bring in, on occasions, the voluntary sector, there is no reason not to, but it's more difficult, so let's start with a smaller size and work our way up, and also think about, what is it we are trying to achieve training or development around, and who do we need in the room for that to happen, not always everybody.

Which topics do you think would work?

Well I think something like talking to other health care professionals. Just having doctors and nurses and pharmacists in the same room, and starting to break some of the barriers down. We have talked about theoretical, but it would be interesting to see if anyone goes away and does anything about it, but actually, if they had them in the room, you can force it. So that type of thing is very important. But understanding any clinical area. I don't think it has to be, I think it can be as narrow or as broad as you like, so you could asthma, you could do hypertension, you could do rashes, you could do chemotherapy. You could do anything. Actually, it doesn't really matter, it is it the fact you have started that discussion. Obviously in different cohorts of people there

will be different levels of activity, mental health is a good one, actually, it is as people start to see the opportunity that they think ‘what else should I be doing?’ so it might be starting with what they call the easy topics, asthma, diabetes, hypertension.

Any other comments?

I think there is an element that we have to move away from this formalised form of education and training that we all talk about. Actually, its about clinical capability. I have some serious concerns at the moment that they are talking about extending the clinical diploma to the community sector and increasing the number of places. Why? What skills is that going to give you in terms of patient care and should we invest that money in a more appropriate way, providing the skills and other things. I worry that we are still over educating and not supporting skills and development. For me, there is a really important part of the jigsaw that has to move away from the very formalised form of training to development of skills and capability, which you can record in your CPD, and if it is recorded in your CPD there is evidence you can deliver it. I think, as a profession, we have tended to work in a very structured way. We need to recognise that structure is very important in some ways but we need to recognise that it isn’t needed in all we do.

Appendix 19: Interview transcripts – pharmacists from different countries

Australia

How do you become a pharmacist in your country?

So, um, about generally how someone becomes a pharmacist? No worries. Currently it is required that you do a 4 years pharmacy course as an undergrad and there is a combination of just doing a straight pharmacy degree as opposed to an honours degree. Then there is a year's intern and then there is a series during the intern, there is a series of examinations that the student has to pass as part of the intern year. If you get through that year you become a registered pharmacist. You register with APRA, that changed in 2010. It used to be a state registration but it now a national registration. APRA is the Australian health practitioner regulatory agency, but the division that governs us is the pharmacy board of Australia. So, if you are practising it is called general registration and that is annually. It is in December you have to make a declaration you are doing your CPD and blah, blah, blah and you don't have a criminal record and all that lot and you renew your registration on a yearly basis.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

So there are requirements. At the moment, on an annual basis, we have to do 40 CPD credits. And that is, a CPD year ends, in fact, it is due to end soon. It is the 30th September, that is when the CPD year ends, bizarrely. Don't ask me why. So CPD credits, it depends on the type of CPD you do. There are 2 types, so, the first group of CPD is 1 credit is 1 hour of working on education and that is basically anything that hasn't been peer reviewed, or hasn't developed other people. So basically it is, you attend a seminar or you read a journal article, that type of thing, so if you spend 1 hour doing that you get 1 CPD credit. If you do a group 2, group 2 represents having some kind of learning, or demonstrating learning or peer review, so for example I do some research and then gain feedback from my supervisor, or whatever, that would demonstrate a group 2. If I had read a journal article and then done a quiz on it, that would be a group 2. So every 1 hour gets 2 credits. Then group 3 is where you actually do something with a practise led element to it, so say that I go to a conference and run a workshop and change perspectives, and learning of a group of people, that is a group 3. So that is where I use my skills to develop the skills and learning of others and change their understanding. And that tends to be, I find, very misunderstood in Australia and I find that leadership amongst leadership bodies, don't seem to agree on what group 2 really represents. Some people say that you have to demonstrate by actual, sort of, changes in behaviours, and have some sort of document of how you have changed behaviours, but how anyone can every really get a group 3 if that is the way it is baffles me, but that is just the way it goes. But there is actually a limit of how much group 1 learning you are supposed to do. So you cannot have more than 50% so 20 credits of your learning as group 1, so it's limited to that so there has to be something where it is peer reviewed. There is no limit on group 2 or 3 but there is on group 1. And there is another mandatory thing that was introduced at the end of 2015

whereby it was decided that people were just ticking boxes and not really, just writing things down to get credits, basically, it wasn't actually about a persons practise. The whole thing is meant to be based on a reflective cycle where you are supposed to be reflecting on your competency to practise. It is supposed to be checking the Australian national competency framework, looking, identifying gaps in your practise and planning CPD around that, but people weren't doing that, so it actually became mandatory in 2015 that we produce a learning plan to substantiate our CPD.

How is learning recorded and verified?

It is a randomised, although I have heard that it is not so randomised in some cases, because the first year, my PhD supervisor got assessed and she had thousands of credits, and went above and beyond, and that didn't seem that random, but apparently it is supposed to be a random thing where you can be asked by the board to produce your CPD documents and evidence of how you have got your CPD and I haven't had been called up, and I haven't been in contact really with anyone that has had that, apart from my supervisor. I haven't heard of anyone being struck off because they haven't produced CPD so, I am not sure how well regulated, or how well that works, but people do get audited apparently. It is a random audit. It can be anyone and you can be asked to produce any of your evidence from the past 3 years, so they can ask to see your CPD from the previous 3 years.

How does your profession/country currently provide supplementary education post registration?

There is no restriction on format. It can be blended, it can be any kind of media, it is just a restriction of how the CPD is administered, so you can't just, let's say do a listening to a lecture, there has to be some kind of peer involvement for at least 50% of your CPD.

What support, if any, is given to support education post registration?

I don't think it is that supported. I think, it can be quite different. Even like, I moved from the UK and went to hospital practise, and that was the thing. If you went on a weekend conference, it would probably be at the weekend, so it would be in your own time and you would probably have to pay for it and claim it back on your tax return so there is not, I think it was a bit of a culture shock for me, as I come from a culture where I worked, where a conference would be during the week as it would be work, and hospital would pay for you to go, and that is not always, or normally the case here.

When does learning traditionally take place?

So there are a lot of professional bodies here. The biggest ones are the pharmaceutical society of Australia (PSA) and they run monthly, locally, in this area, educational seminars that you can go to and attend and they also run weekend courses and things like that. I think they have about, there are about 29,000 pharmacists and they have about 16000 as pharmacists in that professional body, but there is also the society of hospital pharmacists and they have about 5000 of the registered pharmacists with them. They tend to provide, more like, weekend seminars and things like that. I think at one of the local hospitals they have evening seminars and probably about on a monthly basis. I don't think distance is a barrier, well, it is a

barrier in Australia, but they have probably, they are more responsive, because they have, like, rural locations, so they are quite adept to skype and teleconference and running things so you do things remotely. It is quite well organised, here it is seen as par for the norm, as obviously, Australia is a massive place. You know, from the northern tip to Brisbane, which is half way down, takes a 5 hour flight. It is a massive place, so to run national and things like that it is often online, teleconference, so there are options to plug in remotely, and most professional bodies are giving that option.

What do you think is the best model for supplementary education and training and why?

I don't have any opinions about it at all. I think, half of the stuff, I think it is a bit hit and miss as far as I am concerned, in that, it is not targeted learning, so I find it quite often a waste of time, whenever I have been, in person, or attended webinars online, they have been a waste of time, because they are not often covering my unique stance, so I think that is the issue, and it is more of a tick box exercise because you are going to get certificates and credits to prove you have done something and you can copy the learning outcomes and put that in your plan, but the reality of it is, there is very often, it's never really targeted at what you actually want to know.

What tools or resources are currently used to help practitioners apply their learning into practice?

They do, like, quite often there will be online assessments, or they will do e-assessments but I find those quite demeaning. They are quite often just MCQs and it is like, more like a comprehension test than actual sort of like test of your ability. Um, and to be quite honest, I tend to include very little of that stuff in my CPD. I mean, like I am doing a PhD anyway, so I don't really need. I am preparing lectures, so I can quite easily get hundreds of credits without even trying, but I don't suppose I am the typical pharmacist.

How does evaluation of learning events currently occur both at a training event and afterwards?

They will give you an evaluation. I don't think they give you individual feedback, if that is what you mean. You'll get to evaluate their provision, but I don't think you get any personal feedback or evaluation. Quite often, those seminars. It will be someone who leads the CPD. They will be looking for speakers, so these are people who are specialist in areas, and they will be saying can you talk about, I don't know, this drug in this special population, or, whatever, you know. It is, not like, educators creating something and developing it for a specific reason. Its just which specialist, or clinical specialist, can they get to speak on a certain topic. I know the PSA, because I sat on the education board for the PSA for a little while when I was working for the university across the river, and I know they would do surveys amongst their sort of registrants to say what sorts of things would like to what, what are your gaps, and what would you like to cover, so I think they have run surveys like that at times.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

Um, well, definitely, like, on a level like our university, for instance, we have go, we are doing multi-disciplinary post-graduate qualifications, so we have one in prescribing where there are nurses, physios, pharmacists. A number of multi-disciplinary, there is a number of disciplines involved in that so there are opportunities, and in terms of, I think mainly for your seminars, it tends to be mainly just pharmacists. So they are very pharmacist, and they are normally produced by the pharmacy professional bodies. But I do think there is a small change in that direction, certainly in the undergrad world we have recognised the value of multi-disciplinary training and that is embedded in our sort of first year, sort of, pharmacy course, so it is gearing that way but needs a bit more momentum I think.

Do you have any other comments that you think would be useful?

Um, I don't know, I mean, it was all very new, CPD, when I left the UK, so um, and I think CPD is quite new here and probably not working that well. I can't really think of anything else.

Belgium - IPSA

How do you become a pharmacist in your country?

Um, so I think in the UK you have the Batchelors/ Masters system, so it is the same. You have to obtain, first the Batchelors, then a Masters in pharmaceutical sciences, which in total takes 5 years, then plus perhaps there is another thing that is important. Not all the universities, um, lets say. To have the title pharmacist you also have to do an internship in a pharmacy for several months. You can choose, as a student, not to do that internship, then you obtain your masters but you haven't got the title pharmacist so you cannot work in a community pharmacy. You can go in the pharmaceutical industry or in the government but you haven't got the title. If after a few years you would like to work in a community pharmacy then you have to do an extra year which includes the internship of 6 months. The master, the last year, you have 6 months of internship. You have some classes and you have to do several exams and one of the exams is a, covers everything you have learnt from the past years and is real life situations and so on. But it is not you have to do a special exam. It just takes part of the masters itself. To register as a pharmacist you have 2 organisations, you have the pharmaceutical inspection, the guys who keep an eye if you are doing your job o.k. and you have the, I don't know how you call it in English, - like the order of pharmacists who, they check that you work correct and you are not too commercial and they keep an eye on your mistakes.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

So I have to say it is now the third year that you have continuing education, so you have a CE system. But it is still now, now the law says, that you have to obtain, within a period of three years 60 points, so an average of 20 a year. And points represent hours of education. So it is a pure CE system, um and normally after three years, so now it is three years, but there is still nothing, how do you say, concrete process, so in fact now, normally for pharmacists who work in community pharmacy. You have a different system for those pharmacists who work in the hospital pharmacists and if you are a pharmacist working in a university or in the pharmaceutical industry, obviously you don't have to obtain these. For hospital pharmacists they also have a CE system but it is different system. It is logically they have all the topics of interest.

How does your profession/country currently provide supplementary education post registration?

Well, it is relatively simple. They just have to attend lessons, lectures. And they can, um, in group of face to face or they can do it online. But can choose, but the law says that every year, from the 20 points average, a maximum of 8 points you can obtain by doing online things. The other 12 points you have to earn them going to a lesson. This will be changed next year. 50:50 it will become. So now it is maximum 40% online. So you have three categories of activities or lessons. Category A are all the lessons that have an interest in pharmacotherapy. Category B is the pharmaceutical care. And those two groups, each hour represents 2 points. And then you have category C which is like the garbage category which covers all the rest and this is 1 hour per point. And

you cannot obtain all your points with category C so obviously all your organised lessons, online or face to face count.

What support, if any, is given to support education post registration? When does learning traditionally take place?

That depends. Lets see. Most attendees we will see in the evening time but what we also see that a few large chains in Belgium, these chains send people more over the day so it is different way of working but lets say the people working in an independent pharmacy normally follow the lessons in the evening. We organise some during the day but we see that the groups coming to those are small, so the majority of the lessons are in the evening. Um, in the weekend from time to time there is something happening. Saturday, sometimes Sunday, but normally it is in the evening. It is normally 8-10pm.

Do people mind coming out that late?

You know – Belgium is rather a small country, so this means that, for example, for us, we give lessons in the Flemish part of Belgium. We have 10, or even 11 fixed locations for the lessons so people only have a distance of maximum 50km to get to the lesson and lets say, the pharmacies here close in the evening about 6 or 7 so we start 8/8;15 so they have an hour to get there. From December it is the first time that we provided food. Before then it was just drinks. So what we see is, the lessons we give start at 8;15 and they finish at 10pm, and then afterwards there is a drink, but you see, 75% of the people immediately go home, so we changed that. It is already like that in the French part of Belgium and we will change it so from 7:30 in the evening we will offer them a sandwich and something to drink and after that, immediately after the lesson we stop and they go home.

Do they pay?

That is another type of question. Yes, they have to pay. It is not for every lesson. We are a non-commercial organisation with onboard the universities and all the professional organisations for pharmacists. We have a little bit of sponsoring, but this is not enough to provide everything for free. What happens here in Belgium is that with the requirement of 20 points per year there are also commercial organisations that offer lessons and we suffer a little bit from those initiatives because they are free. They are companies that are specialised and they go to companies and say, do you have a product launch or something and would you like to do something on it. We can organise everything for you, um speaker, the drinks, the, everything, invitations. The only thing the pharmaceutical company needs to do is pay. And it is all free for the pharmacists. And at this point they manage to get points for these events, so this is, especially now, we found the points are given away too easily to lessons. There are lessons that do not deserve that many points. But this is a problem because at this moment the universities do not cooperate, um, if we don't co-create, to screen the lessons. So the government, two or three years ago said we will put a CE system in place but we do not provide you with any funds or money to do it. So the profession had to do the organisation themselves. But someone has to give credit points to each lesson, so there is no body to do that. The universities say no money, we won't do it. So, at this moment it is not professional enough. There are some negotiations ongoing

but there is still nothing. So people have to pay to go to lessons but there is an agreement between employers and employee organisations, that is on a higher level. But everyone who comes to a lesson can get a refund of 9 euro per hour with a maximum of 400 euros per year. So, we, as an organiser (IPSA) of lessons, we have to ask that organisational platform, do the lessons come for the 9 euro. They say yes/no. so in fact, if they pay to go to our lessons, they can get it back afterwards.

How do people find out about the events?

We have different things. Of course we have a website, the local organisation that provide a lot of the marketing for us. We are also linked to other organisations, that defends the pharmacist political, and also they have incorporated our lessons in their marketing material. But I have to say we are working on that, competition with the free lessons. I sat here on Monday with the marketing specialist about how we are going to go against that. So, website, facebook, paper. We have different things.

Who are the main providers?

We are the main provider in the Flemish part of Belgium. So you have IPSA and on the French speaking side, they are called SSBF, but I think last year we had, I think, in each pharmacy you have a responsible pharmacist, and they join the other pharmacists. Every year the responsible pharmacist was a member with us, so in total we had 6000 pharmacists who followed lessons with us. It was a big number for us! There are 5000 pharmacies and between 10-12,000 pharmacists.

What do you think is the best model for supplementary education and training and why?

Well I will first say why the law says you must, you can only follow 8 credit points online. We find it important that there are still offline things happening, so you can have contact with other pharmacists. If everything starts to go online you lose contact and everyone stays at home, so we find this important and therefore, because we also wrote the law with the government it is important you still have offline things, and personally you have to offer everything and it is a combination of off and online that is important. I don't see, there are always people who say, for me it is only offline. The other thing is I started and after 5 minutes the children are asking me something and I have lost my focus, other people say I would rather like to stay at home, we offer everything so they can choose, but they have to go to the lesson to get their 20 points at the end of the year so they have to come out of their home and for us I think this is the best model.

How is learning recorded and verified?

So there are two things ongoing. Normally now you have to get something on paper and the pharmacist takes it home and he has to keep everything. And after three years he has to send off a copy of it to an organisation, the pharmaceutical inspection, who of course, from 12000 pharmacists can't look at it, so nobody is doing this and they realised that would be a problem so there is now an online system where in fact we are not obliged anymore to give papers at the end but we can log it digitally the present of each other, and it is actually a system that helps ourselves and applies to the whole of Belgium. We use the identity card to registrate everyone at the beginning of a

conference or a lecture, and these registrations are done on an on-line system and every pharmacist himself can check where he was and how many points he has earnt already. If something went wrong the pharmacist himself can still add a note and add a paper certification in the system and say this was 2 or 4 points, so you can add things yourself and organisations can also upload things for pharmacists.

What tools or resources are currently used to help practitioners apply their learning into practice?

Yes, so, first of all we have two types of lessons. We have one type that can be held for 2-3, 500 pharmacists in one time, so obviously it is very difficult to be practical at that point. We try to get some specialists infront of the audience. It is not easy for them to be practical. So what we do then, ourselves, is get the most important things out of that lesson and 10-14 days after we send all attendees that ten need to remember things and these are the most practical ones. So, firstly there is a lot of preparation for each type of lesson, we go two or three times in advance to say this or that has changed, so already there is a lot of work and it is orientated to community pharmacists. Another thing that we do is, for example, there is a lesson about anticoagulants and then a few months after we put in place little interactive working groups with a moderator and there we work with a tool that we developed, which could be a simple PDF document that when you click you see, for example, these are the contraindications, so they learn the theory, or infact relearn the theory that they learnt weeks ago and they learn to work with it in interactive case studies in the written tool we need them where they need to find a solution. Another thing is they learn to work with a data base and how can they apply it if they get a question from a patient. So we make a case study then use Cochrane to solve the problem and this is typical in groups of 15-25 people under the observation of 1 moderator who we train, that happens. Online assessments, we also end with an online test. It is 10 questions, but we dream of an online assessment so in the end we would like to do something like that.

How does evaluation of learning events currently occur both at a training event and afterwards?

They have to fill out an evaluation, a questionnaire at the end of a lesson. We would like to change it. We already, last 10 years, asked the same questions. A few months ago I said to a colleague we will change the questions. Like we want more to know is this a course you would advise your colleague to follow, things like that. We ask them, was the course organised well, was it practical enough, what did you think of the speaker, was it good, not good. These are the classic! Just a second (looking on computer for form) are you happy about the organisation, are you happy about the content of the course, were you happy about the speaker, was the documentation helpful for following the lesson, is the knowledge you gained useful for your practice? And then they have to end, and this is the most important thing, of giving a score out of 20. So 14 or 15, they can give a maximum of 20. Our goal is to get an average of 14 or 15. Anything below that we are not happy. Like I told you, for example, breast cancer is a lesson that started in January and the same professor gives it 11 times. He gives it in this part and this part, so the first 2 times, it is very important that we get the evaluations very quickly here, and we evaluate it, if it is o.k. the speaker always gets feedback, is it o.k. is it not o.k. to rework the lessons so the other 8 times it is

better. It is very important but sometimes people don't fill in the reports as it is filled in manually not digitally, but we regularly repeat that it is important to fill them in as we use it, so they need to do it. But you can imagine, if you have 500 people at a lesson, it is a lot of work here.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

There is, there are things happening, but it is still on a low level. Let us say, for us, the primary target of the government is to get the pharmacist and medics together from time to time. There is some budget to do things and everyone can put a bid for some sort of programme and the government can say we can offer it to local groups who want to put pharmacists and doctors together but let's say it is still a very low level thing.

Why do you think it is low level?

Well, I think. We have to follow lessons, doctors have to follow lessons, you cannot have too many lessons. You have to choose at a certain point. The second thing is, nowadays, I have the impression that nowadays things are more to put them together to get them to know each other better but not about the content so they use it more like this, so it is not really learning, learning, learning. You don't really learnt too much from a session like this. And you might do some practical things, but it is more a social thing. If you really want to learn then you are better off with only your profession. And there are things that we, one of the universities made an e-learning for cancer, and they made it for doctors, pharmacists and nurses and then we saw after the evaluation, the different groups, only preferred to see the content that was relevant to them and not for everybody. I think it could be useful to have 2 groups together, but only 2 groups. For example, not doctors, pharmacists and nurses. This will never work here in Belgium. We could choose to put pharmacists and nurses together for example for treatment of wound care and then some other thing like doctors and pharmacists together for a medication review but not everybody. This is never going to work. You need to take some specific topics and say this is for this group, and this is for this group, yeh.

Do you have any other comments that you think would be useful?

No.

Chile

What do you need to do in Chile to become a pharmacist?

When you are 18 you have to take a test, and it is a test where they ask you history, Chilean history, Spanish and maths, and then in depends on the university that you go, they ask you for a specific test in chemistry and you have a score and then you apply and then they select from the highest score to the lowest. It depends how you score and the vacancies they have. I think there are about 6 schools of pharmacy in Chile. More and more people are studying pharmacy, but there are not many schools, so we are getting more people from different countries. Technically it is 5 years at university then you have to do your thesis. But it depends on the university, sometimes you have to do longer as if you have to do a course and you fail you have to wait a full year to resit it, it isn't the next semester. So most people who study pharmacy for a long period. 6 year. You don't get a masters or doctorate. You are just a pharmacist and then you can apply for a masters or PHD, although you are not forced.

How about pre-reg?

No, there is not, I think that is a main drawback compared to here, but I think, the last year, you mainly do hospital placement. Here you have the preregistration which is an important thing to refresh your knowledge, which I think is a very important thing. How to apply it.

When you qualify, who do you register with?

When you qualify you have the ministry of education in Chile. They check the university and with that stamp, they have something similar to the royal pharmaceutical society, but it's not imperative that you have to be part of it. We used to have one together with doctors and nurses but then it divided and now we have one that is together with those who study biochemistry.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

No, no need for CPD. I think it is a horrible drawback. I think there should be. The problem that they have is, to teach at a university you need to have at least a masters. It's not for me. When I became a pharmacist I didn't have to do any continuing professional development.

How does your profession/country currently provide supplementary education post registration?

o.k. First, in Chile, we have two types of university, private and public. So the main difference, is the public, they tend to say it is more strict, very difficult and most people try to go there because the government funds this. The private, they have, now it's better, but they have bad publicity because they say if you have money you can pass. I think there are only one or two private universities teach pharmacy. Most are public.

What support, if any, is given to support education post registration?

If you want to continue your development you can go to university or you can apply to study abroad. Lots are going to Argentina. You have lots of training courses, but it's

not, how can I say, the association of pharmacists may provide, but it's up to you whether you want to participate or not, where here you have a development plan. I think it is a personal decision. The people who have higher pay, or who teach, they went through all of it. They made that decision.

So do the association of pharmacists offer support?

Yes, but you need to look for it. It's not a lot. Just if you become a member of the pharmacist society because then you can get. In Chile the name is pharmacy and chemistry. You need to use both which is why we are with the biochemistry people. From there you can get support, more focused on chemistry and investigation. For pharmacy now they are trying to create a group of people who are more focused on pharmacists.

What do you think is the best model for supplementary education and training and why?

I always like face to face things. I think this is much better. But, because the country is very long and thin, it is very complicated to make everyone go to the capital. Maybe you could do it in different regions, but maybe you could do it on line, but at least once a month or a few times a year you need to meet.

How is learning recorded and verified?

Everything you study in Chile needs to go through the ministry of education, so they check everything that you do. Any type of degree that you get they have it, so then, you asked for the transcript.

Do you re-register every year as a pharmacist?

No – I am not happy with that. You are just registered for life.

Are there any tools that are not currently utilised that you feel would be of benefit to support application of learning from events people do attend?

I think the problem we have in Chile with pharmacists is like medicals, the doctors, are the main big group, so pharmacists always work back. Now it is a new tendency that pharmacists are trying to work together and what they have to do is like, have royal pharmaceutical society, have an institution that you belong to them and they give case studies, congress. I think it is starting slowly slowly.

How does evaluation of learning events currently occur both at a training event and afterwards?

You have the department of health, but it isn't evaluating the professional development. If they go to the pharmacy they are evaluating the pharmacy there. Like inspection. It is not very nice.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

Because I worked in hospital, they do a lot of events when you are employed, that are really really good. I think it is part of the culture but generally pharmacists are really really shy, because, here, you have lots of assessments that make you speak, but in

Chile we don't have that sort of thing, so I think that people are really really competent and have a lot of knowledge but sometimes are unable to speak, so I think if more pharmacists start to become part of the new society they are creating that people will start pushing to have things. I think they want to be like Argentina, because Argentina is very different. I don't know much, but there is a school of people who study pharmacy and after they finish, like doctors, they have a school, maybe it is their character, I don't know but they push the profession. In Chile we don't. The new generation are starting to do it. Slowly slowly. But it will take years.

Which topics do you think would work?

Different types of public health campaigns, alcoholism especially, you have a lot in Chile, especially, in, you have areas that have miners and things, so you need to be careful about that, and they have to be careful about their oral health. Contraception, definitely, and obesity. Chilean people like to eat and drink.

Any other comments?

I think that, you have capable people but to have a real role as a pharmacist you need to have the help of the government. Pharmacists from Chile will help me. But we need, at least, the pre-registration. The doctors they have. Nurses they have and lawyers but pharmacists don't. They used to have it, but the thing is, I don't know if you know, we were under a military dictatorship, so when that happened it stopped, so now we have democracy for a lot of years so it is something we need to start to do. Start to be more regulated, because when you register as a pharmacist, no one forces you to do development. I am not saying you need to do a Masters or PhD but you need to carry on. Of course, teachers at university do it because it is a requirement, but it's just, if you would like to be a teacher, or do don't need it. And also different companies do courses for you, of course, but it's not law. It is because you work in that role or that company, they will give you courses to support your development but they can't force them.

What is the makeup of pharmacy?

You can have your own pharmacy, yes, but they have mainly three big chains that control the market. It is very difficult because they big chains have all the market and they control prices. The three big chains are in constant communication, even if they say they don't, like sources, prices. If you have your own pharmacy, you don't have like here, the royal pharmaceutical society who give you a lot of support, so you need to find on the internet or something, or go to university to study a masters but that is expensive so it is very difficult, yeh.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

India

How do you become a pharmacist?

Basically, in India you have to get a degree, get your Batchelor's in pharmacy, which is normally for four years, and at the end of four years you will have to do a one and a half month industrial training, or it can be a community training or hospital training, but the duration has to be one and a half months. And then you get a certificate and you go back, and then you get your degree. There is no certification exam such as in Nepal, or the UK, so you don't have to appear for an exam, all you have to do is like go to the pharmacy council with all your certificates. That takes a bit of time, don't know why it takes time, but they do charge you, and then it is pretty straight forward and you just get on the register and you start practising.

Is the pharmacy council a national body?

No, each area. Because I am from Nepal I went back to Nepal and in Nepal you have to write an exam, which happened only recently. Its only been a few years that they started putting that exam. So anyone who wants to register, or even a technician, needs to sit an exam to register. So I am registered in Nepal, which is a national body.

In India. It just depends on which state you are registered in. there are a lot of states.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

There aren't any, well not that I know of anyway. I did come across a lot of pharmacists, but nor practising pharmacists. Because they are on the register and they can call themselves pharmacists and even in India and Nepal, you get into the register and then it is up to you to do whatever you want to. There is no such thing as CPD. Well not as far as I am aware of. In Nepal, I think you register for ten years. They do provide you with a certificate that has an expiry date.

How does your profession/country currently provide supplementary education post registration?

I think it depends on where you are working. So if you are working in a pharmacy, time and again they might want to run a certain service, and they might need to show or have a certificate to show they have done training, and the trainees are capable of doing that. There may be sometimes they come up with a training programme where you have to enrol the staff. But apart from that, especially academics, I have never heard of anyone speaking of CPD.

What do you think is the best model for supplementary education and training and why?

The ones I know of are usually face to face. And it is usually one or two, or sometimes even three days seminar, or sometimes workshop. They will be expected to attend. And at the end of it would you will be provided with a certificate. I don't know how good they are as I can't vouch for that. They do have to go through this before they start running these programmes in their pharmacies.

Any thoughts on face to face versus online learning?

I think, for someone who prefers face to face learning, it is mostly about time factor. Apart from that I can't see why you wouldn't want face to face. I just feel it is a more human approach. You can ask a lot of questions. There can be tons and tons of scenarios that you can test with the person which you couldn't do online.

How is learning recorded and verified?

You get a certificate of attendance. The ones I went to were in an industry setting. But it was not in a production site or in quality, so what I was doing at the time, what I had to do is I had to look at all the GMPs, which were followed by different European and mostly developed countries. I had to look at them and come up with a concise version and pull in the information, and come up with a report, and then at the end of it, when I was done, during it, I was in contact with my tutor, trainer.

What tools or resources are currently used to help practitioners apply their learning into practice?

No, it was mostly about you being able to use what you have learnt, to wherever you work, but they don't necessarily help you after that as once you are done you are done, so they don't try to keep in touch or anything. It is just about you taking the skill that you have learnt with you.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

It depends on which programme you are on at the time. I don't know if this exists in the UK but in Nepal, and other developing countries, there is a bit of friction between doctors and any other healthcare profession, so there have been lots of cases or scenarios where doctors were found to be very rude, not just rude but downright, like unprofessional. There were lots of cases regarding this, so you don't find a lot of programmes actually incorporating other healthcare professions, but they will be few and far between. You will have lots of pharmacist training programmes. And also, we don't have as many technicians as you have, so we don't have as big a role for technicians. It is not defined or structured, so you can find a position, even if you have just completed your training. We call it SLC, school leaver's certificate, so if you have completed that you are actually eligible to work in a pharmacy. It is not regulated, so that is one of the main issues, especially in Nepal. So if you go into pharmacy the person you come across in the pharmacy may not be the pharmacists and they may not have even done a degree or whatever, so what it is, usually, you see a pharmacist's certificate, but it is not belonging to him. So as long as you see a pharmacist's certificate, the pharmacist doesn't have to be there.

So there is a lot of resistance between doctors and pharmacists.

Any other comments?

I don't even know if it can be implemented in developing countries like Nepal and India. It is just that, it is not like the nation or government actually will try to do something about it, but they haven't actually got round to structuring the whole thing, or got a plan, so you haven't got a structure. So you can get any medication without a prescription. Isn't that scary. I think, I am glad I didn't practice as a pharmacist there

and came straight to the UK because had I practised there I would still have it in my mind that it is still o.k. to give medication without a prescription. And talking about, there is so much going on about antibiotic resistance, that is a huge huge thing, and it is scary that we don't have newer antibiotics at this stage. And the problem in Nepal and India is that you can get, you can just go to the pharmacists and get it. I think it is a culture thing that it is normal. You may go to a pharmacy and say I have something or a few symptoms, but it could just be a runny nose, or you are coughing a bit more than usual, but you don't have a green or reddish tinge, so you just have normal phlegm. Without trying something first, what patients might do is go to a pharmacy and there will be two scenarios now. One would be that the patient would straight away ask and get some antibiotics. The other scenario is that they will ask the person who is in the pharmacy can I get something for this, and the person who is working in the pharmacy may just give you an antibiotic, you take it for a few days and you will be o.k. you would be pretty surprised. Anyone who works in the UK and goes and works there for even a day, would be surprised.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

Ireland

How do you become a pharmacist in your country?

Yeh, so, it is set in the pharmacy act 2007, that basically sets out all of the legislation for pharmacy in Ireland and arising from that there are particular pieces of legislation relating to qualification and registration, so up until 2 years ago you had to do a 4 year degree in one of the 3 schools of pharmacy, and then you progressed to what was called the NPIP year, so the national pharmacy internship programme and that was hosted by one of the schools of pharmacy for the PSI (Pharmacy society Ireland). Arising from that you did your NPIP exam and then you were recommended for registration on the pharmaceutical society Ireland register. So that was up until about 2-3 years ago. Now everyone has to undertake a 5 year integrated programme and so you register with one of the 3 schools of pharmacy, and then you do your 5 year integrated programme and as part of the 5 year programme you have placements integrated across the 5 years and they are co-ordinated by a central national office, the *Affiliation* for *Pharmacy* Practice Experiential Learning, a joint affiliation, and they are then able to signed off and you are eligible to join the register. I don't think that anybody will be going through that route for about 3 years. But then of course you have a third country registration, where pharmacists outside and inside of the EU can use the reciprocal agreements or the EU agreements to register as a pharmacist in Ireland. There are about 5500 pharmacists.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

So there is a Statutory Instrument, SI 553 of 2015. It is the statutory instrument that outlines what needs to be done in order to maintain registration from a CPD perspective. So every year, a pharmacist needs to apply for continued registration and then they also need to engage with the Institute of pharmacy, so you have to, so everyone is registered with the Institute of pharmacy, so if you look at SI 553, 2015, there are a couple of requirements. So one is that pharmacists will be automatically registered with the institute if they are on the register of the PSI. they need to maintain an e-portfolio on the IIOP website. So when I say IIOP it is the Irish institute of pharmacy. They need to demonstrate they are engaging in CPD, which is defined as 'systematic, self-driven, needs based, outcomes focused, based on the process of continual learning with an application into his/her professional practice.' So they need to demonstrate in their portfolio that they are meeting all of those criteria. And then, with engagement with the institute on a quality assurance basis, all pharmacists will have their e-portfolio reviewed once in five years. So the PSI will randomly choose one fifth of the eligible members every year and they will go through the review process. And that is a peer led process. So we have pharmacists engaged in deciding what the standards should be, so it is not based on number, or based on number of cycles or number of hours or input. It is not input based. It is an output focused system. And, for example, if you look on the IIOP website, we have the standards this year, and it is saying, o.k. it needs to be documented in a very systematic way, through the 5 stage cycle. In order to see it is self-directed we need to see some evidence of self-assessment. They need to show evidence they have done a self-assessment against the core competency framework. It needs to be needs based, so they need to tick the

needs they have identified. It needs to be outcomes focused, so how are those needs going to be met in a way that is actually going to change practice. It needs to be based on the continual learning of needs development and they need to show the breadth of what they have done, show that it has been relevant to actual practice. So all of that is reviewed by the Institute in a 2 phase process. Part 1 is where it is peer reviewed – all online, no paper. And pharmacists get an opportunity to give feedback and resubmit if they haven't met the standard on the first occasion and they actually get another opportunity for that. So the first cohort were done last year, only 256 of them, 95% of the register engaged and 91% were able to demonstrate they met the standards as defined by their registration and that is for the very first year. Pharmacists need to engage in the portfolio review. Then, also, for those in patient facing roles, the need to engage in what is called practice review. So a smaller number per year, so about 150 pharmacists per year will be randomly selected by the PSI. they will transfer those names to the Institute and will undergo the assessment process. And again, it is in the legislation, it is a very very complex sentence, I won't be able to remember it, but we must be able to have a direct evaluation of a pharmacists knowledge, skills and competencies in a range of patient facing roles. They can demonstrate their clinical knowledge, their ability to, um, provide information to the pharmacists and patient, they must be able to demonstrate clinical knowledge and know they are able to gather information and evaluate a patient case. So, I think this was in the legislation and we have copied the Ontario model, so a pharmacist will come to a central location. It is run twice a year, on Saturday and Sunday each weekend, and they go through 8 what we call standardised patient interactions, and they meet with either a standardised patient or a standardised health care professional, which is done by an actor who is very well trained in order to meet the scenario, and the pharmacist needs to be able to deal with that situation, and within the interaction, they are observed with a standardised checklist that has been developed in consultation with peers, and they have to demonstrate their ability to be able to gather information to provide information relevant to the patient, an acknowledgement strategy, and they need to demonstrate they are competent in communication. So they will do 8 of those, they each last about 8 minutes, and then they move to a clinical knowledge review, which is an online e-assessment and they sit at the computer with, I think, 16 cases, each has 3 multiple choice questions on each, it is open book, and they need to complete that in just under 2 hours. So it is quite comprehensive. Pharmacists then need to be able to demonstrate that if they are selected by the PSI, they have engaged with the institute and done it. The other thing in the legislation that is relevant to CPD is that there are some services that are delivered, where training is a competency based, and full accredited, competency mapped training often in relation to administration of medicines, or vaccination, administration of emergency medicines. They need to be able to demonstrate that they have undertook the appropriate training and on a modular based approach which the Institute developed. The pharmacists will self-reflect and decide which elements of the training they need to renew. So one part might need to be CPR that needs to be reviewed every 2 years, another part might be injection technique, or admin, but they may not need to have that reviewed if they are very experienced vaccinators, but if they want to engage in vaccination or administration of medicines under a different route, so if they were giving intramuscular medicines all the time, and they want to be able to deliver something subcutaneous,

then they must be able to demonstrate that they are adequately trained – so it is a self-assessment. And they need to be able to undertake the annual training, which in Ireland is done by module. They need to demonstrate all that before they are allowed to deliver a service. So I appreciate that it is not normally incorporated in what people think of as CPD, but, um, for the purpose of the CPD rules, set out by our regulator those are the main aspects.

So to recap, you have got the establishment of the Institute, the accreditation of formal programmes and what must be undertaken, you have got the e-portfolio on the IIOP website and the e-portfolio review and the practice review. So that sets out the obligations of pharmacists. They came in in 2015, and we went through the first e-portfolio review in 2016. Then, more than 1300 pharmacists have already been called, and the first call for practice review will happen in October 2017 and we ran a pilot for that earlier in the year.

So IIOP is the main provider of training. are there any other providers that are used for supplementary education and training?

So, there isn't a model of accrediting providers, so you could go to Harvard and do an MBA, and come back, and it would be a very high quality programme, but it wouldn't be counted as CPD if you couldn't show how it has changed your practice. So firstly speak to a patient and get really good insights into usage and that may influence how you counsel patients, and that is very good. What you have to demonstrate in your CPD is you have a breadth of learning, that you have done formal and informal, that you have shown learning across the 6 domains of your practice, so it is the spread and the patterns of learning that are looked at in the e-portfolio review. When it comes to the formal programmes associated with the annual work plan or with legislation, the SI 553 sets out requirements for accreditation, and the Institute accredits on behalf of the PSI. So we are an accrediting body, rather than providing. So we wouldn't be like CPPE. Now, we have, what we find extremely difficult is, when there is a particular need for a specific training and we have gone out to tender, we have found very poor response rates and we have got involved in some training ourselves. There are some people who deliver training but want to sell what they have rather than provide what we need, so the standard of quality assurance has been difficult. So that is in regard to the very specific accredited training that the PSI requires, an example that came in recently, again, was Statutory instrument 449 of 2015 and you can see all of these on the irishstatutorybook.ie and they very much set out that if you wanted to deliver one of five emergency medicines, adrenaline, glucagon, GTN, naloxone, salbutamol then you needed to go to an accredited programme. And we put out expressions of interest and said whoever wants to deliver training we would accredit that. So if it is for a very specific service there could be lots of different bodies. It won't be the Institute that delivers it. It would be commercial organisations. If a pharmacist wants to satisfy their CPD just more generally, not in order to deliver a service, then they can go to whoever they want and the onus is on the pharmacist to demonstrate that they felt this was an appropriate source of information. Now, if we saw a pharmacist only going to one provider and no one else, even if that provider might be very good, we would be suggesting to them in their e-portfolio review they need to look at a spread of learning, including informal or formal training, and vice versa. So there isn't at the moment a process of accrediting providers unless they are delivering a statutory training

programme. But that is something that may change, the reason being pharmacists still would like to have some indication about the quality of training, and therefore they would like to have some sort of certification system. However, the reason we haven't done it really is that it takes away the critical thinking on their part and you will just drive people towards courses that they just see as accredited so we are reluctant to do it, but that is possible one of the things that we may have to do. We are currently undertaking an accreditation study. One of the staff here is doing a PhD to look at different models of accreditation and what would work.

How is learning recorded and verified?

There is a standardised format. It is based on the 5 stage cycle. They don't need to fill out all stages, so if they are learning was initiated from action then they only fill out from action, and documenting their learning, and documenting impact on practice. When you go in, each section has drop down menus to show a qualitative free text box, as well as selections where people need to select from a list of what is most them, so they can write as much as they want and reflect in whatever way they want, but they do need to do some selections of the appropriate categorisations of the area. They can upload whatever documents they want and attach PDF, movies, recordings whatever and they need to be able to demonstrate with each of them how and which competencies are demonstrated.

What do you think is the best model for supplementary education and training and why?

So where you are looking for skill development you need to have face to face if you are going to assess whether the objectives have been achieved, and so anything like meds admin or any element of skills and competency required we would have face to face. For others we rely more on online, so, for example, do you need to have face to face training for an update on what the changes in flu vaccine are every year, no. but if you were going to engage in route of administration. Do you need to have face to face, absolutely you do. The second one, there was a very strong emphasis and desire that the Institute would have a face to face and blended learning. Now, because what would have traditionally happened previously with the ICPPE, which was the precursor to the Institute. And what also happened with the ICPPE and the Unions learning offering, they tend to send out a schedule of events every April, August and every January which would have approximately three months of courses that would be delivered by a network of tutors and people would turn up and go to them. They were brilliant. From a networking point of view you would always see the same sorts of people, um, but you also knew that every Monday, Tuesday and Wednesday for the months of February, March, April and for the months of September, October, November, you knew you would be able to somehow access training. Now the institute hasn't been able to offer that sort of system because it has a high degree of quality assurance around people that are delivering, it doesn't use tutors, therefore it is much more adhoc. We had a two day superintendent training and that was delivered by specialist trainers. We have personal development training, and again, it is about the right skills and behaviours that they considered important. But what we find is that a lot of pharmacists don't want to take 2 days or a full day out, or can't. So we have a high dropout rate, of the people who sign up don't attend. They are not charged for it,

so that is a problem because there is no penalty if they don't turn up, but yet they have robbed a place. We have tended to get very good fill rates. So we have had over 1000 people do the online training courses, and then we get fewer than a hundred on the superintendent course at far greater expense. What we did explore was a blended model. The blended model has far less uptake for the face to face element, but the feedback from those who do engage is far better, because they are coming to the group with a greater level of understanding of the subject matter. The difficulty is a lot of pharmacists don't want to do the pre course work, and we won't allow them to attend if they haven't done it, so dropout rates there are also quite high because people have greater aspirations of what they can actually do compared to the reality. They just over estimate what they can do and underestimate the number of hours they need to put in. so, um, we have tried different types. I think what the Institute needs to do having an online offering supplemented by a face to face offering is ensure knowledge, skills and competencies are acquired, so you can have a proper formative assessment in the form of an OSCE. Those sort of things are important. We try, so what that leaves us with is, what about the social aspect? What we had in that regular thing, we know people liked to meet each other. So what we have done is separate out and we don't use them as training events any more, we use them as peer support networks and peer support events so we bring people together for the purposes of understanding about the need for CPD, about sharing experiences, and it is about networking, so we make those events about the networking rather than trying to encourage networking through attendance at a training programme. So we are just trying to be very specific about what it is we are trying to achieve.

How does evaluation of learning events currently occur both at a training event and afterwards?

Evaluation on practice can be evaluated in a couple of different ways. Something like the vaccination programme. We know no one is allowed to vaccinate unless they have undertaken the training programme, so we know we have 10% of vaccinations being undertaken by pharmacists, so the impact on practice we try to look at as how many people have administrated vaccinations. We know there have been 5 saved lives because of administering adrenaline over the past 5 years. We know there is 35 saved naloxone, deaths due to naloxone, although that might not all be pharmacists. So we can see what can be done as a result of these programmes. When it comes to evaluation itself, we take it quite seriously and the Quality Enhancement Office in the Royal College of Surgeons manage that for us, so what happens it, we develop the evaluation instrument in conjunction with the QEO who are quite experienced and then they administer it anonymously, so we will never get to see who has responded or it what way, but we get all the breakdown and it will cover from the, um, did the event meet their expectations, knowledge that was covered, knowledge that was gained, impact on their practice, changes they would like to see, did it satisfy the learning objectives that were set out, so it is quite comprehensive, and I would say, part of our difficulty, we are doing an awful lot right, we are probably not reviewing those with the same regularity that we should, the reason being most of the courses we have are contracted for a certain amount of time, so one of the things that seems to happen is all of those go to the providers. We don't provide the training so they go to the training provider. They, if they have an accreditation with us, they have to undertake the annual

quality review, which must take account of all the feedback and that is reviewed by an external committee, then what actions, if any have been taken. Then there is the review where they will respond to the comments and make changes where needed, and there have been changes, for example the blended learning approaches have been amended somewhat or they have created webinars, so there is a continuous quality improvement on all that is accredited by the Institute.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

Brilliant question. At the moment there isn't a huge amount that I can see, and we saw that as being a difficulty. We didn't think that it was right, for example, one of the things we have been commissioned to do this year was benzodiazepine training, so with new legislation that came out from the Department of Health, plus guidelines that came out from a collaboration between pharmacists and the regulator, therefore it felt fitting that we would work with the GP professional body on a joint programme for pharmacists and GPs. We got agreement on that, we developed the programme, we have had both GP and pharmacist input. We presented the programme in a way that looks at the prescribing and diagnosis and management aspects. We are currently still working our way slowly through making, gaining agreement that this goes ahead. So we had agreement up front and the ICGP need to put it through their committee and I think there might be a bit of reticence about having a joint programme with Pharmacists. For me, I think it is ludicrous that you would have multiple professions learning about the same disease states or things without understanding that their other colleagues in the care teams are learning, and I think, actually, duplication of effort is crazy, so good online learner focused material which is adapted, so part of what you can do is you can give different interfaces for the same programme, so you can end up with whatever profession you are, so that would give you all the information you needed. This would also allow other professions to see some of what you are learning and doing it face to face would even be better but we haven't got there yet. It is very political here unfortunately and there is little appetite for interprofessional learning. Now that appetite doesn't come from the part of pharmacists but it comes from some of the medical organisations.

Do you have any other comments that you think would be useful?

I suppose what is interesting about the Institute, is that it is only three years old, we have I would say about 75% of the overall profession engaged on a regular basis with the e-portfolio. When called we know we have 95% engagement and 91% achieving. I think it is testament to the profession here. They have always been doing CPD but they haven't necessarily been documenting it. We now have a very robust quality assurance framework that we can show to policy makers, show to other professions, show to patients, to demonstrate pharmacies commitment to quality practice. It has certainly been very important that all stakeholders are involved, so the regular, the representative body, the colleges, the Institute itself, and being based in the Royal College of Surgeons has been of huge benefit to us, because I sit on the board with surgeons, radiologists, dentists, nurses, and therefore I have quite a degree of hope that there will be greater collaboration in the future. The big difficulty for Ireland, and it is important that you understand the context. We don't have a chief pharmacist , we

don’t have a pharmaceutical, any policy of strategy in the department of health or agencies, so our role at the Institute is starting to become more and more about policy, and essentially what happens is that for any of our initiatives originate and are funded by the Department of Health, and they decide what they want for patient care, and we come in with a pharmacy solution, rather than the other way round, saying ‘this is what pharmacy can do’ and it is very different policy, research and legislative framework to other organisations or other countries. I would love to see us go down the route of advanced practice, but I think we are not close to getting there, but there needs to be clarity between the regulator and the profession as to who does what. I suppose it is important to understand that complexity. If you think about, from a UK perspective, if you think about the CPPE delivering training programmes and if you think about pharmacy research UK, because we also have research mandate, and if you think about the GPhCs role in CPD it is definite, and if you think about the RPS it supports with professional development, and that is essentially how the institute is trying to work across each of those agendas the fact that it is all in one body, whilst challenging, allows for a lot of alignment between the different agendas. So, um, I think that is probably some context to it all, and that is probably useful for you to know.

Iraq

How do you become a pharmacist in your country?

So, basically, we have similar to the A level over there but it is a better organised system, similar to the French system. So you need to have, on average, it depends on the overall years, so for example, when they do their A-level, the interim requirements might be different. Having said that, all the time it is going to be over 93%. O.k. so, it is very competitive, so you have similar like here where you put your application into UCAS, and you put an application over there through a system, and basically on your average, out of 100%, what you achieve you will be allocated university. So the top one all the time is medicine, followed by dentistry, followed by pharmacy, o.k. these are the top university. Now, there will be, like, Baghdad is the capital and they take all the time the highest and then the further you go away it is the less. Having said that, all the time it is not going to be less than 93%. The course is 5 years and you graduate as a BPharm. All the first year it is more or less similar to what we do here. It is general themes. We study calculus, which is maths, physics, biology, chemistry and you start calculations intensively for a whole year, the first year is all about calculations. We start a bit about introduction to pharmacy and small labs but it is not as in depth as here about patient skills. It is more er, as we say, science. Second year they will have more detail about other related bits of pharmacy, third year, that is when we click. So third year the basic science is going to be removed, or you don't get taught it any more. It is replaced by pharmacology, therapeutics, er, drug delivery, er, clinical pharmacy, so all these are related to pharmacy. Third year to fourth year during the summer we need to have a placement in a pharmacy for 3 months. So that is the summer placement. We need to do that. Once we return in fourth year we do an exam about our placement, so it is what did you learn. Fourth year we will have more into the patient skill and that is when you start into the hospital, o.k. so will we have one or two days throughout the whole semester, so not much, but it is just to see how they do it in the hospital, and then we do summer placement in the community pharmacy, o.k. and then you do another exam. The fifth year, that is when you have most of the, what we call, clinical skills, so we will have clinical pharmacy, drug and therapeutic and we will have more about you guys do here, about the lab. In the first semester we have 2 days a week allocated in hospital so we spend the whole 2 days in hospital looking at different wards, looking at cases, discussion and if there is anything what we think, and overall, what they are trying to encourage us to be better prescribers, so that is one of the things. The second part we go to labs, so you know all the tests they do, o.k. so we attend these and see how the physicians over there, they work on that. After that you will become a pharmacist. When you are a pharmacist you are able to practice pharmacy but you are not able to open your own pharmacy or further practice. In order to further practice you need to do a year in role in community pharmacy, like year 6, but is it not university. So a year in community and a year in hospital and a 6 months in industry. After, to be a qualified pharmacist and to open your own pharmacy, o.k. and to have your own name and everything you need to have basically 7 and a half years, o.k. it is a long process, but, basically what is happening, like, for the pharmacists over there, as there are a lot of pharmacies, o.k. so the student once they graduate, they do their degree and they pass they can work in a pharmacy under the name of the other pharmacist. So for example, as a pharmacist I can have my own

pharmacy. I don't have to come to the pharmacy as long as I have a graduate pharmacist working there. So that is the thing.

Who do you register with?

The syndicate of Iraqi pharmacists. And they have a website and everything.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

We do some education, mainly by the syndicate of Iraqi pharmacists and so they offer for us, free of charge, that is the thing. The reason is because, similar to here, we pay membership fees, o.k. every year you pay a fee to keep your registration awake and if you are working in a pharmacy you pay for that and if you are a qualified pharmacist you pay for that, o.k. So the syndicate they do a lot of CPDs training. Good thing, one thing we have a difference over there. For example, if you want to choose a clinical pathway there will be another training for it. And you need to commit to that so the hospital will pay a lot of money for you to attend training courses by the hospital, by the ministry of health and from other providers. Clinical pharmacists are different definitely.

What is the split hospital to community?

It is going to be like 60/40. 60% hospitals. Because over there, it depends. People like hospital because hospital most likely is a government job. O.k. so salary is coming, work hours and everything. Community pharmacy on the other hand is independent. Things for the government, now, they have now cracked down. For example, you are a hospital pharmacist. Hospital pharmacist is 8 to 2 or to 3 o'clock. Once you have finished that you can go to work in a community pharmacy. But the thing is that now we have a higher number of graduates the government said you can either go for community or hospital pharmacy, so that is the thing.

How does your profession/country currently provide supplementary education post registration?

Some of them are voluntary, some of them are mandatory. But, having said that, the mandatory one, there is no one to follow if you have done it, so you don't have to provide any evidence. It is all face to face. That is the thing. The guy who provides it, what is his name, the Iraqi pharmacist. He tried to go into online learning, and for example, other tasks, in order for me to renew my membership I need to send all my application overseas, o.k. They see it and they send me back my registration. It is a longer process. Now what they are doing is everything online. You are filling online, like you need to state where you are based and what you do and they do everything online.

What do you think is the best model for supplementary education and training and why?

I like more face to face for many things, o.k. like, when I was over there, face to face, one thing is the opportunity to meet your colleagues, so it is the network option. Second thing, it will be more skills, and more hands on, o.k. it is like you have to do it. Online sometimes is like I don't have to do it, but when it is face to face it is a good

thing as it takes you outside of the atmosphere, of work or hospital or whatever. It is chill. There, when they do it face to face there is always good food. So it is good. Activities as we said is nice.

What support, if any, is given to support education post registration?

So basically you don't get protected time, it is in your own time, so you need to have some arrangement with your line manager for example if you are working in a hospital or if you have your own pharmacy that is easy, you can have someone to cover, or if you are working with someone else you just need to let them know. It is much flexible. Like, a good thing, when I was in my fifth year I was working in a pharmacy already and as long as there is supervision I am allowed to. So during the exams period I used to call the pharmacy and I would say I can't come today, this is this. Or, the things which I like which is different to the UK is that the title overthere is Doctor. Although it is a BPharm you graduate as a doctor pharmacist. So dentist is doctor, doctor is doctor, physician, and pharmacist is doctor. All these three, the medical, my title over there is D R dot pharmacist so they can distinguish from the dentist, yeh. But once you travel you lose that.

When does learning traditionally take place?

During the day and sometimes the weekend. Like, sometimes there is activity, it was the day before yesterday there was, because my sister told me who is a pharmacist. And, she is still on facebook and stuff. But they do it during the daytime and you come visit and sometimes they have holiday during the weekends and sometimes they do it at the time, but because of the situation it has moved away from night and into more of the daytime.

Which providers are used for supplementary education and training?

Syndicate of Iraqi pharmacists. They are the only one. Now, in the hospital as clinical pharmacist, the hospital staff will provide you. So you will have two sources. That is why I told you they need a commitment. So basically they take like a grand tour, when you become a clinical pharmacist because they make sure that the time with you, the effort and money they put on your training, they want to make sure you stay and are not leaving to another thing.

How is learning recorded and verified?

We don't record.

What tools or resources are currently used to help practitioners apply their learning into practice?

Yes, they give us a handout, that is for sure. They give us handouts of the slides, sometimes if it is a group study we will share the study between us, so there will be, you know, the electronic version of it. But, you see then handouts is going to be printed and they give us.

How does evaluation of learning events currently occur both at a training event and afterwards?

Yes, small surveys. Are you happy? Similar to that? Happy, things to improve, what was your thoughts, it is very straightforward one.

Do you think they listen to it?

Sometimes they do. Like I said, in Iraq, it is the Iraqi syndicate, and every four years they elect a new person, so, what's happen. If they don't deliver, when elections happen by the pharmacists, we can oust them. One of the things, I have seen it now, there was no fixed price for medication, so the pharmacists can charge whatever they want. So, for example. You have pharmacy A and they charge 20% or 50%, like we call profit. Another pharmacy may make 200%. People felt this is unfair, because competition and everything. So the new, head of Iraqi pharmacists, said everything, the price is going to be fixed and set by the syndicate and it will be fair competition. Another thing they are pushing for now is attending conferences overseas. One of the conferences they do subsidise and they pay for pharmacists to go there is the FIP. O.k. so if you are at FIP this year you will see a lot of Iraqi pharmacists. They try to subsidise some of the things. So sometimes they try to subsidise either the registration, sometimes the travel costs, sometimes the accommodation. It depends. So that is what they are trying to do. They are trying to have. What we had in the past, in the past we were under blockage and all the sanctions and everything. We were not able to travel outside. So that is why now they are trying to have the good exposure from all the overseas into what we are doing.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

That is one of the things. We have IPE there since the fourth and fifth year. And a lot stronger. Postgraduate, there is a clinical postgraduate and they do it alongside doctors. There is the other though which is the science postgraduate, like for example, the ceutics, that is going to be lab based, so you are not going to have alongside doctors. But the other one they do and that is why we do in fourth year as they are training us for later on. You can do microbiology and we can work as a microbiologist, because we have skills. The thing is, in Iraq, the reason it is five years is we study a lot of science. All the science that underpins the pharmacy, we study it intensively, and that is why you can work. Postgraduate clinical pharmacy, all the time you study alongside doctors. Nurses in Iraq they are not like they are here. It is mainly the physician who is calling the shots. Nurses is much like helping.

Would you go to learning events with others as well?

Sometimes, what they do is, the Iraqi syndicate is the pharmacy, dentistry and medicine. They are all in the same building so what they do is have a communal theme sometimes and they invite everyone. And the reason they don't do it that often is the high number. There is a lot of them. You are talking, like in Baghdad, there is 1-2 government and 3 private, so you have a lot. In Iraq you have 50 or 60 schools of pharmacy. And you are not talking small numbers. You are talking, like Baghdad college of pharmacy, each year they take 400 students, so you see it is huge.

Postgraduate that is less than that. There is like conferences and workshops, yes we do that.

What positive aspects of learning together do you see?

That is the thing. Qualified doctors, sometimes they think themselves as gods. They are arrogant, they don't like to listen from pharmacists. Now, there is a trend, similar to here, where they try to push the clinical pharmacist to have a voice. Now, over there, when you are a qualified pharmacist and you do the rounds you are able to stop a medication and override a doctor over there. So if you thing there is something wrong, or there is a drug interaction or you don't want to prescribe the medication you can say, sorry, I am not going to sign this. O.k. so then the, not, escalated, but what will happen, the consultant will come and he will ask you why. And if you give him the reason he will take your side. So it is not the rotating doctor. All the time there is a pharmacist and that is why now there is different for the clinical pharmacist to have a say. It is not always easy as they are thinking, why are we learning with the pharmacist. And remember they have a higher grade and average than us, that is the other thing. In Iraq medicine is 6 years, and they think we have done longer than you and they are looking at the pharmacy as we are more of a delicate job over there so it is nice, you have good patient contact and you are an independent prescriber. So one of the things they don't like. In order to go to a doctor you have to go privately, and you have to pay for it. You can do the same if you go to a pharmacy. If you give them your signs and symptoms the pharmacist, if it is simple, they can prescribe, so you don't have to pay for them. So they find it that they are losing business, but they still think they are above us.

Do you have any other comments that you think would be useful?

One thing, I tell you difference between Iraqi education and UK education. Iraqi education we know something about everything, whereas UK education you know everything about something. So over there the study is thorough. We take a bit of clinical, we take a bit of this and a bit of this. Like here, the first year you have the basic science but then you have more about patient skills, how to deal with the patient, how to read the prescription. All this stuff we did during practice, so, as I told you the course is 5 years but to be fully qualified is 7 and a half years.

Malta

How do you become a pharmacist in your country?

As present, the way is, first you do a four year course, which would lead to a bachelor of science in pharmaceutical sciences and then it is one and a half years to get a masters. *(currently 30 in each cohort).* So five and a half year course. But during the… there is a practice during the whole course, starting from the first year. But at the end of the course, during the masters part there is a six month placement, which is practice. There is no separate pre-registration or registration exam. You then register with the council of pharmacists.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

No legal requirements. There are no legal requirements but there are continuing education courses routinely. I would say with a very high participation of over 60%, 70% of pharmacists, even though it is voluntary.

How does your profession/country currently provide supplementary education post registration?

A lot. We have some run by the, our department (the University), some run by, for example, we have the medicines authority courses, we have a lot of things. Some drug firms do some specialised courses. There is the medical school, with whom we do joint courses. Um, the Faculty of health sciences with whom we also do joint continuing education courses, so quite a lot. It is an amazing amount of courses. In Malta there is a lot of interprofessional courses.

When does learning traditionally take place?

There is very little online, so mainly face to face. It is the geography that helps, but people also use these occasions for networking and social things,

How do people find out about them?

It is amazing today that everything is listed online, so there are groups, you know, there is a site that everyone, well nearly all of the 1000 pharmacists in Malta and the pharmacy students have. It is called pharmacist and pharmacist students.

What support, if any, is given to support education post registration?

It depends. It depends on the place where they work and now, many are including it in their contract. Most of it takes place after 8pm, although there are some meetings held on a Sunday. It depends on who is funding or organising it.

How many pharmacists work in community versus hospital?

We have about, I would say, about 60% of pharmacists, the practising ones, who work in community. But now we have an increase in the ratio we have employed in the major hospital in Malta, since the introduction of clinical pharmacists and services. And we have a few work in the industry, a few work for the pharmaceutical industry as medical representatives.

How is learning recorded and verified?

There is no recording. Nothing like what is required by the GPhC.

What tools or resources are currently used to help practitioners apply their learning into practice?

Quite a lot of that in fact. Most of the sessions are based on that in fact. Most of the sessions are interactive.

Are there any tools that are not currently utilised that you feel would be of benefit to support application of learning?

People are very much interested in case scenarios. I can tell you, when they started, quite some years ago, they started obligatory continuing education in Italy, pharmacy education in Italy was centred on chemistry and a lot of detailed chemistry, very detailed. More than what graduates in chemistry would do. And they started this continuing education requirement on all pharmacists, including some who were quite an age, a few 80, 85 year olds still practising. So you can imagine, they still had to go for this continuing education, and the system of pharmacy there, all pharmacies are owned by pharmacists, and the system is by competition, but, the law stated that those who, this was done by holding sessions, and then there was a written examination, and the law said that if you don't score, I can't remember what it was, but it was high percentage to pass, you can lose, not your licence to practice only, but also your ownership licence so you can lose the pharmacy. That means you would lose, I mean it is hard to sell them, but there are some systems, that means you would be losing 1 million euros, so, they wanted to do something once the law was passed. I mean it is easy to pass a law, but then they, the government said, they set laws with certain parameters, and then the association started getting worried. They made a lot of conditions, that the courses have to be carried out by professional lecturers, so they had to go to the universities, the universities have experts on chemistry, and then they had to be full professors who teach, and they needed to have experience in post graduate, so they couldn't find people who were advanced at that stage who were in chemistry. They had no idea of practice, and so, since we could speak, and all of it had to be done in Italian, all this was stipulated by law, by law, not just regulations, so, a very senior pharmacist met us, and he gave us the idea to go and teach, since we do these courses, and we could manage to do courses that could be applied and we had an idea of pharmacy practice. But just to give you an idea of level of education. Of course now things have evolved, but to give you an example, once we, for example, once we used to give a lecture, a session, they were sessions, three day sessions, so we would do one in Sicily then one in Milan on the same day, so once in a month we passed about 30 times through an airport. To give you an idea of how it can be when you don't leave any flexibility in continuing education.

In Malta are community pharmacies owned?

They can be owned by anybody. There are some pharmacists who own their own and there are others.

How does evaluation of learning events currently occur both at a training event and afterwards?

Some of them are evaluated by a feedback form, in that way, but not evaluated by an education body. It is common, but not evaluated by education institutions.

I think some changes are made, I think so, because there are some other areas, like, the group of medical doctors and family practitioners who have a requirement about how these things are done, and then in order to qualify so that they get credits to remain a member they need credits. We also have a continuing education group that does require, so they are taken into consideration, yes. *(http://www.mcppnet.org/)*

If we are to move towards multi-disciplinary supplementary education and training, you said you do that. Please can you tell me more about how it works, and any positives or challenges?

Yeh. That started very early in Malta, the interprofessional education. Very very early and meetings and things like that. One reason is that, it started in 1972, but also later on in the 80s the education of professionals, other than doctors and dentists, like nurses especially, but even physiotherapists, occupational therapists, was not organised academically. It was more of a sort of apprentice with an academic input. And at the time I had just returned from the United States where all of these were degree level, you know, physiotherapists, pathologists, chiropodists, and so I started an institute at that time, with pharmacists that gave degrees to all these professions. In one institute, so those were already gathered up under one umbrella. And then, because I was running it from my pharmacy office, it was easy to incorporate pharmacists, and then pharmacy belongs to the Faculty of medicine and surgery, so from there we got medical people and that started early on. There were attempts, there are still attempts, for example, there are still some areas, pathology for example, was done with medical people, and anatomy is done with medicine, so they would already know one another.

Who leads it?

It is a small place so it led, mainly, by personal communication.

Do you have any other comments that you think would be useful?

What I think, what we excel at, is the way we moved on in clinical pharmacy. Um, maybe one thing, let's start with one thing that did wrong I think. In the UK, for example, if you would like me to compare it to the UK, they started with ward pharmacy, sort of. In the United Stated they didn't call it so, but they really started with ward pharmacy only. They didn't immediately call it clinical pharmacy. For example, intravenous injections, centralised on the wards, satellite pharmacies, it was more than really clinical pharmacy, where people would write on the, what they changed doses and things like that. We thought it was good that we stopped this step, but in my opinion it wasn't. we went into nearly, what is referred to today, as advance clinical pharmacy, because, we went a little bit to the other side of the fence, you know, and we started ignoring some basic things, for example, storage of medicines, storage on the wards I mean. Ways how to distribute medicines. We skipped these steps where people were going into unit dose; we skipped those and went directly to bedside practice. Those are essentials as if you say you need to give the 'five rights', you need to give the right medicine to the right person, it is useless to point out all the interactions and all the

side effects and all the better medicines you could give from the same class, and then the patient is given the wrong drug. So I think the most important thing that one should learn is to go to specialisation at a very late stage. Because otherwise, I think pharmacy runs the risk of losing its identity. Also, one important thing, and this is I think the good thing we have kept, in Malta, we never felt a division or schism between the sciences and the practice. One thing, but, this you feel it in many countries in Europe, that schism, those who are chemists, those who teach quality control, those who teach analytical chemistry, synthetic and those who are in different elements, whereas the pharmacist has gone on to retain these, and I think that is one area we have been extremely successful in Malta. One thing that I did was, I was an analyst as my first job. Purely analysis, and I made it a point to change it. And I even changed from, I started to teach pharmacology, that's another thing. I used to teach pharmacology to every body, to every profession – nurses, pharmacists, pharmacy technicians, doctors, dentists. All the range. And I even gave that up to go and teach pharmacy practice. Because I wanted to show that as a scientist, there shouldn't be this division. In Europe, they still kept that the scientists are kind of superior to the practitioners. I think that is not felt in Malta at all. That is not felt. It could be felt a bit by the university administration, um, I feel it, because I am on a committee, and suddenly, the rector of the university himself, there is the other people around the table, will say 'don't forget he was a very eminent scientist.' For him that is much more important. I have introduced in Europe, more or less, the teaching of pharmacodynamics. He thinks that is an achievement, much more than having joined the teaching of science and practice, which I think is the most successful thing we have succeeded to do in education in Malta. And more importantly, because this is something I think could be missed, um, is that, when we started our doctor of pharmacy programme *(currently 16 per cohort)* we insisted to set it at Level 8, the same as a PhD. There are still some people who raise eyebrows when they see, you know, level 8, doctor 8, yes, it is research and thesis component, about one third, but then it has a clinical practice component, and then a didactic sort of component. Again, the ability, there, to cooperate, which I think distinguishes the pharmacist from other professions, is that they keep to the very end, except, I think, for surgeons, who keep anatomy going to the very end, cooperating in the clinical, but then you find that surgeons would, um, look up their noses at pharmacology, for example. The most difficult group I used to teach were surgeons, for pharmacology. On the other hand, they were the most people willing to incorporate clinical pharmacy in their wards because they don't give importance to drugs at all, but in pharmacy, hopefully, hopefully, we have tried, that is what makes a pharmacist, because I always say that the time will come, if it is not already here where we will have a big excess of medical doctors. Let me tell you, I met the UK minister for health a few months ago, and he was telling me, even in the UK the policy is going to be to flood the market with medical doctors. So he was mentioning opening, you know, an enormous number of medical schools in the UK now. But it is not just a characteristic of the UK. It is probably going to be repeated in the United States, and more importantly in developing countries and in countries that are evolving, which are not developing, but are rich, such as Saudi Arabia, where I am seeing a movement in the same. Whether that will be successful is difficult to say. But even if it isn't the reason that we have an excess, that might be a God send. I think it is important for the pharmacist to be a pharmacist, and not part doctor, part nurse, part

laboratory officer. They need to retain as a pharmacist. Now what we are doing. We are going into, more or less, modern tools that can help in that. Like,for example, point of care, testing, and any advancements, where you need to keep your mind, you know, the limitations, the statistics involved in checking, the disadvantages, and I think, the pharmacists have been the most capable. They are the most capable to spot and transmit back to the labs when a laboratory machine is not working properly, from the clinic. Something that physicians, I find, are not capable of doing. They can't say 'this type of error is coming from' because they are used to work in labs, so, for example, an HPLC, you would know what would happen if you have that error. If there is a problem with robotics, or with calculations, they are capable to point it out very very quickly. Which nurses aren't that much capable. For example, what I noted with my students as different from nursing students, as I used to teach them in practice, even though I wasn't a nurse. For example, I used to always go to ITU, at that time there were a large number, I think it is still, amphotericin given as an IV push. Say you have to give it over 5 minutes or ten minutes. They give it and you tell them 'do you know how much time it took.' Probably they would say longer, maybe 8 minutes, 9. It was 3 minutes. I mean there is a big clock in the ward and they all carry watches with them, and they can't measure 8 minutes, and they don't care to measure it. But if you have a pharmacist, you would see that the pharmacist writes it down. 8:05 and stops giving it 8:11. They write it down, so it must be 6 minutes, because he is waiting to write it down. That is what makes a pharmacist. When he is capable. One may say it is easy but I have seen people going into shock with amphotericin, so people, all of the efforts to save a patient in ITU and you lose him like that, a stupid thing, not keeping a watch. And those are the little things. You might not say that that patient was saved by the pharmacist because he has done nothing special except followed the rules, and that is what I mean, the capability of keeping a pharmacist as a pharmacist, and using his talents, including, for example, let's come to modern times. I have noted our students, are capable, from a small place. Something I have seen, something I have seen lacking in practice, during my observations, wherever I go. They are talking a lot about, people are becoming familiar with what they call data integrity. I mean that you would expect a pharmacist to be quite good, but now all of the professions are becoming a little bit more conscious about it, and it is not staying to be such a pharmacist characteristic. But, the interpretation of big data, to small groups, or even, the significance of big data to an individual, people are not capable, but pharmacists are very, very capable. Wherever they are working, even if working in areas outside of pharmacy, like public health. A simple example of what I have seen in a group. I have seen there was a pharmacist and I saw them functioning, for example, in surveillance. While many find it very difficult to apply, for example, in European surveillance, of toxicity, of toxicology. Many fail to realise the importance of having big data, like arsenic levels, lead levels, at European levels, then in individual countries, how they compare one country to another by having big data and many say this is epidemiology and after all what that means for the individual patient, the pharmacist is very well capable of interpreting the data to know what to do with a patient with certain lead levels, and things like that. So the application of big data, and I think tomorrow will be an area of big data, in the same way that we used to say the pharmacist is the expert in drugs, which is still there and will be retained. They are the person who knows the most, but that wouldn't be enough of a selling point to save lives. Now we get alerts of

drug interactions with robotics, they wouldn’t have even finished matching the drug and the interaction comes up. Not even finishing the whole name if the doctor gets the alert. But with the interpretation of big data, there are individual cases, but I think it will take many years to get it recognised, and I think pharmacists will, that is something pharmacists learn with relative ease, and we are introducing that in our school, and I think it will be an important thing for pharmacists, as much as important as accuracy and precision and things like that, that Pharmacists are endowed with. And I will insist that for our students, but all modern aspects.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

Malaysia

How do you become a pharmacist in your country?

Well we have to go through pre university studies, like A levels and then after that we have to fulfil the criteria to enter into university for a four years Bachelors degree, and after that we have to do pre-reg training like in the UK, one year, and pass the test. Yes, and then you are a registered pharmacist.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

There a lot of differences between the government sector and the private sector. In government sector they will actually push you to all the CPD and you will have enough points to fulfil for the year. Every week, every month, they will send you for training, o.k. for private sectors, as you know, we are too busy, and we have to focus on what we can do, and this boss they will not spare you the time and money to send you for training, unless it is really necessary. Or it is up to your own initiative.

Who do you register with as a pharmacist?

The Board of pharmacy.

And do they set out requirements for what you need to achieve? Can the private sector still stay registered if they don't do CPD?

This is why this is a grey area. I would say, because they don't really make it a must for everyone to do it, so in private, if you think you are good enough, you don't go for training, that is up to you, because they don't really supervise it, but, in the future they will make it a must to actually get 30 points to get registered for the next year.

Do you know how many work in public versus private?

I have no idea!

When does learning traditionally take place?

Any time. It could be in the working hours, outside speakers, or any company that comes about products, will slot the programmes in, or they will send you overseas sometimes, to some conferences and things, or some inter programmes within the government sectors.

Which providers are used for supplementary education and training?

It is quite general, it is by the pharmaceutical companies or product companies.

What do you think is the best model for supplementary education and training and why?

You can do it online, if you have no time to attend, you can do it on your own. But there is a limit. You can't get 30 points out of it, just 10 points. For face to face I think there is more interaction and you can ask questions and you can, you know, get into details about what they are talking about, but online I think there are some limits of understanding.

How is learning recorded and verified?

You have to prove you attended and submit a portfolio.

What tools or resources are currently used to help practitioners apply their learning into practice?

It is actually pretty flexible. I have done some online trainings actually, from BMJ, yeh. So they don't restrict you on what education tools you are using, as long as they are a good one, and you print out the certificates after that, and submit that.

Do you have to complete evaluation forms at the end of sessions to say how good they were?

No, no we don't do that.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

If you attend a workshop, like a three day workshop, of course there is a mixture of all healthcare professionals keeping their expertise on certain conditions, but it depends on what type of training you are getting. If product based it would be the company representative.

What positive aspects of learning together do you see?

You can learn from other perspectives, the importance of what they are doing, and how they impact your field.

What are the challenges of learning together?

The problems – maybe you have some disagreements of opinions.

Any other comments?

I think generally, the Malaysians are very reserved and don't really interact much in class, and everything is just given, and you study and go forward. In the UK it is more about application. We have a Bachelors after 4 years, not a masters. It is quite intensive actually.

Pakistan – Male pharmacist. 17/12/16

First of all, please can you tell me about the registration process to become qualified as a pharmacist in Pakistan?

Yes – first of all one has to do a five year degree and after that one has to apply to, like the GPhC, the pharmacy council in Pakistan, but the pharmacy council in Pakistan, every district has their own council, so one has to apply to that. Some years ago they used to give a licence to practice to Bachelors in pharmacy as well but there is no such degree now, before it was a three year degree. Now it is a five year degree.

And you they need to anything like our equivalent of the pre-registration training?

No. It is incorporated into the course. You have to have certain amounts of hospital visits and pharmacy visits but it's not set in stone.

O.k. So, once your qualify or register, what professional requirements surround the need to complete ongoing education post registration in your profession/country?

Well, to be honest with you, there are no such things currently, because, in Pakistan, the basic thing one does after registering in pharmacy is the industry, the Pharmaceutical Industry, so they just apply to industries, they do stuff there. Because the hospitals are not well developed still, I remember, where I used to, where I came from, there was one big hospital, a 500 bed hospital, and there was just one pharmacist there, and that person, he just does stock taking and everything else, just stock management, because there is just a culture of the Doctors, they just looked on , because most of the pharmacists have just done small diplomas in pharmacy, they are just medical reps, they just go to the doctor, and wait outside their clinics for hours and hours, but because the pharmaceutical companies hire those reps they still think that pharmacy is all about that there.

Wow. So most go into industry. What about community?

In community pharmacy it is changing now, but three or four years back it was still the same thing. Anyone with a license can open a pharmacy, but not necessarily a pharmacy licence, like a chemist or a druggist; they can open their own shop, without a pharmacist. So it is something quite gloomy.

O.k. so you say you register within a district. Do you register with one particular district? What happens if you wanted to work somewhere else?

That license you have would work all over Pakistan, but where you come from, you have to have registration from that District, no other authority can give you the license.

So once you register is there any requirement to keep up to date?

No, no.

So linked to that then, how does Pakistan provide any supplementary education post registration? There is no requirement for CPD but how then, do pharmacists keep up to date?

They do sometimes attend events, but these are solely organised through the hospital so they just have their own seminars and their own workshops, but nothing for those people working in the community or industry, because industry there are just some SOPs that people have to follow, and that is all. The government requires that each industry should have at least a certain number of so it is just a matter of filling in the blanks. They just hire those people and they are in the industry, mostly doing nothing.

So, basically the employers provide the training?

Yes.

We can cut out a few of the next questions then! So, from your point of view then, if they were to introduce a model where pharmacists in Pakistan did have to keep up to date and go to training events or participate in training events, what do you think would be the best way of doing it?

Face to face is the best, as e-learning, it does not, it is something that is not quite popular as people don't take it as seriously as such, they just think it is something they can do in their own time and they are mentally absent during those sessions as well, because for doctors, they do such kind of things, lots of face to face and there are several organisations, WHO has their seminars, but don't invite pharmacists as they have not yet recognised the important role of pharmacists in the system.

What tools or resources are currently used to help practitioners apply their learning into practice, or how would you support people to stay up to date?

Exactly, the system here is very very good, like the RPS have their own system, their own requirements and their own courses. Of course the pharmaceutical council, of course the governing body must offer it. If the governing body is not offering it, but the law is in place so pharmacists are willing to do that. Here you have to do stuff. If it was imposed there too people would do it and it would have an impact.

You mentioned there the RPS, who is the professional body, versus the GPhC who is the regulator. You mentioned the pharmacy council in Pakistan. Is there an RPS type equivalent?

No, no such thing.

How does evaluation of learning events currently occur both at a training event and afterwards?

They don't evaluate any learning.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from pharmacists in Pakistan?

They would be more than interested. They would be very interested in that.

Do you think the doctors would want that?

That is the thing. Doctors always have their own agenda, in the system as well. In hospitals, they are filled by doctors and they dispense the medicines. The doctors just think pharmacists should just oversee the stock of the medicines and their role is very diminished. And in the community, because every other person is opening a pharmacy store they don't need a pharmacist. And also the sort of pharmacist, when they try, like, I have done a masters here. When they try pharmacy they do into academics, they get a degree and license and they just give that license out for a pharmacy, even if they are not present there, so most of the time they switch between academe and the pharmacy, but during the hours they are not present in the pharmacy the license still needs to be there as the law says that at least one license must be in the pharmacy.

And do you need to re-register with the council every year?

Yes

So lots of challenges of learning together. So, if the doctors and pharmacists did learn together who do you think should take the initiative to do that. Who should lead that?

I guess the doctors are in a position to do that, as they know how these things work so they would be quite helpful, but they have to be realistic at the same time, so they should include pharmacists as well.

Any other comments you have?

In terms of the education system there, they have some legal aspects which are of least importance and they give you books and books and chapters and chapters and expect you to learn them, and with the clinical aspect, there is no difference between pharmacology and clinical pharmacy in terms of the course, it is just the brand names of the drugs they have included, and they link the pharmacology and brand names. They give lots of importance to industrial pharmacy, the quality management procedures. They have lots and lots of courses on that because that is one thing pharmacists are expected to do, something that is pre destined for them, as in hospital it is quite precarious that pathway, and community, being honest, it doesn't pay at all. It pays, I guess, in UK terms, £200 a month, so it is something pharmacists don't appreciate going in to.

New Zealand 2

How do you become a pharmacist in your country?

When I did it, we do a pre-registration year following a four year degree. So, that is just like the UK. You apply for it and it is just like any other job. You can do it community setting or hospital, but it has to be an approved site by our, um, council, so it is 52 weeks. So, when I did it the pre-registration exam it involved doing 8 OSCE scenarios, and each OSCE lasts for about 7 minutes. It was a range from over the counter advice, from doing, um, counselling, there was a medication information station, um, what else? A variety of scenarios you would encounter in a pharmacy, although I would say they were more community based. And then there was also a twenty minute interview where they ask you legal questions and they ask you about those. However, I think it was two or three years ago they changed it, so now, mid-way through your pre-registration year, do you a multi choice written examination and if you pass that you are eligible for stage 2 and stage 2 again involves an 8 station OSCE but it doesn't cover the legal and ethics interview because that would have been covered in the multi choice examination which is legal and ethical, and calculations and clinical questions

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

So we, we have to be part of enhance. You, every year you have to record your CPD and it is done online. And you have to get 20 points a year minimum, but over 3 years you have to get 90 points. And then they split it up and you need a certain number of group 1 points, a certain number of group 2 points and a certain number of group 3 points. Now, group 1 points – that just means like, reading an article or, reading a paper or something like that, so you can show you have done something. In group 2 though, you have to do learning, but also be assessed on it, so there will be, if you go to a conference and they give you a test at the end and you pass it, you can put that down. And then group 3 you need a learning partner and you have to do, it is a combination of doing all of your group 1 and group 2. So you are learning and then showing how you are using that in practice. So an example could be like, um, one of the group 3 points ones I did was writing a community acquired pneumonia guidelines. You do the research then you write the guideline, then you put it in practice and you see how practice is changing as a result. Someone in the community might do the emergency contraceptive pill, where we have to pass a programme and you get examined on it. And then, because you are using it day to day it becomes group 3.

How does your profession/country currently provide supplementary education post registration?

It is a mixture. They do some online. They do some audio conferences, where you dial in and someone is doing a lecture and then there are face to face conferences that you can attend as well, and they are organised through the pharmaceutical society. So it is the same set up as the UK where you have the regulatory body, which is the New Zealand pharmacy council, and then you have the professional body which is the New Zealand pharmaceutical society. And they do a lot of the educational type of stuff. They are definitely the main provider for community but in the hospitals we have our own New Zealand hospital pharmacists association, and then they do a lot of the

hospital conferences. Every, in the community, every franchise would do their own teaching as well, so one of the biggest ones is green cross health, and they have their own annual conference, so if you are member of that pharmacy chain you tend to go to one of their conferences.

What support, if any, is given to support education post registration?

So community, usually you don't get support. In hospital they will fund your post graduate diplomas. Some hospitals will give you protected time to do that and others won't and you do it all in your own time.

What do you think is the best model for supplementary education and training and why?

I think it depends on the topic you are covering, so, there are some things like, say you want to get emergency hormonal contraceptive pill accredited, the online course is sufficient, followed by, you know, a test at the end. When you want to discuss more emerging themes and stuff like that then I think face to face is significant to make those connections and see what other community pharmacists or hospital pharmacists are doing, and it is more improvement based initiatives.

How is learning recorded and verified?

So we have to say what point you are entering, you have to say what you have done and give a description of it, and how many hours you have been doing that, so one hour is equal to 1 point. If you go to enhance there is more information and talk you through the requirements.

What tools or resources are currently used to help practitioners apply their learning into practice?

Yes, so a lot of the conferences now, if you send your assessments to the pharmaceutical society they will credit it and say 'this person attended the full day, or the first and second day and did these assessments, or give it 15 points of learning.' But it has to be sent through to them and they have to look at it and it needs to meet their criteria or learning and then they will allocate points, so then, by attending and completing the test you automatically get the points. There are other tools available. I am not sure about community as I haven't really done community, but it is here say from what I know from my colleagues. I imagine there are – there is a lot so support around enhance and how to complete it.

How does evaluation of learning events currently occur both at a training event and afterwards?

There is always an evaluation form of what went well, what didn't go so well, and what learning you achieved

Who carries out the evaluation?

The conference organisers.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

Um, so within a hospital we do multi-disciplinary learning, through journal clubs. Journal clubs are quite a big thing in hospitals, so you do that with your registrars and consultants. Sometimes the nurses attend. So, there is always journal clubs. Sometimes, if you are like, a specialist pharmacist , you could attend, like when I was an infectious diseases pharmacist, we would always attend the new Zealand infectious diseases and microbiology conference every year, and they same applies to oncology, haematology pharmacists. In the community I know a lot of community pharmacists will do multi-disciplinary meetings with their local GPs, um, and so, there is usually some associated learning with that. They might do a journal club or go through paper.

What pros and cons of learning together do you see?

I think the pros are always. It is good to, when you are looking at papers and different guidelines and things, knowing what they are looking for, what case mix they are getting through, coz, I guess, new Zealand is a small country, so we don't always have our own guidelines, like in the UK you have the NICE guidelines and things like that, so we look across the world to see what everyone is doing. So we will look at NICE, we will look at US and what Australia and Canada are using, and sometimes then see what we have available in New Zealand and apply what is going to work for our patient groups the best. So to have that discussion, and it is good to have pharmacist input at that time saying what is available as our funding system is different. What we fund and things, so it is good to have that discussion. Also, speaking mainly from a hospital setting. We are, the pharmacists are on the shop floor. The consultants will just go to the patients for 5 minutes and tell them what to do, but sometimes that isn't quite clear, so if you can talk about issues we are seeing on the shop floor, discuss those. We get more information from doctors especially what is coming through the laboratory, are they seeing any resistance issues, do we need to source any other antibiotics. Stuff like that. So it is good to have multidisciplinary meetings.

The cons, can be sometimes you attend and it isn't relevant for pharmacists. Sometimes it is quite medical based and it has very little relevance, but I think the pros definitely out way the cons. And when you know they are going to discuss something that is more diagnostic or radiological which we don't have much input on, we don't have to attend.

Do you have any other comments that you think would be useful?

I don't really know. But, from what I gather, it is quite similar. There is very little difference. Even around funding, and it is similar. I am working with a lot of British pharmacists and the standard of care seems quite similar and practices are very similar. The only difference would be around availability of medicines.

New Zealand 1

How do you become a pharmacist in your country?

I became a pharmacist using a programme that is equivalent to the OSPAP programme. I didn't qualify as a pharmacist in New Zealand. You may know this – I am from Iraq. But I went through a programme where I had to basically prepare myself, without the lines of a structured programme like you do here. And sit Australasian exams, which were Australia/new Zealand based. And I had to pass those and there were clinical and scientific exams basically over 2 days. Then after that you do something similar on the law and ethics side of things after you basically sit something structured that was set by the university and after you do all of these exams you do a one year pre-registration training that could take a year or a bit longer, if you don't pass the exam. That, again, is structured. And the exam is a face to face interview where they put a scenario in front of you and all that, so after you finish that year and are signed off by the pharmacist, 2 individual pharmacists including someone from the council, it would be a face to face examination in front of that. So if you pass all that you get registered. Of course you need to apply with a reference of your character, so that's it.

The undergraduate course is 4 years of MPharm.

There is a pre-reg year but there is no pre-reg exam at the end of it. There is portfolios that are being submitted over the year and they are marked individually so it is case by case but you don't have the same sort of system as here where there is some sort of exam. And I think they can afford to do that as it is a small cohort. We are talking about 150 to 200 per year.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

You register with the pharmacy council of New Zealand. There is a programme that they call it enhance, which is the continuing education programme. You need to actually complete, every year, a certain number of tasks and credits and basically demonstrate that you have passed those. So for instance, I am accredited to, I mean, not all pharmacists have the right to dispense the emergency hormonal contraceptive pill. You have to have some sort of training. One of the providers is the new Zealand college of pharmacists which is affiliated with the pharmaceutical society. So pharmaceutical society, just like here, is the training body, the professional body. The educational body is the council.

How often do you submit? Is it a portfolio?

Every year. It is annual.

How does your profession/country currently provide supplementary education post registration?

It is a mixture. You can have online and you can have face to face. You could basically attend courses that they would recommend, but aren't actually run by them. So it is a mixture.

What do you think is the best model for supplementary education and training and why?

I think face to face will always have that human element to it, and you will have an opportunity to interact with peers, and learn with them. It lacks the flexibility of course that an online course would provide, but that human element is fantastic.

What support, if any, is given to support education post registration?

Normally, most of them would be after hours or in the evening. Sometimes you could get a particular body like a hospital who might get a bespoke training designed to meet their needs, but in general it is after hours or weekends.

How about breakdown of pharmacists?

I think it would be something like 80:20 of community to hospital

How is learning recorded and verified?

So registration there – there are 2 types of registration. If you go to the pharmacy council's website you will see there is a practicing register and a non-practicing register. And normally, to practice, you will have to have an annual practicing certificate. That means you are engaged in CPD. Every year you have a portfolio. That is online and you submit it online.

What tools or resources are currently used to help practitioners apply their learning into practice?

Well, they will be your sort of conventional resources which are your written material. Let's say we are talking about influenza management, you know, flu management in a community setting. So there will be information on the various options available – your Relenza and Tamiflu and all of these. And in most cases there will also be material supplied by the manufacturers and suppliers. And it would be fancy stuff you know. You could have a memory stick with information on it, you could have access to online material with a special code you could have. You could have leaflets, pamplets, and material. It is a combination. You could sometimes have access to MCQ questions and interviews on line, all sorts of things like that. It is targeted.

How does evaluation of learning events currently occur both at a training event and afterwards?

Normally. What tends to happen in most cases is at the end of the event you would have some MCQ questions to answer and it is formative rather than summative. So you would attend it but no one would really mark it. So you would have to present this as part of your portfolio to the legislator.

Is anyone evaluating the quality of the training?

Things would be accredited by people so they would tell you that this is accredited.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

Well, to be honest with you. That is implemented and entrenched in the degree itself. So from early days you will always have. Put it this way. Both of the universities in new Zealand that teach pharmacy have medical provision, dentistry, among others, but at least you will have medics and dentists. So there will be combined and joined health campaigns and there will be student activities on public health where students design campaigns together. There is stronger emphasis on that side of the world on the health issues encountered by the indigenous people. So Mauri health, and there will always be, sort of, campaigns to look out how to better education Mauri's on diabetes, cardiovascular health, disease, predisposing factors, lifestyle, all of that. It is there and it is part of the education. Now, at a higher level, when you move into primary and secondary healthcare, I think healthcare organisations are well and truly entrenched and they lead the healthcare system there. And by that, I mean, a cohort of medics, pharmacists and dentists, physiotherapists who receive a certain amount of funding, you know, to provide health services to a particular geographical location. So that is there. And if you are not part of a healthcare primary care commission you won't have a contract or be able to provide that.

Do you have any other comments that you think would be useful?

Well, let me quote someone. There was a very famous quote in the pharmaceutical journal here, probably about 7 or 8 years ago, about CPD to be honest with you, but how that was pioneered and integrated into the profession in New Zealand. The quote was 'when New Zealand leads, the world follows.' Or something like that. But, without being arrogant. There is a lot to learn from each other. I think if you look historically, Kiwi and Ozzy pharmacists integrated well with each other and here. People, before 2007, you would see a lot of that. I still believe that the profession, educational standards are comparable and I do like to think that one day common sense would prevail and reciprocal arrangements would be restored on both sides of the world. But, you know, you understand and I understand it was a political move.

USA

How do you become a pharmacist in your country?

You do your doctorate in pharmacy, which is 6 years but there is 2 years pre-pharmacy but some universities ask for a PCAT

What is PCAT?

Like a qualification exam to move from pre-pharmacy to pharmacy.

Is there a pre-reg?

It is integrated. You then register with the NABP, the national association of boards of pharmacy. You renew, well, there is federal and state. You register with the NABP, which is the USA governing body which produces the registering exam, but then you need to maintain your licence with your state doing your CPD or CEs on a yearly basis.

You may then do a residency. So, if you want to work, more than just a job. So there are people who graduate who just want a job, because they know pharmacy will give them a good income, but they aren't necessarily passionate, but those who want to go further who want to be more or less leaders, they will go for residencies. The residencies could be in community pharmacy. They could be in primary care and they could be in hospital. So it has become a huge aspirate. So you do that and then you do a specialist residency, so you might do cardio, or like I did, I did a pharmacy practice residency and then I did a oncology residency and then there are fellowships, whereby it is a 2 year thing.

What is involved? Exams?

No exams, no assessments, but, someone is training you intensively, so for example, general practice residency, you go through the various roles, so you do a bit of intern medicine, you do a bit of paediatrics, you do a bit of geriatrics, all of that. But someone is training you. You have a mentor who's teaching you. So it is like a safe, protected environment for you where you go and they understand what you want, what your strengths and your weaknesses are. And then there is a research project and then there is an annual conference where all the residents get together to share experiences. It is a beautiful journey but it is a lot of work. They really work you but it is a lovely, lovely journey. And similarly the specialities. When I did my oncology I rotated through bone marrow transplant, haematology, pain and palliative care, so they make sure you have a full picture, and you are being mentored. It is long hours. You just immerse yourself.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

Each state is different, so my state is just 15 CE hours annually.

How does your profession/country currently provide supplementary education post registration?

It could be conferences, it could be accredited articles, accredited webinars, and you get your hours.

What support, if any, is given to support education post registration?

Um, I think it depends on where you work. So with some hospitals, if you are like a specialist pharmacist you do get days. A whole day where you get to do research or work on your CEs or things, but I think in community, I don't think they do.

When does learning traditionally take place?

No, the study day is a day off, so you aren't working on the ward or you just do whatever you need to do, so you can do online stuff, you can do reading.

Which providers are used for supplementary education and training?

So, you need to get them accredited. So anyone can be a provider but they need to be accredited by ACPE (accreditation council for pharmacy education) or AHSP, so once these are accredited activities you get a point for it. It can't just be any random thing.

How would pharmacists sign up for events?

So, usually, um, through conferences, emails, from your society. So for example, there are two big societies, there is AHSP (American Society of Health-System Pharmacists) that is a huge society which produces a lot of CEs. There is ACCP (American College of Clinical Pharmacy) that produces a lot and there is the American pharmacy association. These are the three big ones. American pharmacy association is more of less community, ACCP is more clinical, AHSP is a mixture of everyone.

What do you think is the best model for supplementary education and training and why?

I love face to face. I prefer face to face but I guess it isn't always possible.

What are the pros and cons then?

You need to make time out of your busy day to go and do a face to face, there are certain things that will just stick in your head and you won't ever forget, because when you read something you may forget it all actually, if you don't have a direct application soon.

How is learning recorded and verified?

So there is a honour system, so every year when you go to renew your licence they ask you have you done your 15 hours. Yes? Then you get audited. So you have to keep track of your CE credits. So every time you do a CE activity you get a certificate and you have to hold on to it.

What tools or resources are currently used to help practitioners apply their learning into practice?

I think in face to face the speakers really help. Drawing on their experience and stories. Um, yes, I think application. So theory, someone just blagging theory at you, does not facilitate learning. You need theory and then a direct example after that of someone applying that, how it helped the patient or how it helped the pharmacist. I think there needs to be the application and case studies. Personally the handouts are also good

because if you are organised and keep track of them that is great, but if you are not, then you need to make the most of what happens on the day, so, um, the more effective the session is the better.

How does evaluation of learning events currently occur both at a training event and afterwards?

Evaluation of learning? So at the moment, because I am oncology qualified I need to maintain these and these, in 7 years I need to do 105 hours, so they boil up to 15 hours a year. So I do these oncology, so I study what they give us, which is a book of the latest articles and oncology studies and then do an online test and then after that, if I pass, I get to evaluate the test and the articles. Does that make sense? So it is a survey. For what I do, it is a survey, and they, for example, I have 15 chapters to do and they ask me specific questions about each chapter.

Do you feel it is relevant to what you do?

Do you feel it met the learning objectives?

Do you feel it has been tainted by an bias or drug companies, or whatever

Do you feel the questions were fair?

Do you feel the questions were a true reflection of the article?

It is tedious to be honest, because if you do it all in one go, you have 15 big surveys to fill out, but it gives you a voice. And they do then next year change things around.

Would that be the same for all providers?

I don't know as this is a specialty. But they are expensive. I mean I pay 100 a year to maintain my specialty plus, that is just membership, but the material costs me about $500 a year. Because I pay so much, I think that is why the evaluation is so rigorous.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

Well, actually, if you think about it, if you are in a hospital setting, there is a lot of professional activities that go on that are interprofessional, whereby medical students, pharmacy students are invited. But, see it may not be. So you know, interprofessional, in the strict definition they need to be learning from each other, not just necessarily sitting side by side. So the ones I have been to, activities, they are literally sitting side by side.

Is there a hierarchy or are they happy to be in the same room?

I think it depends on where you work. So, I have worked in two different institutions. One, definitely a hierarchy, where pharmacists were not included enough and they had been doing silly stuff like leaving notes on patients charts whatever, whereas when I worked at the cancer centre there was definitely equality there and the ward round would not happen without the pharmacist there. Because the pharmacists were very specialised, really up to their game, and you need to be. And they, there was a very good working experience, very good. And the interesting thing is that the ward round included the nurse and the social care person, so whenever anything is identified,

everybody is there and sometimes the nutritionist if the patient was on parenteral nutrition or something.

What are the pros and cons of learning together?

Um, pros and cons. Alright. Dependent on where you are at, I think. Personally I don't see any cons. It is hard to organise and hard to get people together but there is only advantages. And if you do get them together it should be then learning from each other, so it needs to be a workshop style, not lecture, and there needs to be, the people leading the session, should not be from one field. So whoever is learning, they need to see pharmacists and a model nurse and a model doctor, not just one. Because if you have only one, then one of your professions will feel like an outsider, or they are not represented or not learning.

Which topics do you think would work?

Because it is postgraduate it could be based on the people's speciality but it could be common things that everyone struggles with, like pain management. Everyone struggles with that. You know, GPs, pharmacists, nurses are scared of opioids. So you can choose things that are of common interest to everyone. But if you are speaking to a specialised group then you can long with long term conditions.

Do you have any other comments that you think would be useful?

So I think, because the students first experience with practice, they are still part of the course. In England we send them on placements and more or less we don't have a say in what is going on, whereas the students in their 6th year, this is when they go out on their, they call them APPEs, advanced pharmacy practice experience, so they go out on these blocks of 6 weeks to different hospitals and see patients, and these rotations are only accepted if there are specific learning outcomes and a lot of these would be interprofessional experiences, so it is not just the pharmacist with the student it is usually a ward round which is multidisciplinary, so, at an undergraduate level the student gets to see good practice of the pharmacist being properly integrated, but they are still linked to the school to have a reflection on it and have a mark attached to it. By the time they finish their 6th year they have to complete 1000 hours of intern hours, so while they are learning they are expected to have an intern and accrue these hours. So some of them are employment, some of them are placements, some of them are self-arranged, some are payed, some are not payed, so by the time the student graduates they would have done a lot.

Philippines

How do you become a pharmacist in the Philippines?

In the Philippines, depending on which university you go to, you may take the course for five years, the minimum is four years. Some universities may take as long as six years, I think its DPharm probably. For Batchelors in science of pharmacy it is minimum of 4 years.

Do you do a pre-reg equivalent?

No, but for registration you need to do internships. Community, hospital and industry. You need to complete 200 hours each and then we have to pick one for the major internship which we have to cover 360 hours. That is after the course. We register with the professional regulations council. Not just pharmacists, but all professionals. You need to renew your licence every three years but you have to attend seminars and do CPD.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

A pharmacist has to complete, they have to get a couple of points, depending on what seminar they attend. And if they work in a community pharmacy they have to attend a seminar that has been identified, or in hospital the same.

How does your profession/country currently provide supplementary education post registration?

Mostly face to face.

Which providers are used for supplementary education and training?

The Philippine pharmacist association handles the CPD part, yeh, and then they partner up with the regulatory body,

What support, if any, is given to support education post registration?

They can choice to do it whenever is convenient some are in the day and some in the evening,

What do you think is the best model for supplementary education and training and why?

From what I have seen, online learning, of course it is effective, but in the Philippines we don’t have that yet. I am hoping in the future they can streamline it. I think most of them have started it.

How is learning recorded and verified?

Mainly certificates I think.

What tools or resources are currently used to help practitioners apply their learning into practice?

I don’t think they give anything. I have heard from colleagues they do workshops so aside from the certificate, I am not sure.

How does evaluation of learning events currently occur both at a training event and afterwards?

I think a sort of questionnaire, did they learn anything from it, as an evaluation.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

Well, some companies do sent their employees to different seminars. Some of them are supported by their companies. I can only speak on behalf of younger pharmacists. I have seen my colleagues, they enjoy the training and they get to interact with other pharmacists and share their experiences and learn new things. As for the more mature pharmacists I think they are concerned about the time and going to the venue, travel is really bad.

What are the challenges of learning together?

It is a major thing in terms of hierarchy as pharmacists in my country are not perceived as important as professionals in the U.K. I think it is mainly to do with the salary. It is the same with the nurses. The doctors are on the top of the hierarchy of things. It is very discouraging for many pharmacists. For example, if you are asked what you do, and you say ‘I am a pharmacist’ most of the lay people would think ‘oh. You work in a drug store, oh, you work for this company’ and you always have to explain to them that pharmacy is not just about that and having to work in different industries and settings. Most Philippinos have that sort of mindset.

Any other comments?

I can’t think of anything at the moment.

Great Britain

Please can you tell me how you become a pharmacist in your country?

If someone wants to become a pharmacist they first need to do a GPhC accredited degree, which is a 4 year course, an MPharm, at a variety of different universities across the country. They can feed into this doing a foundation, and then they can do an MPharm. You need to do the set number of years on an accredited course, and then a one year of pre-registration placements, in an accredited premises with a tutor, although there are some accredited integrated routes too.

What professional requirements surround the need to complete ongoing education post registration in your profession/country?

Well, more recently they have introduced revalidation for pharmacists, which includes recording and submission of 4 CPD records, which is to include planned and unplanned entries, of which at least 2 have to be planned CPD, and also submitting a peer discussion and a reflective account based on 3 of the Standards for Pharmacy Professionals. Before revalidation it was 9 cycles a year, but it was called every 5 years, whereas now it is an annual submission.

How does your profession/country currently provide supplementary education post registration? When does learning traditionally take place? Which providers are used for supplementary education and training?

A variety of routes. Some people may just do things around written things. If people are part of the Royal Pharmaceutical Society, they can use the Pharmaceutical journal and just access articles. There is the centre for postgraduate pharmacy education (CPPE) through Manchester who do a lot of distance learning or workshops, and events there. There is a variety too of meetings, through the RPS, local meetings through LPFs. Evening meetings. There are other meetings that people might go to run by people like UKCPA or Pharmacy Management that might be during the day. There are a variety of settings where people can pick up information. It can be flexible. If you only have evenings to do things people can do that, or they may want to learn in a more passive way by picking up an article, or plan to read articles, but some may go along to workshops, and do work based activities too.

What support, if any, is given to support education post registration?

It is normally done in peoples own time.

What do you think is the best model for supplementary education and training and why?

Its interesting, as lots of it is down to peoples personal preference. A lot of people don't have much flexibility due to hours of work and what they do, so as much as they might want to go along to an evening meeting, where others might feel supported there, they might need to be in their pharmacy stores til late, by which time there is no enthusiasm to go on and do the things that are seen to be less of a requirement, so something a bit more passive might be o.k. I think face-to-face from a supporting background, in

my view, is the best way. It is the way I feel that I get things best. I do do reading, but something it is a bit.. this is the latest update on this, whatever. I prefer to be able to go along to a session and get practice experience and people feeding in what they are seeing on a day to day, whether that is on a practical or process element or service provision or whether it is a clinical topic. But whether that is suitable for everyone, as I appreciate not everyone can be that flexible. It might also require funding.

How is learning recorded and verified?

You submit it to the GPhC through MyGPhC, which is part of their website, and you go into your own record and there are certain places to complete and upload your record. It is an online system only, but basically you put it in. you can enter it when you like throughout the year, and you can submit when you feel it is ready for them to look at it. You can complete more than the required amount during the year, and then just click on the ones you want to submit when you are ready. Only 2.5% of submissions will be looked at annually.

What tools or resources are currently used to help practitioners apply their learning into practice?

Sometimes, for certain things. I am a big UKCPA fan, and often they give you grids to help you think about the elements you need for CPD, and to fulfil the requirements for the GPhC requirements. It helps people to think about why they are there, what they got out of the session, that is the learning, what they want to reflect, what are you going to do with this information. You didn't just come for the food! What have you learnt. Just asking questions to help you think about what you are going to go away and do. Sometimes you have to hand it in, but certainly at day things I have gone to you are free to keep it. I would normally go away and put that into the website.

The only assessments I have seen would be when I have used CPPE things when you do e assessments and get certificates. It might be an assessment of what you thought for others, but not really an assessment of what you learnt.

How does evaluation of learning events currently occur both at a training event and afterwards?

Usually you get an evaluation form at the end. The only way you are going to get data is by getting people to fill it in when they are physically there. Sometimes you get it right from the beginning so you can tick things as you go along or it might be right at the end.

Who carries out the evaluation?

If it is a CPPE thing they take away the whole evaluation, or the facilitator of the meeting would take it. Pharmacy management take it away and have a look.

If we are to move towards multi-disciplinary supplementary education and training, what do you think the appetite would be for this from your profession?

I think, it is interesting for pharmacists. It depends on where they are from. For example, those in a hospital setting probably already do a lot of IPE type training within their workplace, so ward rounds, pharmacists, doctors, nurses would all be part of this,

or physio depending on the condition. In the community I think people would appreciate it but might be hesitant, but I am just thinking around here, if you could get the community nurses in with the community pharmacists there are a lot of things going on where there are lots of parts of 'we want this, we want that.' It would be good to be able to talk to people if it felt like a non-threatening environment for them.

What positive aspects of learning together do you see? What are the challenges of learning together?

I think there are challenges of timing. I know in the local area there are lots of community nurses who are part time, and a lot of people who are working 5 hours within the school day, so there are availability issues to come to evening things. However, having said that, I always used to come to evening things when my kids were little. You can somehow work things around. So it would just be timing. Not everyone would want. Community pharmacists would need to come in an evening and community nursing may not always want it to be in an evening, so some people may not come to CPD.

Who should lead joint learning?

That's an interesting one actually. I would rather that it was an education provider than an organisation, such as a CCG because I feel people can be a bit more open if it is somewhere that they are not being managed or commissioned, or something like that. So I feel from an education point of view, people would value it more. I know certainly the move to the venues of things that run at out University, people like the fact they are coming to a University. I know that might be difficult to replicate across the country though. And culturally, moving things out of pubs and things, even if it is a function room, there is an issues, culturally there is an issue where your venue could be. Say, it was a CCG, or maybe a hospital setting, but who is going to lead on it, it would be helpful being an education provider.

Which topics do you think would work?

I think there is a host really. It depends on who your audience is. I think if you are thinking about, I know I am being specific about nursing and pharmacy but I think we have said that all of our patients have physios so other community roles. I think you could do it around conditions, but I think we could also do things that are more basic conditions. We always think of super duper clinical things but there are also more basic topics in the community, for example, catheter related infections, dressings, barrier creams. Sometimes it could be practicalities, or why something might be on a particular formulary or something like that. So I think some more practical, how things function might be good.

Who do you think should fund joint education and training?

Interesting. I don't know how it kind of works. Obviously the CPPE works through the University of Manchester and that is funded through Health Education England. I think it needs to come out of that sort of setting but how to proportion it, or whether money has to come out of somewhere else I don't know. Funding is always going to be so tricky

Do you have any other comments?

I wish we could, I am very pleased you are doing this. I think we need to include more, as some people feel very isolated, particularly community pharmacy. And i feel once people do come along to things you can sort of nab them in and if they come to one thing they might come to others. It is getting them to come to the first thing that is quite hard. I think we are leaving lots of people behind who are feeling sort of threatened and I think that is really difficult. I don't know how we get people through the door as people are so busy.

Thank you very much for taking the time to meet with me and answer these questions. Your input will be extremely valuable in proposing a future model for education and training.

Appendix 20: Framework creation (Chapter 7)

Framework creation for the running of a training event

Background to the study:

This work is the culmination of all other elements of PhD work. This has included the following activities:

- Creation of Pharmacy Education South London (PESL) (2014)
- Evaluation of PESL sessions (paper available in The International Journal of Pharmacy Practice)

  Micallef, R. Kayyali, R. Factors affecting a face-to-face learning event. International Journal of Pharmacy Practice 2017; 26(2), pp. 183-190. ISSN (print) 0961-7671
- Survey of pharmacists in South London of understanding current participation in, and perceptions of training opportunities (n=338 responses)– March 2015-March 2016
- Learning from others:
  1. Interviews of pharmacists in South London (n=19)- March-June 2015

  2. Learning from other healthcare professionals and pharmacists globally via Interviews (n= 24) – January-June 2017
- Creation of framework - 2018

Overall, the findings have found that although many training events follow the same structure, there is no formalised framework to support providers to ensure the intervention is fit for purpose.

PESL

- Face-to-face attendance is still wanted
- Topic selection is central to effective engagement.
- Aims of the learning should be able to correlate to tangible actions after the event
- Future work is also needed on how to follow-up with participants after events to support them to change their practice, and learn about application of their learning.
- Funding also needs to be considered for future models.
- A comprehensive strategy for picking local or nationally driven topics is crucial, to ensure the workforce has the appropriate skills and knowledge.
- In publicising events, the topic, including the driver for the topic and the skills that will be obtained, the speaker and their experience plus how learning can be applied after the event should be included.

Survey

- It is seen that face-to-face learning is still preferred, although there is an increasing emergence of online learning.
- Continued work is still needed to ensure preferences are taken into account when planning learning programmes.
- There needs to be a strategy to ensure good utilisation of providers.
- A framework needs to be created to ensure knowledge is gained from the learning programmes on offer, and that this is measured and evaluated.

Learning from others

- Continuing Professional Development (CPD) is common for other healthcare professionals in the UK
- For pharmacists globally there is no consistent model
- Face-to-face learning is the most common
- Application into practice is a key element in the CPD cycle, where in place
- Multiple providers for pharmacy CPD in the UK but globally 2 countries so far have gone to 1 provider for ease and consistency
- Evaluation of learning events is not common place, but, where it happens, there is still a culture of evaluation forms

Taking into account all of the findings of the research above, a framework has been created to support the running of a training event. This has been called the PRACTICE framework to support application of learning into practice.

Aims of the study:

- Validate a created framework with people who organize or who have organized training events through focus groups
- Validate each item of the created framework through circulation to local key contacts organized in pharmacy education and training, and also through the Health Education Research and Evaluation (HERE) research group
- Run an education event and gain views of attendees

Target audience:

The target for this research will be South London, as this has been the core area for the majority of elements of the previous research, supported by local relationships.

Sample size:

Sample size for this element of study will be smaller than previous elements and will be dependent on attendance at events.

For the focus group validation this will take place during a training and development day for those in senior roles in pharmacy across South London, organized by the Local Pharmaceutical Committees. On average, 20 people would attend this. For item validation the sample will aim to be 6-7 people involved in pharmacy education and 6-7 outside of pharmacy, to echo previous studies. The average attendance at a pharmacy education event run locally is 25.

The PRACTICE training framework

To be validated including evidence for the element

			Where from?
Before Intervention	**P**lanning	Complete a training needs analysis	Previous studies and experience
		Date set for the event	'I think they have 3 meetings a year where we get together and have a meeting together.' Interview 1 – survey interview
		Budget set for the event	Funding also needs to be considered for future models. – PESL paper the government, two or three years ago said we will put a CE system in place but we do not provide you with any funds or money to do it.(Belgium) – learning from others interviews
		All stakeholders included in the planning	'A lot of the time such things are only sent to certain people and it doesn't reach us, so a lot of the time we are not aware that a seminar or something is going on actually, so, if, people are made more aware, and a summary of what it entails may make you go.' Interview 19 – survey interview
		Format for event identified	Of the 292 responders who had participated in education and training in the past 12 months, 62.0% (n=181) had completed an e-learning package, 54.8% (n=160) had attended a workshop, 53.4% (n=156) had read a journal article and 51% (n=149) had attended a conference or network meeting. Likely participation was 3.8/5 for downloading material, 3.6/5 for attending at workshop and 3.3/5 for attendance at lecture. – survey chapter 'There are times I sometimes cannot make an event and you don't want to miss out, so a webinar is one of those good things that I like because I can do it from home…they are very clever with their IT so you listen but do the case studies with other people in a group virtually, which I think is an amazing model, because I felt like I was in a workshop but sitting at home.' Interview 5 – survey interview 'I would rather attend, where the mobile is off, no one is disturbing me, and I am doing something constructive.' Interview 11 – survey interview There is no restriction on format (Australia) – learning from others interview I think it depends on the topic you are covering (New Zealand) – learning from others interview
		Length of event identified	The optimum time for participation in events is seen to be 1-2 hours with the exception of daytime or weekend events which can be longer. Although podcasts would be

			acceptable up to 2 hours, shorter appears to be preferable. – survey chapter
		Timing of event (day of the week and time of day) identified	'*Unfortunately when they work from 9-9 it is very difficult for them to get out.'* Interview 8 *'Lots of people have family commitments, children, elderly members of the family they may look after.'* Interview 6 – PESL interview Weekend events were least likely to be participated in, although just over a third (36.1%, n=120/338) were likely to participate. - survey
		Audience identified (which group/groups)	Specialist groups/providers identified in survey chapter
		Plan for evaluation both at intervention, and afterwards, planned	we look at start rates and completion rates, which kind of tell us if the topic is popular… and pass rates , so are the questions written to a standard...we have star ratings and user reviews which are all reviewed by our customer services team, and we get lots of suggestions for new content, and positives and criticisms about it, which is phenomenally useful for us, so actually, it is mainly the qualitative stuff that steers our direction in terms of content, (BMJ learning) – learning from others interview
		Reminder sent to registrants	Once signed up for an event, 93% (n=106) would like to be reminded by email. – PESL follow up questionnaire
	Resources	A venue/online platform identified	
		The venue is accessible/central (if not online)	*'I live five minutes away so it is good and very close.'* Interview 3 '…*wherever I can get on the tube, as I don't drive.'* Interview 4 – PESL interview
		The venue/online platform booked/secured	
		Booking platform set up	
		Evaluation form for event planned (if applicable)	We have feedback forms that everybody does. (CPPE) – learning from others interview
	Advertising	Stakeholders support dissemination of details	'*To be honest a very small number of people turn up. I am wondering, is it they don't actually realise it is happening?'* Interview 2 – PESL interview
		Identification of backfill provided (if applicable)	'When I have asked my colleagues they always say it is because they can't get time off for them, or they are working on that day and can't get a relief person.' Interview 8 – survey interview 'And the cost is significant there because I am self-employed. If I don't work I don't earn, so if I have to factor in high costs, you know, conference fees as well as transport and accommodation if I have to stay overnight I don't get reimbursed for any of that, so cost is a significant factor for me.' Interview 16 – survey interview We don't fund backfill, no. remember, post-employment training is in the interest of the employer and service provider too, so, if you like, that's their contribution. If we were to fund

			backfill we would have to get extra funding, (HEE) – learning from others interview
		Mode of advertisement identified	The most preferred communication method was email with 97.4% (n=112) wanting to hear about future events by this method. Once signed up for an event, 93% (n=106) would like to be reminded by email. Although initially to hear about events 23.5% (n=27) would like to hear by text, this increases to 36.8% (n=42) wanting to be text a reminder about an event after having signed up. Social media as a method of communication for future events was requested by less than a fifth of those asking for email with only 15.7% (n=18) and 13.0% (n=15) asking for Facebook or tweet. – PESL follow up survey 'Maybe advertisements need to be clearer, as many people may not check their emails or, I don't know, they may see it but ignore it.' Interview 7 – survey interview
		Advertising completed in sufficient time to allow planning	*'With a lot of the ones I have attended I only heard about them a week or so in advance. If they could do it more in advance that would be good.'* Interview 3 – PESL interview
		Advertising includes: o Aims of event o Topic including driver for the topic o Skills to be acquired o Benefit to practice	PESL paper conclusion: Aims of the learning should be able to correlate to tangible actions after the event; therefore future work is also needed on how to follow up with participants after events to support them to change their practice, and learn about application of their learning. Funding also needs to be considered for future models. *'I remember the format in which the objectives were set out and what objectives I was particularly interested in learning.'* Interview 6– PESL interview *'I think all of the topics have been good in the sense that they all helped us to support the key services.'* .Interview 5– PESL interview *'My primary reason for attending would have been for making sure I was aware of current evidence and practice.'* Interview 1– PESL interview 'I guess in the description it is the main headline, so maybe a bit more information about exactly what they are going to go through. I know some people may just look at the headline and think they don't know what it is.' Interview 3 – survey interview 'I like to know who the speakers are and the agenda in advance, because sometimes you turn up and it is not at all what you thought, so if you have someone from a different angle to what you wanted covered, and I would also,

			ideally, like it to be someone independent.' Interview 14 – survey interview
	Capacity	Other events in the local area do not clash	'Sometimes there are so many events on that you almost don't know, you are trying to decide which one you should go to, and it turns out that because there are so many so frequently it turns out that it is difficult to choose, so I don't choose anything.' Interview 12 – survey interviews
		Calendar of events made available (if applicable)	Weekday daytime and weekend events should be over 2 hours every 6 months Evening events should be between 1-2 hours every 3 months Webinars should be between 1-2 hours every 3 months Podcasts should be less than an hour monthly Downloading and reading materials should take between 1-2 hours monthly Lectures or workshops should be between 1-2 hours every 3 months. – survey chapter
		Number of repeated events identified (if applicable)	We have 10, or even 11 fixed locations for the lessons so people only have a distance of maximum 50km to get to the lesson (Belgium) – learning from others interview
		Maximum capacity for the event identified	Dependent of venue – previous experience
	Topic	Topic is applicable for all potential attendees	For employers, the need to complete mandatory training was highlighted with little focus on other development. The comments regarding CPPE echoed the figures above showing a perceived community focus, with the potential that hospital pharmacists do not see the content as clinical. The comments on UKCPA focused on great conferences and expert speakers. – Survey chapter I have a feeling that people aren't attracted to the topic or don't think it is relevant for them, or, the importance of that has not been, they have not understood the importance of why that topic needs to be done. Interview 15 – survey interview They are all very interesting but how we prioritise and select them for training has got to apply the 70:30 rule, you have to do 30% of topics that will apply to 70% of people, otherwise what is the point. Interview 10 – survey interview
		Expert speaker(s)/facilitator(s)/provider identified	over 80% ranked the speaker as overall good (scale mark 3) or very good (scale mark 4) in all criteria tested. The mode response was 4, followed by 3. There was no statistical difference between providers with lecture given by an expert speaker and workshops delivering rehearsed material – PESL evaluation forms 'The quality of the presenter is fundamental.' Interview 11 – survey interview 'I think it depends on the speaker. If the speaker is a really good speaker and they are

			engaging the audience, and I feel if they are repeating things as well that consolidates your learning then in that case I really like listening to guest speakers.' Interview 7 – survey interview
		Topic is relevant to audience professionally and/or personally	59% of attendees stating they attended due to the topic being relevant to the role and 56.3% saying they came due to an interesting topic. – PESL evaluation forms *'My primary reason for attending would have been for making sure I was aware of current evidence and practice.'* Interview 1 *'just an interest in the topic I think. It came up and seems like something I really wanted to go to, something I could learn from. It wasn't necessarily something that was a CPD need''* Interview 9 – PESL interviews
		Pre-work distributed (if applicable)	
		Aims of event correlate to tangible actions	'I choose training mainly to be able to provide new services. It is mainly based on the learning needed for the actual service, so I don't normally go to additional training unless it will benefit a service, so it needs to be necessary information.' Interview 18 – survey interviews
Intervention	Intervention	Presentation referenced to local/national priorities or guidelines	'*Making sure I was aware of current evidence and practice for using those types of medication, keeping up to date with the latest things and to look at any new updates on the subject areas concerned'* Interview 3– PESL interviews
		Copies of slides/workbooks made available (if applicable)	*'I love to look back at the slides and go over them to see if there is anything I missed. I can save them and go back to them if I want to in the future.'* Interview 7 3.3 '*we were sent the slides, and anything we asked for was sent too, especially the inhaler slides were very useful. In fact I used them, especially with the GPs.'* Interview 8 'As long as we get the summary of notes, or slides, it is good.' Interview 2 – survey interview
		Case studies used	use of case-studies were highlighted for both workshop and lecture – PESL evaluation forms 'I prefer workshops where we do case studies. I get more mileage from that than from anything else. The way I like it is a short lecture to introduce the topic and then breakout sessions where you discuss certain scenarios, pick up issues, then conclude.' Interview 11 – survey interviews 'Really I prefer the cases you do in workshops because they just really help you to apply the learning, gives you that extra practice.' Interview 7 – survey interviews People are very much interested in case scenarios. (Malta) – learning from others interview

		A mixture of learning formats used	'*I prefer the more lecture based as that is stuff I wouldn't hear otherwise',* Interview 3– PESL interviews *'(the speaker) was very happy for people to interject and ask questions as we went along.'* Interview 1– PESL interviews *'I think there was a little bit of a discussion towards the end which was also quite nice, with some questions from others of what they have come across and what they wanted to know.'* Interview 4– PESL interviews *'The workshop style was most interactive which I thoroughly enjoyed because we participated in our groups, and were able to contribute our thoughts and learn from each other.'* Interview 6– PESL interviews 'I prefer workshops where we do case studies. I get more mileage from that than from anything else. The way I like it is a short lecture to introduce the topic and then breakout sessions where you discuss certain scenarios, pick up issues, then conclude.' Interview 11 – survey interviews
		Contact details collected for follow up evaluation	We use the identity card to registrate everyone at the beginning of a conference or a lecture (Belgium) – learning from others interview
		Assessment of learning given or signposted (if applicable)	Just less than half (46.7%, n=150/321) feel that completing an online assessment would be of use. – survey chapter 'What I find very useful, and sometimes we do this with my colleagues is when you get sent questions, or multiple choice questions or something to check your learning, because then, it is like a game, or an exercise you might do, just to check….I think it would help if we had some sort of test, yeh. I don't want to say exam, but some sort of test at some point, because something that would keep you motivated.' Interview 4 – survey interview 'A quiz would be good, a little test thing, to help you remember what you know and don't know and will help you. Probably the day after because then it is fresh in your mind. Maybe online or given as a sheet during the evening.' Interview 7 – survey interviewcerti
		Opportunities to network are given	'*Sometimes you work in isolation, it gives you opportunity to talk to someone else in a different field and just network, and compare what is going on.'* Interview 8 – PESL interview '*What was good was there was a mixture of hospital and community as well as primary care based pharmacists'.* Interview 1 – PESL interview *'I do recommend them regularly to my colleagues, peers and others and I do it because I personally like them as they are a good opportunity to meet people from different walks of life, different jobs, different*

			areas, and you meet people and you always learn something.' Interview 10 – PESL interview 'It is an opportunity to network so being with like-minded people or people with specialist areas, try to speak to them and get their insight, or try and build contacts really.' Interview 17 – survey interview
		Ability to ask questions	*'(the speaker) was very happy for people to interject and ask questions as we went along.'* Interview 1– PESL interviews *'I think there was a little bit of a discussion towards the end which was also quite nice, with some questions from others of what they have come across and what they wanted to know.'* Interview 4– PESL interviews
	CPD	Application into practice opportunities identified	Overall, 57.8% (n=347) stated they would complete a CPD cycle after the event – PESL evaluation forms 13.5 (n=81/600) stated they would develop new services 'Getting the opportunity to discuss it with colleagues. You might find we are implementing something in slightly different ways.' Interview 1 – survey interview 'I find it is good to have the knowledge and try to apply it to different situations and learn from other people. It is more interactive.' Interview 17 – survey interview
		Tools given to support learning	'*I remember taking notes and the handouts that come out of it'* Interview 6 'Application is first and foremost when putting the knowledge into certain aspects and using it, so using maybe flash cards, or at the end providing some quick tip points which you could use in practice and utilise when in practice.' Interview 6 – survey interview
		Actions planned with measurable outcomes	'*I know I did a CPD entry on it,' 'I definitely did complete a CPD cycle'* Interview 3 – PESL interview
		Certification of learning given (if applicable)	Although they would not support a change in practice certificates were asked for. – survey chapter (tools wanted to support a change in practice) It can be anything. It can even be going to a conference, so as long as you get a certificate of attendance you are fine. (nurse) – learning from others interview
		A follow up email is sent with key points	A copy of the event presentation was the most requested tool with almost three quarters (70.9%, n=73) saying this would be useful. Case studies and follow up emails were also requested by over half of responders. – PESL follow up After attending a learning event 72% of responders (n=231/321) said they would benefit from receiving a copy of the presentation. 58.6% (n=188/321) asked for case studies and 57.9% (n=186/231) asked

			for a follow up email with a reminder of key points. – survey chapter results 'A very brief summary of the key learning points I am meant to have learnt during the session so I can go back, and think, these are the key 6 things I should have learnt from that meeting, or what I did learn so I can reflect on that, to help write my CPD cycle.' Interview 10
After intervention	**E**valuation	Methodology planned	
		Evaluation tool completed – at event o Good elements o Least positive elements o Relevance to practice o Learning outcomes achieved o Speaker/facilitator feedback o Organisation of event Proposed changes to practice from event	For what I do, it is a survey, and they, for example, I have 15 chapters to do and they ask me specific questions about each chapter. Do you feel it is relevant to what you do? Do you feel it met the learning objectives? Do you feel it has been tainted by an bias or drug companies, or whatever Do you feel the questions were fair? Do you feel the questions were a true reflection of the article?.....Because I pay so much, I think that is why the evaluation is so rigorous. (United States of America) – learning from others interview We ask them, was the course organised well, was it practical enough, what did you think of the speaker, was it good, not good…. are you happy about the organisation, are you happy about the content of the course, were you happy about the speaker, was the documentation helpful for following the lesson, is the knowledge you gained useful for your practice? (Belgium) – learning from others interview
		Evaluation tool completed -follow up	
		Final evaluation report created	
		Evaluation shared with stakeholders	
		Lessons learnt and identified to support future interventions	

Appendix 21: Face validity of framework

Would you recommend/implement this framework when planning and running training events?

Definitely….. Probably- 1 ….. Possibly….. Probably Not….. Definitely Not…..

No response…3..

For the complete PRACTICE framework, please answer the following questions:

What benefits can you see from using this framework?	**Would you use the complete framework in the future? Yes/No Why?**
Consistency avoids duplication avoids wasted effort sets standards for training helps divide up worklad in team provides clear evaluation/outcomes ensure important elements not missed helps time management quality assurance good chance of success same standard of training regardless of location give academic rigour structured allows you to optimise attendance relevant for audience 'checklist' extensive – ensures you cover everything structured to do list/avoiding missing things all info in one place different bits can be assigned to different people	**No answer – 1** **yes – 3** **no – 0** would go through – choose relevant elements and use as checklist this is a checklist to ensure you haven't missed anything we would keep the acronym but adapt specific details in accordance to what we're using it for like lists useful to use for non-pharmacists too (pharmacists generally like lists)
Who are the stakeholders who would benefit the most from using the framework?	**Any other comments?**
Applicable to any educational event use across different sectors/organisations for consistency participants because would be less likely to waste their time training multiteams event organisers attendees anyone responsible for organising events	Would be useful to include some time scales include local, underpinning information seems to be more applicable to formal training rather than reflective type learning events maybe the checklist could be expanded to include other 'types' of learning and have a N/A column surprised no one has done before commissioners expertise and commitment of all bodies needed for certain topics for completion – add person responsible column as this could be potentially done by a small team missing – training needs assessments – called pre-planning i.e. PPRACTICE!

Planning	Date set for the event
	Budget set for the event
	All stakeholders included in the planning
	Format for event identified
	Length of event identified
	Timing of event (day of the week and time of day) identified
	Audience identified (which group/groups)
	Expectations of attendees captured
	Plan for evaluation both at intervention, and afterwards, planned
	Reminder sent to registrants

For this specific element of the framework, please answer the following questions

What is missing for this element? pre-planning – training needs assessment	What are the challenges to complete this element?
When do you think the individual elements needs to be completed in relation to the training event?	Any other comments? format for event identified/length of event identified – dependent on content may need to prioritise agenda expectations of attendees captured – requires prior knowledge and prior engagement – tie into advertising reminder sent to registrants – should this not be under advertising or with development of attendees list?

Resources	A venue/online platform identified
	The venue is accessible/central (if not online)
	The venue/online platform booked/secured
	Booking platform set up
	Evaluation form for event planned (if applicable)

For this specific element of the framework, please answer the following questions

What is missing for this element? IT requirements catering	What are the challenges to complete this element? IT!
When do you think the individual elements needs to be completed in relation to the training event? a couple of months in advance/ as early as possible	Any other comments? The venue is accessible/central – e.g. transport to venue accessibility for disabled people? more complicated than a linear list, things change understand elements are in order to allow acronym but may be better in a logical order/cyclical order as some items could be in more than 1 heading

Advertising	Stakeholders support dissemination of details
	Identification of backfill provided (if applicable
	Mode of advertisement identified
	Advertising completed in sufficient time to allow planning
	Advertising includes: o Aims of event o Topic including driver for the topic o Skills to be acquired o Benefit to practice

For this specific element of the framework, please answer the following questions

What is missing for this element? contact details financial/CPD incentive – free or do you need to pay? people providing training target audience cancellation policy	What are the challenges to complete this element? people accessing advert reminding people about the event getting support of stakeholders to disseminate details
When do you think the individual elements needs to be completed in relation to the training event? depends on size of events and number of people attending	Any other comments? managers to be informed of event at the same time as possible attendees

Capacity	Other events in the local area do not clash
	Calendar of events made available (if applicable)
	Number of repeated events identified (if applicable)
	Maximum capacity for the event identified

For this specific element of the framework, please answer the following questions

What is missing for this element? expressions of interest 6 months in advance so you know how big a venue to book	What are the challenges to complete this element? identifying events in the local area
When do you think the individual elements needs to be completed in relation to the training event? part of planning so you know how many people want to attend	Any other comments?

Topic	Topic is applicable for all potential attendees
	Expert speaker(s)/facilitator(s)/provider identified
	Topic is relevant to audience professionally and/or personally
	Link seen between topic and potential application practice outcome
	Pre-work distributed (if applicable)
	Aims of event correlate to tangible actions

For this specific element of the framework, please answer the following questions

What is missing for this element? would like to see link between topic and national/local priorities/focuses (NB although this is an intervention, we feel there should be a stronger link)	What are the challenges to complete this element? it is not possible to know for certain that the topic is applicable to all potential attendees
When do you think the individual elements needs to be completed in relation to the training event?	Any other comments? the objectives and potential application should be part of planning as top of the list to consider first need to target the invitation/advert depending on the topic

Intervention	Presentation referenced to local/national priorities or guidelines
	Copies of slides/workbooks made available (if applicable)
	Case studies used
	A mixture of learning formats used
	Contact details collected for follow up evaluation
	Assessment of learning given or signposted (if applicable)
	Opportunities to network are given
	Ability to ask questions

For this specific element of the framework, please answer the following questions

What is missing for this element?	What are the challenges to complete this element? providing different learning formats is very difficult to achieve esp in time limited circumstances
When do you think the individual elements needs to be completed in relation to the training event?	Any other comments? Is the assessment element evaluation?

CPD	Application into practice opportunities identified
	Tools given to support learning
	Actions planned with measurable outcomes
	Certification of learning given (if applicable)
	A follow up email is sent with key points

For this specific element of the framework, please answer the following questions

What is missing for this element?	What are the challenges to complete this element? cross sector peer review to enable application of practice
When do you think the individual elements needs to be completed in relation to the training event?	Any other comments? GPhC link to accreditation tool make it relevant to all - pharmacists and pharmacy technicians can be peers applicable to CP and GP and practice pharmacists

Evaluation	Methodology planned
	Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
	Evaluation tool completed -follow up
	Final evaluation report created
	Evaluation shared with stakeholders
	Lessons learnt and identified to support future interventions

For this specific element of the framework, please answer the following questions

What is missing for this element?	What are the challenges to complete this element? stop start keep doing
When do you think the individual elements needs to be completed in relation to the training event?	Any other comments? useful to practice for GP learning events survey monkey is used – get email and relevancy GP get 4 topics in 1 session every 2 months email certificate based on survey

Appendix 22: Initial GANTT chart for framework

		Initial chart	Minimum of 3 months prior to event	2 months prior to event	1 month prior to event	3 weeks prior to event	2 weeks prior to event	1 week prior to event	1-2 days before event	Day of event	1 week after event	1 month after event	2 months after event	3 months after event
Before Intervention	Planning	Complete a training needs analysis of potential audience												
		Date set for the event												
		Budget set for the event												
		All stakeholders included in the planning												
		Format for event identified												
		Length of event identified												
		Timing of event (day of the week and time of day) identified												
		Audience identified (which group/groups)												
		Methodology for evaluation planned (at intervention, and post training)												
	Resources	A venue/online platform identified												
		The venue is accessible/central (if not online)												
		The venue/online platform booked/secured												
		Booking platform set up												
	Advertising	Stakeholders support dissemination of details												
		Identification of backfill provided (if applicable												
		Mode of advertisement identified												
		Advertising of event completed												
		Advertising includes: o Aims of event o Topic including driver for the topic o Skills to be acquired o Benefit to practice												
	Capacity	Other events in the local area do not clash												
		Calendar of events made available (if applicable)												
		Number of repeated events identified (if applicable)												
		Maximum capacity for the event identified												
	Topic	Expert speaker(s)/facilitator(s)/provider identified												
		Topic is relevant to audience professionally and/or personally												
		Aims of event correlate to tangible actions												
Intervention	Intervention	Evaluation form for event planned (if applicable)												
		Pre-work distributed (if applicable)					For new registrants							
		Reminder sent to registrants												
		Presentation referenced to local/national priorities or guidelines												
		Copies of slides/workbooks made available (if applicable)												
		Case studies used												
		A mixture of learning formats used												
		Contact details collected for follow up evaluation												
		Assessment of learning given or signposted (if applicable)												
		Opportunities to network are given												
		Ability to ask questions given												
	CPD	Application into practice opportunities identified												
		Tools given to support learning												
		Actions planned with measurable outcomes												
		Certification of learning given (if applicable)												
		A follow up email is sent with key points												
After Intervention	Evaluation	Evaluation tool completed – at event o Good elements o Least positive elements o Relevance to practice o Learning outcomes achieved o Speaker/facilitator feedback o Organisation of event o Proposed changes to practice from event												
		Evaluation tool completed -follow up												
		Final evaluation report created												
		Evaluation shared with stakeholders												
		Lessons learnt and identified to support future interventions												

Appendix 23: Content validity scoring

element		Pharmacist 1	pharmacist 2	Pharmacist 3	Pharmacist 4	Pharmacist 5	Pharmacist 6	number scoring 3 or 4	I/CVI
1	Complete a training needs analysis	2	2	3	3	4	3	4	0.67
2	Date set for the event	4	4	4	3	4	4	6	1.00
3	Budget set for the event	4	4	4	3	4	4	6	1.00
4	All stakeholders included in the planning	3	3	2	4	4	3	5	0.83
5	Format for event identified	4	3	4	4	3	3	6	1.00
6	Length of event identified	4	4	3	4	4	4	6	1.00
7	Timing of event (day of the week and time of day) identified	4	4	3	4	4	4	6	1.00
8	Audience identified (which group/groups)	4	3	3	4	4	4	6	1.00
9	Methodology for evaluation planned (at intervention, and post training)	3	3	3	4	4	4	6	1.00
10	A venue/online platform identified	4	4	4	4	4	4	6	1.00
11	The venue is accessible (location and access) for all attendees (if applicable)	3	3	4	4	4	4	6	1.00
12	The venue/online platform booked/secured	4	4	4	4	4	4	6	1.00
13	Booking platform set up	4	4	4	4	4	4	6	1.00
14	Evaluation form for event planned (if applicable)	4	4	3	4	4	3	6	1.00
15	Stakeholders support dissemination of details	4	2	3	3	4	3	5	0.83
16	Identification of backfill provided (if applicable)	4	2	2	4	4	3	4	0.67
17	Mode of advertisement identified	4	3	3	4	4	3	6	1.00
18	Advertising completed in sufficient time to allow planning	4	4	4	4	4	4	6	1.00
19	Advertising includes:	4	4	4	4	4	4	6	1.00
	○ Aims of event								0.00
	○ Topic including driver for the topic								0.00
	○ Skills to be acquired								0.00
	○ Benefit to individual practice								0.00
20	Other events in the local area do not clash	4	3	3	4	3	3	6	1.00
21	Calendar of events made available (if applicable)	3	4	3	4	2	3	5	0.83
22	Number of repeated events identified (if applicable)	4	2	3	4	2	2	3	0.50
23	Maximum capacity for the event identified	4	4	3	4	3	4	6	1.00
24	Expert speaker(s)/facilitator(s)/provider identified	4	4	4	3	4	4	6	1.00
25	Topic is relevant to audience professionally and/or personally	3	4	3	4	4	4	6	1.00

26	Pre-work distributed (if applicable)	4	4	3	4	4	4	6	1.00
27	Reminder sent to registrants	4	3	4	4	3	3	6	1.00
28	Aims of event correlate to tangible application into practice outcomes	4	4	4	4	4	4	6	1.00
29	Presentation referenced to local/national priorities or guidelines	3	4	3	4	2	3	5	0.83
30	Copies of slides/workbooks made available (if applicable)	4	4	3	4	3	3	6	1.00
31	Case studies used	3	4	2	4	3	3	4	0.83
32	A mixture of learning formats used	4	3	4	4	4	3	6	1.00
33	Contact details collected for follow up evaluation	4	1	3	4	4	3	5	0.83
34	Assessment of learning completed or signposted (if applicable)	4	4	3	4	3	3	6	1.00
35	Opportunities to network are given	4	3	4	4	4	3	6	1.00
36	Ability to ask questions	4	4	3	4	4	4	6	1.00
37	Application into practice opportunities identified	4	2	3	4	4	4	5	0.83
38	Tools given to support learning	4	3	3	4	4	4	6	1.00
39	Actions planned with measurable outcomes	4	3	3	4	4	4	6	1.00
40	Certification of learning given (if applicable)	2	2	3	4	1	2	2	0.33
41	A follow up email is sent with key points	2	2	3	4	2	3	3	0.50
42	Evaluation tool completed – at event	4	3	2	4	4	4	5	0.83
	○ Good elements								0.00
	○ Least positive elements and suggested improvements								0.00
	○ Relevance to practice								0.00
	○ Learning outcomes achieved								0.00
	○ Speaker/facilitator feedback								0.00
	○ Organisation of event								0.00
	○ Proposed changes to practice from event								0.00
43	Evaluation tool completed -follow up	4	3	4	4	3	4	6	1.00
44	Final evaluation report created	4	4	4	4	4	4	6	1.00
45	Evaluation shared with stakeholders	4	4	4	4	4	4	6	1.00
46	Lessons learnt and identified to support future interventions	4	4	3	4	4	4	6	1.00
		42	38	42	46	41	44		42.33
								ACP	0.92

		nurse	nurse	nurse	nurse	nurse	educational	number scoring 3 or 4	CVI
1	Complete a training needs analysis	4	4	2	3	4	4	5	0.83
2	Date set for the event	4	2	4	4	4	3	5	0.83
3	Budget set for the event	4	2	4	4	4	4	5	0.83
4	All stakeholders included in the planning	3	4	2	4	3	4	5	0.83
5	Format for event identified	4	3	3	4	2	4	5	0.83
6	Length of event identified	4	3	4	4	4	4	6	1.00
7	Timing of event (day of the week and time of day) identified	4	1	4	4	2	4	4	0.67
8	Audience identified (which group/groups)	3	4	2	4	4	4	5	0.83
9	Methodology for evaluation planned (at intervention, and post training)	3	4	3	4	3	4	6	1.00
10	A venue/online platform identified	4	3	3	4	4	4	5	0.83
11	The venue is accessible (location and access) for all attendees (if applicable)	4	2	4	4	4	4	5	0.83
12	The venue/online platform booked/secured	4	3	4	4	3	4	6	1.00
13	Booking platform set up	4	3	4	4	4	4	6	1.00
14	Evaluation form for event planned (if applicable)	3	2	4	4	3	4	5	0.83
15	Stakeholders support dissemination of details	3	3	4	3	4	4	6	1.00
16	Identification of backfill provided (if applicable)	3	2	4	2	2	4	3	0.50
17	Mode of advertisement identified	4	3	4	4	4	4	6	1.00
18	Advertising completed in sufficient time to allow planning	4	4	4	4	4	4	6	1.00
19	Advertising includes:	4	4	4	4	4	4	6	1.00
	o Aims of event								
	o Topic including driver for the topic								
	o Skills to be acquired								
	o Benefit to individual practice								
20	Other events in the local area do not clash	4	2	3	2	2	4	3	0.50
21	Calendar of events made available (if applicable)	4	3	4	3	2	4	5	0.83
22	Number of repeated events identified (if applicable)	3	3	3	3	2	4	5	0.83
23	Maximum capacity for the event identified	3	1	4	4	2	4	4	0.67
24	Expert speaker(s)/facilitator(s)/provider identified	3	3	4	4	3	4	6	1.00
25	Topic is relevant to audience professionally and/or personally	3	4	3	4	4	4	6	1.00

26	Pre-work distributed (if applicable)	2	2	4	3	2	3	3	0.50
27	Reminder sent to registrants	4	2	4	3	4	4	5	0.83
28	Aims of event correlate to tangible application into practice outcomes	3	3	3	4	4	4	6	1.00
29	Presentation referenced to local/national priorities or guidelines	3	4	3	4	4	4	6	1.00
30	Copies of slides/workbooks made available (if applicable)	4	4	4	4	4	4	6	1.00
31	Case studies used	3	4	4	4	4	4	6	1.00
32	A mixture of learning formats used	3	4	4	4	4	4	6	1.00
33	Contact details collected for follow up evaluation	3	3	4	3	2	4	5	0.83
34	Assessment of learning completed or signposted (if applicable)	3	3	3	4	2	4	5	0.83
35	Opportunities to network are given	4	3	4	4	4	3	6	1.00
36	Ability to ask questions	3	4	4	4	4	4	6	1.00
37	Application into practice opportunities identified	3	3	4	4	4	4	6	1.00
38	Tools given to support learning	4	3	4	4	4	4	6	1.00
39	Actions planned with measurable outcomes	4	3	4	4	4	4	6	1.00
40	Certification of learning given (if applicable)	4	3	4	3	4	4	6	1.00
41	A follow up email is sent with key points	3	1	3	3	4	3	5	0.83
42	Evaluation tool completed – at event	3	3	4	4	4	3	6	1.00
	○ Good elements								
	○ Least positive elements and suggested improvements								
	○ Relevance to practice								
	○ Learning outcomes achieved								
	○ Speaker/facilitator feedback								
	○ Organisation of event								
	○ Proposed changes to practice from event								
43	Evaluation tool completed -follow up	3	1	3	4	4	4	5	0.83
44	Final evaluation report created	3	2	4	4	4	4	5	0.83
45	Evaluation shared with stakeholders	4	3	4	4	4	4	6	1.00
46	Lessons learnt and identified to support future interventions	4	4	4	4	4		6	1.00
									41.00
								ACP	0.89

	Pharmacist 1	pharmacist 2	Pharmacist 3	Pharmacist 4	Pharmacist 5	Pharmacist 6	nurse	nurse	nurse	nurse	nurse	educational phscologist	total number scoring 3 or 4	CVI
Complete a training needs analysis	2	2	3	3	4	3	4	4	2	3	4	4	9	0.75
Date set for the event	4	4	4	3	4	4	4	2	4	4	4	3	11	0.92
Budget set for the event	4	4	4	3	4	4	4	2	4	4	4	4	11	0.92
All stakeholders included in the planning	3	3	2	4	4	3	3	4	2	4	3	4	10	0.83
Format for event identified	4	3	4	4	3	3	4	3	3	4	2	4	11	0.92
Length of event identified	4	4	3	4	4	4	4	3	4	4	4	4	12	1.00
Timing of event (day of the week and time of day) identified	4	4	3	4	4	4	4	1	4	4	2	4	10	0.83
Audience identified (which group/groups)	4	3	3	4	4	4	3	4	2	4	4	4	11	0.92
Methodology for evaluation planned (at intervention, and post training)	3	3	3	4	4	4	3	4	3	4	3	4	12	1.00
A venue/online platform identified	4	4	4	4	4	4	4	3	3	4	4	4	11	0.92
The venue is accessible (location and access) for all attendees (if applicable)	3	3	4	4	4	4	4	2	4	4	4	4	11	0.92
The venue/online platform booked/secured	4	4	4	4	4	4	4	3	4	4	3	4	12	1.00
Booking platform set up	4	4	4	4	4	4	4	3	4	4	4	4	12	1.00
Evaluation form for event planned (if applicable)	4	4	3	4	4	3	3	2	4	4	3	4	11	0.92
Stakeholders support dissemination of details	4	2	3	3	4	3	3	3	4	3	4	4	11	0.92
Identification of backfill provided (if applicable)	4	2	2	4	4	3	3	2	4	2	2	4	7	0.58
Mode of advertisement identified	4	3	3	4	4	3	4	3	4	4	4	4	12	1.00

Advertising completed in sufficient time to allow planning	4	4	4	4	4	4	4	4	4	4	4	4	12	1.00
Advertising includes:	4	4	4	4	4	4	4	4	4	4	4	4	12	1.00
○ Aims of event														
○ Topic including driver for the topic														
○ Skills to be acquired														
○ Benefit to individual practice														
Other events in the local area do not clash	4	3	3	4	3	3	4	2	3	2	2	4	9	0.75
Calendar of events made available (if applicable)	3	4	3	4	2	3	4	3	4	3	2	4	10	0.83
Number of repeated events identified (if applicable)	4	2	3	4	2	2	3	3	3	3	2	4	8	0.67
Maximum capacity for the event identified	4	4	3	4	3	4	3	1	4	4	2	4	10	0.83
Topic is applicable for all potential attendees	4	1	4	3	3	4	4	3	3	4	4	3	12	1.00
Expert speaker(s)/facilitator(s)/provider identified	4	4	4	3	4	4	3	3	4	4	3	4	12	1.00
Topic is relevant to audience professionally and/or personally	3	4	3	4	4	4	3	4	3	4	4	4	12	1.00
Pre-work distributed (if applicable)	4	4	3	4	4	4	2	2	4	3	2	3	9	0.75
Reminder sent to registrants	4	3	4	4	3	3	4	2	4	3	4	4	11	0.92
Aims of event correlate to tangible application into practice outcomes	4	4	4	4	4	4	3	3	3	4	4	4	12	1.00
Presentation referenced to local/national priorities or guidelines	3	4	3	4	2	3	3	4	3	4	4	4	11	0.92
Copies of slides/workbooks made available (if applicable)	4	4	3	4	3	3	4	4	4	4	4	4	12	1.00
Case studies used	2	4	2	4	3	3	3	4	4	4	4	4	10	0.83
A mixture of learning formats used	4	3	4	4	4	3	3	4	4	4	4	4	12	1.00

Contact details collected for follow up evaluation	4	1	3	4	4	3	3	3	4	3	2	4	10	0.83
Assessment of learning completed or signposted (if applicable)	4	4	3	4	3	3	3	3	3	4	2	4	11	0.92
Opportunities to network are given	4	3	4	4	4	3	4	3	4	4	4	3	12	1.00
Ability to ask questions	4	4	3	4	4	4	3	4	4	4	4	4	12	1.00
Application into practice opportunities identified	4	2	3	4	4	4	3	3	4	4	4	4	11	0.92
Tools given to support learning	4	3	3	4	4	4	4	3	4	4	4	4	12	1.00
Actions planned with measurable outcomes	4	3	3	4	4	4	4	3	4	4	4	4	12	1.00
Certification of learning given (if applicable)	2	2	3	4	1	2	4	3	4	3	4	4	8	0.67
A follow up email is sent with key points	2	2	3	4	2	3	3	1	3	3	4	3	8	0.67
Evaluation tool completed – at event	4	3	2	4	4	4	3	3	4	4	4	3	11	0.92
○ Good elements														
○ Least positive elements and suggested improvements														
○ Relevance to practice														
○ Learning outcomes achieved														
○ Speaker/facilitator feedback														
○ Organisation of event														
○ Proposed changes to practice from event														
Evaluation tool completed -follow up	4	3	4	4	3	4	3	1	3	4	4	4	11	0.92
Final evaluation report created	4	4	4	4	4	4	3	2	4	4	4	4	11	0.92
Evaluation shared with stakeholders	4	4	4	4	4	4	4	3	4	4	4	4	12	1.00
Lessons learnt and identified to support future interventions	4	4	3	4	4	4	4	4	4	4	4	4	12	1.00
	42	38	42	46	41	44								41.58
													ACP	0.90

Appendix 24: Instructions for Think aloud

The PRACTICE framework

The aim of the framework is to support planning of training interventions. This can be used as a spreadsheet, or paper based document.

PRACTICE outlines the main elements of planning:

- **P**lanning
- **R**esources
- **A**dvertising
- **C**apacity
- **T**opic
- **I**ntervention
- **C**PD
- **E**valuation

These items have been derived after evaluation of events, along with surveys of participants, and interviews with pharmacists locally and globally, and interviews with other healthcare professionals.

This tool was designed primarily for pharmacist training interventions, although has also been validated for use by other healthcare professionals, and for other educational interventions.

Not all items will be applicable to all projects. Please use the framework as a support document to support the planning of training interventions, as a checklist and reminder tool.

All tasks start as red. Once a task is started, it can be coloured amber. Once completed it can be coloured green.

Appendix 25: Initial PRACTICE framework for think aloud

		Initial chart	Minimum of 3 months prior to event	2 months prior to event	1 month prior to event	3 weeks prior to event	2 weeks prior to event	1 week prior to event	1-2 days before event	Day of event	1 week after event	1 month after event	2 months after event	3 months after event
Before Intervention	Planning	Complete a training needs analysis of potential audience												
		Date set for the event												
		Budget set for the event												
		All stakeholders included in the planning												
		Format for event identified												
		Length of event identified												
		Timing of event (day of the week and time of day) identified												
		Audience identified (which group/groups)												
		Methodology for evaluation planned (at intervention, and post training)												
	Resources	A venue/online platform identified												
		The venue is accessible/central (if not online)												
		The venue/online platform booked/secured												
		Booking platform set up												
	Advertising	Stakeholders support dissemination of details												
		Identification of backfill provided (if applicable												
		Mode of advertisement identified												
		Advertising of event completed												
		Advertising includes:												
		○ Aims of event												
		○ Topic including driver for the topic												
		○ Skills to be acquired												
		○ Benefit to practice												
	Capacity	Other events in the local area do not clash												
		Calendar of events made available (if applicable)												
		Number of repeated events identified (if applicable)												
		Maximum capacity for the event identified												
	Topic	Expert speaker(s)/facilitator(s)/provider identified												
		Topic is relevant to audience professionally and/or personally												
		Aims of event correlate to tangible actions												
Intervention	Intervention	Evaluation form for event planned (if applicable)												
		Pre-work distributed (if applicable)					For new registrants							
		Reminder sent to registrants												
		Presentation referenced to local/national priorities or guidelines												
		Copies of slides/workbooks made available (if applicable)												
		Case studies used												
		A mixture of learning formats used												
		Contact details collected for follow up evaluation												
		Assessment of learning given or signposted (if applicable)												
		Opportunities to network are given												
		Ability to ask questions given												
	CPD	Application into practice opportunities identified												
		Tools given to support learning												
		Actions planned with measurable outcomes												
		Certification of learning given (if applicable)												
		A follow up email is sent with key points												
After Intervention	Evaluation	Evaluation tool completed – at event												
		○ Good elements												
		○ Least positive elements												
		○ Relevance to practice												
		○ Learning outcomes achieved												
		○ Speaker/facilitator feedback												
		○ Organisation of event												
		○ Proposed changes to practice from event												
		Evaluation tool completed -follow up												
		Final evaluation report created												
		Evaluation shared with stakeholders												
		Lessons learnt and identified to support future interventions												

Appendix 26: Changes from initial creation to final framework

Where blacked out, no previous statement existed. Yellow indicates a change in wording, green is a new statement and red indicates the previous statement was removed. Pink indicates a new position.

Initial statements	After face validation
	Complete a training needs analysis
Date set for the event	Date set for the event
Budget set for the event	Budget set for the event
All stakeholders included in the planning	All stakeholders included in the planning
Format for event identified	Format for event identified
Length of event identified	Length of event identified
Timing of event (day of the week and time of day) identified	Timing of event (day of the week and time of day) identified
Audience identified (which group/groups)	Audience identified (which group/groups)
Expectations of attendees captured	Removed
Plan for evaluation both at intervention, and afterwards, planned	Methodology for evaluation planned (at intervention, and post training)
Reminder sent to registrants	Moved position
A venue/online platform identified	A venue/online platform identified
The venue is accessible/central (if not online)	The venue is accessible (location and access) for all attendees (if applicable)
The venue/online platform booked/secured	The venue/online platform booked/secured
Booking platform set up	Booking platform set up
Evaluation form for event planned (if applicable)	Evaluation form for event planned (if applicable)
Stakeholders support dissemination of details	Stakeholders support dissemination of details
Identification of backfill provided (if applicable)	Identification of backfill provided (if applicable)
Mode of advertisement identified	Mode of advertisement identified
Advertising completed in sufficient time to allow planning	Advertising completed in sufficient time to allow planning
Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice	Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice
Other events in the local area do not clash	Other events in the local area do not clash
Calendar of events made available (if applicable)	Calendar of events made available (if applicable)
Number of repeated events identified (if applicable)	Number of repeated events identified (if applicable)
Maximum capacity for the event identified	Maximum capacity for the event identified
Topic is applicable for all potential attendees	Removed
Expert speaker(s)/facilitator(s)/provider identified	Expert speaker(s)/facilitator(s)/provider identified
Topic is relevant to audience professionally and/or personally	Topic is relevant to audience professionally and/or personally
Link seen between topic and potential application practice outcome	Removed
	Pre-work distributed (if applicable)
	Reminder sent to registrants
Aims of event correlate to tangible actions	Aims of event correlate to tangible application into practice outcomes
Presentation referenced to local/national priorities or guidelines	Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)	Copies of slides/workbooks made available (if applicable)
Case studies used	Case studies used
A mixture of learning formats used	A mixture of learning formats used
Contact details collected for follow up evaluation	Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)	Assessment of learning given or signposted (if applicable)
Opportunities to network are given	Opportunities to network are given
Ability to ask questions	Ability to ask questions
Application into practice opportunities identified	Application into practice opportunities identified
Tools given to support learning	Tools given to support learning
Actions planned with measurable outcomes	Actions planned with measurable outcomes
Certification of learning given (if applicable)	Certification of learning given (if applicable)
A follow up email is sent with key points	A follow up email is sent with key points
Methodology planned	Removed
Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved	Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved

○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event	○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed -follow up	Evaluation tool completed -follow up
Final evaluation report created	Final evaluation report created
Evaluation shared with stakeholders	Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions	Lessons learnt and identified to support future interventions

After face validation	After content validation
Complete a training needs analysis	Complete a training needs analysis of potential audience (if applicable)
Date set for the event	Date set for the event
Budget set for the event	Budget set for the event
All stakeholders included in the planning	All stakeholders included in the planning
Format for event identified	Format for event identified
Length of event identified	Length of event identified
Timing of event (day of the week and time of day) identified	Timing of event (day of the week and time of day) identified
Audience identified (which group/groups)	Audience identified (which group/groups)
Methodology for evaluation planned (at intervention, and post training)	Methodology for evaluation planned (at intervention, and post training)
A venue/online platform identified	A venue/online platform identified
The venue is accessible (location and access) for all attendees (if applicable)	The venue is accessible (location and access) for all attendees (if applicable)
The venue/online platform booked/secured	The venue/online platform booked/secured
Booking platform set up	Booking platform set up
Evaluation form for event planned (if applicable)	Moved position
Stakeholders support dissemination of details	Stakeholders support dissemination of details
Identification of backfill provided (if applicable)	Identification of backfill provided (if applicable)
Mode of advertisement identified	Mode of advertisement identified
Advertising completed in sufficient time to allow planning	Advertising completed
Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice	Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice
Other events in the local area do not clash	Other events in the local area do not clash
Calendar of events made available (if applicable)	Calendar of events made available (if applicable)
Number of repeated events identified (if applicable)	Number of repeated events identified (if applicable)
Maximum capacity for the event identified	Maximum capacity for the event identified
Expert speaker(s)/facilitator(s)/provider identified	Expert speaker(s)/facilitator(s)/provider identified
Topic is relevant to audience professionally and/or personally	Topic is relevant to audience professionally and/or personally
Removed	Aims of event correlate to tangible application into practice outcomes
	Evaluation form for event planned (if applicable)
Pre-work distributed (if applicable)	Pre-work distributed (if applicable)
Reminder sent to registrants	Reminder sent to registrants
Aims of event correlate to tangible application into practice outcomes	Moved position
Presentation referenced to local/national priorities or guidelines	Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)	Copies of slides/workbooks made available (if applicable)
Case studies used	Case studies used
A mixture of learning formats used	A mixture of learning formats used
Contact details collected for follow up evaluation	Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)	Assessment of learning given or signposted (if applicable)
Opportunities to network are given	Opportunities to network are given
Ability to ask questions	Ability to ask questions
Application into practice opportunities identified	Application into practice opportunities identified
Tools given to support learning	Tools given to support learning
Actions planned with measurable outcomes	Actions planned with measurable outcomes
Certification of learning given (if applicable)	Certification of learning given (if applicable)
A follow up email is sent with key points	A follow up email is sent with key points (if applicable)
Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event	Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed -follow up	Evaluation tool completed -follow up
Final evaluation report created	Final evaluation report created
Evaluation shared with stakeholders	Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions	Lessons learnt and identified to support future interventions

After content validation	After pilot think aloud
Complete a training needs analysis of potential audience (if applicable)	Removed
	Identify audience (which group/groups)
	Identify gaps in audience knowledge/their training needs
Date set for the event	Date set for the event
Budget set for the event	Budget set for the event
	Identify stakeholders
All stakeholders included in the planning	All stakeholders included in the planning
Format for event identified	Format for event identified
Length of event identified	Duration of event identified
Timing of event (day of the week and time of day) identified	Timing of event (day of the week and time of day) identified
Audience identified (which group/groups)	Moved and wording amended
	Number of repeated events identified (if applicable)
	Expert speaker(s)/facilitator(s)/provider identified
	Topic is relevant to audience professionally and/or personally
	Aims of event correlate to tangible application into practice outcomes
	Maximum capacity for the event identified
	Other events in the local area do not clash
Methodology for evaluation planned (at intervention, and post training)	Methodology for evaluation planned (at intervention, and post training)
A venue/online platform identified	A venue/online platform identified
The venue is accessible (location and access) for all attendees (if applicable)	The venue complies with accessibility requirements and has good transport links (if not online)
	Familiarise yourself with the venue facilities (if applicable)
The venue/online platform booked/secured	The venue/online platform booked/secured
Booking platform set up	Booking platform set up
Stakeholders support dissemination of details	Stakeholders are willing to support communication of the event
Identification of backfill provided (if applicable)	Identification of backfill provided (if applicable)
Mode of advertisement identified	Mode of advertisement identified
Advertising completed	Advertising of event completed
Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice	Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice
Other events in the local area do not clash	Moved position
Calendar of events made available (if applicable)	Calendar of events made available (if applicable)
Number of repeated events identified (if applicable)	Moved position
Maximum capacity for the event identified	Moved position
Expert speaker(s)/facilitator(s)/provider identified	Moved position
Topic is relevant to audience professionally and/or personally	Moved position
Aims of event correlate to tangible application into practice outcomes	Moved position
Evaluation form for event planned (if applicable)	Evaluation form for event planned/developed (if applicable)
	contact details downloaded from booking platform. Create attendance list
Pre-work distributed (if applicable)	Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants	Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines	Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)	Copies of slides/workbooks made available (if applicable)
Case studies used	Case studies used
A mixture of learning formats used	A mixture of learning formats/pedagogical approaches used
Contact details collected for follow up evaluation	Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)	Assessment of learning given or signposted (if applicable)
Opportunities to network are given	Opportunities to network are given
Ability to ask questions	Time allowed for questions and answers
Application into practice opportunities identified	Application into practice opportunities identified
Tools given to support learning	Appropriate tools given to support learning
Actions planned with measurable outcomes	Individual actions planned with measurable outcomes
Certification of learning given (if applicable)	Certification of learning given (if applicable)
A follow up email is sent with key points (if applicable)	A follow up email is sent with key points (if applicable)
Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event	Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed -follow up	Evaluation tool completed -follow up
Final evaluation report created	Final evaluation report created
Evaluation shared with stakeholders	Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions	Lessons learnt and identified to support future interventions

After pilot think aloud	After think aloud 1
Identify audience (which group/groups)	Identify audience for training (which group/groups)
Identify gaps in audience knowledge/their training needs	Identify audience training needs/gaps in audience knowledge
	Identify stakeholders and include them in the planning
	Topic is relevant to audience professionally and/or personally
Date set for the event	Date set for the event
Budget set for the event	Budget set for the event
Identify stakeholders	Moved position and combined with statement below
All stakeholders included in the planning	Moved position and combined with statement above
	A venue/online platform identified
	The venue complies with accessibility requirements and has good transport links (if not online)/parking available
Format for event identified	Format for event identified
Duration of event identified	Combined with statement below
Timing of event (day of the week and time of day) identified	Timing/duration of event (day of the week and time of day) identified
	Identification of money available to release/backfill participants (if applicable)
	Maximum capacity for the event identified
Number of repeated events identified (if applicable)	If the event is repeatable, the number of events is identified (if applicable)
Expert speaker(s)/facilitator(s)/provider identified	Expert speaker(s)/facilitator(s)/provider identified
	The venue/online platform booked/secured
	Other events in the local area do not clash
	Calendar of events made available (if applicable)
Topic is relevant to audience professionally and/or personally	Moved position
Aims of event correlate to tangible application into practice outcomes	Aims of event correlate to tangible actions and planning of event elements/modification of material complete (see * elements below)
Maximum capacity for the event identified	Moved position
Other events in the local area do not clash	Moved position
Methodology for evaluation planned (at intervention, and post training)	Methodology for evaluation at intervention, and post training planned
A venue/online platform identified	Moved position
The venue complies with accessibility requirements and has good transport links (if not online)	Moved position
Familiarise yourself with the venue facilities (if applicable)	Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed.
The venue/online platform booked/secured	Moved position
Booking platform set up	Booking platform set up (including ** plus contact details, special requirements)
Stakeholders are willing to support communication of the event	Combined with elements above
Identification of backfill provided (if applicable)	Moved position and wording changed
Mode of advertisement identified	Mode of advertisement identified
Advertising of event completed	Moved position and wording changed
Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice	Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice
	Communication/advertising of the event completed through stakeholders
	Ensure required equipment/resources for event are ordered or will get to the venue
Other events in the local area do not clash	Moved position
Calendar of events made available (if applicable)	Moved position
Evaluation form for event planned/developed (if applicable)	Evaluation form for event planned/developed (if applicable)
contact details downloaded from booking platform. Create attendance list	contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)	Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants	Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines	Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)	Copies of slides/workbooks made available (if applicable)*
Case studies used	Case studies used*
A mixture of learning formats/pedagogical approaches used	A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation	Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)	Assessment of learning given or signposted (if applicable)*
Opportunities to network are given	Opportunities to network are given*
Time allowed for questions and answers	Time allowed for questions and answers*
Application into practice opportunities identified	Application into practice opportunities identified*
Appropriate tools given to support learning	Appropriate tools given to support learning*
Individual actions planned with measurable outcomes	Individual actions planned with measurable outcomes*
Certification of learning given (if applicable)	Certification of learning given (if applicable)
A follow up email is sent with key points (if applicable)	A follow up email is sent with key points (if applicable)

Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event	Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed -follow up	Evaluation tool completed for follow up - either email or post
Final evaluation report created	Final evaluation report created
Evaluation shared with stakeholders	Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions	Lessons learnt and identified to support future interventions

After think aloud 1	After think aloud 2
Identify audience for training (which group/groups)	Identify audience for training (which group/groups)
Identify audience training needs/gaps in audience knowledge	Identify audience training needs/gaps in audience knowledge
Identify stakeholders and include them in the planning	Identify stakeholders and include them in the planning
Topic is relevant to audience professionally and/or personally	Topic is relevant to audience professionally and/or personally
	Format for event identified
	Budget set for the event including Identification of money available to release/backfill participants (if applicable)
	Timing/duration of event (day of the week and time of day) identified
	Maximum capacity for the event identified
	If the event is repeatable, the number of events is identified (if applicable)
	A venue/online platform identified
Date set for the event	Date set for the event
Budget set for the event	Moved and combined
A venue/online platform identified	Moved position
	Expert speaker(s)/facilitator(s)/provider identified
The venue complies with accessibility requirements and has good transport links (if not online)/parking available	The venue complies with accessibility requirements and has good transport links (if not online)/parking available
Format for event identified	Moved position
Timing/duration of event (day of the week and time of day) identified	Moved position
Identification of money available to release/backfill participants (if applicable)	Moved and combined
Maximum capacity for the event identified	Moved position
If the event is repeatable, the number of events is identified (if applicable)	Moved position
Expert speaker(s)/facilitator(s)/provider identified	Moved position
The venue/online platform booked/secured	The venue/online platform booked/secured
Other events in the local area do not clash	Other events in the local area/ public or religious holidays do not clash
Calendar of events made available (if applicable)	Calendar of events made available (if applicable)
Aims of event correlate to tangible actions and planning of event elements/modification of material complete (see * elements below)	Planning of event elements/modification of material complete (see * elements below)
	Aims of event correlate to tangible changes in practice
Methodology for evaluation at intervention, and post training planned	Methodology for evaluation at intervention, and post training planned
Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed.	Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed.
Booking platform set up (including ** plus contact details, special requirements)	Online booking platform set up (including ** plus contact details, special requirements)
Combined with elements above	
Mode of advertisement identified	Mode of advertisement identified and marketing material prepared including **
Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice	Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice
Communication/advertising of the event completed through stakeholders	Communication/advertising of the event completed through stakeholders
	Check that equipment needed at the venue are available e.g. IT
Ensure required equipment/resources for event are ordered or will get to the venue	Ensure required resources for event are ordered to get to the venue
Evaluation form for event planned/developed (if applicable)	Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
contact details downloaded from booking platform. Create attendance list	contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)	Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants	Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines	Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*	Copies of slides/workbooks made available (if applicable)*
Case studies used*	Case studies used*
A mixture of learning formats/pedagogical approaches used*	A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation	Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)*	Assessment of learning given or signposted (if applicable)*
Opportunities to network are given*	Opportunities to network are given*
Time allowed for questions and answers*	Time allowed for questions and answers*
Application into practice opportunities identified*	Application into practice opportunities identified*
Appropriate tools given to support learning*	Appropriate tools given to support learning*
Individual actions planned with measurable outcomes*	Individual actions planned with measurable outcomes*
Certification of learning given (if applicable)	Certification of learning given (if applicable)
A follow up email is sent with key points (if applicable)	A follow up email is sent with key points (if applicable)

Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event	Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed for follow up - either email or post	Evaluation tool completed for follow up - either email or post
Final evaluation report created	Final evaluation report created
Evaluation shared with stakeholders	Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions	Lessons learnt and identified to support future interventions

After think aloud 2	After think aloud 3
Identify audience for training (which group/groups)	Identify audience for training (which group/groups)
Identify audience training needs/gaps in audience knowledge	Identify key learning topic/learning needs for the target audience
	Identify topic for the training session
Identify stakeholders and include them in the planning	Identify key stakeholder groups associated with the planned training and include them in the planning
Topic is relevant to audience professionally and/or personally	Topic is relevant to audience professionally and/or personally
Format for event identified	Format for event identified e.g. face-to-face or online
Budget set for the event including Identification of money available to release/backfill participants (if applicable)	Budget set for the event including Identification of money available to release/backfill participants (if applicable)
Timing/duration of event (day of the week and time of day) identified	Timing/duration of event (day of the week and time of day) identified
Maximum capacity for the event identified	Maximum capacity for the event identified
If the event is repeatable, the number of events is identified (if applicable)	If the event is repeatable, the number of events is identified (if applicable)
	Identify an alternative format for cascade for non-attenders (if applicable)
A venue/online platform identified	A venue/online platform identified
Date set for the event	Date set for the event
Expert speaker(s)/facilitator(s)/provider identified	Expert speaker(s)/facilitator(s)/provider identified
The venue complies with accessibility requirements and has good transport links (if not online)/parking available	The venue complies with accessibility requirements and has good transport links (if not online)/parking available
The venue/online platform booked/secured	The venue/online platform booked/secured
Other events in the local area/ public or religious holidays do not clash	Other events in the local area/ public or religious holidays do not clash
Calendar of events made available (if applicable)	Calendar of events made available (if applicable)
Planning of event elements/modification of material complete (see * elements below)	Creation of event material/modification of material complete (see * elements below)
Aims of event correlate to tangible changes in practice	Aims of event correlate to tangible changes in practice
Methodology for evaluation at intervention, and post training planned	Methodology for evaluation at intervention, and post training planned
Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed.	Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed.
Online booking platform set up (including ** plus contact details, special requirements)	Online booking platform set up (including ** plus contact details, special requirements, venue details)
Mode of advertisement identified and marketing material prepared including **	Mode of advertisement identified and marketing material prepared including **
Advertising includes:** o Aims of event o Topic including driver for the topic o Skills to be acquired o Potential impact on individual practice	Advertising includes:** o Aims of event o Topic including driver for the topic o Skills to be acquired o Potential impact on individual practice
Communication/advertising of the event completed through stakeholders	Communication/advertising of the event completed through stakeholders
Check that equipment needed at the venue are available e.g. IT	Check that equipment needed at the venue are available e.g. IT
	communicate with venue about room layout for event (if applicable)
Ensure required resources for event are ordered to get to the venue	Ensure required resources for event are ordered to get to the venue
	Arrange/order catering and/or refreshments (if applicable)
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included	Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
contact details downloaded from booking platform. Create attendance list	contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)	Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants	Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines	Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*	Copies of slides/workbooks made available (if applicable)*
Case studies used*	Case studies used*
A mixture of learning formats/pedagogical approaches used*	A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation	Contact details collected for follow up evaluation survey
Assessment of learning given or signposted (if applicable)*	Assessment of learning given or signposted (if applicable)*
Opportunities to network are given*	Opportunities to network/breaks are given*
Time allowed for questions and answers*	Time allowed for questions and answers*
Application into practice opportunities identified*	Application into practice opportunities identified*
Appropriate tools given to support learning*	Appropriate tools given to support learning*
Individual actions planned with measurable outcomes*	Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable)
Certification of learning given (if applicable)	Certification of learning given (if applicable)
A follow up email is sent with key points (if applicable)	A follow up email is sent with key points (if applicable)
Evaluation tool completed ***– at event o Good elements o Least positive elements o Relevance to practice o Learning outcomes achieved	Evaluation tool completed ***– at event o Good elements o Least positive elements o Relevance to practice o Learning outcomes achieved

○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event	○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed for follow up - either email or post	Evaluation tool completed for follow up - either email or post
Final evaluation report created	Final evaluation report created
Evaluation shared with stakeholders	Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions	Lessons learnt and identified to support future interventions

After think aloud 3	After think aloud 4
Identify audience for training (which group/groups)	Identify audience for training (which group/groups)
Identify key learning topic/learning needs for the target audience	Identify key learning topic/learning needs for the target audience
Identify topic for the training session	Identify topic for the training session
Identify key stakeholder groups associated with the planned training and include them in the planning	Identify key stakeholder groups associated with the planned training and include them in the planning
Topic is relevant to audience professionally and/or personally	Topic is relevant to audience professionally and/or personally
Format for event identified e.g. face-to-face or online	Format for event identified e.g. face-to-face or online
Budget set for the event including Identification of money available to release/backfill participants (if applicable)	Budget set for the event including Identification of money available to release/backfill participants (if applicable)
Timing/duration of event (day of the week and time of day) identified	Timing/duration of event (day of the week and time of day) identified
Maximum capacity for the event identified	Maximum capacity for the event identified
If the event is repeatable, the number of events is identified (if applicable)	If the event is repeatable, the number of events is identified (if applicable)
Identify an alternative format for cascade for non-attenders (if applicable)	Identify an alternative format for cascade for non-attenders (if applicable)
A venue/online platform identified	A venue/online platform identified
Date set for the event	Date set for the event
Expert speaker(s)/facilitator(s)/provider identified	Expert speaker(s)/facilitator(s)/provider identified
The venue complies with accessibility requirements and has good transport links (if not online)/parking available	The venue complies with accessibility requirements and has good transport links (if not online)/parking available
The venue/online platform booked/secured	The venue/online platform booked/secured
Other events in the local area/ public or religious holidays do not clash	Other events in the local area/ public or religious holidays do not clash
Calendar of events made available (if applicable)	Calendar of events made available (if applicable)
Creation of event material/modification of material complete (see * elements below)	Creation of event material/modification of material complete (see * elements below)
Aims of event correlate to tangible changes in practice	Aims of event correlate to tangible changes in practice
Methodology for evaluation at intervention, and post training planned	Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call
Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed.	Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed.
Online booking platform set up (including ** plus contact details, special requirements, venue details)	Online booking platform set up (including ** plus contact details, special requirements, venue details)
Mode of advertisement identified and marketing material prepared including **	Mode of advertisement identified and marketing material prepared including **
Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice	Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice
Communication/advertising of the event completed through stakeholders	Communication/advertising of the event completed through stakeholders
Check that equipment needed at the venue are available e.g. IT	Check that equipment needed at the venue are available e.g. IT
communicate with venue about room layout for event (if applicable)	communicate with venue about room layout for event (if applicable)
Ensure required resources for event are ordered to get to the venue	Ensure required resources for event are ordered to get to the venue
Arrange/order catering and/or refreshments (if applicable)	Arrange/order catering and/or refreshments (if applicable)
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included	Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
contact details downloaded from booking platform. Create attendance list	contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)	Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants	Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines	Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*	Copies of slides/workbooks made available (if applicable)*
Case studies used*	Case studies used*
A mixture of learning formats/pedagogical approaches used*	A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation survey	Contact details collected for follow up evaluation survey
Assessment of learning given or signposted (if applicable)*	Assessment of learning given or signposted (if applicable)*
Opportunities to network/breaks are given*	Opportunities to network/breaks are given*
Time allowed for questions and answers*	Time allowed for questions and answers*
Application into practice opportunities identified*	Application into practice opportunities identified*
Appropriate tools given to support learning*	Appropriate tools given to support learning*
Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable)	Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable)
Certification of learning given (if applicable)	Certification of learning given (if applicable)
A follow up email is sent with key points (if applicable)	A follow up email is sent with key points (if applicable)
Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback	Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback

○ Organisation of event ○ Proposed changes to practice from event	○ Organisation of event ○ Proposed changes to practice from event
Evaluation tool completed for follow up - either email or post	Evaluation tool completed for follow up - either email or post
Final evaluation report created	Final evaluation report created
Evaluation shared with stakeholders	Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions	Lessons learnt and identified to support future interventions

After think aloud 4	After think aloud 5
Identify audience for training (which group/groups)	Identify audience for training (which group/groups)
Identify key learning topic/learning needs for the target audience	Identify key learning topic/learning needs for the target audience
Identify topic for the training session	Identify topic for the training session
Identify key stakeholder groups associated with the planned training and include them in the planning	Identify key stakeholder groups associated with the planned training and include them in the planning
Topic is relevant to audience professionally and/or personally	Topic is relevant to audience professionally and/or personally
Format for event identified e.g. face-to-face or online	Format for event identified e.g. face-to-face or online
Budget set for the event including Identification of money available to release/backfill participants (if applicable)	Budget set for the event including Identification of money available to release/backfill participants (if applicable)
Timing/duration of event (day of the week and time of day) identified	Timing/duration of event (day of the week and time of day) identified
Maximum capacity for the event identified	Maximum capacity for the event identified
If the event is repeatable, the number of events is identified (if applicable)	If the event is repeatable, the number of events is identified (if applicable)
Identify an alternative format for cascade for non-attenders (if applicable)	Identify an alternative format for cascade for non-attenders (if applicable)
A venue/online platform identified	A venue/online platform identified
Date set for the event	Date set for the event
Expert speaker(s)/facilitator(s)/provider identified	Expert speaker(s)/facilitator(s)/provider identified
The venue complies with accessibility requirements and has good transport links (if not online)/parking available	The venue complies with accessibility requirements and has good transport links (if not online)/parking available
The venue/online platform booked/secured	The venue/online platform booked/secured
Other events in the local area/ public or religious holidays do not clash	Other events in the local area/ public or religious holidays do not clash
Calendar of events made available (if applicable)	Calendar of events made available (if applicable)
Creation of event material/modification of material complete (see * elements below)	Creation of event material/modification of material complete (see * elements below)
Aims of event correlate to tangible changes in practice	Aims of event correlate to tangible changes in practice
Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call	Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call
Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed.	Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed.
Online booking platform set up (including ** plus contact details, special requirements, venue details)	Online booking platform set up (including ** plus contact details, special requirements, venue details)
Mode of advertisement identified and marketing material prepared including **	Mode of advertisement identified and marketing material prepared including **
Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice	Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice
Communication/advertising of the event completed through stakeholders	Communication/advertising of the event completed through stakeholders
Check that equipment needed at the venue are available e.g. IT	Check that equipment needed at the venue are available e.g. IT
communicate with venue about room layout for event (if applicable)	communicate with venue about room layout for event (if applicable)
Ensure required resources for event are ordered to get to the venue	Ensure required resources for event are ordered to get to the venue
Arrange/order catering and/or refreshments (if applicable)	Arrange/order catering and/or refreshments (if applicable)
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included	Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
contact details downloaded from booking platform. Create attendance list	contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)	Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants	Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines	Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*	Copies of slides/workbooks made available (if applicable)*
Case studies used*	Case studies used*
A mixture of learning formats/pedagogical approaches used*	A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation survey	Contact details collected for follow up evaluation survey
Assessment of learning given or signposted (if applicable)*	Assessment of learning given or signposted (if applicable)*
Opportunities to network/breaks are given*	Opportunities to network/breaks are given*
Time allowed for questions and answers*	Time allowed for questions and answers*
Application into practice opportunities identified*	Application into practice opportunities identified*
Appropriate tools given to support learning*	Appropriate tools given to support learning*
Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable)	Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable)
Certification of learning given (if applicable)	Certification of learning given (if applicable)
A follow up email is sent with key points (if applicable)	Position moved and wording changed
Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback	Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback

○ Organisation of event ○ Proposed changes to practice from event	○ Organisation of event ○ Proposed changes to practice from event
[redacted]	A follow up email is sent with key points and contact details for further questions (if applicable)
Evaluation tool completed for follow up - either email or post	Evaluation tool completed for follow up - either email or post
Final evaluation report created	Final evaluation report created
Evaluation shared with stakeholders	Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions	Lessons learnt and identified to support future interventions

After think aloud 5	After think aloud 6
Identify audience for training (which group/groups)	Identify audience for training (which group/groups)
Identify key learning topic/learning needs for the target audience	Identify key learning topic/learning needs for the target audience
Identify topic for the training session	Identify topic for the training session
Identify key stakeholder groups associated with the planned training and include them in the planning	Identify key stakeholder groups associated with the planned training and include them in the planning
Topic is relevant to audience professionally and/or personally	Topic is relevant to audience professionally and/or personally
Format for event identified e.g. face-to-face or online	Format for event identified e.g. face-to-face or online
Budget set for the event including Identification of money available to release/backfill participants (if applicable)	Budget set for the event including Identification of money available to release/backfill participants (if applicable)
Timing/duration of event (day of the week and time of day) identified	Timing/duration of event (day of the week and time of day) identified
Maximum capacity for the event identified	Maximum capacity for the event identified
If the event is repeatable, the number of events is identified (if applicable)	If the event is repeatable, the number of events is identified (if applicable)
Identify an alternative format for cascade for non-attenders (if applicable)	Identify an alternative format for cascade for non-attenders (if applicable)
A venue/online platform identified	A venue/online platform identified
Date set for the event	Date set for the event
Expert speaker(s)/facilitator(s)/provider identified	Expert speaker(s)/facilitator(s)/provider identified (if applicable)
The venue complies with accessibility requirements and has good transport links (if not online)/parking available	The venue complies with accessibility requirements and has good transport links (if not online)/parking available
The venue/online platform booked/secured	The venue/online platform booked/secured
Other events in the local area/ public or religious holidays do not clash	Other events in the local area/ public or religious holidays do not clash
Calendar of events made available (if applicable)	Calendar of events made available (if applicable)
Creation of event material/modification of material complete (see * elements below)	Creation of event material/modification of material complete (see * elements below)
Aims of event correlate to tangible changes in practice	Aims of event correlate to tangible changes in practice
Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call	Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call
Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed.	Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed
Online booking platform set up (including ** plus contact details, special requirements, venue details)	Online booking platform set up (including ** plus contact details, special requirements, venue details)
Mode of advertisement identified and marketing material prepared including **	Mode of advertisement identified and marketing material prepared including **
Advertising includes:** o Aims of event o Topic including driver for the topic o Skills to be acquired o Potential impact on individual practice	Advertising includes:** o Aims of event o Topic including driver for the topic o Skills to be acquired o Potential impact on individual practice
Communication/advertising of the event completed through stakeholders	Communication/advertising of the event completed through stakeholders
Check that equipment needed at the venue are available e.g. IT	Check that equipment needed at the venue are available e.g. IT
communicate with venue about room layout for event (if applicable)	Communicate with venue about room layout for event (if applicable)
Ensure required resources for event are ordered to get to the venue	Ensure required resources for event are ordered to get to the venue
Arrange/order catering and/or refreshments (if applicable)	Arrange/order catering and/or refreshments (if applicable)
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included	Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
contact details downloaded from booking platform. Create attendance list	Contact details downloaded from booking platform. Create attendance list
Pre-work/pre-reading distributed (if applicable)	Pre-work/pre-reading distributed (if applicable)
Reminder sent to registrants	Reminder sent to registrants
Presentation referenced to local/national priorities or guidelines	Presentation referenced to local/national priorities or guidelines
Copies of slides/workbooks made available (if applicable)*	Copies of slides/workbooks made available (if applicable)*
Case studies used*	Case studies used*
A mixture of learning formats/pedagogical approaches used*	A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation survey	Contact details collected for follow up evaluation survey
Assessment of learning given or signposted (if applicable)*	Assessment of learning given or signposted (if applicable)*
Opportunities to network/breaks are given*	Opportunities to network/breaks are given*
Time allowed for questions and answers*	Time allowed for questions and answers*
Application into practice opportunities identified*	Moved and combined
Appropriate tools given to support learning*	Appropriate tools given to support learning*

Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable)	Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable)
Certification of learning given (if applicable)	Certification of learning given (if applicable)
Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event	Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event Proposed changes to practice from event
A follow up email is sent with key points and contact details for further questions (if applicable)	A follow up email is sent with key points and contact details for further questions (if applicable)
Evaluation tool completed for follow up - either email or post	Evaluation tool completed for follow up - either email or post
Final evaluation report created	Final evaluation report created
Evaluation shared with stakeholders	Evaluation shared with stakeholders
Lessons learnt and identified to support future interventions	Lessons learnt and identified to support future interventions
	* • Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable) • Assessment of learning given or signposted (if applicable)* • Opportunities to network/breaks are given* • Time allowed for questions and answers* • Appropriate tools given to support learning* • Copies of slides/workbooks made available (if applicable)* • Case studies used* • A mixture of learning formats/pedagogical approaches used* ** • Aims/rationale of event • Topic including driver for the topic • Skills to be acquired • Potential impact on individual practice *** • Good elements • Least positive elements • Relevance to practice • Learning outcomes achieved • Speaker/facilitator feedback • Organisation of event • Proposed changes to practice from event

Changes only

Initial statements	After face validation
	Complete a training needs analysis
Expectations of attendees captured	Removed
Plan for evaluation both at intervention, and afterwards, planned	Methodology for evaluation planned (at intervention, and post training)
Reminder sent to registrants	Moved position
The venue is accessible/central (if not online)	The venue is accessible (location and access) for all attendees (if applicable)
Topic is applicable for all potential attendees	Removed
Link seen between topic and potential application practice outcome	Removed
	Pre-work distributed (if applicable)
	Reminder sent to registrants
Aims of event correlate to tangible actions	Aims of event correlate to tangible application into practice outcomes
Methodology planned	Removed

After face validation	After content validation
Complete a training needs analysis	Complete a training needs analysis of potential audience (if applicable)
Evaluation form for event planned (if applicable)	Moved position
Advertising completed in sufficient time to allow planning	Advertising completed
Expert speaker(s)/facilitator(s)/provider identified	Expert speaker(s)/facilitator(s)/provider identified
Topic is relevant to audience professionally and/or personally	Topic is relevant to audience professionally and/or personally
Removed	Aims of event correlate to tangible application into practice outcomes
	Evaluation form for event planned (if applicable)
Aims of event correlate to tangible application into practice outcomes	Moved position
A follow up email is sent with key points	A follow up email is sent with key points (if applicable)

After content validation	After pilot think aloud
Complete a training needs analysis of potential audience (if applicable)	Removed
	Identify audience (which group/groups)
	Identify gaps in audience knowledge/their training needs
	Identify stakeholders
Length of event identified	Duration of event identified
Audience identified (which group/groups)	Moved and amended position
	Number of repeated events identified (if applicable)
	Expert speaker(s)/facilitator(s)/provider identified
	Topic is relevant to audience professionally and/or personally
	Aims of event correlate to tangible application into practice outcomes
	Maximum capacity for the event identified
	Other events in the local area do not clash
The venue is accessible (location and access) for all attendees (if applicable)	The venue complies with accessibility requirements and has good transport links (if not online)
	Familiarise yourself with the venue facilities (if applicable)
Advertising completed	Advertising of event completed
Other events in the local area do not clash	Moved position
Number of repeated events identified (if applicable)	Moved position
Maximum capacity for the event identified	Moved position
Expert speaker(s)/facilitator(s)/provider identified	Moved position
Topic is relevant to audience professionally and/or personally	Moved position
Aims of event correlate to tangible application into practice outcomes	Moved position
Evaluation form for event planned (if applicable)	Evaluation form for event planned/developed (if applicable)
	contact details downloaded from booking platform. Create attendance list
Pre-work distributed (if applicable)	Pre-work/pre-reading distributed (if applicable)
Ability to ask questions	Time allowed for questions and answers
Tools given to support learning	Appropriate tools given to support learning
Actions planned with measurable outcomes	Individual actions planned with measurable outcomes

After pilot think aloud	After think aloud 1
Identify audience (which group/groups)	Identify audience for training (which group/groups)
Identify gaps in audience knowledge/their training needs	Identify audience training needs/gaps in audience knowledge
	Identify stakeholders and include them in the planning
	Topic is relevant to audience professionally and/or personally
Identify stakeholders	Moved position and combined with statement below
All stakeholders included in the planning	Moved position and combined with statement above
	A venue/online platform identified
	The venue complies with accessibility requirements and has good transport links (if not online)/parking available
Duration of event identified	Combined with statement below
Timing of event (day of the week and time of day) identified	Timing/duration of event (day of the week and time of day) identified
	Identification of money available to release/backfill participants (if applicable)
	Maximum capacity for the event identified
Number of repeated events identified (if applicable)	If the event is repeatable, the number of events is identified (if applicable)
	The venue/online platform booked/secured
	Other events in the local area do not clash
	Calendar of events made available (if applicable)
Topic is relevant to audience professionally and/or personally	Moved position
Aims of event correlate to tangible application into practice outcomes	Aims of event correlate to tangible actions and planning of event elements/modification of material complete (see * elements below)
Maximum capacity for the event identified	Moved position
Other events in the local area do not clash	Moved position
Methodology for evaluation planned (at intervention, and post training)	Methodology for evaluation at intervention, and post training planned
A venue/online platform identified	Moved position
The venue complies with accessibility requirements and has good transport links (if not online)	Moved position
Familiarise yourself with the venue facilities (if applicable)	Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed.
The venue/online platform booked/secured	Moved position
Booking platform set up	Booking platform set up (including ** plus contact details, special requirements)
Stakeholders are willing to support communication of the event	Combined with elements above
Identification of backfill provided (if applicable)	Moved position and wording changed
Mode of advertisement identified	Mode of advertisement identified
Advertising of event completed	Moved position and wording changed
Advertising includes: ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Benefit to practice	Advertising includes:** ○ Aims of event ○ Topic including driver for the topic ○ Skills to be acquired ○ Potential impact on individual practice
	Communication/advertising of the event completed through stakeholders
	Ensure required equipment/resources for event are ordered or will get to the venue
Other events in the local area do not clash	Moved position
Calendar of events made available (if applicable)	Moved position
Copies of slides/workbooks made available (if applicable)	Copies of slides/workbooks made available (if applicable)*
Case studies used	Case studies used*
A mixture of learning formats/pedagogical approaches used	A mixture of learning formats/pedagogical approaches used*
Contact details collected for follow up evaluation	Contact details collected for follow up evaluation
Assessment of learning given or signposted (if applicable)	Assessment of learning given or signposted (if applicable)*
Opportunities to network are given	Opportunities to network are given*
Time allowed for questions and answers	Time allowed for questions and answers*
Application into practice opportunities identified	Application into practice opportunities identified*
Appropriate tools given to support learning	Appropriate tools given to support learning*
Individual actions planned with measurable outcomes	Individual actions planned with measurable outcomes*
Evaluation tool completed -follow up	Evaluation tool completed for follow up - either email or post

After think aloud 1	After think aloud 2
	Format for event identified
	Budget set for the event including Identification of money available to release/backfill participants (if applicable)
	Timing/duration of event (day of the week and time of day) identified
	Maximum capacity for the event identified
	If the event is repeatable, the number of events is identified (if applicable)
	A venue/online platform identified
Budget set for the event	Moved and combined
A venue/online platform identified	Moved position
	Expert speaker(s)/facilitator(s)/provider identified
Format for event identified	Moved position
Timing/duration of event (day of the week and time of day) identified	Moved position
Identification of money available to release/backfill participants (if applicable)	Moved and combined
Maximum capacity for the event identified	Moved position
If the event is repeatable, the number of events is identified (if applicable)	Moved position
Expert speaker(s)/facilitator(s)/provider identified	Moved position
Other events in the local area do not clash	Other events in the local area/ public or religious holidays do not clash
Aims of event correlate to tangible actions and planning of event elements/modification of material complete (see * elements below)	Planning of event elements/modification of material complete (see * elements below)
	Aims of event correlate to tangible changes in practice
Booking platform set up (including ** plus contact details, special requirements)	Online booking platform set up (including ** plus contact details, special requirements)
Mode of advertisement identified	Mode of advertisement identified and marketing material prepared including **
	Check that equipment needed at the venue are available e.g. IT
Ensure required equipment/resources for event are ordered or will get to the venue	Ensure required resources for event are ordered to get to the venue
Evaluation form for event planned/developed (if applicable)	Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included
Evaluation tool completed – at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event	Evaluation tool completed ***– at event ○ Good elements ○ Least positive elements ○ Relevance to practice ○ Learning outcomes achieved ○ Speaker/facilitator feedback ○ Organisation of event ○ Proposed changes to practice from event

After think aloud 2	After think aloud 3
Identify audience training needs/gaps in audience knowledge	Identify key learning topic/learning needs for the target audience
	Identify topic for the training session
Identify stakeholders and include them in the planning	Identify key stakeholder groups associated with the planned training and include them in the planning
Format for event identified	Format for event identified e.g. face-to-face or online
	Identify an alternative format for cascade for non-attenders (if applicable)
Planning of event elements/modification of material complete (see * elements below)	Creation of event material/modification of material complete (see * elements below)
Online booking platform set up (including ** plus contact details, special requirements)	Online booking platform set up (including ** plus contact details, special requirements, venue details)
	communicate with venue about room layout for event (if applicable)
	Arrange/order catering and/or refreshments (if applicable)
Contact details collected for follow up evaluation	Contact details collected for follow up evaluation survey
Opportunities to network are given*	Opportunities to network/breaks are given*
Individual actions planned with measurable outcomes*	Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable)

After think aloud 3	After think aloud 4
Methodology for evaluation at intervention, and post training planned	Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call
Familiarise yourself with the venue facilities (if applicable). Do a site visit if needed.	Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed.

After think aloud 4	After think aloud 5
A follow up email is sent with key points (if applicable)	Position moved and wording changed
	A follow up email is sent with key points and contact details for further questions (if applicable)

After think aloud 5	After think aloud 6
Expert speaker(s)/facilitator(s)/provider identified	Expert speaker(s)/facilitator(s)/provider identified (if applicable)
Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed.	Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed
communicate with venue about room layout for event (if applicable)	Communicate with venue about room layout for event (if applicable)
contact details downloaded from booking platform. Create attendance list	Contact details downloaded from booking platform. Create attendance list
Application into practice opportunities identified*	Moved and combined
Individual actions planned with measurable outcomes* linked to CPD requirements (if applicable)	Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable)
	* • Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable) • Assessment of learning given or signposted (if applicable)* • Opportunities to network/breaks are given* • Time allowed for questions and answers* • Appropriate tools given to support learning* • Copies of slides/workbooks made available (if applicable)* • Case studies used* • A mixture of learning formats/pedagogical approaches used* ** • Aims/rationale of event • Topic including driver for the topic • Skills to be acquired • Potential impact on individual practice *** • Good elements • Least positive elements • Relevance to practice • Learning outcomes achieved • Speaker/facilitator feedback • Organisation of event • Proposed changes to practice from event

Appendix 27: Final PRACTICE framework for trial in practice

	Before intervention							Intervention	After intervention				
FINAL version	Minimum of 12 weeks prior to event. Tasks to be completed at this time are flexible in terms of order and timing dependent on location/local priorities	8 weeks prior to event	4 weeks prior to event	3 weeks prior to event	2 weeks prior to event	1 week prior to event	1-2 days before event	Day of event	1 week after event	4 weeks after event	8 weeks after event	12 weeks after event	Comments
Identify audience for training (which group/groups)													
Identify key learning topic/learning needs for the target audience													
Identify topic for the training session													
Identify key stakeholder groups associated with the planned training and include them in the planning													
Topic is relevant to audience professionally and/or personally													
Format for event identified e.g. face-to-face or online☑													
Budget set for the event including identification of money available to release/backfill participants (if applicable)													
Timing/duration of event (day of the week and time of day) identified													
Maximum capacity for the event identified													
If the event is repeatable, the number of events is identified (if applicable)													
Identify an alternative format for cascade for non-attenders (if applicable)													
A venue/online platform identified ☑													
Date set for the event													
Expert speaker(s)/facilitator(s)/provider identified (if applicable)													
The venue complies with accessibility requirements and has good transport links (if not online)/parking available													
The venue/online platform booked/secured													
Other events in the local area/ public or religious holidays do not clash													
Calendar of events made available (if applicable)													
Creation of event material/modification of material complete (see * elements below)													

Mode of advertisement identified ☑ and marketing material prepared including **													
Advertising includes:** o Aims/rationale of event o Topic including driver for the topic o Skills to be acquired o Potential impact on individual practice													
Communication/advertising of the event completed through stakeholders													
Check that equipment needed at the venue are available e.g. IT													
Communicate with venue about room layout for event (if applicable)													
Ensure required resources for event are ordered to get to the venue													
Arrange/order catering and/or refreshments ☑													
Evaluation form for event planned/developed (if applicable) ensuring elements from*** are included ☑													
Contact details downloaded from booking platform. Create attendance list													
Pre-work/pre-reading distributed (if applicable)					For new registrants								
Reminder sent to registrants													
Presentation referenced to local/national priorities or guidelines													
Copies of slides/workbooks made available (if applicable)*													
Case studies used*													
A mixture of learning formats/pedagogical approaches used*													
Contact details collected for follow up evaluation survey													
Assessment of learning given or signposted (if applicable)*													
Opportunities to network/breaks are given*													
Time allowed for questions and answers*													
Appropriate tools given to support learning*													

Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable)													
Certification of learning given (if applicable)													
Evaluation tool completed*** – at event o Good elements o Least positive elements o Relevance to practice o Learning outcomes achieved o Speaker/facilitator feedback o Organisation of event o Proposed changes to practice from event													
A follow up email is sent with key points and contact details for further questions													
Evaluation tool completed for follow up - either email or post													
Final evaluation report created													
Evaluation shared with stakeholders													
Lessons learnt and identified to support future interventions													

*

- o Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable)
- o Assessment of learning given or signposted (if applicable)*
- o Opportunities to network/breaks are given*
- o Time allowed for questions and answers*
- o Appropriate tools given to support learning*
- o Copies of slides/workbooks made available (if applicable)*
- o Case studies used*
- o A mixture of learning formats/pedagogical approaches used*

**

- o Aims/rationale of event
- o Topic including driver for the topic
- o Skills to be acquired
- o Potential impact on individual practice

***

- o Good elements
- o Least positive elements
- o Relevance to practice
- o Learning outcomes achieved
- o Speaker/facilitator feedback
- o Organisation of event
- o Proposed changes to practice from event

☑

Ensure an equality, diversity and inclusion impact assessment has been considered for these elements

Appendix 28: Completed framework from Domestic Abuse event (25th September 2019)

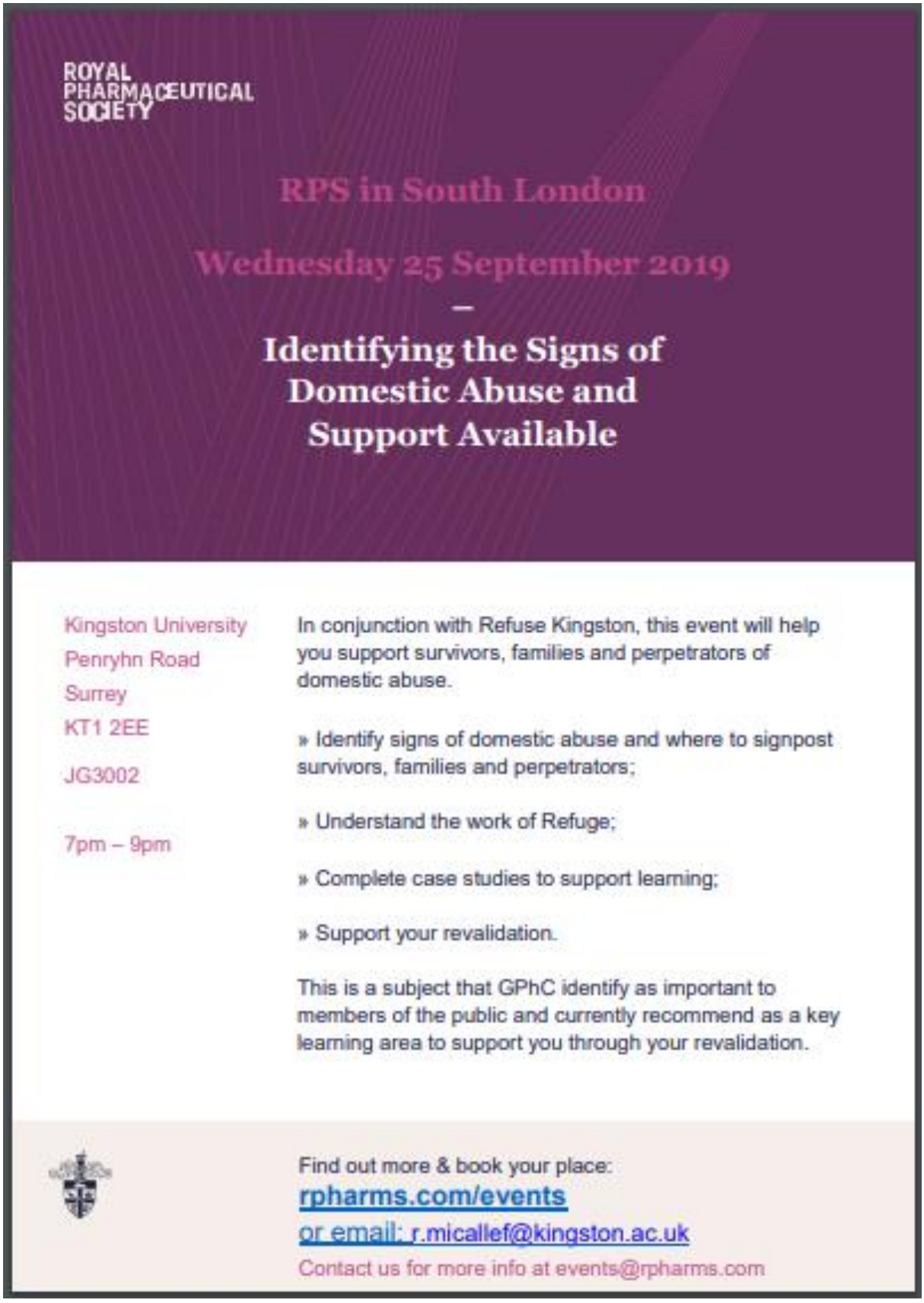
Domestic abuse event 25.09.2019	Comments.	Time scales
Identify audience for training (which group/groups)	Pharmacists	Supervisor meeting 05/03/2019
Identify key learning topic/learning needs for the target audience	The GPhC, on their revalidation homepage for 2019 stated 2 topics for consideration by pharmacists: sodium valproate and domestic abuse.	Supervisor meeting 05/03/2019
Identify topic for the training session	Domestic abuse has been chosen as the topic, as this has not been covered by other available learning outlets	Supervisor meeting 05/03/2019
Identify key stakeholder groups associated with the planned training and include them in the planning	the LPC were included in this discussion of the topic, as were the LPF	14/03 and 09/05/2019 - LPC meetings. 23rd April LPF support gained
Topic is relevant to audience professionally and/or personally	The GPhC, on their revalidation homepage for 2019 stated 2 topics for consideration by pharmacists: sodium valproate and domestic abuse.	Supervisor meeting 05/03/2019
Format for event identified e.g. face-to-face or online	face-to-face event being held, as this is preferred to be able to include activities	Supervisor meeting 05/03/2019
Budget set for the event including identification of money available to release/backfill participants (if applicable)	RPS South London has agreed to pay for refreshments for the event. The event is an evening one, so backfill is not required.	Money agreed during LPF meeting on 23/04/2019
Timing/duration of event (day of the week and time of day) identified	Traditionally our events are on Wednesdays, so this is being continued. The event will be an evening one; 7 for food and then 7:30-9pm for the event.	During LPF meeting on 23/04/2019
Maximum capacity for the event identified	50 is the maximum	During LPF meeting on 23/04/2019
If the event is repeatable, the number of events is identified (if applicable)	NA	NA
Identify an alternative format for cascade for non-attenders (if applicable)	NA	NA
A venue/online platform identified	Kingston University. room to be booked when available	During LPF meeting on 23/04/2019

Date set for the event	After speaking to Refuge Kingston the date was agreed for 25th September 2019. This was completed after the expert speaker had been identified, for this event.	09/07/2019
Expert speaker(s)/facilitator(s)/provider identified (if applicable)	Refuge in Kingston were identified as potential speakers. They were first approached on 28/03/2019 but were awaiting a new manager, so the date was agreed once this person was appointed.	First email sent on 28/03/2019. New manager appointed in June, so initial email contact on 17/06/2019
The venue complies with accessibility requirements and has good transport links (if not online)/parking available	Kingston University has good links and parking available. Lifts are available to get to the rooms.	During LPF meeting on 23/04/2019
The venue/online platform booked/secured	Room booked - Kingston University JG3002	Booked on 14/09/2019
Other events in the local area/ public or religious holidays do not clash	No religious festivals identified. Date confirmed with LPC and CPPE calendar checked	Date confirmed with LPC 11/07/2019
Calendar of events made available (if applicable)	Added to RPS events page	26/07/2019
Creation of event material/modification of material complete (see * elements below)	see appendix 29. RPS template amended to ensure appropriate content is included	29/07/2019
Aims of event correlate to tangible changes in practice	aims were added to template	29/07/2019
Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call	survey created for both at and post event. Survey at the event will be paper based, and the follow up will be added to google forms	Part of ethical approval Nov 2018
Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed.	NA as I work at the venue	NA
Online booking platform set up (including ** plus contact details, special requirements, venue details)	Event set up on RPS events system, which includes booking details	29/07/2019
Mode of advertisement identified and marketing material prepared including **	Emailed through RPS events system, flyer emailed to LPC for circulation, personal contacts emailed	29/07/2019
Advertising includes:**		29/07/2019
o Aims/rationale of event		
o Topic including driver for the topic		
o Skills to be acquired		
o Potential impact on individual practice	yes - all included on the flyer. See appendix 29.	

Communication/advertising of the event completed through stakeholders	Events email from RPS - generic, events email from RPS - specific, email through LPC, email to personal contacts	Email from RPS - 05/08/19 - generic, 09/09/19 - specific. Email sent to LPC for onward circulation on 19/08/2019
Check that equipment needed at the venue are available e.g. IT	All teaching rooms have access to IT equipment	
Communicate with venue about room layout for event (if applicable)	NA - I know the layout is suitable	
Ensure required resources for event are ordered to get to the venue	Speaker emailed to identify is any pre-reading or material needed	10/09/2019
Arrange/order catering and/or refreshments	ordered - Saj Restaurant Raynes Park	30/08/2019
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included	Evaluation form planned- and has received ethical approval. Printed ready	30/08/2019
Contact details downloaded from booking platform. Create attendance list		23/09/2019
Pre-work/pre-reading distributed (if applicable)	speaker contacted -no pre-work	10/09/2019
Reminder sent to registrants	RPS reminder sent and forwarded to other participants	19/09/2019
Presentation referenced to local/national priorities or guidelines	reviewed with speaker prior to event	25/09/2019
Copies of slides/workbooks made available (if applicable)*	Copies of the slides were given to participants at the beginning of the session	25/09/2019
Case studies used*	Although this was requested, no official case studies were used as activities during the event, although cases were shared to highlight learnings	25/09/2019
A mixture of learning formats/pedagogical approaches used*	The session started with group work and table talk, prior to a presentation, with discussion and questions throughouts=	25/09/2019
Contact details collected for follow up evaluation survey	A pull off sheet was given with the evaluation form. 16 attendees were present and all gave their details	25/09/2019
Assessment of learning given or signposted (if applicable)*	Multiple resources were given during the presentation	25/09/2019
Opportunities to network/breaks are given*	Group work allowed discussion, and networking occurred during food 7-7:30 and after the event	25/09/2019

Time allowed for questions and answers*	Q and A occurred throughout the session, and then an additional 10 minutes were allocated at the end	25/09/2019
Appropriate tools given to support learning*	handouts were given. Additional material to be emailed	25/09/2019
Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable)	no official action plan was created, although the evaluation form asked participants to indicate their intended change in practice	25/09/2019
Certification of learning given (if applicable)	NA	
Evaluation tool completed*** – at event o Good elements o Least positive elements o Relevance to practice o Learning outcomes achieved o Speaker/facilitator feedback o Organisation of event o Proposed changes to practice from event		25/09/2019 Results correlated on 26/09/2019
A follow up email is sent with key points and contact details for further questions		Sent on 01/10/2019
Evaluation tool completed for follow up - either email or post		Email sent on 07/10/2019 with reminder sent on 21/10/2019
Final evaluation report created		
Evaluation shared with stakeholders		
Lessons learnt and identified to support future interventions		

Appendix 29: Advert for Domestic Abuse event



Appendix 30: Evaluation form Domestic Abuse event

Please fill in this evaluation form as your comments are very important to us.

Gender _____

What is your current sector of practice?

_____

Role_____

Years since qualification _____

1. What were your personal objectives for the course?

2. Please tick the most appropriate response for each of the following statements:

	Not at all	A bit	Some	Mostly	Absolutely
Did you find the timing of the event convenient?					
Were you aware of the aims of the course before attending?					
Were you aware of the drivers for the topic prior to attendance?					
Did the course meet its specified aims/objectives?					
Did the course meet your personal objectives?					
Was the content pitched at an appropriate level?					
Was there a good balance between theory and practical application?					
Has the course helped meet your learning needs?					
The handouts/material given were useful					

3. Did you receive the pre-work for the course at least a week before the event? Yes/No

4. Did you complete the pre-work for the course? Yes/No

5. How do you anticipate that your professional practice change in response to what you have learned from this course?

6. What were the most useful course elements?

7. What were the least useful course elements?

8. How could the course be improved?

9. Please tick the most appropriate response for each of the following statements:

	Poor	Fair	Good	Very good	Excellent
Overall impression of the event					
Overall impression of the course tutor(s)					
Overall impression of the venue					
Opportunity to participate in activities					
Opportunity to ask questions					
Opportunity to practise the skills learnt					
Opportunity to think about how to apply the learning into practice					

10. Please write any general comments you have which may help to explain your answers:

11. What opportunities have you identified to support your future CPD needs because of attending this workshop?

12. On a scale of 1-10 where 1 is not at all and 10 is extremely please answer the following:

The questions on this evaluation form were easy to answer	
The questions on this evaluation form encouraged reflective thinking	

13. Would you recommend this workshop to others, and why?

Thank you for completing this questionnaire.

In accordance with the programme enrolment requirements, all delegates are required to participate in programme evaluation.

You will receive a link to an online survey 3 months post-programme.

Please provide your name and email address for this purpose*:

Name:

Email Address:

* Your email address will be removed prior to review and analysis, so that your evaluation responses remain anonymous. Your email address will be used only by the evaluator and only for the purpose of providing you with the link to an online survey 3-months post-programme. This information will be stored securely until required and will be destroyed after 3 months.

Appendix 31: Evaluation of Domestic Abuse Event

Gender: m = 3, f = 13

What is your current sector of practice?

Community Pharmacy - 9
Hospital pharmacy - 3
Academia – 2
Not currently in practice - 2

Role

Associate professor
Clinical pharmacist
E and T pharmacist
Paediatric pharmacists
Pharmacist x 7
Superintendent x 2
Teaching fellow

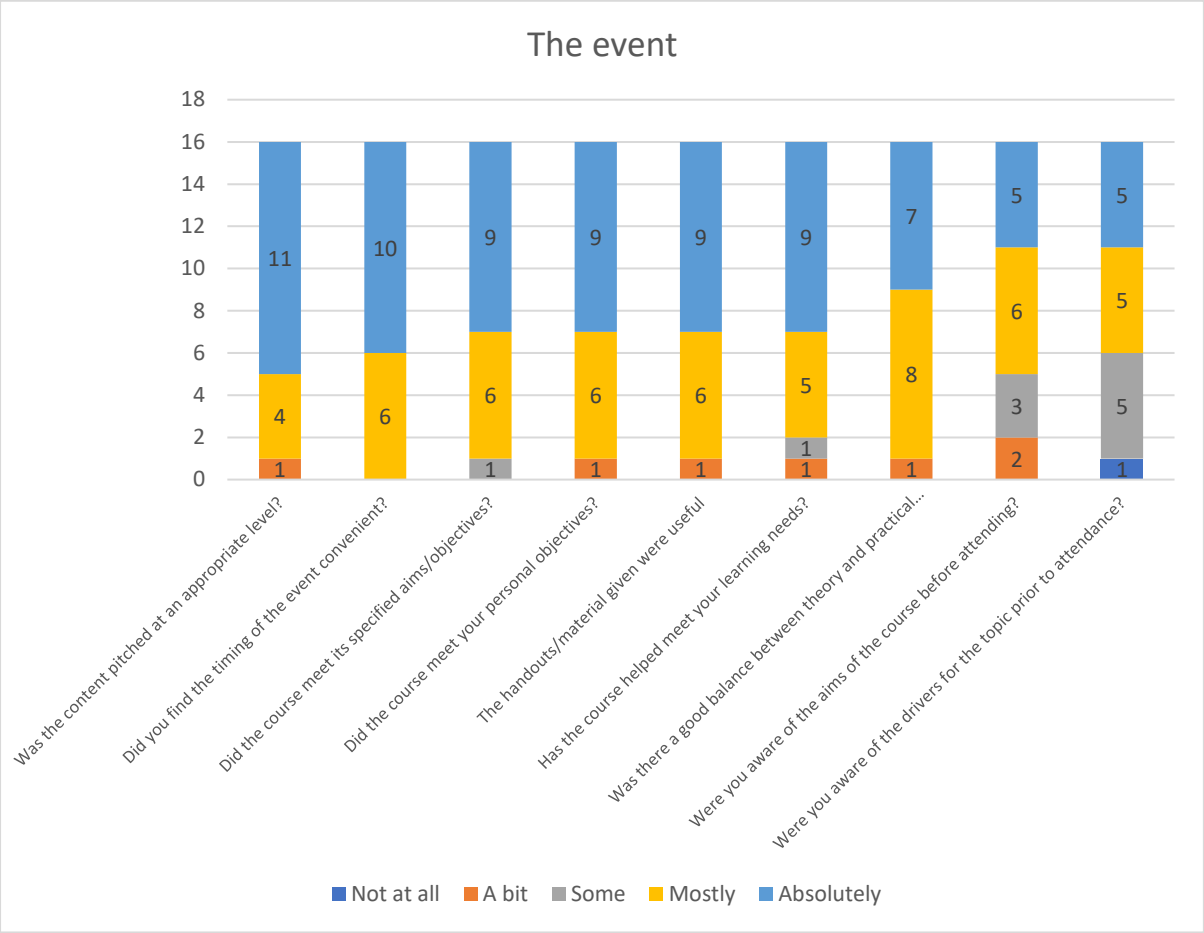
Years since qualification

1, 11, 11, 15, 18, 20, 20, 20, 21, 24, 27, 27, 29, 30, 37

What were your personal objectives for the course?

- Find out about provisions for victims of abuse
- Increased awareness
- Picking up signs, signposting advice
- Refresh knowledge/signs to look for/where to signpost
- Signs of abuse and where to refer
- To find out more about Kingston support and advice available. To know how to signpost
- To find out more about the topic and sign posting to useful support
- To recognise abuse, what different types of abuse. What to say. Where to refer
- To recognise signs of domestic abuse. To know where to signpost patients if victims of abuse
- To understand more about domestic abuse and learn who I can signpost to
- Topic of interest for CPD
- Understand symptoms/signs
- Understanding signposting pathways
- Unusual topic to see presented but important

The event



How do you anticipate that your professional practice will change in response to what you have learned from this course?

- Be aware of any physical or emotional abuse. Knowing what action to take
- Greater awareness of roles of specialist e.g. IDVA and support networks. Refer if appropriate
- Greater awareness of signs of abuse. Discuss with staff
- Greater confidence to discuss the topic and be able to signpost
- I am now aware of the DV advice line and can give this number to patients if referral is necessary
- I will be more aware of signs and places to signpost
- I will be more aware of the signs of abuse and how to help and support patients
- I will put the information in my signposting folder
- Increased knowledge of support available
- It was always a bit of a grey area, was not too sure who/where to refer people in need
- More aware of the range of options for victims
- More aware of where to signpost students/colleagues for advice
- More confidence to deal with difficult situations
- More confident about signposting and consequences for victims if they accept help

What were the most useful course elements?

- All of it
- Contact details
- Current help available and real examples
- Discussion on signposting and statistics. Shocking and informative – motivates me to support where possible
- Group work and signposting links. Really useful to have a hand out
- Group work on identifying signs. Resources available
- I was mostly already aware of all that was discussed so not very helpful
- Listening to the expert speaker. Useful links. Useful referrals
- Real case snippets to support ideas discussed e.g. myths, reasons to stay etc.
- Role of refuge and wide variety of resources available
- Signposting information
- Signposting. What help is available
- Support within the borough
- The different types of abuse
- The topic was covered very thoroughly
- Understanding stats and local issues
- Where and where not to refer

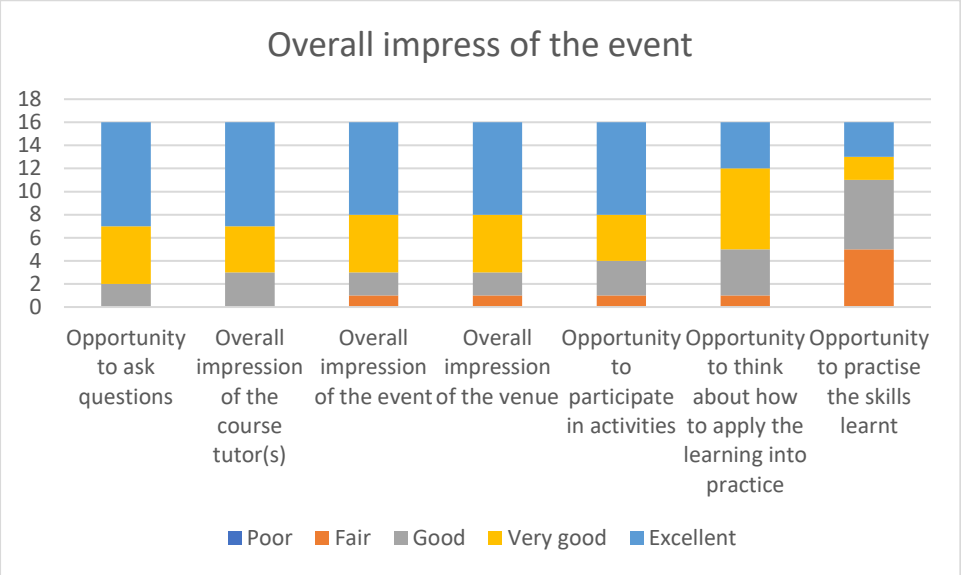
What were the least useful course elements?

- Kingston specific and I am based in another borough
- Long discussion about individual groups involved
- Lots of acronyms we don't need to understand
- None – all equally helpful
- The venue
- Very Kingston specific

How could the course be improved?

- Case studies
- Case studies might help with application of knowledge
- It was very good, very practical, very satisfied
- Maybe have some case studies to work through
- More focused on our role as pharmacists
- More group discussion about how to identify people and how to have the conversations
- More real-life examples to understand extent of issues
- So useful in limited time

Please tick the most appropriate response for each of the following statements:



Please write any general comments you have which may help to explain your answers:

- Event not what I expected, I already know most of the items covered
- Having case studies and further examples of cases to help us to relate to the real world
- I was engaged throughout the event
- Not a session to practise conversations, but could have role play activity
- Overall great! Very insightful
- Really broadened my awareness of range of DV
- Very good sessions
- Very, very helpful

What opportunities have you identified to support your future CPD needs because of attending this workshop?

- Emergency contraception
- I need to update my teaching material, and check signposting folders when in practice to check for information provided in them is up to date
- Know my local services and understand how to approach
- Learn more about resources available
- Links will be useful to click on and see type of information/support available
- Possibly attend a one stop shop to see what it involves. Can pharmacists offer medical advice?
- Safeguarding/current pharmacy contract element
- The role of community pharmacists in recognising abuse and how this can be applied to acute care admissions
- Understand more about FGM and cultures that have this as common practice
- Update my signposting/safeguarding folder

On a scale of 1-10 where 1 is not at all and 10 is extremely please answer the following:

The questions on this evaluation form were easy to answer	5,5,7,7,8,8,8,9,9,9,9,10,10,10,10 (n=15) Average: 8.3
The questions on this evaluation form encouraged reflective thinking	5,5,7,7,8,8,8,8,9,9,9,10,10,10,10 (n=15) Average: 8.2

Would you recommend this workshop to others, and why?

- No – does not say much more than CPPE safeguarding course
- Yes
- Yes
- Yes
- Yes – 100%
- Yes – important social issue
- Yes – informative
- Yes – initiates learning and awareness
- Yes – really enjoyable not to feel I need to be an expert or have knowledge
- Yes – thought provoking and informative
- Yes – thought provoking topic
- Yes – useful information
- Yes – very important information to be aware of
- Yes – very informative

Thank you for completing this questionnaire.

Appendix 32: Follow up letter from the Domestic Abuse event

Kingston University

Penrhyn Road

Kingston upon Thames

Surrey KT1 2EE

020 8417 9000

Dear Attendee,

Evaluation of the training you received on 25th September 2019

I would like to thank you for taking the time to complete the survey given out at the end of your training evening. We would now like to request that you take part in a brief follow up survey.

Your name was accessed via the information you supplied at the training event. We would like to reassure you that all information provided by you will be maintained in a strictly confidential manner. The project final report will contain no information that will enable the reader to identify who the respondent was.

We would really appreciate it if you could complete the survey within 1 week of receiving it. Your input is appreciated.

The survey is available at: https://forms.gle/5XB4L1BwUuXQB4gN7

If you have any questions, queries or problems please contact me.

Yours Sincerely,

Ricarda Micallef MRPharmS

r.micallef@kingston.ac.uk

Appendix 33: Follow up evaluation form Domestic Abuse event

Please fill in this evaluation form as your comments are very important to us.

Gender _____

What is your current sector of practice? _____

Role_____

Years since qualification _____

1. What do you remember about the course?

2. Did you receive a follow up email after the course containing key learning points? Yes/No
3. Have you used the learning points to support your CPD? Yes/No

4. Please tick the most appropriate response for each of the following statements:

	Not at all	A bit	Some	Mostly	Absolutely
I am putting the intended changes in practice I stated at the event into practice					
The topic covered was relevant to my practice					
I am more confident after the event					
I am more knowledgeable after the event					
I shared the information learnt with my team					
I have seen a change in my practise as a result of the course					

5. Please can you describe anything you have done differently or implemented after the course

6. Please can you describe any barriers that have stopped you implementing any change after the event

7. Do you have any other comments?

Thank you for completing this questionnaire.

Appendix 34: Follow up evaluation results of Domestic Abuse event

8 responses, therefore 50% response rate (8 out of 16)

Responses were 3 male and 5 female.

With regards to sector of practice, 5 responders were community pharmacists, 2 worked in hospital and 1 was an academic.

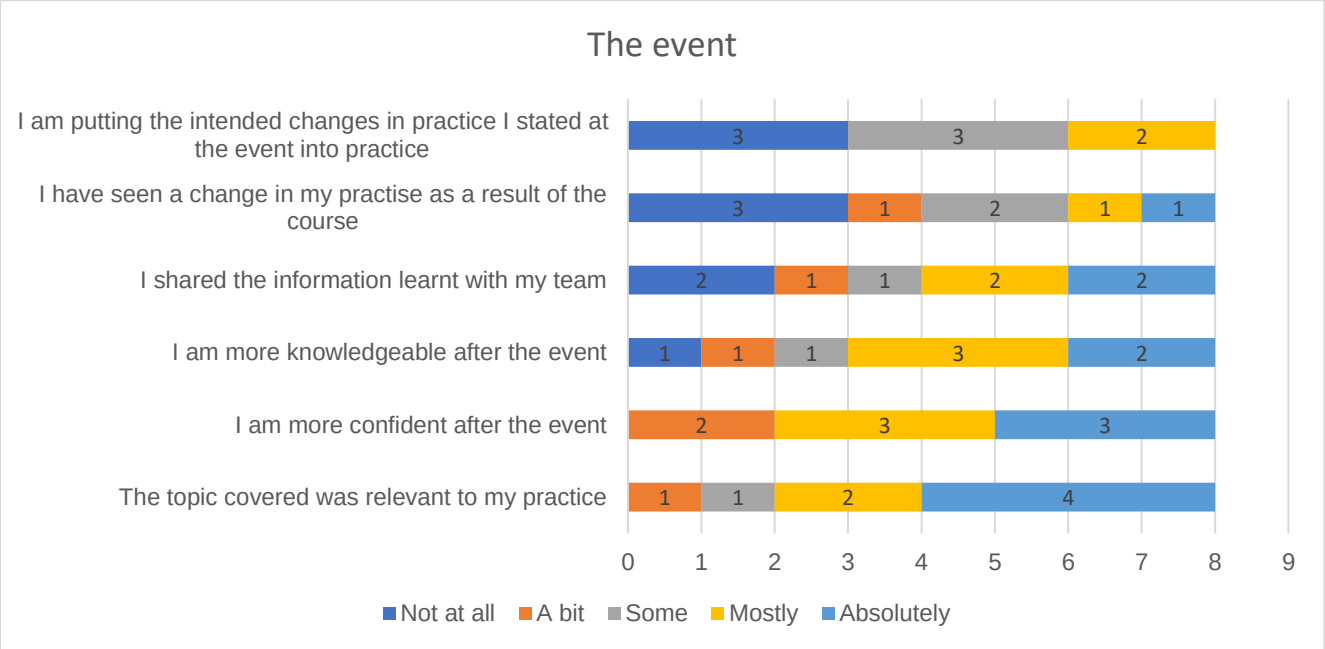
Years of qualification ranged from 1 to 35 (1,11,18,18,20,30,30,35)

When asked what they remember from the course, most responses focused on the information they received

- Abuse comes in many forms and can be hidden. Need to look for changes in persons behaviour etc. Not the stereotypical person either
- Information about the patient benefits to using Digital apps to order repeat medication/book appointments/view test results etc.
- Local support access, many different types of abuse
- Lots of information given, and an open discussion. Good exercises to get us to think about the topic.
- Sessions regarding the type of abuse, and what services are available
- sign posting details...
- There was information give about how to recognise signs of domestic abuse and how to signpost women and resources available to help. We went through the different types of abuse.
- Too much to enter here! It was useful to get contact information for agencies that can help or advise. Most of the actual information I already knew.

Of the responses, 7 out of 8 said they had received the follow up email with the key learning points, and 5 responded that they had used the learning to support their CPD, with 1 additional response stating that they had ‘maybe’ used the information.

When asked about the event, half (4/8) said that the topic was ‘absolutely’ relevant to practice, with 6 out of 8 (75%) responses being positive. Again, 6 out of 8 (75%) responses were positive for being more confident after the event. Being more knowledgeable after the event was positive in 5 out of 8 cases. Half (4/8) gave positive responses about sharing information learnt with their team. However, only 2 responders (25%) gave positive responses about seeing a change in practice as a result of the event, and 2 (25%) had also put changes into practice.



	Not at all	A bit	Some	Mostly	Absolutely
I am putting the intended changes in practice I stated at the event into practice	3		3	2	
The topic covered was relevant to my practice		1	1	2	4
I am more confident after the event		2		3	3
I am more knowledgeable after the event	1	1	1	3	2
I shared the information learnt with my team	2	1	1	2	2
I have seen a change in my practise as a result of the course	3	1	2	1	1

When asked to describe anything that has been done differently or implemented after the course respondents mentioned awareness, updating and sharing information, although one colleague had yet to complete anything.

- I am more aware of the issue
- I have kept a record of contact information in our signposting file.
- More aware of potential risks
- Nothing yet

- Shared information with colleagues, and initiated a few conversations with people where I think they needed to be aware of resources available, and where the issues they were talking about could warrant a domestic abuse claim.
- Some case-studies might have been helpful to identify the role of pharmacists in recognition and referral of results
- Updated our information held and understood by the team
- Will be advising patients of the benefits of using the NHS app or our own App as well

When describing barriers to implementation of learning the biggest factor was limited opportunity as no cases had been encountered. This echoes the previous results about implementing change.

- I have not been in a situation to implement any changes thus far
- I haven't been practicing much since I attended the event, so minimal time to implement
- No
- no barriers, but always difficult to identify cases, as it takes multiple visits by a patient to notice anything.
- No barriers, just that no domestic violence problems have arisen.
- Not always patient facing in my role
- Opportunities in practice
- Too soon

Do you have any other comments?

- It was a great event, and very thought provoking. Thank you for arranging it.
- There were some unanswered questions from the meeting
- Great event and very informative

Appendix 35: Final PRACTICE framework including instructions for use

The aim of the framework is to support planning of learning or training interventions. This can be used as a spreadsheet, or paper based document.

PRACTICE supports achievement of the main elements of planning:

- **P**lanning
- **R**esources
- **A**dvertising
- **C**apacity
- **T**opic
- **I**ntervention
- **C**PD
- **E**valuation

This tool was designed primarily for pharmacist training interventions, although has also been validated for use by other healthcare professionals, and for other educational interventions.

Please use the framework as a support document to support the planning of training interventions, as a checklist and reminder tool. Not all statements will be applicable to all learning events. Whilst listed in a chronological manner, some statements may be completed before others. Time scales are also given as suggestions, although these may be adjusted to suit your individual learning event.

For online use, the time scale linked to a statements is red. This can be changed to amber or green to track progress of your project, if applicable. Comments can also be added, where needed, to add date of completion, or other issues.

This framework is not exhaustive, and other activities may also need to be completed.

	Before intervention							Intervention	After intervention				
FINAL version	Minimum of 12 weeks prior to event. Tasks to be completed at this time are flexible in terms of order and timing dependent on location/local priorities	8 weeks prior to event	4 weeks prior to event	3 weeks prior to event	2 weeks prior to event	1 week prior to event	1-2 days before event	Day of event	1 week after event	4 weeks after event	8 weeks after event	12 weeks after event	Comments
Identify audience for training (which group/groups)													
Identify key learning topic/learning needs for the target audience													
Identify topic for the training session													
Identify key stakeholder groups associated with the planned training and include them in the planning													
Topic is relevant to audience professionally and/or personally													
Format for event identified e.g. face-to-face or online ☑													
Budget set for the event including identification of money available to													

release/backfill participants (if applicable)													
Timing/duration of event (day of the week and time of day) identified													
Maximum capacity for the event identified													
If the event is repeatable, the number of events is identified (if applicable)													
Identify an alternative format for cascade for non-attenders (if applicable)													
A venue/online platform identified ☑													
Date set for the event													
Expert speaker(s)/facilitator(s)/provider identified (if applicable)													
The venue complies with accessibility requirements and has good transport links (if not online)/parking available													
The venue/online platform booked/secured													
Other events in the local area/ public or religious holidays do not clash													
Calendar of events made available (if applicable)													

Creation of event material/modification of material complete (see * elements below)													
Aims of event correlate to tangible changes in practice													
Methodology for evaluation at intervention, and post training planned e.g. survey, focus group, call													
Familiarise yourself with the venue facilities/safety procedures (if applicable). Do a site visit if needed ☑													
Online booking platform set up (including ** plus contact details, special requirements, venue details)													
Mode of advertisement identified and marketing material prepared including **													
Advertising includes:** o Aims/rationale of event o Topic including driver for the topic o Skills to be acquired o Potential impact on individual practice													
Communication/advertising of the event completed through stakeholders													

Check that equipment needed at the venue are available e.g. IT													
Communicate with venue about room layout for event (if applicable)													
Ensure required resources for event are ordered to get to the venue													
Arrange/order catering and/or refreshments ☑													
Evaluation form for event planned/developed (if applicable) ensuring elements from *** are included ☑													
Contact details downloaded from booking platform. Create attendance list													
Pre-work/pre-reading distributed (if applicable)					For new registrants								
Reminder sent to registrants													
Presentation referenced to local/national priorities or guidelines													
Copies of slides/workbooks made available (if applicable)*													
Case studies used*													

A mixture of learning formats/pedagogical approaches used*													
Contact details collected for follow up evaluation survey													
Assessment of learning given or signposted (if applicable)*													
Opportunities to network/breaks are given*													
Time allowed for questions and answers*													
Appropriate tools given to support learning*													
Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable)													
Certification of learning given (if applicable)													
Evaluation tool completed*** – at event o Good elements o Least positive elements o Relevance to practice o Learning outcomes achieved													

o Speaker/facilitator feedback o Organisation of event o Proposed changes to practice from event													
A follow up email is sent with key points and contact details for further questions													
Evaluation tool completed for follow up - either email or post													
Final evaluation report created													
Evaluation shared with stakeholders													
Lessons learnt and identified to support future interventions													

*

o Individual actions planned for application of knowledge into practice, with measurable outcomes* linked to CPD requirements (if applicable) o Assessment of learning given or signposted (if applicable)*

- o Opportunities to network/breaks are given*
- o Time allowed for questions and answers*
- o Appropriate tools given to support learning*
- o Copies of slides/workbooks made available (if applicable)*
- o Case studies used*
- o A mixture of learning formats/pedagogical approaches used*

**

- o Aims/rationale of event
- o Topic including driver for the topic
- o Skills to be acquired
- o Potential impact on individual practice

***

- o Good elements
- o Least positive elements
- o Relevance to practice

- Learning outcomes achieved
- Speaker/facilitator feedback
- Organisation of event
- Proposed changes to practice from event

☑

Ensure an equality, diversity and inclusion impact assessment has been considered for these elements