

**FACTORS AFFECTING SERVICE
DELIVERY WITHIN COMMUNITY
PHARMACY IN THE UNITED
KINGDOM**

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ABSTRACT

Aims of study

The overall aim of this study was to investigate factors affecting service delivery within a national pharmacy chain, from the perspective of pharmacists and consumers, using asthma services as an example. Data were collected to explore the current environment and opportunities available to pharmacy, the factors affecting service delivery, and to identify recommendations for future service models. The impact of the design and route of service implementation were studied through two different types of asthma services.

Methods

The 'brief intervention' in asthma was designed centrally and implemented nationally, whilst the 'asthma service' was designed and implemented locally by a group of pharmacists. A triangulation of qualitative and quantitative methods were used throughout this study, including an omnibus survey, audits, mystery customer research, customer and pharmacist interviews, and a review of the dispensing data.

Results

A total of 81 facilitators, 45 barriers and 23 motivators were identified. In addition to extending those factors that had been previously recognised within the literature, new factors were also identified. Firstly, the route and design of service implementation to promote local ownership and responsibility for delivery of services was found to be a key factor, as was having flexibility in the length and content of service delivery. Clear and visible benefits to the pharmacists delivering the service, the customers accessing the service, and the pharmacy organisation were also found to play an important role in the delivery of services.

Conclusions

This is the first large scale study of its kind to look at all the factors involved from the perspective of both customers and pharmacists, and many of the facilitators and barriers identified extend beyond those provided within the current literature. The motivators identified within the previous studies have been from the perspective of pharmacists only. This study has looked at the perspective of not only pharmacists, but also the motivators to customers and the service provider. Based on all the factors identified throughout this study, a number of recommendations have been made for future service delivery.

PUBLISHED WORK

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CHAPTER I

Introduction to the thesis

1.0 Introduction to the chapter

This chapter of my thesis provides an introduction to my research study, including the origins and development of my PhD. Despite a number of opportunities that have been made available to community pharmacy, the implementation and delivery of both private and National Health Services (NHS) is proving problematic and slower than expected. Although a number of papers have looked at the factors affecting service delivery [1-32], there is still a need for more research, and in particular, studies that investigate factors affecting service delivery on a large scale which include business and organisational elements [33]. My research should help to identify factors affecting service delivery within community pharmacy in the United Kingdom (UK), and help to address some of the issues identified within the literature. This chapter commences with an overview of the community pharmacy environment and the issues that my research is trying to address. I then present the aims and objectives of this study, and a detailed breakdown of the rationale and structure of the remainder of this thesis.

1.1 Origins and development of the thesis

The current Government for England have committed to providing a health service that is based around the needs of the patient. It has focused on prevention programmes that help to keep people healthy, making general healthcare more accessible, and introducing programmes that reduce health inequalities. The Government has recognised that health and social care will need to work together, along with new providers from the public and private sector, to deliver the vision for health outlined in ‘The NHS Plan’ [34]. A number of opportunities exist for community pharmacy to get more involved in delivering NHS services that promote self care and improve the management of long term conditions. A number of legislative changes have occurred to help community pharmacists extend their role, such as the extension of pharmacist prescribing responsibilities [35] and supervision requirements [36]. The new community pharmacy contract [37] should also help as a vehicle for funding and remuneration for elements of these extended roles. This changing environment in

health services policy should help to facilitate the extended role of the community pharmacist in the delivery of NHS services.

Community pharmacies within the UK are operated and run as private businesses, independently of the NHS. They are able to sell products and services directly to consumers, and are responsible to their shareholders or owners for the income generated. Company directors and boards are responsible for the strategy and direction that the companies take. Community pharmacies are able to supply Prescription Only Medicines (POM) and advice to consumers based on a contract with the NHS, where the bulk of the remuneration has traditionally been based on the volume of prescriptions dispensed, rather than the services provided. Within the UK, community pharmacies are currently made up of a number of large multiples (>50 stores), small chains of pharmacies and independent contractors, with multiples accounting for approximately 40% of the market [38]. At the time of the study, Boots The Chemists^a (BTC) had 1412 stores of which approximately 90% had pharmacies and NHS contracts. These stores were located in a variety of settings ranging from health centres, high street locations, edge of town shopping centres, and local communities. Community pharmacists are employed directly by a pharmacy company, or own and operate an independent pharmacy themselves. All pharmacists are members of the Royal Pharmaceutical Society of Great Britain (RPSGB), who act as a professional and regulatory body.

Despite the changes in health services policy, and the opportunities this has presented for community pharmacy, the implementation and delivery of services has been slower than expected. The structure of community pharmacy within the UK may help to explain some of the issues around the slow development of non-supply services on behalf of the NHS. The implementation and delivery of private services, outside of the NHS, has also proved problematic within the past, with issues experienced around sustainability and scalability. Problems with the implementation and delivery of services within community pharmacy have been experienced not only within the UK, but also at an international level. A number of studies have identified some of the barriers [1-5, 7, 8, 12, 14-16, 18-21, 23-32], facilitators [1-6, 9-14, 16-20, 22-28, 30-32] and motivators [14, 16, 22, 28] affecting service delivery within community pharmacy, which include: customer need and demand, public attitudes towards the pharmacist, pharmacist characteristics and attitude, training, communication,

^a Throughout the remainder of this study Boots The Chemists will be referred to as Boots

awareness of the service, recruitment to the service, operational aspects of service delivery, pharmacist's confidence in service delivery, support for the service, time available, staff resource, remuneration, pharmacy environment, healthcare professional relationships, evidence of the value of the service, and the external environment. These factors are explored in more detail within the next chapter of this thesis.

I have been involved in pharmacy service development for the last six years as part of my role as Service Development Manager within Boots. Over this period of time I have observed the market changes within the pharmacy environment, and experienced first hand some of the issues in developing and implementing private and NHS pharmacy services that are both sustainable and scaleable. My personal and business interest in the factors affecting pharmacy service delivery led to the development of me further investigating these issues as part of a PhD. This large scale study uses a triangulation of data to investigate the factors affecting service delivery within community pharmacy, and includes the collection of data from the pharmacists delivering the service, the views of customers accessing the service, and the operational delivery of the service. Remuneration, which is often quoted as a factor in other studies [3-8, 11-16, 20, 22, 23, 25-30, 32], has been excluded from this study due to the fact that it is being funded by the company itself. Although previous literature has investigated some of the factors affecting service delivery, this is the first large scale study within the UK that has investigated the barriers, facilitators and motivators relating to the market opportunity, the role of the pharmacist within services, and the implementation and delivery of a locally and nationally led service. The findings from this study have already provided valuable insights and learnings that have been utilised within Boots itself as part of the development of new services. The publication of my work will also help to share this knowledge with the academic community [39-44].

The asthma services studied within my thesis were developed and implemented by myself as part of my development role within Boots, and are used as an example to study service implementation and delivery within community pharmacy. Although developed for commercial reasons, these services provided an ideal example to study as part of my PhD. The data collection methods that I have used within this study have been chosen with both research and commercial interests in mind. Whilst the research has been undertaken utilising resources available to me within my job at Boots, all analysis of the data presented within this study has been conducted by myself as a

researcher conducting a PhD and independently outside of the work environment. Whilst my development role at Boots has provided me with a unique opportunity to undertake this large scale study, I recognise the potential conflict of delivering both commercial and research objectives concurrently, and discuss this in more detail within chapter nine.

During the initial stages of my PhD I focused on the effect of the implementation route on the success of a service, but broadened this as my PhD progressed to include all factors affecting service delivery. At the time of study, I was also involved with the development of the service specifications for the new pharmacy contract, which affected the change in direction and increased breadth of my PhD to make it more relevant to today's practice environment. As I collected data from several sources throughout my study, I have been able to analyse the data to fit with the change of focus. Everything that I have learnt throughout this PhD has influenced the direction and development of not only these asthma services discussed within this thesis, but also other services that I have been involved with.

Alongside the focus of pharmacy services on asthma during 2003/04, Asthma UK (formerly National Asthma Campaign (NAC)) was chosen as Boots charity of the year. The charity of the year involved a number of public relation events and fund raising activities, such as sale of pin badges and Christmas cards within Boots pharmacies. All activity related to the charity of the year was managed through a separate team and department at Boots head office, with separate aims and objectives.

1.2 Aims and objectives

The overall aim of this study was to investigate factors affecting service delivery within a national pharmacy chain, from the perspective of pharmacists and consumers, using asthma services as an example. The first three objectives listed explore the current environment and help to identify opportunities available to community pharmacy and the factors that may influence service provision. The last four objectives relate specifically to the factors affecting service delivery and recommendations for the future. Together, these objectives are used throughout this thesis to try and explore, and explain the numerous factors influencing the delivery of services within community pharmacy in the UK.

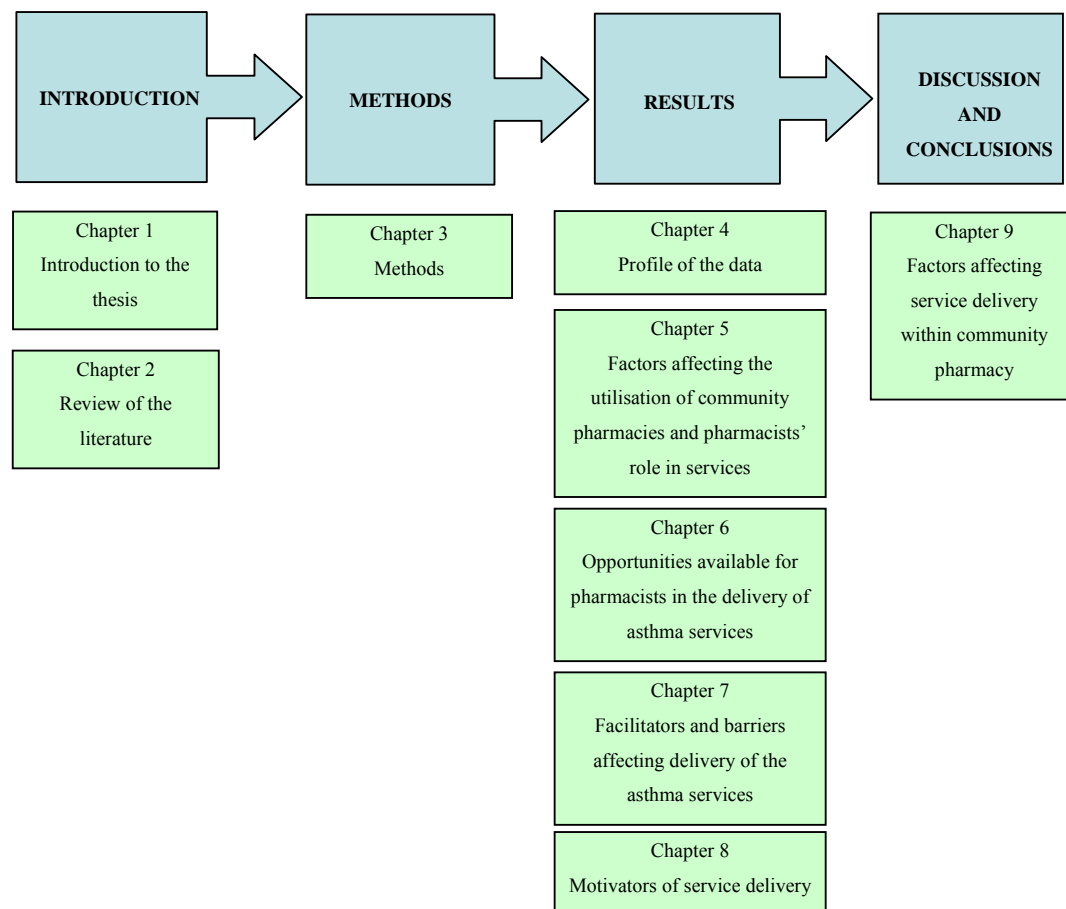
Objectives

1. To identify opportunities for community pharmacists to help improve symptom control in people with asthma
2. To describe consumers' current choice, frequency of visit and use of community pharmacy
3. To describe consumers' and community pharmacists' views on the extended role of the community pharmacist
4. To investigate the impact of the design and route of service
5. To discuss factors affecting the delivery of the asthma services
6. To identify the benefits of service delivery; to the staff involved in running the service; the service user; and the company funding the service
7. To identify any recommendations for future service delivery within community pharmacy

1.3 Structure of the thesis

I have presented the results from my study over a series of chapters, enabling me to paint a clearer picture of the numerous factors that could affect the implementation and delivery of services within community pharmacy. I have separated the results to investigate the factors affecting delivery based on the community pharmacists' role, the opportunities for service delivery in asthma, the facilitators and barriers affecting the delivery of the asthma services themselves, and the motivators for service delivery. An overview of this structure is illustrated in Figure 1.

Figure 1: Structure of the thesis



Chapter two begins by providing an overview of the literature relevant to this study. This chapter is split into two sections, the first exploring the development of the health services strategy in England, and how this has opened up a number of opportunities for community pharmacy. The second section of this chapter provides an overview of the factors affecting service delivery in community pharmacy as identified within the current literature.

Chapter three details the methods of service implementation used for the brief intervention in asthma (service one) and the asthma service (service two). It then goes on to explore the methods of data collection and evaluation used throughout this study.

Chapter four is the first of the results chapters, and is a small chapter providing a summary of the profile of the data presented within the results.

Chapter five is the first of the chapters investigating the factors affecting service delivery within community pharmacy. Within this chapter, I have investigated the perception of the pharmacists' current and future role. The first section of this chapter looks at how consumers currently use community pharmacies, including the frequency and type of advice accessed. Within the second section of this chapter, I then go on to explore the changing role of the community pharmacist and the impact on, and views of both customers and pharmacists themselves. I also explore the confidence of pharmacists in delivering new services.

Chapter six then goes on to explain why asthma was chosen as a condition area to focus on for this study, exploring general problems with the condition, and identifying the opportunities available for community pharmacy. As a result of this, I explore the factors that affect service delivery in relation to the asthma condition itself and opportunities available for pharmacist interventions.

The results from the delivery of the asthma services are presented within chapter seven. This chapter is split into three sections, the first looking at the facilitators and barriers identified during delivery of the brief intervention in asthma, and the second, those identified during delivery of the asthma service. The third section within this chapter discusses the potential facilitators as identified by the customers and the pharmacists.

The final results chapter is presented within chapter eight. Data on the benefits of service delivery to consumers, pharmacists, and the service provider are presented, from which motivators for delivery of the asthma services are identified.

The final discussion of all the factors presented throughout this thesis is discussed within chapter nine, including how it supports and builds on current literature. Final conclusions and recommendations for future service delivery are presented, alongside recommendations for future research.

CHAPTER II

Review of the literature

2.0 Introduction to the chapter

This chapter of my thesis reviews the literature relevant to my study. The chapter is split into two sections: the first of which explores the Government's health services strategy, policies and targets for England, and the opportunities this presents for community pharmacy. This review is not designed to be a comprehensive guide, but merely to demonstrate the changing health service environment, and the increasing number of opportunities becoming available for community pharmacy. Although Boots has pharmacies throughout the UK, the majority are within England and as such tend to shape the direction of service development for the company. The developments mentioned within this first section provide an indication of the opportunities available for community pharmacy, and although similar developments are occurring within Scotland, Wales and Northern Ireland, they are not presented within this thesis.

Despite the Government legislation and policy changes within the health service environment, the extended role of the community pharmacist has not been developed, delivered and embraced by the profession as rapidly as one might expect. A number of factors are thought to affect the delivery of services in community pharmacy, and those identified within the literature are presented within the second section of this chapter.

SECTION ONE

2.1 Development of health services policy in England, and the opportunities this presents for community pharmacists

In July 1999, the Labour Government introduced the white paper ‘Saving Lives: Our Healthier Nation’ [45], which set out their health strategy for the next ten years. The overall aims of the strategy were to improve the health of the population as a whole, and to reduce health inequalities. Specific targets were set for reducing death rates within four priority areas identified within the paper: cancer, Coronary Heart Disease (CHD) and stroke, accidents and mental health. The following year, in July 2000, the Department of Health (DH) launched ‘The NHS Plan’ for England [34], which set out a radical and challenging programme of reforms for the NHS. This plan was based on a set of ten core principles for the NHS, which included; shaping care and services around the needs of the patient, helping to keep people healthy, reducing health inequalities, improving quality, and making better use of the skills of the NHS staff. Later that same year ‘Pharmacy in the Future’ was published [46], which outlined the Government’s plans for pharmacy in the new NHS. Community pharmacists were recognised as primary healthcare professionals in the NHS, who had vital roles to play in helping to deliver ‘The NHS Plan’ [34]. The pharmacy strategy included plans for giving patients better access to pharmacy services and for helping them to use medicines more effectively, which would be achieved by restructuring services around the needs of the patients, better integration of the pharmacy profession into the NHS, and increasing the number of pharmacies. The report also committed the Government to developing a number of work strands that would enable community pharmacists to help deliver these plans. These included Information Technology (IT) development (to enable Electronic Prescription Services (EPS) and access to integrated care records), improving skill mix (to help free the community pharmacist up from supervising the whole of the dispensing process), legislation changes (to enable the community pharmacist to make changes to, and supply prescriptions without contacting the General Practitioner (GP)), and providing greater access to a wider range of medicines (through Patient Group Directives (PGD) and reclassification of medicines).

In April 2002 ‘Delivering the NHS Plan’ was published [47], detailing the next steps for investment and reform of the NHS. These steps included; securing the best use of resources, increasing patient choice, providing greater plurality in health service provision, devolving power to front line staff, local accountability, and reforming

funding flows. During April 2002, Derek Wanless also released his first review of the long term trends affecting the health service in the UK [48]. This review described the vision of an NHS service in 2022, where patients were at its heart, demanding and receiving high quality services and treatment with fast access. He set out an assessment of the resources required not only to satisfy the NHS short term objectives, but also to invest in improving supply by building the capacity of the workforce, improving IT support, renewing premises, and by investing in reducing demand by enhancing promotion of good health and disease prevention. During May 2002, the DH launched their new strategy to providing wider availability of medicines through the reclassification process of prescription only medicines to pharmacy status [49]. This marked a major step in the Government's commitment to expanding the range of medicines available for self medication through pharmacies, as described in 'The NHS Plan' [34]. The Government also recognised that this would lead to more efficient use of resources by freeing up GPs' time and enabling community pharmacists to use their expertise to help manage minor ailments and chronic conditions. The DH recognised that extending the roles of pharmacists and pharmacy staff were key to delivering the aims set out within 'The NHS Plan' [34], and so during late 2002, they published a strategy to help create a modern workforce that would maximise the contribution that pharmacy could make [50]. Included within this strategy was the continued extension of the role of the community pharmacist (through medicine management schemes, supplementary prescribing and Local Pharmaceutical Services (LPS)), and development of the pharmacy technician and support staff (including pilots schemes in which qualified technicians could dispense and supply medicines without the personal supervision of the pharmacist). The strategy aimed to increase the skills of the pharmacy support staff, enabling the pharmacist to deliver extended roles. Changes in legislation occurred in April 2003 to permit pharmacists to become supplementary prescribers [51], allowing trained pharmacists to make changes to medication supply under a clinical management plan agreed by the patient and GP.

During July 2003, 'Tackling Health Inequalities' highlighted the vital role that pharmacists could play in improving the public's health [52], and in particular, the importance of community settings and services in addressing health inequalities. During the same month, the DH released 'A vision for pharmacy in the new NHS' [53] which recognised the good progress made in the first three years of 'Pharmacy in the Future'[46], and set out the next steps for a continuing programme of reform for pharmaceutical services. Community pharmacists were recognised as having the skills, expertise and experience to be able to deliver services in the community that

were accessible to all. Specific roles identified within the paper included; supporting patients wishing to care for themselves, responding to the needs of patients, helping to deliver the aspirations outlined within National Service Frameworks^b (NSF), helping to promote public health, tackling health inequalities and improving general health.

The Office of Fair Trading (OFT) published a report in 2003 that recommended the abolition of ‘control of entry’ restrictions on NHS pharmacy applications [38]. The ‘control of entry’ system enabled Primary Care Organisations (PCO) to judge whether a new pharmacy contract was either necessary, or desirable to ensure adequate provision of NHS services locally. In 2004, the DH released new rules to control the location of pharmacies [54], which made it simpler and faster for new pharmacies to open and offer NHS services. This move by the DH to relax restrictions, offered the opportunity to improve patient choice and access to pharmacists and pharmacy services.

During 2004, the Government produced four major publications which demonstrated their commitment to improving health and tackling health inequalities [55-58]. Firstly, Derek Wanless published his second report in which he focused on the prevention of ill health, and stressed the cost effectiveness of improving the health of the whole population and reducing health inequalities [58]. The development of the extended role of the community pharmacist was recognised as being important to expand overall capacity in the management of people with chronic conditions. The review concluded that achieving a society more fully engaged in health would result in longer and healthier lives, and reductions in the pressure on health services in the future. In June 2004, ‘The NHS Improvement Plan’ was published [55], which set out key deliverables for the NHS including targets for inequalities in health, CHD, cancer, smoking, obesity, under eighteen contraception rate, and health outcomes for people with long term conditions. Immediately following on from this, the health and social care standards planning framework was released [57]. Finally in November 2004, the white paper for ‘Choosing Health’ was published [56]. This paper described how the Government planned to make it easier for people to make healthier choices, by offering them practical help to adopt healthier lifestyles. It described how the goals within the ‘NHS improvement plan’ [55] would be achieved. Key priorities for action included; tackling health inequalities, decreasing the number of people who smoked, tackling obesity, improving sexual health, improving mental health and wellbeing, and

^b Long term strategies for improving specific areas of care

reducing harm and encouraging sensible drinking. The whole strategy was underpinned by the key principles of informed choice for all, personalisation of support to make healthy choices, and working in partnership to make health part of everyone's business.

In line with the Government reforms, contracts with healthcare professionals were renegotiated during 2003 and 2004 to enable focus and delivery on the key strategy outlined within 'The NHS Plan' [34]. The new General Medical Services (GMS) contract for GPs [59] was introduced in April 2004, and placed emphasis on quality programmes with a large proportion of potential income linked to Quality and Outcomes Framework targets (QOF). The development of LPS allowed pharmacy contractors to move away from the conventional volume based contract towards more innovative and novel ways of operating. LPS enabled PCOs to focus on local health needs and make better use of pharmacists' skills. During 2004, the Pharmaceutical Services Negotiating Committee (PSNC) successfully negotiated the new national NHS community pharmacy contract with the DH and NHS confederation [37]. The new contractual framework was recognised as providing an important vehicle for improving health:

"My ambition remains to realise community pharmacy's future as an integral part of NHS primary care service provision, embedded in NHS thinking and planning. Whether through helping patients make better use of their medicines, promoting healthier lifestyles or providing innovative services which really do make a difference to patient choice locally, I believe the new framework offers the right platform to raise the quality and standards of the services you provide and the right environment in which to make the best use of your clinical and professional skills."

Rosie Winterton MP, Minister of State [37]

The contract focused on the Government's key priorities, and provided remuneration for improving public health, helping people in the management of long term conditions and supporting people to self care. It was based around three tiers of services; essential^c, advanced^d, and enhanced^e. Although the majority of the pharmacy income would still be derived from dispensing income, there was the opportunity to be

^c Funded centrally and provided by all contractors

^d Funded by ring fenced money locally, capped funding, and provided by accredited contractors only

^e Commissioned locally by PCOs, provided by accredited contractors

remunerated for specific services. The contract came into effect during April 2005, and was seen as something that would continuously evolve with the profession, so that over time, more services would become part of the essential and advanced part of the contract.

In January 2005, the DH published two key documents [60, 61]. The first provided information on developing policy on support for self care, to empower people to treat themselves appropriately and avoid unnecessary medicine intake [60]. Community pharmacists were recognised as a source of advice for self care, and innovative pharmacy schemes for minor ailments were quoted as examples of good practice within the report. The second document focused on providing support for people with long term conditions [61], in which pharmacists were also recognised as playing an important role in helping people to manage their conditions better. In March 2005, the DH released their delivery plan for ‘Choosing Health’ [62], and immediately following this, ‘Choosing health through pharmacy’ was published [63]. This resource was developed to maximise the contribution of community pharmacists, their staff, and the premises in which they worked, to improve health and reduce inequalities.

“We want to build on pharmacy’s strengths, to develop and further extend health improvement services, working closely with the wider public health team and expanding their role as advocates for health.”

Melanie Johnson MP, Parliamentary Under Secretary of State for Public Health [63]

‘Choosing health through pharmacy’ [63] set out the contribution that pharmacy could make to delivering ‘Choosing Health’ [56]. This included; signposting, ‘stop smoking’ services, sexual health services, drug misuse schemes, obesity programmes, identifying individuals with risk factors for disease, and helping people to manage long term conditions. Many good examples of pharmacy based services were quoted within the paper, including the asthma service studies which forms the basis of the services described in this thesis.

In November 2005, the DH announced the extension of nurse and pharmacist prescribing to become independent prescribers [35]. It was hoped this would allow patients to have quicker and more efficient access to medicines, through qualified practitioners independently prescribing licensed medicines for any medical condition.

Guidance and information on the implementation of independent prescribing in the NHS were published in April 2006, to support the timing of change in legislation [64].

In January 2006, the white paper ‘Our health, our care, our say’ was released [65]. Prior to the writing of this paper, the DH conducted a consultation exercise with over 40,000 people to understand what local people wanted out of their NHS service^f. The consultation showed the public wanted to see a wider range of professionals (particularly practice nurses and pharmacists) involved in health improvement, disease prevention and the promotion of independence. They also wanted pharmacists to have an increased role in providing support, information and care. This white paper outlined four main goals for the NHS; better prevention services with earlier intervention, more patient choice and a louder voice for people, more on tackling inequalities and access to community services, and more support for people with long term conditions. A number of opportunities were mentioned for pharmacy involvement, including a desire to encourage innovative providers from the independent and voluntary sectors to work together. A number of innovative pharmacy services were mentioned within the paper, including the Boots Chlamydia screening service. One of the priorities identified within the consultation exercise for ‘Our health, our care, our say’ was for services based around the needs of people with long term conditions, to help them take control of their health, support their wellbeing, and enable them to lead an independent and fulfilling life. In response to this consultation, the DH published a document in February 2006 to support people with long term conditions to self care [66]. This document was a self help guide to help organisations locally deliver strategies to empower people with long term conditions to manage their own care, with the support of doctors, nurses and pharmacists.

In September 2006, the DH published the national framework for pharmacists with special interests [67]. This document provided guidance on how local health communities could develop, commission and implement extended services in primary care. In particular, it supported the wider development of the pharmacy workforce including national standards for pharmacy roles, better skill mix, and the establishment of consultant pharmacist posts. This framework was intended to allow pharmacists to work with other primary care professionals to deliver care in new ways.

^f Details of the consultation are included within the white paper ‘Our health, our care, our say’ [65]

2.1.1 Summary of section one

The current Government have committed to providing a health service that is based around the needs of the patient. It has focused on prevention programmes to help keep people healthy, making healthcare more accessible, and reducing health inequalities. The Government has recognised that health and social care will need to work together, along with new providers from the public and private sector, to deliver the vision for health outlined in 'The NHS Plan' [34]. A number of opportunities exist for community pharmacy to get more involved in delivering NHS services that promote self care and improve the management of long term conditions. Legislative changes have also occurred to help community pharmacists extend their role, such as the extension of pharmacist prescribing responsibilities and supervision requirements. The new community pharmacy contract should also help as a vehicle for funding and remuneration for elements of these extended roles. This changing environment in health services policy should help to facilitate the extended role of the community pharmacist in the delivery of services. Despite these changes within the health services environment, and the opportunities available for community pharmacists, the delivery of service is still not routine practice. The following section of this chapter reviews the literature to help identify factors which may be responsible.

SECTION TWO

2.2 Factors affecting service delivery in community pharmacy

Despite the Government legislation and policy changes within the health service environment, and the recommendations of two major pharmacy reports [68, 69], the extended role of the community pharmacist has not been developed, delivered and embraced by the profession as rapidly as one might expect. A number of factors are thought to affect the delivery of services in community pharmacy, and those identified within the literature are presented within this section of the chapter.

A literature review was conducted using the MEDLINE and EMBASE databases with a combination of the following search terms:

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pharmac$      AND   cognitive services
                OR pharmaceutical care
                OR services
                AND   barrier
                OR facilitator
                OR factor
                OR implementation
                OR motivator
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A search was also carried out on the MEDLINE and EMBASE databases of authors that were identified within the literature search, as was a hand search of key journals such as, the International Journal of Pharmacy Practice, and Patient Education and Counselling. Additional papers were identified by reviewing the literature quoted by authors discovered within the initial review. Papers not reported in English were excluded from the review.

The literature review identified thirty-two papers that had conducted extensive research into the factors affecting service delivery in community pharmacy, a summary of which is provided in Table 1. The implementation and delivery of services within community pharmacies appears to have been problematic and slower than expected on an international level, as identified within the studies conducted within the United States of America (USA) [1, 4, 6, 9, 10, 14, 16-19, 21, 30, 31], UK [2, 3, 5, 13, 15, 25-28, 32], Denmark [11, 12, 23, 24], Malta [7], Netherlands [20],

Australia [22], New Zealand [8], and Europe wide [29]. Although the terminology on service delivery varies within the literature (pharmaceutical care, cognitive services, pharmacy services), all of these studies refer to factors affecting service delivery in community pharmacies, and as such are included within this review. Only six of the studies have investigated specific services [4, 6, 20, 21, 24, 28], compared to twenty-six that have looked at the overarching concept of service delivery in community pharmacies [1-3, 5, 7-19, 22, 23, 25-27, 29-32]. The majority of these studies have used quantitative methods [1, 2, 4-10, 14, 15, 17, 19, 21, 23-25, 28, 30-32] to collect the data, as apposed to qualitative techniques [3, 11-13, 16, 18, 20, 22, 26, 29], and only one study conducted by Tann et al. [27] used a combination of techniques to triangulate the data. In addition, several literature reviews are also discussed [33, 70-75].

Table 1: Summary of the literature identifying the facilitators and barriers to service delivery in community pharmacy

(Please note that this table is presented over 16 pages)

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Zelnio, R. Nelson, A. Beno, C. [31] (1984) <i>Country of study:</i> USA	To investigate the relationship between service provision and pharmacists' willingness and competency. To characterise pharmacists who did or did not provide expanded levels of service	Self administered mail questionnaire to 890 community pharmacists	Pharmacists' willingness, practice setting (apothecary, independent), pharmacists' characteristics (hold advanced degrees, completion of more Continuing Education (CE), more willing to participate in CE, work more hours per week)	Pharmacist: lack of competency and lack of willingness	Significant relationship between pharmacists' willingness and ability, and the extent to which they provided expanded levels of service. Some pharmacists, however, were willing and able but still did not provide expanded services	Variable explained only a small amount of variation, other variables not measured by research, self reported data
Nelson, A.R. Zelnio, R. Beno, C. [16] (1984) <i>Country of study:</i> USA	Second phase of a two part investigation. Report focuses on why pharmacists who had expressed a willingness and competency to perform clinical pharmacy services in phase one had not developed such a practice	Series of 11 focus groups with 81 pharmacists	*Training and education, knowledge and experience, advertising, demand, manpower, revenue generation, improved pharmacist and physician attitudes and relationships, favourable pharmacy atmosphere, communication skills, access to patient information, proven benefits, legislation, equipment (e.g. computers) * Requisites	Lack of revenue from service, pharmacists', physicians' and patients' attitudes, lack of time, legal barriers, lack of patient contact, pharmacist incompetence, lack of demand, services too costly, lack of facilities	Authors suggest a plan: identify services needed by patients (cost effective), develop programmes to provide new skills, develop systems to increase pharmacist productivity, identify physicians willing to assist, redesign physical structure of pharmacy, increase patient awareness of service, educate patients on appointment system, research to investigate payment for services	Self reported data, identified facilitators were hypothetical in nature

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Raisch, D. [21] (1993) <i>Country of study:</i> USA	To identify how pharmacists perceive barriers, the relationship between the barriers and the rate at which pharmacists provide Cognitive Pharmacy Services (CPS), To establish relationships between job or career satisfaction and the amount of CPS provided	Survey of 64 pharmacists (participants were pharmacists who had collected data on Cognitive Services (CS) for an earlier study)	Not measured	Excessive workload, lack of privacy, patient attitudes, store layout, difficulties in contacting physicians, physicians negative attitude towards pharmacists recommendations, and inadequate patient information	Suggested methods to overcome barriers: structuring reimbursement and workload around CPS (not dispensing), redesigning pharmacies to provide counselling areas, changing pharmacist attitudes and abilities through education, using technology to promote information transfer between pharmacies and healthcare facilities	Sample size dictated by previous study, predefined list of barriers specific to services assessed (factors may be missing)
Mottram, D.R. Jogia, P. West, P. [15] (1995) <i>Country of study:</i> UK	To identify activities perceived by community pharmacists to represent extended role, the extent to which these activities were implemented, and to measure the constraints against implementation	Mail questionnaire to 62 community pharmacists	Not measured	Time, finance, conflict with other healthcare professionals, threat to traditional role of community pharmacists	Future of community pharmacy depends on adoption of extended role, but must be conducted in collaboration with GPs if community pharmacists are to be accepted as full member of primary healthcare team	Self reported data, predefined list of constraints (factors may be missing), predefined list of activities

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Miller, M.J. Ortmeier, B.G. [14] (1995) <i>Country of study:</i> USA	Examined relationship between prescription payment methods and the number of pharmacy services provided at a community pharmacy. Also studied were pharmacists' perceptions regarding pharmacy services, motivating factors, payment and barriers to service delivery	Survey of 590 community pharmacies	**Financial incentives, professional reward, legal / contractual requirements of third party payment programmes **Motivators rather than facilitators	Compensation for dispensing commodity rather than service, lack of time, capital requirements required to implement, develop and deliver services	Without adequate financial incentives, legislative and contractual requirements will most likely fail to achieve level of motivation necessary to develop pharmacy services	Self reported data, survey instrument not validated, sample bias towards independent pharmacies, preformed data (factors may be missing), no distinction between actual and perceived barriers
Odedina, F.T. Segal, R. Hepler, C.D. [18] (1995) <i>Country of study:</i> USA	To identify factors that providers and non providers believe influence their behaviour relative to the provision of Pharmaceutical Care (PC)	Telephone interviews with ten providers of PC were compared with ten non providers	Pharmacist commitment to patient care, physical layout of pharmacy, qualified personnel, practice orientation, patient expectation, physician cooperation, computer support, access to patient medical information, pharmacist competency	Physical layout of pharmacy, qualified personnel, practice orientation, patient expectation, physician cooperation, computer support, access to patient medical information, pharmacist competency	There are certain factors that community pharmacists can easily control to facilitate provision of PC, but there are also other factors that cannot be controlled by employee pharmacists without the assistance of management	Small sample size, self reported data

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
<p>Odedina, F.T Segal, R. Hepler, C.D. Lipowski, E. Kimberlin, C. [19] (1996)</p> <p><i>Country of study:</i> USA</p>	<p>To present findings about Pharmacists Implementation of Pharmaceutical Care (PIPC) factors (theoretical model) and community pharmacists self reported behaviour</p>	<p>Survey of 617 community pharmacists (two part study six weeks apart)</p>	<p>Past behaviour recency, positive behavioural intention, perceived behavioural control, positive attitude, positive social norm, positive self efficacy, positive instrumental beliefs, positive affect</p>	<p>Low perceived social norm by physicians, low perceived behavioural control, low self efficacies, low affect</p>	<p>PIPC model proposes two key decision points for pharmacists to adopt PC, which can be used as targets for designing programmes to assist in providing PC. Interventions need to be developed for: motivating pharmacists to form an intention to provide PC, and transforming behavioural intention to actual trying</p>	<p>Self reported data, although initial sample random – final subjects used were not</p>
<p>Tann, J. Blenkinsopp, A. Allen, J. Platts, A. [27] (1996)</p> <p><i>Country of study:</i> UK</p>	<p>Explores hypothesis that innovation is related to a set of largely generic characteristics possessed by those who promote professional change, together with enabling elements in the work environment</p>	<p>Triangulation of methods (structured interviews, critical incident analysis, psychometric test KAI) with 37 community pharmacists. Comparison of data with control group</p>	<p>Pharmacist processing characteristics of Leading Edge Practitioner (LEP), including patient centred, effective soft networkers, staff development, influencers</p>	<p>Finance, time, space, GP relations and attitudes</p>	<p>Work suggests that gap between policy and practice, as well as time lag in implementation, could be reduced by focusing on LEPs to pilot and implement recommended changes in practice. Implications for training and recruitment policies</p>	<p>Self reported data, poor representation of multiples</p>

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Odedina, F.T. Hepler, C.D. Segal, R. Miller, D. [17] (1997) <i>Country of study:</i> USA	To develop a theoretical framework that explains pharmacists behaviour relative to the provision of PC	617 community pharmacists were surveyed twice (mail survey)	PIPC model developed postulates that behaviour is directly determined by past behaviour recency, behavioural intention and perceived behavioural control. Psychological appraisal process (instrumental beliefs, self efficacies, and affect towards means) influence behaviour through past behaviour recency. Behavioural intention is determined by attitude, social norm and perceived behavioural control	Not measured	PIPC model provides a formal scientifically validated theoretical framework that can be used to design successful interventions for PC implementation. Model provides specific factors that need to be addressed to motivate pharmacists in making two major decisions: forming an intention to provide PC, and enacting the behavioural intention	Self reported data, although model developed from pharmacists behaviour, no work done to test how influence behaviour to improve PC delivery
Venkataraman, K. Madhavan, S. Bone, P. [30] (1997) <i>Country of study:</i> USA	To determine the influence of various perceived facilitators and barriers on the provision of PC in rural communities	Questionnaire to 162 pharmacy owner / managers in rural communities	Perceived patient attitude, pharmacist positive attitude towards patient care, pharmacists confidence (all found to be statistically significant)	Lack of reimbursement (not statistically significant)	Results suggest that pharmacists may need training on how to provide PC before they feel confident in their ability to provide services, and their attitudes and beliefs about PC may need to be changed	Self reported data, only limited number of barriers and facilitators investigated (pre-defined)

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Berger, B.A. Grimley, D. [4] (1997) <i>Country of study:</i> USA	To apply the transtheoretical model of change to measure pharmacists readiness for rendering PC	Self administered questionnaire completed at 1996 American pharmacists association annual meeting by 148 pharmacists	CE, compensation	Compensation, pharmacy redesign	Authors concluded that one size fits all strategy will not be effective, and CE must be stage specific to be effective. Recommend that need to understand strategies for each stage in order to design programmes to assist pharmacists in taking the next step	Convenience sample of respondents attending conference, results not generalisable
Bell, H.M. McElnay, J.C. Hughes, C.M. Woods, A. [3] (1998) <i>Country of study:</i> UK	To ascertain attitudes and opinions towards the concepts of PC and its implementation	In-depth interviews with 20 community pharmacists	Improving public perception of pharmacy, professional training, remuneration, good working relationship with other healthcare professionals, access to patient medication records, private counselling area, collegial interaction, extra staffing resource	Lack of time, little financial incentive, lack of private counselling area, low public expectation of pharmacy profession, poor relationship with GPs, lack of access to patient medication records, lack of competency	Suggested support required to overcome barriers: improving public relations, professional training, support from Government and professional bodies, remuneration, money to employ additional staff, utilisation of CE courses, working with other healthcare professionals	Self reported data, small sample size
Bell, H.M. McElnay, J.C. Hughes, C.M. [2] (1999) <i>Country of study:</i> UK	To investigate how community pharmacists currently use their time, to see if lack of time to implement PC really is a barrier to provision of extended patient care services	Self reported work sampling study with 30 pharmacists	Improved time management, use of trained dispensary staff	Amount of pharmacist time devoted to non professional activities	Study found that 22% of pharmacists' time was devoted to non professional activities which could have been performed by non professional members of the team. Authors recommended time management and use of staff would increase scope for pharmacists to integrate PC into routine practice	Small sample size

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Christensen, D.B. Hansen R. [6] (1999) <i>Country of study:</i> USA	To determine the influence of payment, pharmacy setting characteristics, pharmacist demographics, practice setting, and attitudinal characteristics on whether CS were performed by community pharmacists, and the volume of CS performed	Mail survey to community pharmacists, randomised control trial. Study group was reimbursed for CS (n=110), whilst control group was offered no reimbursement (n=90)	Participation in CS; job role (pharmacy owner or manager), communication and assistance regarding documentation so not perceived as burdensome, low prescription volumes Higher rates of CS: Reimbursement, practice setting (medical centre, rural locations), high proportion of eligible patients visiting pharmacy, environment with low prescription volumes	Not measured	To maximise effect of new CS programme then need to select pharmacy setting carefully, and develop communication and assistance to ensure documentation not burdensome. To enhance participation in existing CS then need to modify work environment, and change performance expectations of pharmacists	Volume of CS service delivery was self reported, reference to documented CS activities only, factors influencing delivery of CS may be different to those influencing its documentation
Farris, K.B. Schopflocher, D.P. [9] (1999) <i>Country of study:</i> USA	To describe self efficacy, beliefs, evaluations and perceived behavioural control in the provision of PC, to quantify intention and behaviour to provide PC, and to examine the relationships between intention and behaviour	230 community pharmacists undertook attitude survey followed by behaviour survey (mail)	Perceived behaviour control and self efficacy	Not measured	Providing PC is not merely a function of individual decision making. Behaviour is strongly impacted by pharmacists' perceived control over their practice environments. PC implementation programmes which address individual factors singly will not be successful	Self reported data, pre formed questionnaire

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Barner, J. Bennett, R. [1] (1999) <i>Country of study:</i> USA	To measure the effect of a Pharmaceutical Care Certificate Programme (PCCP) in community pharmacists	Survey of 36 pharmacists participating in PCCP (baseline and one year)	***Focusing on neediest patients, networking with other pharmacists, involving all staff in training, developing relationships with patients, support staff to free up pharmacist time, private counselling areas, marketing services, training programmes, documentation value services, computer software to support documentation and billing, participation in studies, management support, access to online research to inform recommendations ***Solutions to barriers	Lack of data / documentation systems, too many pharmacist interruptions, high volume dispensing, physical layout of pharmacy, patients not wanting service, poor workflow, lack of pharmacist education, lack of management support, management responsibilities, and attitude other pharmacist colleagues	After undertaking PCCP programme, pharmacists in study improved their confidence in performing job, and felt significantly better prepared to perform PC components. Little change in the percentage of time spent delivering PC to patients after one year however	Convenience sampling, self reported data
Cordina, M. McElney, J.C. Hughes C.M. [7] (1999) <i>Country of study:</i> MALTA	To assess the importance Maltese community pharmacists placed on various aspects of PC and their willingness to provide such care	Modified version of 'behavioural pharmaceutical care scale' questionnaire was mailed to privately owned community pharmacies in Malta (n=99)	Not measured	Lack of reimbursement, time available, support staff, patient acceptance, doctor cooperation, access to medical information, pharmacist competency, unsatisfactory physical layout of pharmacy, non conducive structure of local healthcare system	Although the majority of pharmacists were willing to provide PC, a series of strategic steps need to be taken to resolve issues. These include: standardised training, improving understanding between doctors and pharmacists, research and development programmes to promote PC provision, reimbursement system that supports PC	Self reported data, participants had poor understanding of PC – perceived barriers, results not comparable with other countries

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
<p>Tully, M.P. Seston, E.M. Cantrill, J.A. [28] (2000)</p> <p><i>Country of study:</i> UK</p>	<p>To assess the strong motivators and barriers to the implementation of prescription monitoring and review services by community pharmacists either in pharmacies or in GP practices</p>	<p>Two part Delphi survey to a purposive sample of 120 community pharmacists</p>	<p>** Improving the public and GPs' perception of pharmacists, experiencing professional fulfilment and personal challenges</p> <p>**Motivators rather than facilitators</p>	<p>Time consuming nature of services, locum difficulties, the prohibitive cost and unwillingness of pharmacy owners or GPs to fund services</p>	<p>Overcoming the logistical and financial barriers to services may not be sufficient. Also need to address internal rivalries, and the structure and culture of the profession</p>	<p>Self reported data, pre formed questionnaire, study based on single service (medication review), purposive sample, results not generalisable</p>
<p>Rutter, P.R. Hunt, A.J. Jones, I.F. [26] (2000)</p> <p><i>Country of study:</i> UK</p>	<p>To investigate community pharmacy managers perceptions of their role in providing healthcare to patients and to compare these with their aspirations for future</p>	<p>Two focus groups with 14 pharmacy managers from one area of UK national pharmacy chain</p>	<p>Delegation of services from prescribers to pharmacists, more formalised and open channels of communication with prescribers, moving away from performing technical duties, better qualified and trained staff, provision of additional pharmacy support, enhanced working environment</p>	<p>Time, inappropriate levels of staff, lack of patient time, perceptions of others (healthcare professionals and general public), poor communication with head office, legal restrictions, current remuneration structure</p>	<p>Empowering staff (through skill mix) would allow the pharmacist more opportunity to interact with patients and at the same time free them from routine dispensing</p>	<p>Self reported data, small sample size, group polarisation effect of focus groups (enhanced as participants worked in same area so likely to know each other), main researcher was company employee</p>

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Heller, C. Arozullah, A. [10] (2001) <i>Country of study:</i> USA	To evaluate and further develop evidence based implementation strategies that are effective and efficient (theory based)	Review of three empirical frameworks	Aligning programme with the strategic goals of the organisation, obtaining active senior leadership commitment, securing appropriate infrastructure to facilitate integration of recommended actions into daily practice, setting up systemic communications with all involved stakeholders	Not measured	Programmes were more likely to be successful if goals were also considered from the view of the various stakeholders and if all four factors were present	Although conducted review of disease management programmes in literature after identified four components, limited general findings as theory not tested in designed study
van Mill, J. De Boer, W. Tromp, T. [29] (2001) <i>Country of study:</i> EUROPE	To establish the perceived barriers to the implementation of PC into community pharmacy practice in different European countries and the relevant importance of these barriers	Structured interviews with representatives from national pharmaceutical organisations or pharmaceutical care researchers from 11 European countries known to be attempting to implement PC	Not measured	Two most important barriers were lack of time and money (reimbursement for services). Other barriers also identified – but impact on implementation seemed to differ markedly over Europe	European pharmaceutical associations need to pay attention to remuneration issues before attempting to implement PC in their countries, and also need to work continuously to change attitudes amongst pharmacists	Self reported data, based on perspective of implementers, not providers of PC. Small sample size, only one person from each country was interviewed, findings not generalisable

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Pronk, M.C.M. Blom, A.T.G. Jonkers, R. Van Burg, A. [20] (2001) <i>Country of study:</i> NETHERLANDS	To identify barriers and facilitators into the diffusion stages of Rogers 'Innovations in Organisations' model	Qualitative study using focus groups with pharmacists (n=18) and pharmacy technicians (n=20).	Task division among technicians, attention for special patient groups (e.g. diabetes), availability and use of a leaflet system, having a patient friendly layout in pharmacy, continuing education and motivation in specialist areas, use of protocols	Lack of support from staff, documentation of the process, lack of a leaflet system, lack of privacy, time, use of protocols, guidance and lack of remuneration	Findings from study indicate that pharmacists and technicians have different viewpoints. Both groups should be involved in initiatives concerning the improvement and evaluation of services such as patient education	Low response rate so sample likely to be biased towards highly motivated individuals
Ruston, A. [25] (2001) <i>Country of study:</i> UK	To identify the characteristics of community pharmacists that influence adoption of an extended role in order to inform ways in which they could organise their businesses to achieve successful re professionalisation	Postal questionnaire to 731 community pharmacists	Fostering levels of autonomy, promoting uptake of post registration education to provide the knowledge, skills and confidence required, establishing ways for pharmacists to leave premises and work with other professionals outside the pharmacy, having regular contact with health authority pharmaceutical advisor	Shortage of time, insufficient remuneration, shortage of staff, no locum cover, lack of contact with other healthcare professionals, lack of confidence, shortage of skills	Involvement in extended role activities more to do with pharmacist professional orientation than the setting in which they work. Data suggest that may be quite some time before extended role becomes a true reality for community pharmacists	Self reported data, no clear explanation of how correlations between reports of activities and business / pharmacist characteristics of the respondent were made

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Krska, J. Veitch, G.B.A.[13] (2001) <i>Country of study:</i> UK	To obtain the views of key pharmacists in Scotland on a systemic approach to PC and on the factors important in its development	Interviews with 11 policymakers and five leading edge pharmacists	Remuneration, time, support staff, consultation space, improvement to computer systems to support documentation, access to appropriate literature to support decision making, training on application of practice, good working relationship with GPs to facilitate access to medical information, perception of patients and healthcare professionals, structured research on benefits of PC, implementation of repeat dispensing, patient registration at pharmacy	Not measured	Authors recommend that planning of future services needs to involve community pharmacists. Also suggest that views obtained on repeat dispensing, patient registration, access to patient data and remuneration could be of importance to Scottish legislators, and may require legislative changes. Time management, pharmacy layout, access to literature and training may be issues for individual contractors to address	Small sample size, many of those interviewed were known personally to interviewer, and all were aware of funding source – which may have led to bias
Rossing, C. Hansen, E.H. Krass, I. [23] (2002) <i>Country of study:</i> DENMARK	To examine the barriers and facilitators perceived and experienced by Danish community pharmacists regarding the implementation of PC	Survey to 218 community pharmacists in Denmark	Post graduate training, raising profile of pharmacy, management support, better utilisation of existing personnel, allocation of time to deal with specialised issues	Lack of financial and human resources in pharmacy, lack of time, lack of personnel, lack of co-operation with GPs, lack of education of pharmacists	Implementation of PC would be promoted by allocation of further resources (dedicated to both internal and external activities) and development of strategic marketing plan	Self reported data, pre formed questionnaire (factors may be missing)

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Dunlop, J.A. Shaw, J.P. [8] (2002) <i>Country of study:</i> NEW ZEALAND	To establish community pharmacists level of understanding of PC process, to determine their attitudes to the concept of PC, to determine the barriers to commencing PC practice	Postal questionnaire with 348 pharmacists	Not measured	Included: Lack of time, reimbursement, therapeutic knowledge, clinical problem solving skills, finance, space, patient demand, access to patient medical records, data on the value of PC	Authors conclude that with impending changes in pharmacy education, service delivery and remuneration, many of these perceived barriers may be removed in the future	Preformed responses, no opportunity to add additional data
Blenkinsopp, A Celino, G. [5] (2003) <i>Country of study:</i> UK	To establish current and planned local community pharmacy services, to identify drivers and barriers to local community pharmacy development, to determine the extent to which community pharmacy development was planned, to assess PCO pharmacists own perception of local progress	Postal questionnaire completed by 203 PCO pharmacy advisors / chief pharmacists	Relationship with PCO and local pharmaceutical committee, new pharmacy contract, support of GPs, profile of community pharmacy in PCO, attitude of community pharmacists	Access to funding, pharmacy resource at PCO, confidence in community pharmacists to deliver, attitude of community pharmacists, outcome of OFT report	Authors concluded that local relationship / leadership issues appear to be driver and barrier to service development	Viewpoint of PCO commissioners of services only

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Roberts, A. Benrimoj, S.I. Chen, T. Williams, K. Aslane, P. Gadiel, D. Ridoutt, L. [22] (2003) <i>Country of study:</i> AUSTRALIA	To investigate the process of change in community pharmacy, and identify facilitators of practice change process as they relate to the implementation of community pharmacy CPS	36 in depth interviews with pharmacy owners, employed pharmacists, pharmacy assistants, and pharmacy strategists. Organisational theory framework for data collection and analysis	Remuneration of implementation and / or service, external support or assistance, reorganisation of the pharmacy structure and function, communication, internal leadership, delegation of tasks	Not measured	Sustainability of CPS at risk if pharmacists do not restructure and effectively trade off or make compromises with existing activities and commitments to give themselves appropriate space, time and resources to deliver new services	Self reported data, purposive sample
Hopp, T.R. Sorensen, E.W. Herborg, H. Roberts, A.S. [12] (2005) <i>Country of study:</i> DENMARK	To investigate the implementation process of CPS in professionally active pharmacies in Denmark, to describe factors that influence the implementation process in the context of organisational theory	20 semi structured interviews with pharmacy staff and owners in professionally active pharmacies responsible for implementation of CPS from 16 community pharmacies	Included: In service training, activities to raise profile of pharmacy, management support, better utilisation of existing personnel, internal courses on relevant issues	Lack of time and money are the first major barriers to overcome. If and when these barriers are overcome, lack of knowledge and lack of competence become barriers, followed by inadequate organisation of the pharmacy	Many interdependent factors influence implementation process. Future models should support comprehensive and flexible strategies that can be adapted to the dynamics of the individual organisation	Interviews with active pharmacies only, self reported data, small sample size

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Rossing, C. Hansen, E.H. Traulsen, J.M., Krass, I. [24] (2005) <i>Country of study:</i> DENMARK	To explore characteristics of community pharmacies with respect to implementing PC activities at reality, perceived and policy level	Cross sectional questionnaire sent to all Danish community pharmacies. Response of 218. Identification of medicine related problems was used as outcome measure as proxy of PC activities	Included: Co-operation with healthcare professionals and patient associations, skills enhancement, quality assurance, better utilisation of manpower, experience with PC	Included: Shortage of pharmacist personnel, lack of computer support, lack of opportunity for patient counselling	Difference between 'actual' and 'perceived' provider profiles mainly related to the external profiling of pharmacy and efforts of 'actual' providers to enhance skills. Authors recommend that successful implementation of PC has to be based on full commitment of pharmacy profession	PC practice was measured partly through behaviour (identification of medicine related problems) and partly through self report without giving a definition of PC
Bradley, F. Elvey, R. Ashcroft, D. Noyce, P. [32] (2006) <i>Country of study:</i> UK	To identify factors which PCOs consider to be barriers and drivers to the commissioning of services from community pharmacies	Questionnaire completed by 216 PCOs	Pharmacy contract, relationship with PCO, awareness of community pharmacists within PCO, PCO capacity, attitude of pharmacists, PCO capability, experience of commissioning pharmacy services, confidence in pharmacists to deliver, other contractual options, evidence of the effectiveness of the service, support of GPs, access to funding	Access to funding, PCO capacity, PCO reconfiguration, support of GPs, availability of training, ability to recruit to commissioning posts, evidence of effectiveness of service, other contractual options, confidence in pharmacists to deliver, experience of commissioning services, PCO capability, attitude of pharmacists, number awareness of community pharmacists within PCO, relationship with PCO	Collaboration across PCOs was found to be widespread. Whilst PCO reconfiguration should address capacity issues, was also viewed as a large barrier to commissioning services.	Self reported data, views of commissioners from the PCO perspective only

Authors	Study objectives	Method	Facilitators	Barriers	Conclusions	Limitations
Hopp, T. Klinke, B. Sorensen, E. Herborg, H. Roberts, A. [11] (2006) <i>Country of study:</i> DENMARK	To understand how projects for the implementation of CPS are perceived as facilitators of change from the perspectives of practitioners and strategists	20 semi structured interviews with practitioners in professionally active pharmacies, and eight interviews with professional strategists in field of pharmacy practice	<i>Practitioners goals:</i> competence development, implementation of CPS, marketing of the pharmacy, improvement of patients drug use and outcomes, professional and personal development, compensation, focusing on specific patient groups and increasing understanding of the patient perspective, maintaining and recruiting competent personnel, collaboration with other healthcare professionals <i>Strategists goals:</i> Same as first four above plus – documenting CPS, implementation and dissemination of CPS, tools for implementation, attracting third party payers, optimising education of undergraduates, offering CPS to pharmacies	Not measured	Authors concluded that there were clear differences in the perspectives of strategists and practitioners. Two metaphors were developed as images of the different ways of perceiving CPS projects. The strategists developed projects as standard menus and the practitioners selected projects in which to participate as if they were one of many dishes on a buffet	Self reported data, small sample size, views of professional strategists – not company

Problems with service delivery in community pharmacy were first reported by Zelnio et al. in a two part study in 1984 [16, 31]. During the first part of their study they investigated the relationship between service provision, and willingness and competency of the pharmacist [31]. A significant relationship was found between the pharmacists' willingness and ability, and the extent to which they provided expanded levels of service. In addition to this, they found that pharmacists delivering the services worked longer hours, tended to work in apothecary or independent pharmacies, held advanced degrees, and were more involved in continuing education. These variables explained only a small amount of the number of services offered, which was consistent with the finding that some pharmacists were willing and able to provide services, but did not. This led to Nelson et al. investigating this further to try and understand the factors influencing the development of clinical pharmaceutical services in retail pharmacy [16]. Data were collected via a series of focus groups with pharmacists that had been identified in the first phase of their study as varying in willingness, competency, and delivery of expanded services. The authors found that pharmacists were aware of common clinical services, but had given little thought to unique services orientated towards patients needs. A numbers of barriers were identified, along with motivators and hypothetical prerequisites for service delivery (refer to Table 1). Although the studies were conducted in 1984, the results are still very relevant, and similar factors have been identified in the more recent studies discussed within this chapter [1-15, 17-30, 32]. Based on the learnings from both studies [16, 31], the authors suggested a plan to increase community pharmacists' involvement in expanded services, which included:

- a) Identifying services needed by patients that could be cost effective if delivered by pharmacists
- b) Providing pharmacists with new skills
- c) Developing systems to increase pharmacist productivity
- d) Identifying physicians willing to assist pharmacists
- e) Redesigning the physical structure of the pharmacy
- f) Increasing patient awareness
- g) Encouraging research to develop new payment mechanisms that rewarded pharmacists for provision of services

During 2003, Roberts et al. [22] conducted research into the development of a business and professional model for community pharmacy in Australia. This research was initiated in light of the Third Guild Government Agreement in Australia, to enable the profession to incorporate cognitive pharmaceutical services as part of their core

business. The overall objectives of this research were to identify facilitators in practice change through experiences of those involved in services, and to design a theoretical model to take community pharmacy through the transition from its current business platform to one in which the delivery of cognitive pharmaceutical services were an integrated component. The research was conducted in a number of stages, and included a literature review, qualitative study, comparison of financial data, and the development of a change management model. Within the first phase of their research, Roberts et al. [22] reviewed the literature on the facilitators of implementation of cognitive pharmaceutical services, and distinguished between experiential (those actually experienced by study participants when changing their practice), and potential (those that have been proposed as possible factors that may assist in overcoming barriers to service implementation). They found that few studies attempted to identify facilitators that were based on experience, as the majority were based on views and opinions of either researchers or participants within the study. From their literature review, the authors concluded that there was a need to clarify how facilitators could be used in practice, with consideration of both the business and professional aspects of community pharmacy. They also identified a need to differentiate between the factors that facilitated the process of change and those that defined the right environment for change to occur, or motivated people so that they were ready to change. The qualitative study employed an organisational theory framework in order to adopt a community pharmacy approach to data collection and analysis, rather than at an individual pharmacist level. Participants were purposively selected based on their exposure and experience with cognitive pharmaceutical services, and included pharmacy owners, employed pharmacists, pharmacy assistants, and pharmacy strategists. Facilitators that were identified included; remuneration of service, external support or assistance, reorganisation of the pharmacy structure and function, communication, internal leadership, and delegation of tasks. The authors also identified that the desire for professional satisfaction, providing healthcare to the public, and fear of threats to the business, were motivators of practice change. The authors suggested that the sustainability of services were at risk if community pharmacists did not restructure and make compromises with their existing activities to give themselves the appropriate space, time and resources to deliver new services. There was a general feeling amongst the participants that although there may not be a profit to the community pharmacy initially from services, there would be a net gain in terms of customer satisfaction and loyalty. Some participants recognised that future business viability may depend on increased service provision as margins on dispensing decreased and retailing opportunities were increasingly lost to

supermarkets. Within the third phase of their study, Roberts et al. compared the financial statements with the qualitative study data for five pharmacies, and found that pharmacy owners were reluctant to invest money in their business for the purpose of incorporating services into practice. Although this was a small sample, it supported the findings from the qualitative study that pharmacists were taking on services in addition to other activities, and not making investments in staff or other resources to offset the increased workload.

Following on from their original study, Roberts et al. published two further literature reviews during 2006 [33, 73]. The first of these was a review of the models and frameworks for the implementation of cognitive services in community pharmacy [33]. The authors found that many of the identified models focused on specific services and overlooked the complexity of the implementation process. Too much emphasis was placed on the skills, knowledge and attitude of individual pharmacists, with the assumption that improving these factors would automatically result in successful change. The majority of the models in which business and financial aspects were presented were conceptual in nature. The authors concluded that the implementation process was complex in nature involving a range of internal and external organisational factors, and was not just confined to the individual pharmacists. In response to the undeveloped concept of facilitating change, the authors conducted a second review investigating the facilitators of change in community pharmacy and their use in the implementation of cognitive pharmaceutical services [73]. They identified two types of facilitators – those that existed at an individual level and secondly at an organisational level. Many of the studies identified facilitators based on the views of researchers or participants in the study, with only a few studies identifying facilitators based on experience. The authors concluded that facilitators should be incorporated into programmes for service delivery, and be undertaken with both business and professional aspects in mind.

Based on Roberts et al. [22] original work on distinguishing between ‘experiential’ and ‘potential’ facilitators, I have also carried out a similar exercise for all the factors affecting service delivery identified within the literature. I have updated Roberts et al. original table on facilitators (refer to Table 2), and produced new tables for motivators (refer to Table 3), and barriers (refer to Table 4). I have classed the study as ‘experiential’ if the factors identified have been experienced by the participants when changing their practice, or where there is evidence to support these claims. Studies have been classed as ‘potential’ where the results are based on perceived factors, and

there is no evidence, or experience to support the claims. Where studies have not distinguished between results gained from service providers and non providers then they have been placed in this latter group.

Please note: For Tables 2, 3 and 4

Those denoted with (*) were identified only in the literature relating to experiential facilitators / motivators / barriers. All others had also been identified as potential facilitators / motivators / barriers. To avoid repetition, only the factors identified as potential facilitators / motivators / barriers that are not already included under experiential facilitators / motivators / barriers are listed in the third column.

Table 2: Summary of the facilitators identified within the literature in relation to the delivery of services in community pharmacy [Based on Roberts et al. [22]]

(Please note that this table is presented over three pages)

	Experiential facilitators	Potential facilitators
Customer need	<ul style="list-style-type: none"> ▪ Attention for special patient groups* [11, 20] ▪ Improvement in patients' drug use and outcomes* [11] 	<ul style="list-style-type: none"> ▪ Focusing service on neediest patients [1]
Customer demand		<ul style="list-style-type: none"> ▪ Demand for service [16]
Public attitude	<ul style="list-style-type: none"> ▪ Improving public attitude and perception towards pharmacy services* [3, 12, 17, 18, 23, 30, 32] 	
Pharmacist characteristics and attitude	<ul style="list-style-type: none"> ▪ Pharmacist commitment and positive attitude towards patient care* [5, 17-19, 30, 32] ▪ Pharmacist experience of pharmaceutical care [16, 17, 19, 24] ▪ Pharmacist characteristics (patient centred, effective soft networkers, staff development, influencers, participation in CE and higher degrees)* [27, 31] ▪ Pharmacist willingness* [31] ▪ High behavioural intention of providing pharmaceutical care* [17, 19] ▪ Perceived ease of providing pharmaceutical care* [9, 17, 19] ▪ Practising in role of pharmacy owner / manager* [6] 	<ul style="list-style-type: none"> ▪ Fostering levels of autonomy [25]
Training	<ul style="list-style-type: none"> ▪ Provision and promotion of pharmacist training programmes (internal, post graduate, CE) [1, 3, 4, 12, 13, 16, 20, 23-25] ▪ Better qualified and trained support staff [13, 18, 26] ▪ Pharmacist competency* [11, 18] ▪ Professional and personal development* [11] ▪ Communication / assistance re documentation so not perceived as burdensome* [6] 	<ul style="list-style-type: none"> ▪ Involving all employees in training [1] ▪ Tools for implementation [11] ▪ Optimising education of undergraduates [11]
Communication	<ul style="list-style-type: none"> ▪ Improved communication (and skills) [16, 22] 	<ul style="list-style-type: none"> ▪ Setting up communication with all stakeholders [10]

	Experiential facilitators	Potential facilitators
Awareness of service	<ul style="list-style-type: none"> ▪ Advertising and marketing service to patients and healthcare providers [1, 11, 16] 	
Recruitment	<ul style="list-style-type: none"> ▪ High proportion of eligible patients visiting pharmacy* [6] 	
Operational	<ul style="list-style-type: none"> ▪ Access to patient medical records / information [3, 16, 18] ▪ Access to computer support [1, 16, 18] ▪ Use of operational protocols and leaflet systems* [20] ▪ Quality assurance* [24] 	<ul style="list-style-type: none"> ▪ Access to appropriate literature to support decision making [1, 13] ▪ Developing relationships with patients [1] ▪ Improvement to computer system to support necessary documentation [13] ▪ Documentation of CPS [11] ▪ Establishing ways for pharmacists to leave premises [25] ▪ Implementation of repeat dispensing [13]
Pharmacist confidence	<ul style="list-style-type: none"> ▪ Pharmacist confidence* [9, 19, 30] 	
Support	<ul style="list-style-type: none"> ▪ Management support and internal leadership [1, 10, 12, 19, 22, 23] ▪ Collegial interaction with pharmacists [1, 3] ▪ External support or assistance* [22] 	<ul style="list-style-type: none"> ▪ Aligning programme with strategic goals of organisation [10]
Time	<ul style="list-style-type: none"> ▪ Allocation of time to deal with specialised issues [13, 23] 	<ul style="list-style-type: none"> ▪ Time management [2]
Staff resource	<ul style="list-style-type: none"> ▪ Better utilisation and delegation of tasks amongst existing support personnel [2, 12, 13, 20, 22-24] ▪ Provision of additional support staff [1, 3, 16, 26] ▪ Maintaining and recruiting competent personnel* [11] ▪ Staff resource at PCO* [32] 	<ul style="list-style-type: none"> ▪ Securing appropriate infrastructure to facilitate integration into daily practice [10]
Remuneration	<ul style="list-style-type: none"> ▪ Remuneration of implementation and / or service [3, 6, 11, 13, 16, 22, 32] 	<ul style="list-style-type: none"> ▪ Attracting third party payers [11]

	Experiential facilitators	Potential facilitators
Pharmacy environment	<ul style="list-style-type: none"> ▪ Private counselling area within pharmacy [1, 3, 13, 18, 26] ▪ Favourable pharmacy atmosphere conducive to service provision [4, 16, 18, 22, 26] ▪ Patient centred / friendly layout in pharmacy* [18, 20] ▪ Practice setting (apothecary / independent)* [31] (medical centre / rural locations)* [6] ▪ Low prescription volumes* [6] 	<ul style="list-style-type: none"> ▪ Patient registration at pharmacy [13]
Healthcare professional relationships	<ul style="list-style-type: none"> ▪ Good working relationship with GPs / other healthcare professionals [3, 5, 11, 13, 16, 18, 19, 24, 32] ▪ Co-operation with patient associations* [24] 	<ul style="list-style-type: none"> ▪ Delegation of services from prescribers to pharmacists [26] ▪ More formalised and open channels of communication with prescribers [26] ▪ Improving GP attitude and perception towards pharmacy services [13]
Evidence	<ul style="list-style-type: none"> ▪ Proven benefits of service (including value of service) [1, 16, 32] 	<ul style="list-style-type: none"> ▪ Participation in studies to justify services [1, 13] ▪ Trying out action research and models [11]
External environment	<ul style="list-style-type: none"> ▪ New pharmacy contract* [5, 32] ▪ Relationship with PCO staff [5, 25, 32] ▪ Profile of community pharmacy within PCO* [5, 32] ▪ Experience of commissioning pharmacy services at PCO* [32] ▪ Availability of other contractual options* [32] 	<ul style="list-style-type: none"> ▪ Legislation [16]

Table 3: Summary of pharmacist motivators identified within the literature in relation to the delivery of services in community pharmacy

	Experiential motivators	Potential motivators
Public image of pharmacy		<ul style="list-style-type: none"> ▪ Improving the public and GPs perception of pharmacists [28] ▪ Image enhancement [16]
Pharmacists role	<ul style="list-style-type: none"> ▪ To provide healthcare to the public* [22] 	<ul style="list-style-type: none"> ▪ Pharmacists want to offer services [16] ▪ Concern for patients [16]
Job satisfaction	<ul style="list-style-type: none"> ▪ Desire for professional satisfaction and fulfilment [22, 28] 	<ul style="list-style-type: none"> ▪ Personal challenges for pharmacists [28] ▪ Professional reward [14]
Business	<ul style="list-style-type: none"> ▪ Fear of threats to the business* [22] 	<ul style="list-style-type: none"> ▪ Financial incentives [14, 16] ▪ Building business [16] ▪ Legal / contractual requirements [14]

Table 4: Summary of the barriers identified within the literature in relation to the delivery of services in community pharmacy

(Please note that this table is presented over two pages)

	Experiential barriers	Potential barriers
Customer demand		<ul style="list-style-type: none"> ▪ Lack of patient demand [1, 8, 14, 16]
Public attitudes	<ul style="list-style-type: none"> ▪ Low patient / public expectation of pharmacy profession [3, 7, 16, 18, 21, 26, 32] 	
Pharmacist characteristics and attitude	<ul style="list-style-type: none"> ▪ Low perceived behavioural control (perception that very difficult to carry out PC)* [19] ▪ Lack of pharmacist willingness* [31] ▪ Low affect (low sense of enjoyment in carrying out PC)* [19] ▪ Attitude and opinions of pharmacists [1, 5, 16, 29, 32] 	<ul style="list-style-type: none"> ▪ Lack of pharmacist motivation [8]
Training	<ul style="list-style-type: none"> ▪ Lack of pharmacist competency [3, 7, 12, 16, 18, 31] ▪ Insufficient knowledge or training [1, 8, 12, 14, 25, 29, 32] 	<ul style="list-style-type: none"> ▪ Lack of communication skills [8, 29] ▪ Lack of management skills and vision [29] ▪ Insufficient management systems [8] ▪ Lack of understanding of pharmaceutical care [8]
Communication		<ul style="list-style-type: none"> ▪ Poor communication with head office [26]
Recruitment	<ul style="list-style-type: none"> ▪ Lack of opportunity for patient counselling [16, 24] 	
Operational	<ul style="list-style-type: none"> ▪ Lack of access to patient information / records [3, 7, 8, 14, 18, 21] ▪ Lack of data / documentation systems [1, 14, 20] ▪ Lack of computer support [8, 18, 24] ▪ Lack of use of protocols and leaflet system* [20] 	<ul style="list-style-type: none"> ▪ Poor workflow [1] ▪ Lack of access to drug information resources [8]
Pharmacist confidence	<ul style="list-style-type: none"> ▪ Lack of pharmacist confidence [5, 8, 19, 25] 	
Support	<ul style="list-style-type: none"> ▪ Lack of guidance* [20] ▪ Lack of support from technicians* [20] 	<ul style="list-style-type: none"> ▪ Lack of management support [1]

	Experiential barriers	Potential barriers
Time	<ul style="list-style-type: none"> ▪ Lack of time [2, 3, 7, 8, 12, 14-16, 20, 23, 25-27, 29] ▪ Excessive workload (including too many pharmacist interruptions, high volume dispensing and management responsibilities) [1, 21] 	<ul style="list-style-type: none"> ▪ Time consuming nature of services [28] ▪ Lack of patient time [26]
Staff resource	<ul style="list-style-type: none"> ▪ Lack of support staff (suitably qualified) [7, 18, 23, 25, 26] ▪ Lack of pharmacists and / or locum cover [23-25, 28] ▪ Pharmacist resource at PCO* [5, 32] 	
Remuneration	<ul style="list-style-type: none"> ▪ Lack of remuneration [3, 4, 7, 8, 12, 15, 16, 20, 23, 25-27, 29, 30] ▪ Access to funding* [5, 32] 	<ul style="list-style-type: none"> ▪ Prohibitive cost of services (capital required to develop, implement and deliver) [14, 16, 28] ▪ Unwillingness of pharmacy owners or GPs to fund services [28] ▪ Compensation and focus of pharmacy on technical role (dispensing) [14]
Pharmacy environment	<ul style="list-style-type: none"> ▪ Poor pharmacy environment (lack of / inadequate consultation space / privacy) [1, 3, 4, 7, 8, 16, 18, 20, 21, 27] ▪ Inadequate organisation of pharmacy* [12] ▪ Profit orientated practice orientation* [18] 	<ul style="list-style-type: none"> ▪ High prescription turnover [2]
Healthcare Professional relationships	<ul style="list-style-type: none"> ▪ Poor GP relations and attitudes towards pharmacists [3, 7, 8, 16, 18, 19, 21, 23, 26, 27, 29, 32] ▪ Lack of contact with other healthcare professionals [14, 21, 25] 	<ul style="list-style-type: none"> ▪ Conflicts between pharmacists and other healthcare professionals [14, 15]
Evidence	<ul style="list-style-type: none"> ▪ Lack of data on the value of pharmaceutical care [8, 32] 	
External environment	<ul style="list-style-type: none"> ▪ Outcome of OFT report* [5] ▪ PCO reconfiguration* [32] ▪ Availability of other contractual options* [32] ▪ Experience of commissioning pharmacy services at PCO* [32] ▪ PCO knowledge and awareness of pharmacy services* [32] ▪ Relationship with PCO staff* [32] 	<ul style="list-style-type: none"> ▪ Legal barriers and restrictions [14, 16, 26] ▪ Non conducive structure of healthcare system / structure [7, 29] ▪ Threat to traditional role of community pharmacist [15]

The facilitators and barriers identified within the literature can be grouped under general headings as outlined in Table 5. As can be seen within this table, the barriers identified within the literature are in fact the negatives from those identified for facilitators.

Table 5: Summary of the factors affecting service delivery in community pharmacy, as identified from the literature

<i>Factor affecting service delivery</i>	Facilitators	Barriers
Customer need	Need for service	N/A
Customer demand	Demand for service	No demand
Public attitude	Positive	Poor
Pharmacist characteristics and attitude	Favourable	Poor
Training	Equipping staff with the right skills	Lack of training and skills
Communication	Good communication with stakeholders	Poor communication with stakeholders
Awareness of service	Public awareness	N/A
Recruitment	Opportunity to identify customers	Lack of opportunity
Operational	Support for the service	Lack of support
Pharmacist confidence	Confident in service delivery	Poor confidence
Support	Good	Lack of support
Time	Time available	Lack of time
Staff resource	Appropriate	Lack of resource
Remuneration	Available	Lack of funding
Pharmacy environment	Favourable	Poor
Healthcare professional relationships	Good	Poor
Evidence of the value of the service	Good evidence	Lack of evidence
External environment	Receptive environment	Poor environment

As previously highlighted, a number of the studies referenced within the literature are internationally based [1, 4, 6-12, 14, 16-24, 29-31]. Although the results of the studies across the various countries tended to be similar in nature, caution is advised on the relevant ranking of each factor. Each country has different community pharmacy systems, settings, staffing structures, remuneration and funding streams, health

systems, level of support and pharmacist roles. A study by van Mill et al. [29] specifically looked at the factors affecting service delivery across Europe, to try and identify similarities and differences. Interviews were conducted with a representative from either a national pharmacy organisation or pharmaceutical care researcher, within eleven European countries, known to be actively attempting to implement pharmaceutical care. The specific objectives of the study were to establish the perceived barriers to the implementation of pharmaceutical care into community pharmacy practice, and the relative importance of these barriers. Respondents were asked to consider a list of twenty-five potential barriers, and to score the relative importance of each for their own country. The two most important barriers identified for the implementation of pharmaceutical care in European countries were lack of time and money. Other barriers were also identified, but their impact on implementation seemed to differ markedly over Europe. The authors recognised that the level of training of pharmacy support staff, and the influence of non pharmacist employers differed tremendously between countries, and could result in differences between the barriers for implementation of pharmaceutical care. For England, lack of money, lack of education, and lack of communication and documentation skills of the pharmacist were rated as the most important barriers affecting implementation. The least important barriers were identified as lack of space in pharmacies, lack of software for medication assessment, the attitude and opinion of staff, lack of education in public health, and legal problems. The authors concluded that European pharmaceutical associations should address the system of reimbursement of pharmacists before trying to implement services in their representative countries. The results from the study are limited due to the data being derived from the perspective of implementers, and not providers of pharmaceutical care. The authors also recognise the limitations from interviewing one person from each country. In a subsequent review, Van Mill et al. concluded that the constraints on the provision of pharmaceutical care in Europe do not differ much from the rest of the world [75].

Within the literature, ten studies have been identified that looked at factors affecting service delivery within the UK [2, 3, 5, 13, 15, 25-28, 32]. The first of these was reported in 1995 by Mottram et al. [15] who conducted a mail survey with a sample of community pharmacists in Liverpool to try to identify activities that represented the extended role, the extent to which they had been implemented and any constraints that had been experienced. The authors found that pharmacists had adopted activities such as health promotion and pregnancy testing that could be administered with minimal inconvenience to the traditional role, and that required little financial commitment. It

was recognised that many aspects of the extended roles (such as diagnostic testing) required considerable expense and time to set up and run, of which funding was not provided by the Government. Patients themselves were unwilling to pay for extended services from the community pharmacy, especially when they received them elsewhere at no cost.

In 1996 Tann et al. [27] used a triangulation of methods to explore the hypothesis that the successful implementation of the wider role of the pharmacist was related to enablers in the work environment, as well as personal characteristics particular to 'Leading Edge Practitioners' (LEPs). Within the study LEPs were found to initiate more actions, be more patient centred, be effective networkers, more focused on staff development, and more effective influencers. Barriers to implementation identified by the LEPs included lack of finance, time and space within the pharmacy. The authors suggested that the gap between policy and practice, as well as the time lag in implementation of services, could be reduced by focusing on LEPs to pilot and implement changes in pharmacy practice.

In 1998, Bell et al. [3] conducted interviews with a sample of community pharmacists in Northern Ireland to ascertain their attitudes and opinions towards the concept of pharmaceutical care and its implementation. The degree of implementation of pharmaceutical care was restricted, and although all of the pharmacists questioned believed that they were involved with pharmaceutical care, this was primarily focused on patient education of medication. None of the pharmacists interviewed were involved with diagnostic or monitoring services. The authors found that the pharmacists were keen to develop their professional role, but identified a number of barriers which impeded this. These included lack of time, remuneration, private counselling area, access to patient medication records, low public expectation of the pharmacy profession, and lack of professional relationships. Proprietors of independent pharmacies displayed a higher degree of business orientation and were particularly concerned about lack of remuneration. The facilitators identified were the opposites of the barriers, and included having a private counselling area, developing professional relationships, increasing general public perception of the pharmacy, and having access to patients' medication records. The location of the pharmacy was also considered important in developing a loyal customer base, with those pharmacists working near GP practices having particularly good relationships with GPs, and delivering services to a large number of patients. In 1999, Bell et al. [2] investigated whether lack of time to implement pharmaceutical care was a barrier to the routine

provision of extended patient care services. A self reported work sampling study was conducted with a sample of community pharmacists in Northern Ireland to investigate how they used their time. Staffing levels within the pharmacy were found to significantly influence the pharmacists' involvement in a number of activities. The authors also found that pharmacists working in environments with a high prescription turnover were found to devote significantly less time to counselling patients. Almost a quarter of the pharmacists' time was dedicated to non-professional activities that could have been performed by other members of staff. The authors concluded that improved time management and better use of trained support staff could improve the ability of pharmacists to integrate pharmaceutical care services into their routine practice.

During 2000, Tully et al. [28] assessed the strong motivators and barriers to the implementation of a prescription monitoring and review service led by community pharmacists that was delivered within either the pharmacy or GP practice. The authors used a two part Delphi survey and measured the attainment of consensus as to whether the statements represented motivators or barriers. There were high levels of agreement that providing a prescription monitoring and review service would improve the public and GPs' perception of pharmacists, help develop relationships with patients, and give pharmacists professional fulfilment. Other motivators included improving patients' clinical parameters and adherence. Key barriers to the implementation of these services included their time consuming nature, locum difficulties, the prohibitive cost of providing the service, and the unwillingness of pharmacy owners or GPs to fund services. It was also noted that services would be hindered by not having access to the patients' medical record, and if pharmacists did not have a cooperative working relationship with their local GP. The authors also discovered within the free text comments that internal rivalries, and the structure and culture of the profession may also represent barriers to the implementation of these services. They concluded that community pharmacists were motivated to participate in prescription monitoring and review schemes by a complex set of personal, professional and altruistic reasons. The authors recommend that for these services to be successful, adequate remuneration structures, internal rivalries, and the structure and culture of the profession itself would need to be considered.

In 2000, Rutter et al. [26] reported on their study to investigate community pharmacy managers' perceptions of their role in providing healthcare. Interviews were conducted with pharmacy managers within one area of a UK national pharmacy chain. Although participants shared the vision of wanting to play a more integral role in the

healthcare of patients, a number of barriers and obstacles were identified. These included a lack of awareness amongst healthcare professionals and the general public regarding pharmacists' skills and attributes, the legislative restriction on pharmacists remaining on the premises, and the current remuneration structure. There was a call for professional bodies to intervene and campaign to improve the perceived role of the pharmacist. It was also recognised that empowering staff through the skill mix initiative would help to free up the pharmacists' time and provide them with more opportunities to interact with patients.

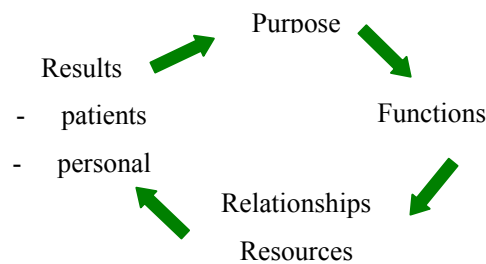
In 2001, Ruston [25] conducted a study to identify the characteristics of community pharmacists that influenced the adoption of an extended role, in order to inform ways in which they could organise the pharmacy business to achieve successful re-professionalisation. Ruston found that involvement was low in extended activities which required skills not traditionally associated with community pharmacy (such as specialist screening services), whereas activities such as health promotion and advice giving were well established. The barriers identified within the study included shortage of time, insufficient remuneration, shortage of staff, and lack of contact with other healthcare professionals. Fostering levels of autonomy, promoting uptake of post registration activities to increase knowledge, skills and confidence, establishing formal links with other healthcare professionals, and identifying ways for the pharmacists to leave the pharmacy premises were some of the facilitators identified within the study. Although Ruston looked at the percentage turnover of NHS prescriptions, type of pharmacy, and provision of private consultation area, she concluded that pharmacist involvement in the extended role was more to do with professional orientation than the settings in which they worked.

In 2001, Krska and Veitch [13] interviewed potential policy makers and innovative practising pharmacists in Scotland to obtain their views on a systematic approach to pharmaceutical care and the factors important in its development. Many of the participants expressed views on the need for remuneration, training, physical resources, relationships with GPs, repeat dispensing systems, and improvements to existing computer systems to facilitate pharmaceutical care. The perceptions of patients as well as other healthcare professionals were also viewed as important, and the majority considered that there was a need to educate patients on the role of the pharmacist.

In more recent years, studies have begun to look at the factors affecting service delivery in community pharmacy from the perspective of commissioners in more detail [5, 32]. In 2003, Blenkinsopp and Celino [5] conducted a postal survey with pharmaceutical advisors and chief pharmacists from the PCOs, to establish current and planned community pharmacy services, and to identify barriers for development. The majority of the PCOs were found to be commissioning additional NHS services with community pharmacists, although there was variability in the number of services commissioned. Those PCOs with less than three services were found to be less likely to employ someone to develop community pharmacy, and tended to take a fairly opportunistic approach to development with limited planning. In contrast, those commissioning more than seven services, tended to employ someone to develop community pharmacy, and took a planned approach to development. Local relationship and leadership issues tended to be the main drivers and barriers to service development. In 2006, Bradley et al. [32] conducted a survey to identify factors which PCOs considered to be barriers and drivers to the commissioning of services from community pharmacies. Access to funding, lack of staff capacity at the PCO and impending reconfiguration were found to be the major barriers, whilst the new pharmacy contract and local relationships with the PCO were found to be the main drivers. The majority of PCOs questioned were engaged with local pharmaceutical committees and local pharmacists to consider service opportunities for community pharmacy.

In addition to the studies that have investigated factors affecting service delivery, a number of authors have also conducted extensive reviews of the literature [33, 70-75], of which the work by Roberts et al. has already been discussed [33, 73]. Based on his previous work, in 1993 Hepler [71] identified a number of issues that needed addressing when implementing pharmaceutical care, as illustrated in Figure 2. In his model, 'results' referred to the outcomes of medication use for patients' and the problems and concerns that needed to be addressed. After assessment of results, the re-evaluation and formulation of the 'purpose' of practice needed to be performed. Following this, the identification of the activities necessary to achieve the purpose of performing these 'functions', and finally, identifying the 'relationships and resources' required. Hepler emphasised the importance of the order in which to consider issues, and the fact that the cycle could be repeated more than once.

Figure 2: Hepler's model of issues to consider when implementing pharmaceutical care [71]



In 2000, Ramaswamg-Krishnarajan and Grainger-Rousseau [72] conducted a review of pharmaceutical care models being implemented in community pharmacies in Canada. They found that regardless of the model being implemented, the success was dependent on the development of a more collaborative system of patient care that blended with other primary care services. The authors concluded that evidence was required on how pharmacists could successfully provide pharmaceutical care in a cost effective manner that improved patient outcomes.

UK literature reviews [70, 74] have also reported challenges for developing the role of the community pharmacist, and recommendations for future practice. A report commissioned by the RPSGB [70] to investigate how service delivery and organisation of community pharmacy was developing in the new environment, concluded that the challenges facing pharmacy were not unique to the profession, and mirrored those that had confronted organisations and professionals operating in the legal and banking sectors. The systematic literature review identified 324 papers of relevance, of which a number of common threads were recognised as essential to the future shape of community pharmacy. These included the need for community pharmacists to work in partnership with other healthcare professionals, the development of the skills of community pharmacist staff, changes to the process of remuneration, and the reconfiguration of the pharmacists' role to enhance professional satisfaction. In 2004, Tann and Blenkinsopp [74] conducted a review of policy and research findings to recommend actions that PCOs could take to increase the likelihood of success when implementing innovation in community pharmacy. The recommendations included establishing a local team to review existing pharmacy services against local needs (including how community pharmacists would support the GMS and pharmacy contract), identifying funding for new services, identifying innovator and early adopter pharmacists, engaging and supporting local pharmacists,

and recognising the need to negotiate with pharmacy chains regarding decisions about innovation as well as local pharmacists.

2.2.1 Summary of section two

The implementation of services within community pharmacy is proving problematic and slower than expected on an international level, as identified within the literature reviewed in this chapter. The facilitators and barriers experienced appear to be the opposites of each other, meaning that once barriers are overcome, they can turn into facilitators for service delivery. The factors affecting service delivery can be grouped under key headings comprising: customer need and demand, public attitudes towards the pharmacist, pharmacist characteristics and attitude, training, communication, awareness of the service, recruitment to the service, operational aspects of service delivery, pharmacist confidence in service delivery, support for the service, time available, staff resource, remuneration, pharmacy environment, healthcare professional relationships, evidence of the value of the service, and the external environment. Although the international literature has identified similar factors, it is worth looking at the UK studies in detail due to the differences in community pharmacy structure and environment between the different countries. Within the UK, the specific facilitators identified from the literature include having favourable pharmacist characteristics and attitude, good public, GP and PCO perception of the role of the pharmacist, access to training to improve skills, knowledge and confidence, remuneration available for the service, good healthcare professional and PCO relationships, access to patient medication records, access to consultation space, appropriate level of staff resource, time available, evidence of the effectiveness of the service, and favourable external environment. The specific barriers identified within the UK literature include poor pharmacist attitudes, lack of time, lack of remuneration, poor healthcare professional relationships, lack of space, poor public, GP and PCO expectation of the pharmacist, lack of access to patient medication records, lack of skills, unfavourable external environment, and lack of staff resource.

2.3 Summary of chapter II: Review of the literature

The health services environment is changing, with the Government committed to providing a health service that is based around the needs of the patient, and focusing on providing prevention programmes that help to keep people healthy, making healthcare more accessible, and reducing health inequalities. It is recognised that new providers are required to help deliver the NHS vision, and in particular, the importance of the role of the community pharmacist has been emphasised. However, despite the number of opportunities available for community pharmacy, the implementation and delivery of services is proving difficult and slower than expected. Although a number of factors have been identified from the literature, there is a need to understand more about the various factors affecting delivery of services in community pharmacy, and ways to overcome barriers and enhance facilitators and motivators. This would enable service providers and commissioners to identify key obstacles that would hinder service development and delivery, and focus on primary facilitators and motivators that would enhance them. This study investigates the factors affecting service delivery within a national pharmacy chain, using asthma services as an example. Data has been collected to explore the current environment and opportunities available to pharmacy, the factors affecting service delivery, and to identify any recommendations for the future. Throughout this thesis, I use the multiple sources of data collected to try and explore and explain the numerous factors influencing the delivery of services within community pharmacy in the UK. The following chapter details the methods that have been used to implement and evaluate the services used within this study.

CHAPTER III

Methods

3.0 Introduction to the chapter

This chapter is split into two sections, the first of which details the service implementation methods used within this study for the nationally led brief intervention in asthma, and the locally driven asthma service. Following on from this, the second section of this chapter goes on to explore the service evaluation methods. These include an omnibus survey, audits, mystery customer research, customer and pharmacist interviews, and a review of the dispensing data.

SECTION ONE

3.1 Service implementation

3.1.1 Introduction to service implementation

National guidelines exist to set priority targets and provide some standardisation. Within primary care in England, the NHS is currently focusing on targets outlined as quality indicators within the GMS contract [59], PCO performance indicators, and the DH priorities and planning framework [57]. The current Government is committed to reducing health inequalities and providing locally driven services to meet local needs, putting the person using the services at the heart of them [65]. Guidelines issued by the DH still require service development and implementation by the PCO that are responsible for managing health services within a local area. As such, the development and implementation of services locally can vary tremendously within individual PCOs.

The strategic direction of community pharmacy is currently facilitated from a national level, be it through head office directing large multiples, national bodies facilitating independents and small chains, or via national guidelines. The future developments in practice and policy within community pharmacy are often shaped by strategies of large corporate pharmacies, and not by research evidence or initiatives of the pharmacy professional body [76]. Individual pharmacies also participate in a number of locally developed services that are commissioned and managed through the local PCOs. Participation in the delivery of services within community pharmacy can be as a result of corporate decisions within individual pharmacy organisations, or the result of local decisions by independent pharmacists, or store managers of a multiple pharmacy to participate within local PCO initiatives. Independent pharmacies can be more entrepreneurial in nature, have more autonomy in decision making, and flexibility in adapting services to meet local needs, than local pharmacists employed by multiples. Individual store managers employed by a multiple pharmacy will be directed by commercial targets and priorities identified at a company level. For both independents and multiples, the decision to participate in services or not at a local level is often based on commercial reasons. As a result of these national and locally driven initiatives, the implementation and delivery of national services or guidelines within pharmacies can vary tremendously at a local level. Within Boots, private pharmacy services are developed centrally and various techniques have been used to attempt to implement services on a national basis, however, the quality of

implementation and delivery of services varies at a local level. The same can be said to be true for advanced services that have been developed nationally as part of the new pharmacy contract, namely Medicines Use Reviews (MURs) [37]. The implementation and participation in this service varies tremendously across the whole of community pharmacy [77]. There is a need to understand the factors affecting private and NHS service delivery, not just within Boots, but across the community pharmacy profession itself.

3.1.2 Action research

Action research is undertaken by participants in social situations to improve their practices and their understanding of them, and is often orientated towards improvement and change [78]. It was founded by Lewin in 1956, and is a method of generating knowledge about a social system while simultaneously trying to change it [78]. The method has proved valuable in helping practitioners, managers and researchers make sense of problems in service delivery and in promoting initiatives for change and improvement. The role of the researcher is to act as a catalyst to help facilitate the process and stimulate, but not impose, people to change [79]. The essence behind action research is that the researcher looks at the way things are done, rather than the results achieved. Action research is a method that can be used to respond to local community needs, and as such does not treat the participants as subjects, but empowers them to act on their own behalf in making change [78]. It uses stakeholder groups as the primary focus of attention and source of decision making, rather than the authoritarian approach that is often seen in large corporate organisations [79]. Action research can be used within small and large projects and organisations, and can result in the initiation of change at both individual professional practice level and organisational processes [78].

Hart and Bond [78] described seven criteria which distinguished different types of action research, and which together distinguished action research from other methods (refer to Figure 3).

Figure 3: Hart and Bond's seven criteria of action research [78]

1. Educative
2. Deals with individuals as members of social groups
3. Problem focused
4. Content specific and feature orientated
5. Involves a change intervention
6. Involves a cyclic process in which research, action and evaluation are interlinked
7. Founded on a research relationship in which those involved are participants in the change process

Although action research uses the methods of social sciences, the research process is undertaken in a way that is user friendly for lay people and professionals, and has the potential of leading to solutions that are appropriate for local communities [80]. The phrase 'look, think, act' has been used to describe the process of action research by Stringer [79]. 'Look' means that participants should define and describe the problem to be investigated and its context; 'think' means they should analyse and interpret the situation in order to develop their understanding of the problem, and 'act' means that they should formulate solutions to the problem. A method that can be used when designing and implementing services locally.

The technique of gathering information in action research is commonly referred to as rapid appraisal, and is a qualitative technique to gain insight into the community's own perspective of its need [80]. Rapid appraisal often includes group meetings, unstructured interviews, structured surveys, mapping, analysis of local documents and workshops with participants. The scientific rigour and validity of the approach involves the use of triangulation of research methods.

The principles behind action research have been used throughout this study, from the flexibility in delivering the brief intervention, to the design and implementation of the asthma service. It has also been used as a method to reflect on the delivery of both the services, and refine them as the study progressed. The use of action research has also enabled me to adapt other services outside of this study based on the learnings that I have gained throughout this PhD.

3.1.3 Methods of service implementation used within this study

As part of the investigation into factors affecting service delivery in community pharmacy, the impact of the design and route of service implementation were studied

through two different types of asthma services. The first service was designed centrally and implemented nationally throughout Boots during March 2003. This ‘brief intervention’ in asthma was kept extremely simple to encourage pharmacists and staff to integrate the intervention into their current practice and role. The second service was designed and implemented by a group of pharmacists within their locality during May to September 2003. This ‘asthma service’ was based around identifying people with asthma that would benefit from a consultation with the pharmacist on inhaler technique, medication use and general lifestyle advice. The impact on delivery between designing and implementing the service locally and nationally will be investigated throughout this study, as part of the factors affecting service delivery.

3.1.3.1 National implementation of the ‘brief intervention’ in asthma

The brief intervention was designed around pharmacists and healthcare staff asking customers with asthma three basic questions to find out their level of symptom control (refer to Table 6). The use of these questions was based on their ease of use as a tool to help identify people with poor control of asthma, as identified by the Royal College of Physicians (RCP) [81]. Based on the response to the questions, the pharmacist or healthcare staff could then provide appropriate lifestyle advice to the customer.

Table 6: RCP questions [81]

RCP question	
1	Have you had difficulty sleeping because of your asthma symptoms?
2	Have you had your usual asthma symptoms during the day?
3	Has your asthma interfered with your usual activities?

All pharmacists within Boots were sent an information pack outlining the brief intervention during March 2003 (refer to Appendix A), along with a summary copy of the latest guidelines on asthma management [82]. The information within these documents was sent to these pharmacists in the form of a letter and not as a compulsory training package, allowing the pharmacists to be in a position to choose how much participation they wanted to have within this activity. Further paper communications were sent directly to each pharmacist on a quarterly basis to provide them with updated lifestyle advice that was relevant to people with asthma. Each communication (refer to Table 7) reflected the latest research developments and advice, that was appropriate for that particular time of year.

Table 7: Pharmacist communication themes

Timing	Fact sheet theme
Q1	Patients with asthma: Lifestyle advice on how to manage their hayfever symptoms
Q2	Lifestyle advice on how to manage children's asthma
Q3	Lifestyle advice on how to manage winter ailments
Q4	Lifestyle advice for pregnant women and young people on how to reduce risks of asthma

This intervention was designed to be flexible for both pharmacists and customers, to be used opportunistically when people with asthma presented their prescriptions or purchased over the counter medicines. No records of the interventions were kept, making this very simple for the pharmacists and healthcare staff to deliver.

Limitations

The implementation of the brief intervention was extremely simple due to the communication method and standardisation of the key messages. Although standardisation aids scalability and can be beneficial for large organisations, it does not usually allow for local variation. The key principles behind the brief intervention were designed to try and overcome this, and encourage pharmacists to be flexible with service delivery, in the hope that they would integrate the service into their current practice. Although simple to deliver, pharmacists were not told, but encouraged to participate within the activity. This presents potential variations in participation between individual pharmacies and pharmacists. Individual pharmacists may also not have actively chosen to communicate activity to fellow pharmacy staff, or participated themselves.

The sheer volume of mail delivered to the pharmacy also presents problems as specific communications such as this intervention can easily be mislaid. As this was the only method of communication with pharmacists about the intervention, it was limited in its reliability of delivery. Due to the simplicity of the brief intervention, no service support materials for recording or marketing the intervention were supplied to individual pharmacies. Although this made the service seem easier operationally, it did have limitations on its reliability on pharmacy staff to identify people with asthma, and introduce the service to them.

3.1.3.2 Local implementation of the ‘asthma service’

The local asthma service was set up to try and encourage pharmacists to develop, implement, and manage an asthma service within their locality. The local design and implementation of this service was framed around action research, and allowed the pharmacists to base the service on local needs, and encouraged local ownership in delivery.

Regional teams nominated groups of pharmacists during March 2003, from which the final team were chosen due to demographics, team numbers, and available support from the local area. Eleven pharmacists were part of the final project team, based in eight pharmacies around the Woking and Guildford area. Ten of these pharmacists had store based roles such as store manager (n=1), pharmacy manager (n=3) and consultant pharmacist (n=6). The other pharmacist had the role of ‘Professional Development Pharmacist’ (PDP), and assumed the position of local project manager. Research commissioned by the practice research division at the RPSGB [83], looked at the characteristics of innovators in community pharmacy and found that successful pharmacist innovators were characterised by a high awareness of developments in the health service, local health needs, pro-activity, networking, confidence and a willingness to involve the whole pharmacy team. All characteristics demonstrated by this particular PDP.

The project team attended a half-day workshop in May 2003 to design the asthma service using the following core objectives;

- To explore options for community pharmacy involvement in the provision of local asthma services
- To identify an asthma project and implementation plan to make it happen
- To increase the number of asthma scripts per pharmacy

My role on the day was to facilitate the process, allowing the team free rein to decide on service options. By the end of the workshop the team had agreement on the basic patient journey and project proposal; including roles and responsibilities of the project team going forward (refer to Table 8). The service was based on pharmacy staff using the questions within the brief intervention to identify people with asthma with poor symptom control, and where appropriate, offer referral to the pharmacist for a full consultation. Within the full consultation the pharmacist would cover subjects such as inhaler technique, medication use, and general lifestyle advice.

Table 8: Roles and responsibilities of the local project team

Role	Responsibilities
Project team	Management of budget locally, design of all service materials
Individual pharmacists	Activity within their own pharmacy, communication with staff and local GPs
PDP	Managing and co-ordinating project locally, communication with internal stakeholders (Regional and Area managers), communication with external stakeholders (PCOs)
Head office	Facilitation of the process, measuring and monitoring results

The project team followed up this initial meeting with another between themselves to plan the work in more detail. At this meeting they discussed training plans and agreed that this should be organised locally based on their needs, and would be held on three separate occasions to maximise the number of pharmacists and healthcare staff that could attend from each pharmacy.

The original patient journey was further discussed and agreement reached within the project team that each pharmacist would be able to vary the delivery of the service within their pharmacy to suit both the needs of their customers, the business and themselves. Some pharmacists chose to operate an appointment system, whilst others decided to offer consultations on an ad hoc basis. A questionnaire was designed by the project team to be used as a guide for the pharmacist based consultations (refer to Appendix B), which the project team felt would allow pharmacists to ask the customer the most appropriate questions in order to understand their particular needs. The project team also agreed to meet up every eight to ten weeks as a way of sharing best practice and agreeing any future actions.

The project team were also encouraged to think about novel ways of marketing the service locally, and as a result each pharmacy drew up individual marketing plans. The plans for each pharmacy varied, but tended to include approaching fellow healthcare professionals such as GPs and nurses, and targeting areas such as schools, libraries, hospitals, smoking cessation groups, shops and bus stations to display leaflets and posters. In addition to this, pharmacies located within shopping centres also planned displays within the centre, whilst other pharmacies looked at leaflet drops within local newspapers.

Limitations

Although the local design and implementation of this service was based on needs identified by the team of pharmacists, this is likely to be different within other localities and is dependent on the individuals involved. The resource required to design and implement this service locally was intensive, as the project team were required to meet on a number of occasions. The replication and scalability of services such as these can be extremely difficult and expensive, due to the duplication of effort, time and resource required.

3.1.4 Summary of service implementation methods

As part of the investigation into factors affecting service delivery in community pharmacy, the impact of the design and route of service implementation were studied through two different types of asthma services. The ‘brief intervention’ in asthma was designed centrally and implemented nationally throughout Boots, whilst the ‘asthma service’ was designed and implemented locally by a group of pharmacists. The principles behind action research are used throughout this study for the implementation and delivery of both services. The following section of this chapter explores the data collection methods that have been used to evaluate the factors affecting service delivery as part of this study.

SECTION TWO

3.2 Service evaluation

3.2.1 Introduction to service evaluation methods

Evaluation is defined as “*the use of the scientific method and the rigorous and systemic collection of research data to assess the effectiveness of organisations, services, and programmes in achieving predefined objectives*” [84]. Evaluation can be further divided into two types; formative, which involves the collection of data while the programme is active with the aim of developing or improving it; and summative, which involves collecting data about the programme with the aim of deciding whether it should be continued or repeated [85]. The evaluation of health services is usually based on collecting data about the structure, process and outcomes of services, as well as the appropriateness of the services [80]. Bowling suggests that data on structure and inputs can be obtained by questionnaire and document analysis, and that the outcome measurements should include the impact of the condition and the service on the quality of life of the patient [80]. Many researchers evaluating services gather descriptive data on the views and experiences of service users in order to describe the population, to study associations between variables, and establish trends [80].

Within the early stages of service development, new initiatives are often provided within a small number of pharmacies that have been selected based on suitable environments and enthusiastic staff. These studies can often be viewed as evaluating the efficacy of the intervention. Once this has been established, the effectiveness of the intervention can be evaluated, that is, does it work when extended to a normal range of practice and working environments [86]. Studies within defined geographical areas are common within health services research, as resources often do not permit nationwide projects. Although findings from a study that is carried out within a defined area cannot be generalised beyond its boundaries, it does not limit the usefulness and wider relevance of the data and conclusions [86].

The question of which research method to use should not be based on the decision between using qualitative or quantitative techniques, but how to identify strategies for combining different perspectives of both methodologies in a single study, whilst at the same time respecting the distinct branches of philosophical thoughts from which they were derived [80]. The combining of different types of approaches, methods and / or data within the same research study is known as triangulation. In health services

research, triangulation is employed to provide different perspectives of phenomena, obtain data on a range of issues in relation to the research question, and to assess and demonstrate the validity of research findings. The rationale behind triangulation is that using a variety of methods helps overcome the shortcoming of any particular one [86]. An overview of the differences between qualitative and quantitative methods is outlined in Table 9. Qualitative and quantitative methods can be complementary to each other when applied to appropriate research questions, for example, in depth information collected during qualitative interviews, can help design questionnaires for use in subsequent quantitative studies.

Table 9: Distinctions between qualitative and quantitative research methods

Qualitative	Quantitative
Appropriate for ‘how’ and ‘why’ questions which explore processes and patterns in peoples thoughts and behaviours	Appropriate for testing hypothesis, investigating frequencies of events, and quantifying relationships between clearly defined variables
Flexibility of approach and receptiveness to respondents viewpoint is central to the research	The direction and content of the questionnaire are predetermined and standardised by the researcher
Essential for exploring new topics and obtaining data on sensitive or complex issues	Appropriate if the issue is known about, relatively simple and unambiguous and amenable to valid and reliable measurement

3.2.2 Introduction to qualitative research methods

Qualitative approaches have gained an increased prominence in health services research in recent years [87], although the numbers of qualitative studies are small compared to those using survey methodologies [86]. A substantial amount of the literature looking at factors affecting service delivery in community pharmacy has used qualitative research methods [3, 11-13, 16, 18, 20, 22, 26, 27, 29]. The aims of the qualitative researcher are to collect and interpret data and describe or explain phenomena in the light of the situations, background and circumstances in which they occur [86]. The researcher is free to change their focus as the data collection progresses, which is a strength of using qualitative methods [80]. As in quantitative research, the basic strategy to ensure rigour in qualitative research is systematic research design, data collection, interpretation and communication [87].

Qualitative work is sometimes described as respondent led due to the direction of the interview being determined by issues raised by the respondent. Data is often collected through individual interviews or focus groups. The distinguishing feature of focus

groups is the interaction amongst the participants, providing a stimulus for the generation of a wide range of ideas and issues than might arise within individual interviews. Focus groups, however, are less effective than interviews in examining the thoughts of individuals in detail [86]. Interviews with individual participants can take the form of unstructured or semi structured. An unstructured interview guide will list a few topic headings which are explored according to issues raised by the respondent. During the interview, the qualitative researcher will try to obtain the true meanings that individuals assign to certain events, and understand the complexities of their attitudes, behaviours and experiences [80]. Semi structured interviews, whilst allowing the respondent the opportunity to express their views, also obtains information relating to issues of interest to the researcher. Accurate transcripts are seen as an essential pre-requisite for a detailed and valid qualitative analysis [86]. Interviews are often audio taped and transcribed at a later date, allowing the interviewer to concentrate on the behaviours of the participant, rather than making notes.

Interviews are often conducted within the respondent's natural setting such as their home, as independent settings often present additional administration, ethical and logistical problems [86]. Interviews conducted face to face offer the advantage of the interviewer being able to probe the participant for responses and clarify any ambiguities. Many detailed and complicated questions can be asked, and the interviewer is able to observe participant behaviour and body language in response to specific areas of discussion. Face to face interviews, however, can be expensive, and do have the potential for interviewer bias [80]. Interviews conducted by telephone can be useful for short, straightforward questionnaires and on non sensitive topics, but are considered limited to the extent to which they are suited to an in depth discussion [86]. Telephone interviews are an economical method in relation to time and resource, but are restricted to people with telephones. Interviews conducted by telephone appear to have equal accuracy in collecting data on health as face to face interviews [88]. They have, however, been found to suffer from a high rate of premature termination, where the respondent does not wish to continue with the interview [89]. Although the use of telephone interviews for qualitative studies is not common, it has been used within previous pharmacy studies including those looking at factors affecting service delivery [18], and consumers' expectations when visiting pharmacies [90].

Non random sampling is used within qualitative research, as the aim is to understand complex phenomena and generate hypothesis, rather than apply the findings to a wider population [80]. Sample sizes are kept small due to the detailed and intensive study

required [86], and although no clear guidelines exist, sufficient sample size is achieved when the same stories, issues and topics emerge from the participants [80]. An example of a sampling strategy that is often applied by qualitative researchers includes purposive, which involves the identification and selection of particular individuals who share characteristics relevant to the study. Representative sampling involves the inclusion of respondents from a number of centres to try and achieve a degree of representation [86]. Opportunistic sampling is similar to convenience, and involves the investigator seizing the opportunity to interview any respondent who is likely to have relevant information for the study [80]. Both convenience and opportunistic sampling are likely to be unrepresentative of the population of interest and may introduce bias [86]. Theoretical sampling is an iterative process that is sometimes employed in grounded research, where sampling strategies are redesigned at each stage of research to enable more detailed examination of the emerging theory [86]. Maximum variation sampling can also be used to cover examples of all the likely variations. The qualitative researcher should describe the sample in a way that enables readers wishing to apply the same process to their own population to do so.

Community pharmacies are good sampling points for recruiting users of pharmacy services and specific patient groups, although data from infrequent or non users of pharmacies will be excluded. Despite this, they have been used for recruitment of respondents in previous studies [90-93]. The importance of recruitment procedures needs to be fully understood by pharmacists and staff when using them to select potential respondents and / or distribute questionnaires. Recruitment protocols need to be acceptable to customers, and workable within the pharmacy setting, to prevent any selection bias on behalf of staff. Pharmacy customers may also be reluctant to provide honest answers if they are concerned how this may reflect on their relationship with the pharmacist [86].

In social sciences research it is common to develop Grounded Theory [80]; a process of discovering theory from data that have been systemically gathered and analysed [94]. Generating a theory from the data means that not only do the hypothesis and concepts come from the data, but they are systematically worked out during the course of the research [94]. Where there is little previous knowledge to inform the development of codes at the beginning of the study, coding is designed after analysing a representative sample of answers to questions. Inductive coding fits with Grounded Theory, and offers advantages in the flexibility, richness of the codes, and the opportunity to develop new categories which otherwise might not have been thought

of, but is time consuming in nature [80]. Coding is essential for the analysis of qualitative data, relating sections of the data to categories which the researcher has previously developed or is developing [94]. A storage and retrieval system permits the storage of the data under the relevant categories and allows for easy retrieval of data for analysis [80]. Computer software packages, such as QSR NVivo[®], may be particularly useful in the management of large data sets. Although they cannot analyse the data, they do have a role to play in validation as they can quickly identify instances in which a particular issue or topic was raised. This enables the researcher to check their descriptions on the topic across all respondents, and identify any inconsistencies with their emerging theories [86].

3.2.3 Introduction to quantitative research methods

3.2.3.1 Survey research

Quantitative research methods are appropriate for testing hypothesis, investigating frequencies of events, and quantifying relationships between defined variables. Quantitative research methods have been used in the majority of studies looking at the factors affecting service delivery within community pharmacy mentioned within this thesis [1, 2, 4-10, 14, 15, 17, 19, 21, 23-25, 27, 28, 30-32].

Social surveys are viewed as a quantitative approach that is a relatively quick and cheap method of obtaining factual information from a large number of respondents. Survey data collected from a sample of sufficient size can be used to quantify predetermined characteristics of a population, identify frequencies of events, establish the proportion of respondents who hold particular views, and describe association between variables; to enable generalisations to be made at a wider population [86]. Pharmacy related organisations and pharmacists frequently conduct surveys that focus on issues important to the profession and its development, often with the explicit aim of informing change and facilitating progress [86]. Approximately a third of the papers cited within this thesis which have looked at factors affecting service delivery have used survey methods [1, 2, 4, 5, 9, 14, 17, 19, 21, 23, 28, 32]. Other examples where surveys have been used in pharmacy practice research include pharmacy workforce issues [95, 96], and consumer perspectives of pharmacy services [91, 97, 98].

Surveys designed to measure events, behaviour and attitudes of the population of interest are called descriptive surveys, as the information is collected from the

population of interest, and descriptive measures calculated. Respondents are generally asked to report on events, feelings and behaviours retrospectively, and thus surveys are called retrospective [80]. Cross sectional surveys are carried out at one point in time and are a relatively economical data collection method in terms of time and resources, as large numbers of people can be surveyed relatively quickly, compared to longitudinal studies in which a sample is followed up over a period of time [80].

It is important that the questionnaire used within the survey gathers relevant information effectively and efficiently, and that responses received are a reliable and valid reflection of the issues being measured. Most pharmacy practice researchers develop their own questionnaires, devising questions to meet the study objectives. Those who use questions developed and tested by others save time and money in validation, and benefit in comparisons that can be made against other data and populations [86]. Survey questionnaires should be acceptable and attractive to potential respondents by being reasonable in length and well presented [86]. The reliability of the data can be affected by the use of pre coded responses in structured questionnaires, as they may not be sufficiently comprehensive, and force some respondents to choose inappropriate answers [80]. Questions that require respondents to recall events, or estimate their frequency, can also present reliability problems. Subjective quantifiers cannot be easily translated into numerical frequencies, as respondents will employ their own terms of reference to the answer, possibly comparing themselves to those around them, their expectations, or previous experiences. In essence, they are providing their perceived answer to the question, and not the actual response. As such, subjective quantifiers should be used with caution where researchers wish to provide some estimates of numerical frequencies of events, rather than perceptions of them [86].

Surveys can be conducted by personal interviews, postal or other self completion questionnaire method or diaries. While face to face interviews have a good reputation, postal and telephone techniques have improved in recent years [99]. The internet is a relatively new option that is becoming increasingly popular as a data collection tool. The range of methods for collecting survey data has implications for both response rates and the cost of obtaining the samples. Personal and telephone surveys tend to achieve higher response rates than postal and internet surveys in general population samples, although this partly depends on the area of study [99]. Face to face interviews allow for more complex questions to be asked, and the opportunity to clarify any misunderstandings. The expense and time required to conduct face to face

interviews, and the development of computer technology, has encouraged growth in the use of telephone interviews [99]. The use of telephone interviews to collect data allows the interviewer to build rapport, and at the same time maintain respondent anonymity. Postal questionnaires are self administered so must be easy to follow and self explanatory. This method is cheaper to administer, but response rates tend to be lower than face to face and telephone interviewing [99]. It is important to ensure the consistent administration of the questionnaire when using multiple interviewers to collect the data. To minimise the scope of variation, questionnaires should be highly structured, procedures standardised, and directions made clear [86].

Random samples are favoured within quantitative research as they allow the application of probability statistics and the generalisation of findings to the population from which the sample was drawn [86]. Methods of random sampling used within quantitative research include cluster and stratified, the latter allowing for increased precision in the sample reducing the chance of over or under representation of groups in the population [80]. Quota samples are often used within market research, and rely on the selection of specific numbers of individuals within different age groups and gender. Convenience sampling, the selection of the most readily accessible or willing individuals as participants, can be useful in the early or exploratory stages of survey research. Due to the non random nature of both quota and convenience sampling, care should be taken before making any generalisations of the results [86].

A number of different approaches can be applied to obtain samples representative of the population of interest, with the ideal sampling frame containing a list of all members of the population. The use of electoral registers as sample frames within defined geographical areas include a high proportion of the population, but are less reliable within populations of high mobility, in particular inner city areas. The post code address file is useful in surveys collecting data by home interviews, where researchers randomly select individuals within particular households. Bias can be introduced by favouring individuals more likely to be at home, a factor which can be reduced by varying the times of day and week in which the researcher visits. Weightings can also be applied to adjust for different sized households. Although telephone directories can be used to sample individuals participating in telephone surveys, selection bias exists with ex directory numbers, households with multiple lines, and those without a telephone. General population samples can be recruited in public places such as shopping centres. Care needs to be taken in the choice of venue and recruitment times; although bias will exist as the most frequent shoppers will have

a greater chance of being included in the sample [86]. Postal and self completion surveys are more economical than interviews, as large samples of the population can be mailed relatively quickly. These methods are only suitable when the issues and questions are straightforward and simple, when the population is literate and speaks a common language, and when a sampling frame of addresses exists [80].

Computer statistical packages, such as the Statistical Package for Social Sciences (SPSS), are generally used within the analysis of large data sets commonly generated from survey research. Statistical tests are used to establish whether the overall picture presented by the data occurred because of an actual association within the data, or whether the relationship was a chance phenomenon. The likelihood of the observed difference occurring by chance alone is expressed as the level of probability or P value. The smaller the P value, the greater the observed differences are due to chance alone. Conventionally, a P value of less than 0.05 is regarded as allowing us to reject chance as accounting for any observed difference, and is termed statistically significant [100].

3.2.3.2 Mystery customer research

Mystery customer research is defined as “*The use of individuals trained to experience and measure any customer service process, by acting as potential customers and in some way reporting back on their experience in a detailed and objective way*” [101]. Within the literature, mystery customer research is known under a number of terminologies including: secret, phantom, anonymous, undercover, covert, surrogate, pseudo, and simulated customers / patients/ shoppers / clients. Methodologically, it is also known as participant observation research. Media coverage on the recent ‘Health Which?’ reports has questioned the validity of using mystery customers to conduct research on pharmacy services [102]. Others have concluded that well designed mystery shopping studies can provide useful data on service quality in a range of settings [103], and that the reliability of mystery customer data is much higher than that of customer surveys [104].

A tremendous amount of effort goes into creating a service, but the impact that this makes on the customer will always depend on how well it is delivered [105]. Service standards are normally set by head office staff and senior management, but the actual task of delivering these standards rests with individual members of staff who deal with the customers. For consumer facing organisations, it is particularly important to ensure that their staff are delivering a consistent, positive customer experience, as this will

drive loyalty and market share. A number of commercial organisations monitor service delivery levels through the use of mystery customer research, which is often carried out by market research agencies [106]. For example, Unichem undertook its own mystery customer research to test staff confidence in recommending smoking cessation products to the public [107]. Other pharmacy chains have also used mystery customer research for a number of years to help assess and improve service delivery, but the results generally remain confidential [108]. There are an increasing number of examples whereby mystery customer research is used within the pharmacy professional bodies; the Prescription Pricing Authority (PPA) uses undercover investigators to visit community pharmacies to check that prescription exception checks are carried out [109], and the RPSGB are authorised to carry out “direct covert surveillance” under the Regulation Investigatory Powers Act 2000, as part of investigations to detect or prevent crime [110]. There has been a steady growth in the use of this methodology within pharmacy practice research over the past 30 years [111], and examples of use include assessing elements of health service delivery [102, 112-114], and as part of training programmes [115, 116].

Unlike customer satisfaction surveys, mystery customer research is used to measure the process rather than the outcomes of a service encounter [106]. The mystery shopper collects facts rather than perceptions [103], and is able to measure the service experience as it unfolds, looking at which procedures do or do not happen [106]. Judgements on the appearance of the premises and staff as well as the actions of staff in terms of politeness, product knowledge and helpfulness are slightly more subjective, but can be minimised by using rating scales with labels [106]. Scenarios need to be designed so that they are able to test exactly what is required, and that are relatively easy to remember by the trained individual [105]. The shoppers themselves have to be trained to be able to answer any question that a pharmacist may ask [103].

3.2.4 Studies that require ethics committee approval

The DH published the ‘Research Governance Framework for Health and Social Care’ in 2001 [117], which set standards for research, including mechanisms for delivery and requirements for monitoring and assessment. The standards within the framework apply to all research which relates to the responsibilities of the Secretary of State for Health, of which compliance was expected in all areas by March 2004 [118]. An updated edition of the framework was published in 2005, which took into account new legislation, and provided further clarity on the roles of the sponsor, chief investigator,

and organisations involved in research [119]. Similar documents have been produced for Scotland [120] and Wales [121], which are fundamentally the same and differ only in the relevant organisations and legislation that they refer to [122].

Approval from the appropriate NHS research and ethics committee is required for any research proposal that involves patients and users of the NHS. This includes all potential research participants recruited by virtue of the patients or users past or present treatment by, or use of, the NHS, including NHS patients treated under contracts with private sector institutions [123]. Individuals identified as potential research participants because of their status as relatives or carers of patients and users of the NHS, and NHS staff recruited as research participants by virtue of their professional role, are also included within this definition. Ethical research is not just about the safety and wellbeing of the research participants, but also about their rights and dignity [122]. Potential participants have the right to choose whether they want to participate within a study or not, with full understanding of their involvement and any potential implications.

Research conducted within community pharmacies is not as clear cut as the definition above [122]. If the study is conducted with patients presenting an NHS prescription, then the study needs to be submitted to an ethics committee, if they are coming in to buy general products then it does not. If they are purchasing Over The Counter (OTC) medicines then the position is unclear, as they may have been advised to buy these by their GP [122].

Approval from the research ethics committee is not always required for medical or clinical audit projects, therefore determining whether your study falls within the definition of ‘research’ or ‘audit’ (refer to Table 10) can also affect the necessity to seek ethical approval or not [124].

Table 10: Comparison of ‘research’ and ‘audit’ projects [124]

Research	Audit
Aims to increase the sum of knowledge through systematic investigation	Systemically examines the peer review of care, treatments or services to identify opportunities for improvement
May involve an element of randomisation to different treatments or services	Never involves the random allocation of treatments or services
May involve a new treatment or service	Never involves a completely new treatment
Often involves extra work over and above that involved in normal clinical management or service provision	Never involves disturbance to the patients beyond that required for normal client management
May involve the application of recruitment criteria before subjects are entered into a study	May involve patients with the same problem receiving different treatments or services. However, the patient has a choice of the treatment or service they receive after full discussion of the known advantages and full disadvantages of each

3.2.5 Methods of data collection used within this study

In order to capture the information required to meet all of the objectives within this study, data were collected using a combination of quantitative and qualitative research methods. The use of multiple data sets and methods to measure specific objectives produces a more robust evaluation method, allowing for triangulation of the data. The objectives and measures detailed within Table 11 were collected as part of the baseline data, to update the literature sources, and to inform the service evaluation objectives listed in Table 12. The data collection methods used to inform each of the objectives and measures is also detailed within these tables. The use of these methods for data collection were based on both research and commercial reasons, and as a result, some of the data collected were not relevant to this study and have not been presented. Although anecdotal feedback was collected following the interaction with the pharmacist, no specific measurements were collected on patient outcomes or quality of life as this was not the focus of this study.

Table 11: Study objectives, measures and data sources for baseline data

Objective	Measure	Data source
To identify opportunities for community pharmacists to help improve symptom control in people with asthma	Customer need	Omnibus survey Asthma audits Customer interviews
To describe consumers current choice, frequency of visit and use of community pharmacy	Feedback from customers	Omnibus survey Asthma audits Customer interviews
To describe consumers' and pharmacists' views on the extended role of the community pharmacist	Feedback from customers and pharmacists	Customer interviews Pharmacist interviews

Table 12: Study objectives, measures and data sources for service evaluation

Objective	Measure	Data source
To investigate the impact of the design and route of service	Evidence of delivery of intervention	Mystery customer research Customer interviews Pharmacist interviews
To discuss factors affecting the delivery of the asthma services	Evidence of delivery of intervention Factors affecting service delivery	Asthma audits Mystery customer research Customer interviews Pharmacist interviews
To identify the benefits of service delivery; to the staff involved in running the service; the service user; and the company funding the service	Pharmacist and customer satisfaction Number of asthma prescriptions dispensed Customer response to advice given	Asthma audits Dispensing data ^g Customer interviews Pharmacist interviews
To identify any recommendations for future service delivery within community pharmacy	Feedback from pharmacists and customers	Customer interviews Pharmacist interviews

Although data were collected at different points of time across the study, each source was accessed once, and as such the studies were cross sectional. The omnibus survey was conducted at the beginning of this study, allowing for information on customer need and pharmacy use to be identified early on within the general population.

^g Limited information is available due to commercially sensitive data

Similarly, audits conducted within the pharmacies participating in the asthma service allowed for data to be collected on customer need and pharmacy use within a sample population of users of the pharmacy. Mystery customer research was used to assess the delivery of the services, and explore factors affecting this, and was an ideal tool to use when assessing a large scale service such as this. The use of interviews for both customers and pharmacists allowed the opportunity to explore some of the service details in more depth, including factors affecting delivery, service benefits, and future recommendations. Semi structured interviews were used to allow questions within the surveys to be duplicated, to compare and support evidence from several perspectives.

An overview of the data collection methods and timings is displayed within Table 13, further details of which are provided later within this chapter.

Table 13: Data collection methods and timings for baseline information (B), brief intervention (BI) and asthma service (AS)

Data set		B	BI	AS	Collection method	Date collected
Quantitative	Omnibus Survey	X			Face to face survey	Mar 03
	Mystery customer research		X		Mystery customers	May 03 Jun 03 Jul 03 Aug 03
	Asthma audits	X		X	Questionnaires in pharmacy	Audit 1 Jun 03 Audit 2 Nov 03
Qualitative	Customer interviews	X	X	X	Semi structured telephone interviews	Apr-Jun 03 (quarter one, Q1) Jul-Sep 03 (quarter two, Q2) Oct-Dec 03 (quarter three, Q3) Jan-Mar 04 (quarter four, Q4)
	Pharmacist interviews	X	X	X	Semi structured telephone interviews	Apr-Jun 03 (Q1) Jul-Sep 03 (Q2) Oct-Dec 03 (Q3)

3.2.5.1 Use of research agencies

As I was designing and managing this study from both a research and commercial perspective, it allowed me greater access to funding and resources for collecting data

than if I had approached it just from a research perspective alone. I was able to take advantage of existing data collection methods within the company, from several different sources. Boots regularly uses agencies to collect data for them, all of which are registered and regulated, to ensure a high standard of delivery by specialist trained individuals. The use of an agency also helps to prevent any bias towards the company when collecting these data.

At the time of the study, mystery customer research was carried out on a monthly basis within Boots by a specialist research agency. Pharmacies were aware that they were visited on a regular basis by the mystery customer, but they were unaware of the scenarios that were used. Each department within the pharmacy was assessed separately, using various scenarios. Taking advantage of this resource, I decided to design an asthma scenario for use by the mystery customers during the months of May, June, July and August 2003.

Research agencies were also used to conduct the omnibus survey, and perform the interviews with both customers and pharmacists. The sheer volume of work involved with the omnibus survey, and the timely manner for which it was required for business decisions, favoured this approach. Research agencies were also better placed in conducting the customer and pharmacist interviews as they provided anonymity to the interviewee. I felt that the respondents were more likely to be honest within the interviews if they were not talking to a healthcare professional from the company concerned, or in respect of the pharmacists, a fellow work colleague.

Although these data were collected by specialised agencies, the decision to use them, who to use, the approach to the research, the design of the questionnaires and guides, and the analysis of the data were conducted by myself. The research agencies were used to collect the data only.

Limitations

There are disadvantages to using a research agency, as you are relying on someone else to do the work for you. Careful selection of the research agency minimises risk, but I do not know whether the interviewers from the agency performed to the same standards and consistency as I would have done myself. Although it is important to regulate data when evaluating services for commercial reasons, the processes do not have to be as stringent as when collecting data for research purposes. To help

minimise risk, clear guidelines were discussed with the agencies prior to collecting data about the requirements for this particular study.

The use of existing data collection methods allowed me to collect from several sources, but did present constraints as to the type of information that could be collected. Mystery customers were used for data collection within the company on a monthly basis, and as such, operated within certain guidelines. The design of the asthma scenario and collection of data were limited within these existing constraints.

3.2.5.2 Omnibus survey research

To help assess customer need and identify the current level of pharmacist activity within asthma, an omnibus survey was conducted prior to implementing any services. National surveys are a useful tool to collect the views of the general population, and can be conducted relatively quickly. Ethics approval is not required for surveys such as this, as recruitment is conducted within the general population.

The questionnaire (refer to Appendix C) was designed to collect some baseline data to help identify customer need, and recognise areas which pharmacists could help people with asthma. Particular questions were asked on knowledge of asthma, medication use, frequency of symptoms, and the use of the pharmacist for advice. Although the literature is rich with information on many of these areas, (see chapter 6), this survey has helped to update and reinforce findings from previous work.

Baseline data were collected for diabetes, hypertension, high cholesterol, and osteoporosis, as well as for asthma. Data for the other chronic conditions was collected to assist with additional trials being conducted at the same time within the company, but for the purpose of this study, only the data from asthma has been used. In order to obtain a reasonable sample of people with these conditions within the general population, 2000 people were targeted to take part in this survey. The survey was conducted through a research agency using a face-to-face approach. Interviewers recruited people to the survey using quota sampling methods, and approached participants within their home environment.

The omnibus survey was carried out in England during March 2003. A total of 1954 people were questioned, of which 255 had asthma themselves, or a partner or child with asthma. The survey was done to reflect the views of a national sample, and not just those people that shop at Boots.

Limitations

Surveys are an effective tool for collecting large volumes of data on the population of interest, however, the reliability and validity of data depends on the respondents being able and willing to provide the information requested. Respondents may consistently over or under estimate the information they provide [86]. Survey methods are a useful tool for collecting facts, but can be unreliable when asking for people to remember timings of events, or rate particular experiences, as one person's perception can be very different from another. Although parents and partners of people with asthma often help to manage the condition, data collected from these sources may not be as reliable as from the person themselves. There is no flexibility at the time of interview, as the data collected in surveys is predetermined and structured, and does not allow for further questioning. There is scope for framing bias in interview studies in which the respondent replies are influenced by the design of the pre coded response choices [80]. Bias may also exist in the recruitment method, as although respondents were recruited within their own homes at different times of the day and week, the method will always be biased towards the selection of those that were more likely to be at home at the time.

3.2.5.3 Asthma audits

To help assess customer need and identify the current level of pharmacist activity within asthma, a baseline audit was conducted within the participating pharmacies prior to the commencement of the asthma service, and was repeated following the implementation of the service. The use of a structured questionnaire that could be completed by customers within the pharmacy, allowed the collection of data in a quick, timely, and cost effective manner. The content of the questionnaire was similar to that of the omnibus survey, to allow for some comparison of data sets. Data were collected on condition knowledge, medication use and symptom occurrence. Within the second audit, additional questions were asked on whether they had received advice from the pharmacist on asthma, what this was about, and how they rated the quality of it. Ethics approval was not required for this audit.

The questionnaire (refer to Appendix D) was designed so that customers could complete the survey within the pharmacy area in a matter of minutes. Staff within each pharmacy asked a sample of customers the questions over a period of two weeks prior to starting the asthma service, and again once the service had commenced. Asthma customers were recruited opportunistically when they approached the pharmacy for advice or over the counter medicines. Once identified, customers were

then asked whether they wanted to participate within the survey. All information was treated as confidential and no customer details were recorded. These data were collected during June and November 2003, and once completed, the forms were sent through to me for analysis. Data were analysed using SPSS v 11.5 software.

The initial baseline audit took place in all eight pharmacies participating in the asthma service during June 2003, and the total sample collected was 119. The second audit took place during November 2003, with only seven of the eight pharmacies participating, and a total sample of 114. The breakdown of questionnaires completed by customers within each of the participating pharmacies is shown in Table 14. The asthma service commenced during September 2003, although all of the pharmacies would have been involved with the brief intervention activity during the course of the summer. These data collected during audits one and two were not from the same customers.

Table 14: Number of completed questionnaires from each pharmacy participating in the asthma service during audits one and two

Pharmacy identification number	Audit 1	Audit 2
96	18	19
817	18	25
906	12	10
950	16	16
953	15	16
975	11	8
976	17	20
1017	12	0
TOTAL	119	114

Limitations

The findings from the asthma audit provide a useful insight into the current knowledge and medication use of people with asthma visiting that particular pharmacy, but can not be generalised due to the small sample size and bias in the opportunistic sampling method used. Recruitment of respondents was reliant on staff within the individual pharmacies, and bias may exist on who the staff approached and when, depending on how approachable the person was, and how busy the pharmacy was at the time.

Despite the recruitment bias, the asthma audits did support other data and helped to strengthen the case for the role of the pharmacist. The second audit was used as a proxy measure for the impact of the service locally, due to increased activity and awareness, but is limited in its reliability due to the data being cross sectional, and not longitudinal in nature. As with the omnibus survey, the questionnaires were structured so did not allow for any further questioning at a local level.

3.2.5.4 Mystery customer research

At the time of the study, mystery customer research was regularly carried out on a monthly basis within Boots, pharmacies aware that they were visited on a regular basis by the mystery shopper, but unaware of the scenarios that they were placed under. Each department within the pharmacy was assessed separately, and staff bonuses were paid according to the results. Although pharmacy scenarios were carried out monthly, pharmacies were not scored on the quality of pharmacist advice given. To provide evidence of delivery of the brief intervention, mystery customer research was used during the months of May, June, July and August 2003. The use of mystery customers enabled me to randomly assess staff use of the brief intervention on a national basis. Although every single pharmacy was assessed by the mystery customer, the asthma scenario was not carried out if more than four customers were present in the pharmacy at the time of assessment, so as not to disrupt the pharmacy staff and customers even further. Ethics approval was not required as the research was carried out on staff within the organisation.

Mystery customers presented at the pharmacy with the asthma scenario outlined in Figure 4 during the months of May to August 2003, and assessed the pharmacy on a single visit each month.

Figure 4: Mystery customer asthma scenario

You want to enquire about your brother / sister who has asthma. It is coming up to the hayfever season and his / her asthma is getting worse. You do not feel that he / she controls his / her asthma very well as he / she is always running out of his / her blue inhaler. Ask whether or not you can get replacement inhalers directly from the pharmacist rather than having to go to the doctor for a prescription.

If asked, your brother / sister seems to suffer from wheezing symptoms quite regularly which is leading you to believe that they are not controlling it well. The pharmacist may ask about the brown inhaler – say that your brother / sister does not use this very much and has not had it replaced for months.

NB The blue inhaler is for relief of symptoms and the brown inhaler is for prevention.

Information was collected regarding who served them, which of the three RCP questions were asked, and whether any lifestyle advice was given by the pharmacy staff (refer to Appendix E). Based on the store identification number, additional information was collected on pharmacy size and type, using existing company databases. The number of pharmacies assessed varied on a monthly basis, as the asthma scenario was not carried out if more than four customers were present at the pharmacy counter at the time of assessment.

Over the four month period from May to August 2003, a total of 2756 asthma scenarios were carried out within 1222 Boots pharmacies. These data were inputted into SPSS v 11.5 and analysed to help assess the delivery of the intervention. Descriptive statistics were collated, and tests of association explored against each of the factors. The hypotheses that service delivery was affected by pharmacy format / pharmacy size / personnel were explored. Tests of association for each of the factors were explored for significance using the chi-square test at a level of $p < 0.05$.

Limitations

The scale of this study has great strengths in the amount of data that can be collected through the use of mystery customers, and provides a fairly reliable snapshot of service delivery throughout the pharmacy chain. However, the interaction recorded takes place in one pharmacy on one day, and is a false situation between two people, whereby one person is lying. There may be circumstances within the pharmacy on that day which effect the interaction, and are not recorded as part of the data collection process. Mystery customer research should be used alongside other data, as caution is advised when it is used on its own to influence strategy and policy decisions [108].

As these data were collected as part of the regular mystery customer assessment within this pharmacy chain, it has presented a number of limitations within this study. These data collections had to fit in with the standard parameters that had already been set within the regular monthly assessments, and this has resulted in the mystery customers collecting information only on the quantity, and not quality of advice given. The member of staff assessed will also vary at a local store level, depending on who is available to serve customers at the time of assessment.

To assess the longevity of this type of service delivery, data would have ideally been collected over the full twelve month period, but unfortunately this particular scenario could not be used for longer than four months. Mystery customers did not carry out

the pharmacy scenario if there were more than four customers present at the pharmacy counter at the time of assessment. This restriction was one of the pre set parameters, so that the mystery customers did not disrupt the pharmacy counter any further during busier times. If these data had been collected, they would have provided a more accurate snapshot of the advice given during busier times

3.2.5.5 Customer interviews

Interviews were conducted with customers to explore in more detail some of the findings from the initial survey data, and to obtain feedback on the service itself. Feedback from the customers was important to understand whether they perceived the interaction with the pharmacist as useful, whether they acted on the advice given, and whether they would come back to the pharmacy for advice in the future. In line with this, it was also important to establish how they currently accessed the pharmacist, and how they saw the pharmacists' role changing in the future. Interviews were preferred to focus groups, as respondents were being questioned on individual experiences following an intervention. Ethics approval was not required for the evaluation of this service, as respondents were recruited after participation in the service.

Interviews were conducted by a research agency using a semi structured questionnaire (refer to Appendix F). The use of a semi structured questionnaire allowed me to have a core structure to the interview and control elements of the data captured, whilst still allowing the interviewers to have some flexibility in exploring issues personnel to the respondents at the time of the interviews. Telephone interviews were conducted to allow greater coverage throughout England, and provide interviewees with anonymity. Conducting the interviews over the telephone also provided convenience for the interviewees, and allowed them to give honest feedback in a non threatening environment of their choice.

Respondents were recruited to research by pharmacists and staff following an intervention or service in asthma. Pharmacists and staff were ideally placed to do this, as they could introduce the study to the customer at the end of the asthma service, and get their agreement locally to participate. Recruitment by a third party within the pharmacy environment would have been a costly exercise, and may have put people off the service in the first place.

Within each quarter, ten pharmacies were selected to recruit customers to research over a period of one to two weeks, using a purposive sampling method. Pharmacies

participating in the brief intervention were targeted to recruit customers for interview during quarters one, two and three, and pharmacies participating within the asthma service were asked to recruit customers within quarter four. Quarterly sampling was adopted to allow for interviews to be conducted throughout the year. Pharmacies participating within the brief intervention were initially selected based on a variety of formats and geographical locations.

The principal pharmacist within each pharmacy selected received a telephone call explaining the purpose of the research, and a verbal agreement of the pharmacy's participation was confirmed. This was then followed in writing to the named pharmacist, along with customer letters to explain the procedure. Each participating pharmacy was asked to record the names and contact details of customers they had spoken to about their asthma over the recruitment period. Once completed these forms were sent directly to the research agency. A random selection process was adopted at the research agency to select ten names to contact customers for interviews, to reduce any potential bias within the pharmacist recruitment process. No incentives were offered to customers to participate in the study.

Due to recruitment problems within the pharmacy, the quota for the quarter one interviews were not reached, and this led to additional selection criteria being used over the subsequent months. Data collected from the mystery customer research was used to target those pharmacies that had a positive result in delivering the brief intervention; had asked all three RCP questions and given lifestyle advice. By targeting pharmacies in this way, the number of customers that pharmacists managed to recruit to research following the brief intervention increased. Within quarter three, pharmacies were targeted if they had consistently delivered the intervention over the four month mystery customer assessment period, and if they had a pre-registration graduate. This was to try and encourage the pharmacists to devolve responsibility for recruitment to the pre-registration graduates, if time was an issue for them.

The customer interviews were conducted for both the brief intervention and asthma service during 2003, and early 2004. The breakdown of these interviews, including timing and coding, is shown in Table 15. The majority of the interviews were taped and transcribed in full. Unfortunately all of those collected in quarter one, and one in quarter four were not recorded, so were transcribed from the interviewers' notes. The transcripts were put into QSR NVivo® v2.0 software package, to help manage the data. The data within the transcripts were sorted by initial themes, and as additional

transcripts were added, further themes emerged. The data was segregated by emerging themes, and was revisited and resorted on several occasions before settling on the final themes. The transcripts were analysed using principles from the Grounded Theory, as the theory behind the factors affecting service delivery emerged from the data itself.

Table 15: Breakdown of customer interviews conducted between April 2003 and March 2004

Quarter	Data set	Sample	Codes
1	BI	8 ^h	C1, C2, C3, C4, C5, C6, C7, C8
2	BI	6	C9, C10, C11, C12, C13, C14
3	BI	10	C15, C16, C17, C18, C19, C20, C21, C22, C23, C24
4	AS	10	C25, C26, C27, C28, C29, C30 ⁱ , C31, C32, C33, C34

Limitations

Due to the semi structured nature of the interviews, there was variability on the content of the data collected between individual respondents. This was also increased by the use of interviewers from a research agency, as interviewees were probed to varying degrees, on different questions. The likelihood of this may have been reduced by the use of a more structured questionnaire, but would have resulted in less rich data. Bias may also exist within the interviews as the issues raised may be a reflection of the interviewees pressing concerns at the time of data collection. The use of a research agency to collect the data also resulted in the transcripts within quarter one being transcribed manually. This may compromise the comprehensiveness of the data collected, as being preoccupied with transcribing, the interviewer is less able to pick up and develop issues as they are raised by the respondent. The richness of the data will also be compromised as the interviewers' notes will be less comprehensive than the original transcripts.

Although there were advantages in the use of pharmacists and staff to recruit customers to research, this was extra work for them, and bias may have existed in their recruitment method. Staff may have varied recruitment depending on the perceived customer response, and how busy the pharmacy was at the time. Individuals who chose to participate in the first place are often self selecting, and their comments may

^h All eight customer interviews within quarter one have been transcribed from the interviewer's notes

ⁱ Transcripts for C30 were taken from interviewer's notes due to tape recorder failure

not be applicable to the wider population. The findings may provide useful insights into the service for those who use it, but be limited on why others do not [86].

3.2.5.6 Pharmacist interviews

Interviews were conducted with a sample of pharmacists to explore in more detail some of the findings from the initial survey data, and to obtain feedback on the service itself. Feedback from the pharmacists on the service was important to draw upon their multiple experiences with customers to try and understand the factors affecting service delivery from both a delivery and receiver perspective. Alongside this, it was also important to establish what they thought about the extended role of community pharmacists, and understand their confidence in delivery of services. Interviews were preferred to focus groups, as respondents were being questioned on individual experiences. Ethics approval was not required for the evaluation of this service, as respondents were employed by the company directly, and not the NHS.

Interviews were conducted by a research agency using a semi structured questionnaire (refer to Appendix G). The use of a semi structured questionnaire allowed me to have a core structure to the interview and control elements of the data captured, whilst still allowing the interviewers to have some flexibility in exploring issues personal to the respondents at the time of the interviews. Telephone interviews were conducted to allow greater coverage throughout England, and provide interviewees with anonymity. Conducting the interviews over the telephone also provided convenience for the interviewees, and allowed them to give honest feedback in a non threatening environment of their choice.

Pharmacist interviews were planned to be conducted during quarters one and three, with a target of ten interviews per quarter. Theoretical sampling was applied to select the pharmacists for interview, as the pharmacy selection criteria were the same as used within the customer interviews. The pharmacists that were selected for interview were often the ones that were responsible for recruiting these customers to research within that pharmacy.

The questionnaire (refer to Appendix G) was designed to try and understand pharmacists views about undertaking the intervention, and where they saw their role extending to in the future. Due to the lack of response in recruiting customers to research within quarter one, I decided to conduct interviews with pharmacists within this first quarter using a slightly different questionnaire (refer to Appendix H). This

revised questionnaire was designed to find out why pharmacists had problems recruiting customers to research, in an attempt to try and address any issues in preparation for subsequent customer recruitment.

The pharmacist interviews were conducted for both the brief intervention and asthma service during 2003. The breakdown of these interviews, including timing and coding, is shown in Table 16. The majority of the interviews were taped and transcribed in full. Unfortunately, two of those collected in quarter one were not recorded, so were transcribed from the interviewers' notes. One of the interviewees in quarter three was actually a pre-registration graduate and not a pharmacist at the time of the interview. The transcripts were put into QSR NVivo[®] v2.0 software package, to help manage the data. The data within the transcripts were sorted by initial themes, and as additional transcripts were added, further themes emerged. The data was segregated by emerging themes, and was revisited and resorted on several occasions before settling on the final themes. The transcripts were analysed using principles from the Grounded Theory, as the theory behind the factors affecting service delivery emerged from the data itself.

Table 16: Breakdown of pharmacist interviews conducted between April and December 2003

Quarter	Data set	Sample	Codes
1	BI	7	P1, P2, P3 ^j , P4, P5, P6, P7 ^j
2	BI	1	P8
3	BI	3	P9 ^k , P10, P11
3	AS	6	P12, P13, P14, P15, P16, P17

Limitations

Due to the semi structured nature of the interviews, there was variability in the content of the data collected between individual respondents. This was also increased by the use of interviewers from a research agency, as interviewees were probed to varying degrees, on different questions. The likelihood of this may have been reduced by the use of a more structured questionnaire, but would have resulted in less rich data. The use of a research agency to collect the data also resulted in some of the transcripts within quarter one being transcribed manually. This may compromise the comprehensiveness of the data collected, as being preoccupied with transcribing, the

^j Transcripts for P3 and P7 were not recorded. Interviewer's notes were used for these transcripts

^k P9 was a pre-registration graduate at the time of interview

interviewer is less able to pick up and develop issues as they are raised by the respondent. The richness of the data will also be compromised as the interviewers' notes will be less comprehensive than the original transcripts.

Bias may exist in the content of the pharmacists interviews as although they were feeding back through a third party, the data was ultimately for the company that employed them. As a result, they may not have been as honest as they would have been if reporting back to an external source.

3.2.5.7 Dispensing data

To understand the financial benefits to the company of delivering services such as this, data were collected on the volume of asthma medication dispensed throughout both studies. Volume was measured instead of value as this was a more accurate measure of the market and was unlikely to be effected by constant fluctuations in the market. Data were collected over a national sample on a weekly basis.

If a patient acts on the advice that a pharmacist gives then the use of preventer medication may increase, and that of relievers decrease. This measure could be used as a proxy to patient's response, and as such, the ratio of type of medication dispensed was monitored over the course of the study on a weekly basis.

Unfortunately, due to the commercial sensitivity of these data, I have been unable to present the findings in full. I have, however, included a summary as I feel that these data are an important factor in affecting the decision to deliver services, both from a national and local level. The analysis of all data includes the impact of market trends during the course of the study.

Limitations

Ideally, the number of asthma customers presenting at the pharmacy would have been measured throughout the study, but this was not possible at the time of the study, or indeed now. The volume of asthma medication dispensed can be used as a proxy measure, but does not distinguish between the number of new customers coming to Boots, and the number of existing customers that are coming more frequently. There is also difficulty in measuring the true impact of the brief intervention, as data were collected from all pharmacies and would have included those that were actively participating, and those that were not. Control data was not possible, as all pharmacies

were invited to participate within the brief intervention. The same will also be true on the ratio of asthma medication dispensed.

3.2.6 Summary of service evaluation methods

A triangulation of qualitative and quantitative methods has been used throughout this study to investigate the factors affecting service delivery in community pharmacy. These methods include an omnibus survey, audits, mystery customer research, customer and pharmacist interviews, and a review of the dispensing data. A profile of the customer and pharmacy data used within this study are provided within the following chapter.

CHAPTER IV

Profile of the data

4.0 Introduction to the chapter

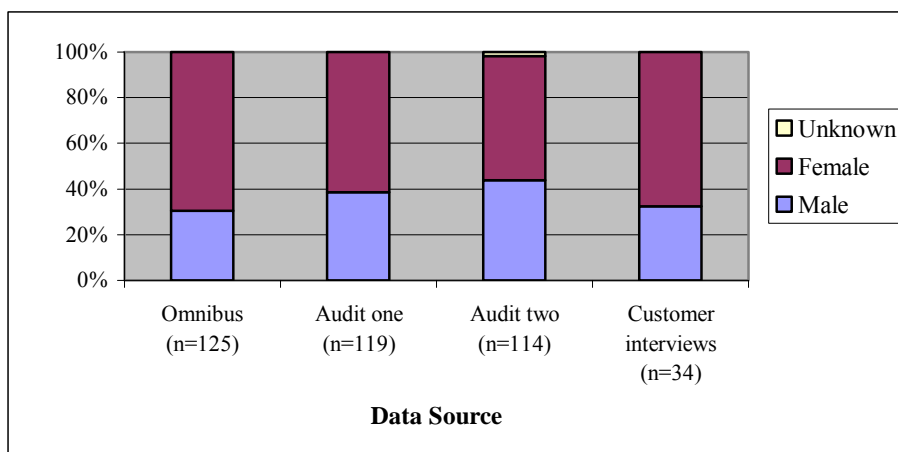
This chapter provides a summary of the gender and age of customers who participated within the omnibus survey, asthma audits and customer interviews. Following on from this, the chapter then goes on to summarise the size and locations of pharmacies that have been used within this study.

4.1 Customer profile

4.1.1 Gender

Data on the gender of customers were collected for respondents with asthma that participated within the omnibus survey, asthma audits and customer interviews, as shown in Figure 5. No data on gender was collected for the pharmacist interviews.

Figure 5: Gender of customers participating within the omnibus survey, asthma audits and customer interviews



Of those respondents participating within the omnibus survey with asthma themselves, 69.6% were female, and 30.4% were male. Within the first asthma audit, 61.3% were female, and 38.7% male, and within the second, 54.4% were female, 43.9% male, and 1.8% unknown. Of those respondents participating within the customer interviews,

67.6% were female, and 32.4% were male. A detailed breakdown of the gender of respondents participating in the customer interviews is shown in Table 17.

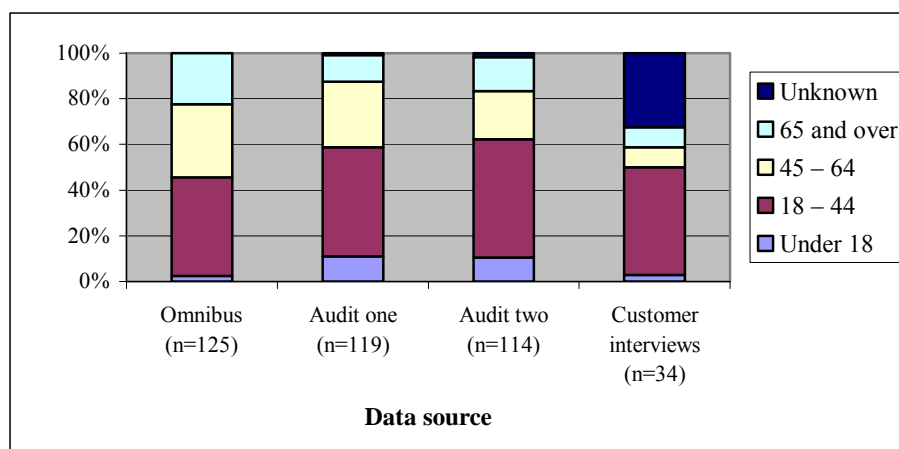
Table 17: Breakdown of respondents participating in the customer interviews by gender

Gender	Respondent	Sample
Female	C1, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C16, C17, C18, C19, C22, C24, C25, C27, C28, C30, C31, C32	23
Male	C2, C3, C14, C15, C20, C21, C23, C26, C29, C33, C34	11

4.1.2 Age

Data on the age of the customers were collected for respondents participating within the omnibus survey, asthma audits and customer interviews, as shown in Figure 6. No data on the age of those pharmacists participating within the interviews were collected.

Figure 6: Age distribution of customers participating within the omnibus survey, asthma audits and customer interviews



The age of 32.4% of respondents participating in the customer interviews, 1.8% of participants from audit two, and 0.8% of participants from audit one were unknown. There were a higher proportion of people aged under 18 participating within the asthma audit one (10.9%) and audit two (10.5%) than both the customer interviews (2.9%) and the omnibus survey (2.4%). The percentage of participants within the age group of 18 – 44 were similar across all four data sets (audit two 51.8%, audit one 47.9%, customer interviews 47.1%, and omnibus 43.2%). As a percentage, there were far fewer respondents aged 45-64 participating within the customer interviews (8.8%)

than the omnibus survey (32.0%) and the asthma audits one (28.6%) and two (21.1%). There were many more participants within the omnibus survey that were aged 65 and over (22.4%) compared to all the other data sets (audit two 14.9%, audit one 11.8%, and customer interviews 8.8%). A detailed breakdown of the age of many of the respondents participating in the customer interviews is shown in Table 18.

Table 18: Breakdown of respondents participating in the customer interviews by age¹

Age band (years)	Respondent	Sample
< 18	C7 (17)	1
19 – 30	C4 (27), C6 (24), C8 (27), C9 (25), C15 (23), C19 (30), C20 (30), C21 (29), C22 (25), C23 (27), C34 (30)	11
31 – 40	C1 (32), C2 (35), C5 (33), C12 (33), C24 (34)	5
41 – 50	C10 (50)	1
51 – 60	C3 (55), C13 (53)	2
> 61	C11 (74), C14 (67), C18 (67)	3

4.2 Pharmacy profile

4.2.1 Categorisation of pharmacy size and format within Boots

At the time of the study Boots had 1412 pharmacies that were a variety of sizes, located in a variety of settings. The pharmacies were classified into six different categories of sizes, as defined in Table 19.

Table 19: Categorisation of pharmacy size within Boots

Coding	Size (m2)
A	0-149
B	150-299
C	300-599
D	600-1199
E	1200-1899
F	1900-3000+

The pharmacies were also categorised based on where they were located, as described in Table 20.

¹ No data on age was recorded for eleven of the respondents participating within the customer interviews

Table 20: Categorisation of formats within Boots

Small Destination	Predominantly based in high street locations in district or local centres
Large Destination	Based in major regional centres including high street or shopping centres
Work	Based in transport locations (airports / train stations) or major city centres
Pop in	Based in small towns or local suburban shopping areas
Health centre	Located near to or in the GP practice
Edge of Town	Located within edge of town retail parks

4.2.2 Brief intervention

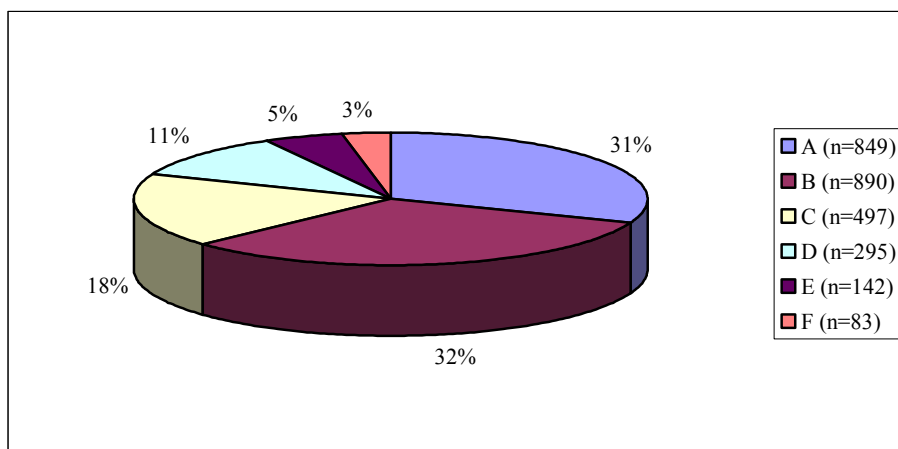
Over the four month period between May and August 2003, a total of 2756 asthma scenarios were carried out by the mystery shoppers within 1222 Boots pharmacies. Not all of the pharmacies were assessed on the brief intervention by the mystery customer, and a number of pharmacies were assessed on more than one occasion, as shown in Table 21.

Table 21: Frequency of pharmacies assessed by the mystery customer between May and August 2003

Number of times assessed	Number of pharmacies	Percentage of total pharmacies assessed
Once	268	21.9
Twice	477	39.0
Three times	374	30.6
Four times	103	8.4
TOTAL	1222	100.0

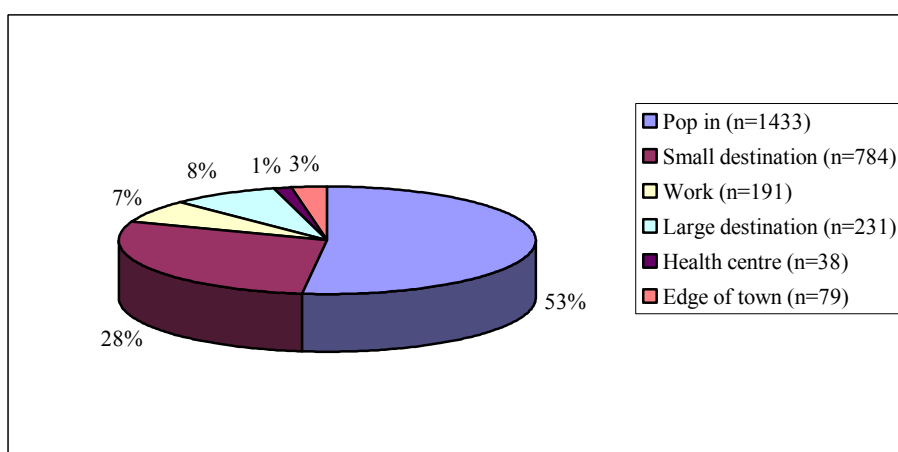
The size of all the pharmacies assessed on the brief intervention by the mystery customer over the period commencing May 2003 to August 2003 can be seen in Figure 7. The majority of pharmacies assessed were the smaller sized pharmacies A and B, followed by the middle sized C and D, and lastly the larger sized pharmacies categorised as E and F. This is consistent with the distribution of pharmacy sizes within Boots at the time of the study.

Figure 7: Distribution of size for all pharmacies assessed by the mystery customer between May and August 2003 (n=2756)



The format of all the pharmacies assessed by the mystery customer over the period commencing May 2003 to August 2003 can be seen in Figure 8. The majority of pharmacies assessed were the pop in and small destination formats, followed by large destination and work formats, and lastly edge of town and health centre pharmacies. This is consistent with the distribution of pharmacy formats within Boots at the time of the study.

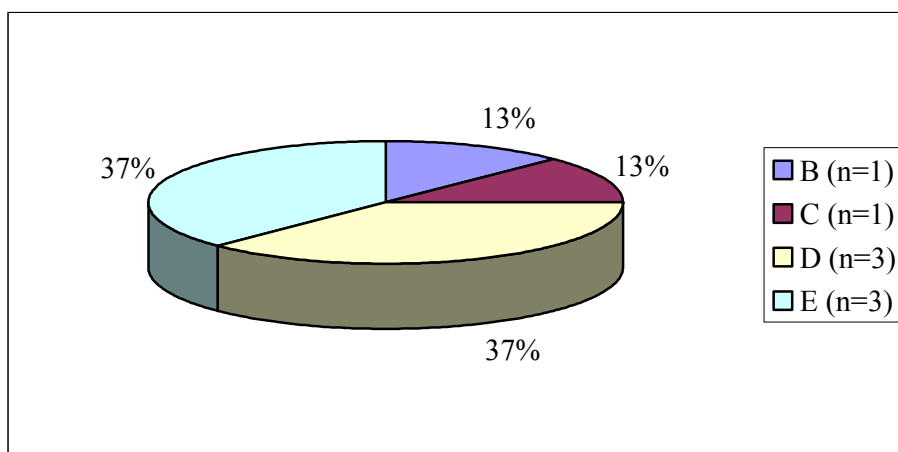
Figure 8: Distribution of format for all pharmacies assessed by the mystery customer between May and August 2003 (n=2756)



4.2.3 Asthma service

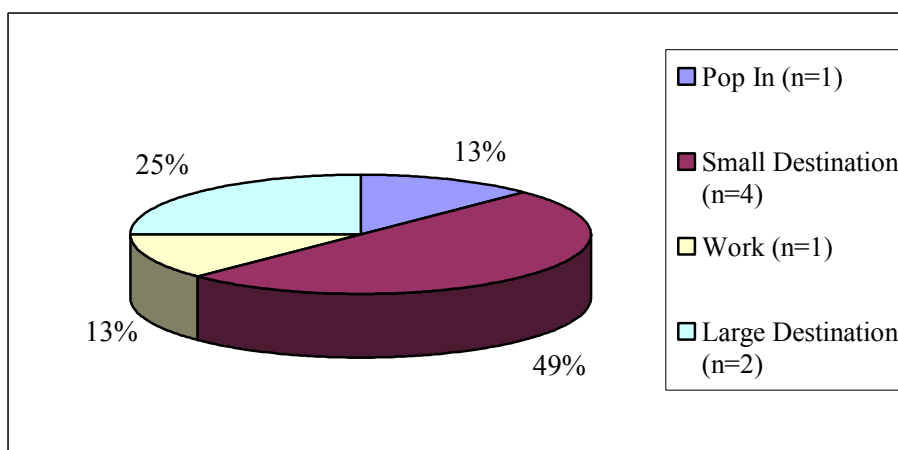
The size of each pharmacy that participated within the local asthma service (n=8) is shown in Figure 9. None of the pharmacies that participated in this activity were the smaller size A or the larger size F.

Figure 9: Distribution of size for the pharmacies participating within the asthma service



The format of each pharmacy that participated within the asthma service (n=8) is shown in Figure 10. No edge of town or health centre pharmacies participated within this local activity.

Figure 10: Distribution of format for the pharmacies participating within the asthma service



4.3 Summary of the data

Over half of the participants taking part in the omnibus survey, asthma audits and customer interviews were female. The biggest group of participants were aged between 18 and 44 years, followed by the 45 to 64 age group, the over 65's, and lastly the under 18's.

Over the four month period between May and August 2003, a total of 2756 asthma scenarios were carried out by the mystery shoppers within 1222 Boots pharmacies. Not all of the pharmacies were assessed on the brief intervention by the mystery customer, and a number of pharmacies were assessed on more than one occasion. The majority of pharmacies assessed were the smaller sized A and B, followed by the middle sized C and D, and lastly the larger sized pharmacies categorised as E and F. The majority of formats assessed were the pop in and small destination, followed by large destination and work, and lastly edge of town and health centre pharmacies. Both the size and format of pharmacies assessed by the mystery customer were consistent with the distribution of pharmacies within Boots at the time of the study.

None of the pharmacies that participated in the local asthma service were the smaller size A or the larger size F. Also, no edge of town or health centre pharmacies participated within this local activity.

The following chapter is the first of the results chapters looking at the factors affecting service delivery within community pharmacy, and explores the perception of the pharmacists' current and future role.

CHAPTER V

Factors affecting the utilisation of community pharmacies and pharmacists’ role in services

5.0 Introduction to the chapter

This chapter of my thesis presents the first set of results looking at the factors affecting service delivery in community pharmacy. In order to understand the multiple factors that could affect service delivery, it is important to firstly understand when and how people currently use community pharmacies, including the type of advice they ask pharmacists for, and what they think about the quality of that advice. It is also important to understand how pharmacists feel about an extended role, and how customers feel about seeking additional advice and help from pharmacists.

The chapter is split into two sections, the first of which looks at the current utilisation of community pharmacies. Previous studies have looked at the utilisation of community pharmacies in depth, and as such, an overview is provided at the start of this section. The results that follow help to support previous findings and are discussed in line with the literature at the end of the first section.

The second section explores customers’ and pharmacists’ views on an extended role. The general literature surrounding these factors has been explored in detail within chapter two, and as such is not repeated within this chapter.

The factors that may be affecting the utilisation of community pharmacies and the pharmacist’s role in services are summarised within each section, and initial conclusions drawn at the end of this chapter. The final discussion and conclusions of all the factors identified within this study are detailed in chapter nine.

SECTION ONE

5.1 The public's utilisation of community pharmacies

There are a number of potential factors that affect the utilisation of community pharmacies. A thorough understanding of current use of pharmacies would provide some insight into potential facilitators and barriers for accessing services in the future.

The RPSGB commissioned a report in 1996 to find out who uses what type of pharmacy, when, for what purpose, and in what location [125]. Although no data was collected on consumer activities relating to general retail use, they did discover that 94% of the population had used a community pharmacy in the last year related to health service provision (prescription, health product purchase, and / or advice). Other studies that have looked at how frequently people visit community pharmacies have found results ranging from 6-23% visiting once a week or more [91, 126], and 45-68% visiting once a month or more [91, 126-128]. The 'Community Pharmacy Research Consortium' commissioned a report on the public's use of community pharmacies as a primary health care resource in 1999 and found that the frequency of use of community pharmacies was high, with people visiting a pharmacy more frequently than their GP [129].

Previous studies have found that women appear to be more frequent visitors to community pharmacies compared to men [125-127, 129]. People with young children [91, 125], those with long term conditions, carers and pregnant women [91] have also been found to be frequent users of the pharmacy. The 1996 RPSGB report also found that respondents appeared to be the main person they visited the pharmacy for, followed by purchases or advice for other members of the immediate family [125].

The choice of pharmacy varies between individuals and can be influenced by a multitude of factors. Jepson et al. found that 45% of the general population used multiple chains as their main pharmacy provider, 32% used independent pharmacies, and 3% small chains [126]. From this same study, they also found 60% of consumers were loyal to one pharmacy [126], whilst Stergachis et al. found that 26% of respondents regularly used two or more pharmacies [130]. For 48% of these respondents, the reason for using multiple pharmacies was their convenience and location. The 1996 RPSGB report found that over half of the respondents questioned (56%) used a single pharmacy for prescriptions and advice, whilst 18% used different

pharmacies [125]. Some consumers choose to go to pharmacists they know for advice, but prefer a more anonymous approach to purchasing medicines, particularly those of a personal nature [90]. Jepson et al. found that consumers using two or more pharmacies based their choice of pharmacy depending on whether there was an urgent need for the goods, or not [126]. Phul et al. [128] used data from the EPS pilot to examine how and why the choice of pharmacy services differed between consumers. They found that those consumers participating in EPS regularly used the same pharmacy, whilst those not participating in EPS were found to be more flexible in their choice. Patient choice was often found to be related to how convenient they perceived the service to be, as well as their personal circumstances.

There have been many studies looking at the reasons why people chose one pharmacy over another, and convenience is cited as the primary reason in the majority of these studies [38, 91, 125-131]. Convenience can mean different things to different people, but is often associated with location such as proximity to home, school, work or shops. Other studies have also found pharmacy choice to be affected by prompt service [127, 128, 130-132], good advice [91, 127, 131], personal service from staff [125, 126, 132], medication being in stock [128, 132], privacy and design of pharmacy [128, 131], customers knowing the pharmacy staff [128, 131], price [130], and the range of consumer goods and services available [131]. Whilst convenience factors appear to be the most important in determining the chosen pharmacy, service related factors become important in creating competitive advantage where a choice of convenient pharmacies exists, as in many urban areas [126].

Abu-Omar et al. [132] conducted a study to explore the existence and nature of the pharmacist and customer relationship between small chain and large multiple pharmacy customers. They found that customers favouring multiple pharmacies gave reasons such as medication being in stock, whilst those using small chains tended to cite personal reasons relating to staff characteristics. Multiple chain pharmacies were thought to be impersonal and were often associated with being money minded. The authors also found that different customers had different needs and even the same customer seemed to have different needs from a pharmacy on different occasions. Sometimes an anonymous service was sought, while at other times, a personal service was preferred. Multiple pharmacies were mainly used for medication supply whilst local pharmacies were viewed as healthcare resources where further services and advice were sought.

The negative drivers that appear to deter people from using certain pharmacies include poor personal service such as inattentive counter assistants [125, 126, 130], and is the reason cited as to why consumers switch pharmacy providers. Other reasons cited for avoidance of certain pharmacies include a slow or busy service [125], lack of stock [125], and the lack of privacy and space in some pharmacies [126, 129].

The 1996 RPSGB report investigated what the public had visited community pharmacies for within the last year and found that 89% had done so to get a prescription dispensed, 81% to purchase a product without advice, 34% to seek specific advice, and 11% to seek general health advice [125]. The study did not investigate non health related visits, so is not representative of usage of large multiple pharmacy chains. Other studies have found between 70-80% of respondents were visiting the pharmacy for a medical reason, and 25-30% for a non medical reason [91, 133]. Previous studies have also found that younger people visiting the pharmacy were more likely to be purchasing non medical related items [91] or non prescription medicines [127]. People who are not high prescription users were also more likely to purchase OTC medicines from pharmacies [126].

In a literature review on the factors influencing the use of community pharmacies as a primary health care resource, the use of the pharmacist as a first port of call for treatment of minor ailments was much lower than the high usage of pharmacies for prescriptions [134]. The literature showed that the first response to minor ailments was often some form of self care, with or without medication. The results of a recent survey commissioned by the DH showed that 95% of the public said that they were confident they had the knowledge and understanding to treat their own minor ailments without seeking medical advice [135]. Previous studies have also found that when individuals did decide to seek professional care, most visited their GP in preference to other healthcare professionals [127, 134].

The pharmacist's area of expertise is perceived to be related to medicines in particular, rather than to health in general [97, 126, 129, 132]. Multiple studies have shown that very few of the general population ask the pharmacist for advice about keeping healthy or general health [97, 98, 125, 126, 129, 133], particularly when it is independent of the function of selling or dispensing medication [133]. The range of symptoms presented in pharmacies is very broad and most are minor and self limiting rather than more serious health problems [134]. Common advice sought includes skin and allergy complaints [98, 126, 136], coughs and colds [98, 126], stomach and

indigestion [98, 126], pain [98, 136], ear and eye [98], and bites and stings [136]. Awareness that pharmacists could give advice on areas such as contraception or conditions such as asthma or diabetes was found to be low [136], and more serious complaints such as chest pain and severe headaches were seen as requiring consultations with the GP [98]. The amount and type of advice that pharmacists give to customers is often determined by the customers' motivation, the type of medication, the customers' abilities, and the time available [137].

When asked why advice would be sought from a pharmacist rather than the GP, McElnay et al. found that 67% of the public indicated that this was because they felt the condition was not serious enough to visit a GP, and 14% indicated that they would visit the pharmacist if they did not have time to wait for a GP appointment [127]. A further 17% cited that they would never ask a pharmacist for advice [127], a finding that has been found in other studies [129]. Reasons cited for not visiting a pharmacy for advice included their own knowledge, previous experience of an illness, and the availability of information from other sources [129]. Rather than using the pharmacist as an alternative to the GP because of their specific expertise, use of pharmacies as an alternative often appears to be closely associated with the view that the GP's time is more important than the pharmacists, and is too valuable to waste [129]. People may also choose to see the pharmacist because the staff are viewed as more helpful, their GP is unsympathetic, or they are dissatisfied with the treatment received from their GP [129]. Easier accessibility in relation to the prompt and immediate advice also suggests that pharmacists are the preferred alternative in some circumstances [134]. Pharmacy customers sometimes use pharmacists as a stepping stone to general practice, taking their advice about the necessity of a visit to their GP [129, 132].

The public's beliefs about the inadequacy of self medication products and perceptions about the pharmacist's role as advice givers may encourage the public to continue to use general practice [134]. The nature of illnesses presented in pharmacies limits the extent to which individuals need pharmacy advice. Many consumers are also informed about their illness based on previous experience or other sources such as family, friends and the media, and as such are pre informed of products before entering the pharmacy. The cost of prescription and OTC products may also affect the usage of community pharmacies [134].

Both age and sex appear to be associated with peoples' attitudes towards symptom advice from the pharmacist. Young people [91, 125] and the elderly [98, 125, 129]

appear less likely to seek advice from the pharmacist, whilst women [98, 125, 134] and those with children [125, 134] appear more likely to ask for advice. Differences between age groups may signal changing public perceptions of the roles of different primary healthcare professionals, and suggests that developments in community pharmacy services may become increasingly more acceptable to the general public [98]. Studies that have looked at satisfaction of those asking for general pharmacy advice have found that 85% [91] to 95% [126] of respondents have found pharmacy advice useful.

The outcome of the 1996 RPSGB report concluded that the influences on community pharmacy utilisation were based on demographics (who used the service), organisation and structure (with location and accessibility encouraging use, and lack of space and privacy discouraging use), attitudes and beliefs of customers and healthcare professionals, need and demand (self limiting nature of minor ailments and availability of other sources of advice), and economic resources available to purchase non prescription medicines [125].

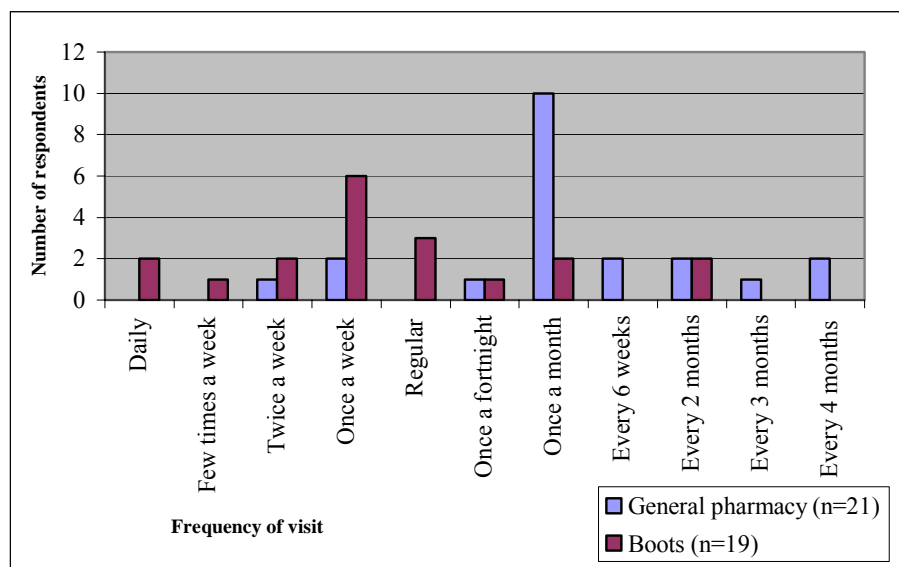
The results presented within this section build on the literature presented on the current utilisation of community pharmacies by the public, including the frequency of visit, choice and use of pharmacy, the type of advice that is sought, and views on the quality of that advice. The results used within this section are taken from the omnibus survey, asthma audits, and customer interviews. From these data, I discuss factors in more detail that may be affecting service delivery within community pharmacies.

5.1.1 Results

5.1.1.1 Frequency of visit to a community pharmacy

Within the customer interviews, respondents were asked how frequently they visited a community pharmacy, and separately, how frequently they visited Boots. Results for both questions are displayed in Figure 11. Two thirds of respondents (66.7%, n=14) visited a community pharmacy once a month or more, of which 47.6% (n=10) visited monthly. Only 14.3% (n=3) of respondents used a community pharmacy once a week or more. When questioned about the frequency of visit to Boots, 89.5% (n=17) visited once a month or more, and 57.9% (n=11) once a week or more. Only 10.5% (n=2) of respondents visited a Boots pharmacy regularly once a month.

Figure 11: Customer interviews “How often do you visit pharmacy stores / Boots in general?”



All of the respondents that visited the pharmacy once a week or more (n=3) were female, and of those that visited once a month or more, 64.3% (n=9) were female. The majority of respondents that visited Boots on a regular basis were also female; 81.8% (n=9) of those that visited once a week or more, and 76.5% (n=13) of those that visited once a month or more.

5.1.1.2 Choice of community pharmacy

As part of the customer interviews, respondents were asked which community pharmacy they tended to use the most. Out of a total of 31 respondents, 61.3% (n=19) used Boots as their main pharmacy, 22.6% (n=7) used a combination of pharmacies, 9.7% (n=3) used independent pharmacies, and 6.4% (n=2) used other chain pharmacies.

Of those respondents that used Boots as their main pharmacy, 36.8% (n=7) seemed to do so out of loyalty to Boots. The use of other pharmacies was very rare in this group, as respondents would go out of their way to use Boots as their pharmacy choice on the majority of occasions;

C26 *“Invariably use Boots, simply because it’s a household name: I’ve known them since I was a child.”*

Over a third of respondents, 36.8% (n=7), used Boots as their main pharmacy due to convenience. These pharmacies tended to be located on bus routes, or near to where people worked;

C17 *“Every month I go to the pharmacist, Canterbury Boots.....It’s where I work so I can pop in there on my way to work.”*

Two of the respondents tended to use Boots because of the convenience that the repeat prescription service offered;

C25 *“I tend to use Boots because I can put the prescription in at the surgery and after I finish work I can put it in at Boots and it’s waiting for me a couple of days later. Boots is the main in town.”*

Two of the respondents also liked the convenience of the location, and used the opportunity to link shopping with the collection of prescriptions. One of these respondents’ also liked Boots because of the speed of service;

C19 *“I tend to go to Boots because I live just off the town centre and Boots is in the town centre. There is a closer one to my surgery, but it’s very slow. There are quite a few closer to me but I tend to go to Boots just because it’s quick or if I can go and pop my prescription in and then go and do some shopping, kill two birds with one stone I guess really.”*

Boots was the pharmacy of choice for 21.1% (n=4) of respondents because of the level of service offered. Boots was seen to offer a higher quality service than other providers, including better trained staff;

C24 *“I always go to Boots. If I need a prescription I would always go to Boots, even if there was a Superdrug with a pharmacy or a supermarket with a pharmacy all in a row I would always go to Boots. I think you’re guaranteed they’ll have the product in you want, pharmacy wise, and then also I think because I feel confident that the person that’s going to be there is going to have the knowledge that you’re going to need if you ask a quick question or say something, they’re going to be able to help you, whereas if you go to a supermarket they will have some form of formal training but I don’t feel it’s as thorough you’d get through a Boots pharmacy. Maybe it’s just a recognised name, somewhere you can rely on.”*

Some of the respondents had got to know the staff within the pharmacies, and liked going to the same place. There was also a perception that Boots gave you the top brand drugs to fulfil prescriptions.

A couple of the respondents had regularly received poor service from another pharmacy provider, and as a result had switched to Boots;

C25 *“I didn’t have very good service originally when I was picking it up from the doctors and going across to the chemist across the street and I went one time, it was quite late but they weren’t to close for another 15 minutes and they’d locked their doors. And another time I’d put it in at the doctors and they were supposed to be at the chemists and I went to the chemists and it turned out it was at the doctors and I was to-ing and fro-ing and that got a bit irritating. Whereas one time when I went to put the certificate in at the surgery to be delivered to Boots I went to pick it up at Boots and they couldn’t find it and it turned out they’d misplaced it. Later that evening they actually sent somebody to deliver it to my door when they’d found it and I was impressed.”*

One of the respondents used Boots as their main pharmacy provider because they felt that they had no other choice. They believed that Boots was responsible for the closure of some of the independent pharmacies within their area;

C2 *“.....most of the Independents in the South East have been kicked out by Boots”.
“I work for a big corporation myself; that doesn’t mean I approve of what they do.”*

Of the total respondents questioned, 22.6% (n=7) used a combination of pharmacies to dispense their prescriptions. Although respondents tended to use the most convenient pharmacy for them at that particular time, they tended to split their prescriptions between two places. Over half of these respondents, 57.1% (n=4), tended to use either Boots or an independent pharmacy;

C13 *“I go into Boots a few times a week – probably go to the pharmacists about once a week for things like painkillers. And then of course I have to pick up my prescription every month and I tend to split those between my local chemist and Boots in town. It just depends which one I’m nearer to when I have my prescription.”*

The remaining 42.9% (n=3) of respondents tended to split their prescriptions between Boots and a supermarket pharmacy;

C18 “I go to Boots if I’m down town or Sainsburys when I do my weekly shop.”

A total of 9.7% (n=3) of all respondents questioned regularly used an independent pharmacy to dispense their prescriptions. Individual pharmacists working within independent pharmacies appeared to be well known to some respondents, and appeared to have been working within that community for some length of time;

C13 *“I must admit I like my local guy. It’s just the fact I guess that I know him quite well now and he’s helped me out of quite a few times.....over the years he’s answered quite a few of my concerns.”*

Only 6.4% (n=2) of respondents used other pharmacy chains on a regular basis. One of the respondents used ‘Tesco’s’ as their pharmacy provider, as it was convenient for them to pick up their prescription from the GP practice on route to their weekly shop. The mother of another respondent managed her prescription refills, and regularly used ‘Lloyds’ as the pharmacy provider.

5.1.1.3 Use of the community pharmacy

Within the customer interviews respondents were asked what they tended to use the pharmacy for. A total of 16 respondents answered this question, of which 37.5% (n=6) used their pharmacy for prescriptions and advice. Most of these respondents tended to use the pharmacy on a regular basis for prescriptions, and only asked for advice occasionally, as and when they needed it;

C10 *“...I’ve asked her about products that they used to have and they don’t have any more and could she recommend something....”*

One particular respondent (C2) used national chains to get their prescriptions dispensed, but would always go to an independent pharmacy for advice.

The remaining 62.5% (n=10) of respondents used their pharmacy to dispense prescriptions or to buy medicines such as paracetamol. Most of these respondents did not seem to visit a pharmacy on a regular basis, other than for prescriptions;

C34 *“Like I say if I need something in particular I’ll go in there for it but I don’t go in there specifically for any other particular product. I don’t use pharmacies a whole lot. Because I’m asthmatic I have to stick to paracetamol as a pain killer so that’s the only thing I ever have, I can’t go round messing about with other things. I’ve got a two*

year old boy which you can probably hear in the background, he needs things like Calpol etc. and I'd go in for that."

A third of these particular respondents (n=3) mentioned specifically that they did not visit the pharmacy for advice;

C16 *"Just go to collect prescriptions not for advice."*

Within the customer interviews, 23 respondents were asked what they tended to visit Boots for. A total of 69.6% (n=16) of respondents shopped in Boots on a regular basis, often weekly, for toiletries and make-up;

C11 *"I go in for makeup, although I'm 74 I still like my eye shadow and my mascara and the shampoos and my husband colours my hair for me, so I just chat away to them."*

C12 *"I guess I'm in Boots twice a week as we have one fairly locally and with a baby there's always things I need. I was in yesterday for some sudocrem for a rash he's developed."*

One particular respondent was a regular visitor to the Boots pharmacy, but not specifically for their asthma;

C31 *"Visit Boots for other things all the time, but not for my asthma. Buy everything and anything, mainly toiletries also do photo processing and occasionally I even buy food at lunchtimes."*

A further 21.7% (n=5) of respondents said that they visited Boots for their prescriptions and general toiletries;

C10 *"Well I have to drop off my prescription once a fortnight and then if I need some antibiotics. Yes I use them for skin products or makeup. On average about twice a week."*

C32 *"Don't go to other pharmacies but I go into Boots quite often for repeat prescriptions, but I also buy other things in Boots like toiletries or make up, so I go in a lot for them more than the pharmacy counter."*

Only 8.7% (n=2) of respondents said that they went to Boots for prescriptions only. One particular respondent found that Boots was quite expensive for general toiletries;

- C25 *“It depends if sometimes I’m passing through and I need something it’s handy but not as much as I used to. I find that there’s cheaper things. It’s mainly the pharmacy.”*

5.1.1.4 Type of advice accessed from community pharmacies

Within the customer interviews, respondents were asked what type of advice they would normally ask the pharmacist about. Of the fifteen respondents who were asked this question, 20.0% (n=3) stated they would not generally ask the pharmacist for advice about their asthma, or anything else. The remaining 80.0% (n=12) of respondents had spoken to the pharmacist for advice in the past, and would carry on doing so. There was a general view amongst respondents that they would speak to the pharmacist about minor ailments and queries on medication. For anything more serious than this, then most respondents would speak directly to their GP. One particular respondent had been brought up to always ask the pharmacist for advice first before going to the GP;

- C13 *“I do sometimes if I think it’s quite minor and not worth troubling the doctor over. Like if I have a rash or something – I’d speak to the pharmacist first and if he recommends I see the doctor then I will make an appointment. But I was brought up to seek the pharmacist’s advice first – it’s something my mum always did. She even used to say that the pharmacist knew more than the doctors as they kept more up to date and were often younger and fresher out of college.”*

Pharmacists were also seen to be easily accessible, especially for unplanned care and advice;

- C12 *“I asked them about Daniel’s rash and they recommended the sudocrem. I could possibly think of loads of instances like that. It’s just so much easier than going to the doctors and trying to get an appointment.”*

Pharmacists were perceived as having expert knowledge in medication and its use, and the majority of advice seemed to centre on this. One respondent in particular stated they would always speak to the pharmacist before taking any medication;

- C14 *“Well they would probably tell you what benefit you would get from whatever it is you’re taking. Or the effect that it would have on you. What you should come to expect from it. I mean, when you choose whatever tablets to take you always have a reaction or something. You know one road or the other. They give you a prescription or a tablet to cure something and they can help advise you. They can just let you know what might happen.”*

Only a couple of the respondents had spoken to the pharmacist about inhaler use, but more commonly, many of the respondents had sought advice on OTC remedies;

C24 *“I have done previously, nothing to do with asthma, something else, but when I was poorly and bought some medication over the counter and just asked for some advice, the pharmacist spoke to me.”*

The role of giving advice was seen as something that pharmacists had always done, and were able to do so because of their good breadth of knowledge on minor ailments and conditions, from “*crabs to heart disease*” (C2).

Respondents within the customer interviews were asked what role Boots currently played within their asthma management, of which a total of nine respondents answered. Five of the respondents had regularly asked the Boots pharmacist for advice on their asthma, in particular on concurrent medication use;

C25 *“A couple of years ago I was buying something and I did get some extra information. I tell you what also when you’re buying something, I think I had a cold and I was getting some information, they do check when they’re selling it to you ‘Do you have asthma?’ It was Ibuprofen, they wouldn’t sell it to me because I had asthma and she was right because one time I had a headache and I took one and I really got short of breath quite quickly. Whereas you know at Boots they will check that it’s suitable for you.”*

A couple of the respondents felt that the Boots staff were helpful and gave useful advice. If they had any queries regarding their asthma then they would go to Boots pharmacists for advice;

C18 *“Yes if I’d had any queries they’re always quite useful.”*

One particular respondent had received advice from the pharmacist in the past which they had found quite useful, but stated they would always mention this advice to the GP next time they saw them;

C29 *“As far as I was concerned, as long as it didn’t clash with anything that my doctor did then it was perfectly ok. Obviously I mentioned it to the doctor next time I saw him.”*

Boots pharmacy role within asthma management was seen as nothing more than a convenient place to collect prescriptions for three of the respondents, although one of

them stated that they had read the odd leaflet from Boots. Consistent with his hostility towards national chains and Boots, another respondent had a particularly reductive view about Boots role in his asthma management;

C2 *“It supplies the drugs I need. That’s it.”*

One respondent had previously used Boots to help manage the collection of her asthma prescriptions when she used to work in the city, but due to parking restrictions that had been implemented, she no longer found Boots convenient for her asthma prescriptions;

C12 *“I would have to find somewhere to park and rush in so I only go to Boots now when I go shopping in town with my Mum. That way she can drop me off with Daniel and then go and park because you can’t park easily in the centre anymore since they introduced the new restrictions.”*

Boots role in their asthma management was limited for one respondent because of the regular use of an independent pharmacy near their GP practice.

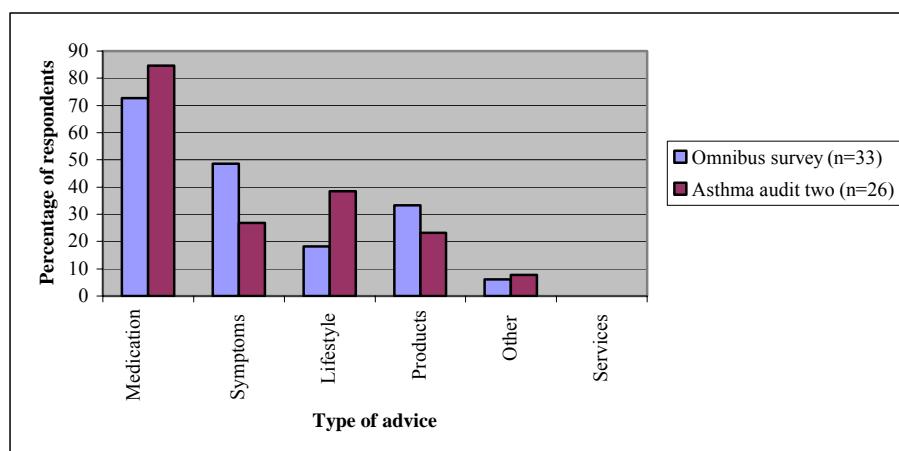
As part of both the omnibus survey and asthma audit, respondents were asked whether they had asked the pharmacist for advice relating to their asthma within the last few months. The results from both sets of data are shown in Table 22. Within the omnibus data, 12.9% (n=33) of respondents had spoken to the pharmacist about their asthma within the last six months, and 29.5% (n=26) of respondents participating within the asthma audit had spoken to a Boots pharmacist about their asthma in the last three months.

Table 22: Response to questions within the omnibus and asthma audit two data as to whether respondents had recently asked for advice on asthma from the pharmacist

Data source	Sample	Question	Percentage response	
			Yes	No
Omnibus survey	255	Have you / they asked the pharmacist for advice related to you / your child’s / their asthma in the last six months?	12.9	87.1
Asthma audit two	88	Have you spoken to a Boots pharmacist about your asthma in the last three months?	29.5	70.5

Those respondents within both the omnibus survey and the second asthma audit, who had asked pharmacists for advice about their asthma within the last few months, were also asked a further question about the type of advice that they had sought help on, the results of which are shown in Figure 12. Respondents were able to indicate a positive response to more than one answer, and many had asked pharmacists for advice on more than one subject area. Within both sets of data, respondents had most frequently asked pharmacists for advice on medication, 84.6% (n=22) within the asthma audit and 72.7% (n=24) within the omnibus data. Within the omnibus survey, the second most frequent advice had been about symptoms, 48.5% (n=16), followed by products, 33.3% (n=11), and then lifestyle, 18.2% (n=6). Within the asthma audit the second most frequently asked advice had been about lifestyle, 38.4% (n=10), followed by symptoms, 26.9% (n=7), and then products, 23.1% (n=6). Within both sets of data two respondents had asked about other topics, 6.1% within the omnibus data and 7.7% within the asthma audit, and no respondents had asked about services.

Figure 12: Omnibus data and asthma audit two; if they had asked the pharmacist for advice on their asthma within the last three / six months, “What was the advice about?”



5.1.1.5 Quality of advice accessed from community pharmacies

Within the customer interviews some of the respondents were asked how they rated the quality of information that they had been given by pharmacists generally in the past. Out of the six respondents questioned, all were very positive about the information and advice that they had received from pharmacists in the past. One particular respondent recalled positive experiences with pharmacists, and thought that Boots and independent pharmacists were equally as good at advising them on asthma. Another favoured independent pharmacists, as they believed they offered a better service, and advised them of the best product as apposed to selling own labels. In

contrast, other respondents preferred multiples such as Boots as they were able to recommend cheaper alternatives;

C13 *“They have always helped me whenever I’ve needed it and they can recommend cheaper versions of prescription products which is always good.”*

Respondents’ felt that the pharmacist accessibility allowed them to ask for advice fairly easily, of which the responses they had received in the past had always been very helpful;

C10 *“They’re very helpful; they always have time for you if you have a question....”*

When talking about the quality of pharmacists’ advice, three of the respondents all seemed to refer to a regular pharmacy that they visited. One of these respondents talked about a particular experience where they had asked the pharmacist for advice about their granddaughter. Although the pharmacist was unable to supply anything, this respondent was impressed with the advice given;

C11 *“...I’ve had my granddaughter in and she gets cystitis. So I went to the chemist and she said that she couldn’t do anything as she was too young. You can do that here they’re very good. They’ll fetch your prescriptions from the surgery they’re brilliant.....”*

A total of thirteen respondents within the customer interviews were questioned on their view of Boots, and the quality of advice that they received. The majority of respondents, 84.6% (n=11), had an extremely positive view of the company. Some of the comments received were based on the company’s history and reputation;

C1 *“Reputable, helpful, I trust them.....Been around for donkey’s years.”*

Other respondents believed that they had got to know the staff within the pharmacies over the years, and in some circumstances had grown up with them. These respondents felt that the staff were well trained and approachable;

C11 *“Well I know most of them that work there, my daughters have grown up with most of the people that work in there we’re on first name terms. I’ve gone through my married life with them.”*

C28 *“But I like Boots because people are approachable in there and they’re kind of knowledgeable if you ask anything.”*

C1 *“They have people who are trained to talk to you, and staff you know and can talk to.”*

There was also a feeling within this group that the staff took an interest in the customers. For one respondent, the pharmacist always came over to find out how they were;

C29 *“I think it’s great, absolutely great”*

A couple of the respondents felt that Boots had better trained pharmacists and staff who were more knowledgeable than other pharmacies. One respondent stated that they would use the Boots pharmacy more frequently if it was closer to them;

C13 *“Well I think they might have more knowledge. You just feel they’re a bit more up to date but I could be wrong. I’ve asked them about things and they always seem to be able to help. It’s just I don’t go there that often so if they were closer I would probably use them more.”*

Two of the respondents felt that Boots was a good place to go to for advice, particularly when you were looking for that ‘bit extra’. In particular, one respondent felt that Boots was good at referring you to a GP when appropriate;

C25 *“You do tend to think of Boots more as a place where you can ask for advice, even when you have other minor ailments that you don’t feel like going to the doctor about, that you can live with, but you might get more advice from a pharmacist. Sometimes going down the doctors it’s not worth it. But there’s also all these other places that don’t have pharmacy counters and just sell a lot of the same things as Boots, you just think oh I’ll buy my certain things that are set up there but if you were looking for a bit extra advice, definitely I think of Boots.”*

One particular respondent felt that Boots pharmacists were good at telling you about more effective and cheaper alternatives for medicines;

C12 *“Plus they can sometimes tell you about better brands that might be more effective and possibly cheaper. I know my husband now uses some different brands for his hayfever due to something the pharmacists in Boots said.”*

A couple of the respondents felt that Boots was very convenient for them and stocked most of the brands that they liked. Another respondent had very positive experiences of Boots and always recommended them to others;

C17 *“I recommend Boots to others often anyway, as it’s so good.”*

Only 15.4% (n=2) of respondents had a negative view about Boots. One particular respondent had visited Boots in the past but was reluctant to visit at the time of the interview as they felt the pharmacies were too warm, which worsened their asthma. Another respondent was negative about national chain pharmacies, in particular Boots. He recalled an incident where an assistant had given him bad advice for his eczema, which had left him feeling very sceptical about receiving any further advice from national chains.

Within the omnibus survey, any respondent asking the pharmacist for advice on asthma within the last six months was asked a further question about the quality of that advice. The results from this additional question can be found in Table 23. The majority of respondents, 84.9% (n=28), rated the asthma advice from the pharmacist as very good or excellent. No respondents rated the advice received as poor.

Table 23: Omnibus data “On a scale of one to five, where one is very poor and five is excellent, how would you / they rate the quality of information you / they were given by the pharmacist?” (Those who responded yes at Table 22, n=33)

Quality of advice	Percentage distribution
1 (poor)	0.0
2	0.0
3	6.1
4	45.5
5 (excellent)	39.4
Don’t know	9.1

As part of the second asthma audit, any respondent who had asked the Boots pharmacist for advice on their asthma within the last three months were asked a further question about how useful they found that advice. The results from this additional question can be found in Table 24. The majority of respondents, 91.7% (n=22), rated the advice as very useful or useful. No single respondent rated the advice poorly.

Table 24: Asthma audit two “On a scale of one to five, how useful did they find the information that the pharmacist gave them?” (one not very useful, five very useful)
(Those who responded yes at Table 22, n=24)

Score	Percentage distribution
1 (not very useful)	0.0
2	0.0
3	8.3
4	25.0
5 (very useful)	66.7

5.1.2 Discussion of the results

The results presented within this section build on the existing literature of the current utilisation of community pharmacies by the public, including the frequency of visit, choice and use of pharmacy, type of advice that is sought, and views on the quality of that advice. From these data, I discuss factors that may be affecting service delivery within community pharmacies.

The results presented within this section on how frequently people visit the pharmacy for general use support that found within previous studies, where between 45 – 68% of people visit once a month or more [91, 126-128]. Boots is a large retailer that is as renowned for selling its health and beauty products, as is its pharmacy heritage. Many people visit Boots to purchase non medical related products on a daily basis, so it is not surprising to learn that of those questioned, nine out of ten visited once a month or more, and six out of ten, once a week or more. Some of the respondents questioned as part of this study actually came into Boots on a daily basis to purchase lunchtime products. Although such respondents are not visiting the pharmacy area, there seems to be an opportunity to target key messages at them whilst they are shopping within other parts of the store. Consideration does however need to be given as to how receptive consumers would be in receiving healthcare messages whilst shopping for general products.

Frequent visitors to both the general pharmacy and Boots were predominantly female, as found within other studies [125-127, 129]. Even so, the percentage of men visiting the pharmacy once a month or more was surprisingly high within these data, 36% for general pharmacy, and 24% for Boots. This is in contrast with other studies which have looked at the use of pharmacies by men, and found that they were used

infrequently [129]. Visitors to the community pharmacy may also be acting on behalf of other potential purchasers of health services, such as carer, partner, or parent, as demonstrated by a number of respondents within these studies. Opportunities exist to target wider messages to this audience aimed at not only the patient, but also the carer, partner, or parent for further dissemination.

Due to the fact that these respondents were recruited for interview whilst visiting a Boots pharmacy, it is not surprising to discover that the majority of respondents (61%) used Boots as their main pharmacy provider. This was not the case with all of the respondents however, as 10% used an independent pharmacy as their main provider, and 6% used other pharmacy chain providers. A previous study within the general population found that 45% used multiple chains as their main pharmacy provider, 32% independent pharmacies, and 3% small chains [126]. Although due to the biased nature of recruitment within this study, these data are not comparable, it is useful to highlight the differences in usage. What is also interesting to note is that although respondents were recruited whilst in Boots, 16% did not use Boots as their main pharmacy provider.

From these data, we can see that over three quarters of respondents, (77%), regularly used one pharmacy, whilst 23% used a combination of pharmacies for their needs. Other studies have found 60% of consumers loyal to one pharmacy [126], and 26% respondents regularly using two or more pharmacies [130]. Consumers have a variety of reasons for using a particular pharmacy, which although often due to location and convenience rather than the services provided and the personal relationship with the staff, could vary depending on the service they require. Some may choose to go to pharmacists they know for advice, but prefer a more anonymous approach to purchasing medicines, as found in a previous study [90]. Another study also found that the choice of pharmacy depended on whether there was an urgent need for the goods, or not [126]. The usage of multiple pharmacies has implications for any future services including the monitoring of long term conditions and EPS, although access to central patient medication records would help facilitate this. The use of pharmacies for different purposes rejects the idea of ‘one pharmacy suits all’, but supports different types of pharmacies and services to suit different needs of the population.

The main reasons that respondents chose Boots as their pharmacy provider were because of loyalty (37%), convenience (37%), and the quality of staff and service (21%). There have been many studies looking at the reasons why people chose one

pharmacy over another, and convenience is cited as the primary reason in the majority of these studies [38, 91, 125-131]. Convenience can mean different things to different people, but is often associated with proximity to home, school, work or shops. Within this study, those respondents choosing other chain pharmacies mainly did so out of convenience, whilst those visiting independent pharmacies did so primarily because of the personal relationship with the staff and the level of service offered. These differences underlying the choice between independent pharmacies and multiples has also been noted in other studies. Abu-Omar et al. found that consumers favouring multiple pharmacies gave reasons such as medication being in stock, whilst those using small chains tended to cite personal reasons relating to staff characteristics [132].

One particular respondent had received poor service from another pharmacy provider so had switched to Boots. This was the main reason cited within other studies [125, 126, 130] as to why consumers switched pharmacy providers. Although unhappy with receiving pharmacy services from Boots, another respondent felt that they were unable to switch providers due to lack of choice. This, they felt, was due to the large multiples putting independent pharmacies out of business.

Approximately two thirds of respondents questioned used the pharmacy for prescriptions and to purchase OTC medicines, with the remaining third using the pharmacy regularly for prescriptions and advice. Of those that used the pharmacy for advice, they were also regular prescription users, findings that have been found in a previous study [91]. The literature includes studies where the percentage of people asking the pharmacist for advice varies enormously, and includes values such as 5.5% [129], 15% [91], and 73% [98]. These studies have also found that whilst the elderly are frequent users of the prescription service, they are the least likely to use pharmacies for advice [98, 129]. Within both groups of those that used the pharmacy for advice, and those that did not, there seemed to be wide distribution of age ranges, 23-67, and 17-55 respectively. There was also representation of males and females within both groups.

Three of the people interviewed stated that they would never use the pharmacy for advice. Previous studies have also found that there is a number of people within the population that would not go to the pharmacist for advice, for reasons such as personal knowledge, previous experience of illness, and availability of information from other sources [127, 129].

Those respondents who came into the pharmacy to purchase medicines, tended to do so as and when required. Respondents appeared to be quite knowledgeable about what they needed, and would tend to ask for medicines by name, rather than seeking advice. A study by Morris et al. looking at the use of questioning within pharmacies when purchasing OTC medicines, found that the majority of people viewed decisions about medicine purchases as their sole responsibility [90]. With this in mind, there appears to be an increasing tendency within the general population to self treat. As within this study, Jepson et al. also found that people who were not high prescription users were more likely to purchase OTC medicines from pharmacies [126].

One particular respondent stated that they used national chains for their prescriptions and an independent pharmacy for advice. This has also been found within a study looking at differences between customers using multiple and small chain pharmacies. Abu-Omar et al. found that customers used multiple pharmacies for medicines supply, and smaller pharmacies for advice, and that several of the customers of large multiple pharmacies had their own different pharmacist whom they used for more personal advice and counselling [132].

Seven out of ten of the respondents questioned regularly visited a Boots pharmacy to purchase non medical related products such as toiletries and make up. For the remaining respondents, visits to Boots were mainly for prescriptions, medicines, or general purchases. Within the literature, studies have quoted between 70-80% of respondents were visiting a pharmacy for a medical reason, and 25-30% for a non medical reason [91, 133]. Due to the vast array of health and beauty products that Boots sells, many customer visits are not in relation to the purchase of medical related products, but more general sales. The fact that a pharmacy is part of a shop may make it more user friendly and so encourage people to use it who might be put off by a more formal establishment [68].

Within the omnibus data, 13% respondents had spoken to a pharmacist about their asthma within the last six months, and within the asthma audit, 30% had spoken to a Boots pharmacist within the last three months. The omnibus survey took place within the general population, and is a representative figure of standard activity. As the asthma audit results were collected as part of the second audit, one would expect the percentage to be greater than the standard collected within the omnibus survey, due to the increased asthma activity within these pharmacies.

Within both the asthma audit and omnibus data, the majority of respondents had spoken to the pharmacist about their asthma within the last three to six months regarding medication queries. Just under a half of respondents within the omnibus data had asked for advice on symptoms, and a third on products. Within the asthma audit, over a third of respondents had asked for advice on lifestyle from the pharmacist. The pharmacists and staff within these Boots pharmacies had been encouraging customers to talk to them about their asthma over this period, which could have had an impact on the level of lifestyle advice sought. Only a quarter of respondents who participated within the asthma audit had asked for advice on symptoms and products within the last three months. Those respondents within the customer interviews who had spoken to the pharmacist in the past had done so for advice on minor ailments or medication queries. Pharmacists were seen to be experts on medication and its use, and were an easily accessible healthcare resource. Previous studies have found that the pharmacist's role is viewed as a medication expert [126, 129, 132], and as an advisor on minor ailments [132]. A review of the literature [134] concluded that pharmacies are used by the public for advice about medicines and minor ailments in particular. For anything that was perceived to be more serious than a minor ailment or medication query, then respondents would seek advice directly from their GP, as also found within a previous study [98]. When unsure of the seriousness of a problem, some respondents would seek reassurance and advice from the pharmacist about whether or not to go to their GP. The role of the pharmacist as a stepping stone to general practice has also been found in other studies [129, 132].

Although lifestyle advice was mentioned in both the omnibus survey and asthma audit, not one respondent within the customer interviews mentioned going to the pharmacist for general health advice. Previous studies have also found that very few people have asked the pharmacist for general health advice [97, 98, 125, 126, 129, 133]. As such, the level of lifestyle advice within the omnibus survey and asthma audit were higher than expected. Given the pharmacists were perceived as experts on medication within the customer interviews, it is surprising to learn that very few had spoken to the pharmacist about inhaler use, as many of the queries had been regarding OTC medication. This was consistent with the responses regarding the role that Boots played within their asthma management, as the majority of those respondents questioned on this had spoken to the Boots pharmacist for advice on their asthma in the past, particularly around concurrent medication use, and not inhaler technique. Unfortunately, no further data was obtained from the omnibus survey or asthma audits

to find out whether the queries on medication were about their inhaler use, or concurrent OTC medication.

One particular respondent stated they would seek advice from the pharmacist on their asthma, but would always repeat this advice to their GP next time they were visiting them. They seemed to perceive the pharmacist's role as supporting the GP, and hence the respondent would never do anything without the GP's final say so. Some respondents appeared to be unsure of the role of the pharmacist and were not confident in their expertise on minor ailments and medication use, and as such did not access them for advice.

The general feeling amongst those respondents that were questioned about the quality of advice they had received from pharmacists in the past was extremely positive. The majority of respondents appeared to seek out particular pharmacists for advice. Pharmacies were seen as somewhere to access advice, without necessarily having to purchase products. The majority of respondents within both the omnibus and asthma audit, who had spoken to the pharmacist for advice about their asthma within the last three to six months, also rated this advice as very good or excellent. Other studies have looked at satisfaction of those asking for general pharmacy advice, and have found 85% [91] to 95% [126] have found this advice useful. Not one single respondent rated the advice poorly. As part of the omnibus survey, 9% rated the advice as 'don't know'. This is likely to have been respondents who were answering the questions on behalf of their partner with asthma. Once consumers accessed advice from the pharmacist, the majority appeared to be pleased with the quality of advice received. Those that had received good advice in the past, tended to access the pharmacist again for further advice.

5.1.3 Summary of section one

Most of these data presented within this section support and further extend work that has been conducted within previous studies and reviews. Potential facilitators and barriers that have been identified within this section are summarised in Table 25.

Table 25: Potential factors affecting service delivery identified from the publics' current utilisation of community pharmacies

	Facilitators	Barriers
Frequency of visit	<ul style="list-style-type: none"> High frequency of visit to pharmacy for general purchases 	<ul style="list-style-type: none"> Poor frequency of visit to pharmacy for health related reasons
Choice of pharmacy	<ul style="list-style-type: none"> Use of different types of pharmacies for different services 	<ul style="list-style-type: none"> Poor loyalty to one pharmacy – requirement for access to centralised medication records
Pharmacy use	<ul style="list-style-type: none"> Wider target audience for dissemination of advice (patient, carer, parent, partner) Good use of pharmacy for general purchases 	<ul style="list-style-type: none"> Poor use of pharmacy for general health Expectations when in pharmacy depending on shopping mode for health or general purchases, and receptiveness for advice
Type of advice	<ul style="list-style-type: none"> Good use of pharmacy for medication related queries 	<ul style="list-style-type: none"> Poor use of pharmacy for general health queries Perceived limitations of pharmacy advice Poor perception of the role of the pharmacist compared to other healthcare professionals
Quality of advice	<ul style="list-style-type: none"> Previous good experience of pharmacist advice 	<ul style="list-style-type: none"> Previous poor experience of pharmacist advice

SECTION TWO

5.2 Views on the extended role of the community pharmacist

As previously discussed, changes within Government legislation and policy within the health services environment are opening up a number of opportunities for community pharmacists to get more involved in delivering NHS services that promote self care and improve the management of long term conditions. Legislative changes that have occurred to help community pharmacists extend their role include the extension of pharmacist prescribing responsibilities [49] and supervision requirements [50]. The new community pharmacy contract [37] should also help as a vehicle for funding and remuneration for elements of these extended roles. This changing environment in health services policy should help to facilitate the extended role of the community pharmacist in the delivery of services.

This section of the chapter focuses on what pharmacists and consumers think about the extended pharmacist role. Despite the changes in the health service environment to open up a number of opportunities for community pharmacy, pharmacists will still need to embrace their new role in order to deliver the services that are expected of them. Likewise, there must be a demand and need for consumers to access any new services delivered by community pharmacists.

A study by Varnish [138] explored the extent to which consumers viewed pharmacy as a fully fledged profession that commanded and fulfilled a legitimate role in the primary healthcare team. The results from the focus groups suggested that pharmacy was held in high esteem by its customers and continued to be seen as a prestigious profession. Pharmacists were seen to have expert knowledge regarding drugs, although the GP was seen to be superior and ultimately responsible for patients' health. Pharmacists were perceived to be answerable to the GP and had little responsibility for the choice of medication. Varnish concluded that these attitudes may have implications for pharmacists desire to extend the services that were offered. A survey by Williamson et al. [98] found that there was considerable public support for an extended role for pharmacists, in particular providing more information on prescription medicines, and the opportunity to discuss minor symptoms. There was less support for discussing health, and cost was found to be the major obstacle in the acceptability of diagnostic testing. In contrast, a separate study by Jepson et al. [126]

found that most consumers expressed an interest in extended diagnostic services in community pharmacies.

Following their literature review, Hassell et al. [134] concluded that if demand in primary care was to be better managed with more care channelled towards pharmacy, then a shift in consumer understanding and expectations about pharmacists' expertise was needed before larger numbers of the public begin to utilise the pharmacy as a first port of call. A number of recent surveys [65, 135] have highlighted an increased public demand for pharmacists to have a more active role in providing health care. In a survey commissioned by the DH [135], 13% of respondents said that they currently used the pharmacist as a source of information on self care, but this figure rose to 21% for respondents wishing to use them as an information source in the future. During the consultation exercise for the white paper 'Our health, our care, our say' [65], the public said that *"they want to see a wider range of professionals – particularly practice and community nurses and pharmacists – involved in health improvement, disease prevention and the promotion of independence"*. In particular, they wanted pharmacists to have an increased role in providing support, information and care.

Despite these surveys, there is still confusion as to where the public should go when they are feeling unwell [139]. A recent survey reported that although 76% of people wanted to choose what health service to use when they were unwell, they often used the wrong service due to confusion over where to go to access different health services [139]. This problem was highlighted not only for emergency services, but also for routine problems as 13% of people in the study stated that they would have difficulty knowing where to go for routine problems such as a chesty cough. The study concluded that people were still lacking advice on how to cope with minor health problems and how to use NHS services properly.

The effect of public opinion on the use of services provided by pharmacists has been discussed in previous studies looking at the factors affecting service delivery within community pharmacy. Improving the public's attitude and perception towards pharmacy services has been found to be a facilitator in service delivery [3, 12, 17, 18, 23, 30, 32]. Similarly, low patient and public expectation of the pharmacy profession has been found to be a barrier in service delivery [3, 7, 16, 18, 21, 26, 32].

Pharmacists' opinions towards service delivery are critical to delivering the vision of the extended role. Previous studies looking at the motivators for pharmacists providing

services have found the desire for professional satisfaction and fulfilment to be important [14, 22, 28], alongside business reasons [14, 16, 22], the need to improve the public and GPs perception of pharmacists [16, 28], and a professional desire to provide healthcare to the public [16, 22]. The attitudes of pharmacists are equally important and have been identified as both facilitators [5, 17-19, 30, 32] and barriers [1, 5, 16, 29, 32] in service delivery. In addition pharmacist characteristics [27, 31], intention to provide services [17, 19], perception of ease of delivering services [9, 17, 19], experience [16, 17, 19, 24], confidence [9, 19, 30], and willingness to provide services [31] all act as facilitators for service delivery. Lack of confidence [5, 8, 19, 25], lack of willingness [31], low sense of enjoyment [19], perceived difficulty in carrying out services [19], and lack of pharmacist motivation [8] have all been found to be barriers for service delivery. Further details of all these studies are provided within the literature review in chapter two, and as such are not repeated here.

The results presented within this section build on the current research available to provide views of pharmacists on their changing role, their confidence in service delivery, and their views on services. The final results presented are based on the views of customers accessing additional advice and services from community pharmacies. The results used within this chapter are taken from both the customer and pharmacist interviews. From these results, potential motivators, facilitators and barriers for service delivery are discussed at the end of this section.

5.2.1 Results

5.2.1.1 Views of pharmacists on their changing role

During the interviews, eight of the pharmacists were questioned about how they saw their role changing. Comments were made about the benefits of the accessibility of the pharmacist, particularly for advice on minor ailments and general health;

P8 *“I’ve always had a strong feeling that the pharmacist is probably the most accessible member of the primary healthcare team. I suppose that means you’re on show, you’re at the front and you are available for advice, etc.”*

There was also the understanding that pharmacists dealt with a wide variety of requests that was not always recognised, making the job of the pharmacist unclear;

P14 *“I think in pharmacy we do an awful lot of that, people come in with strange requests or we sort them out but you don’t actually ever record it. I think that’s why sometimes people are a bit unclear of the role of pharmacists.”*

Some of the pharmacists expressed frustration at the lack of opportunities to date, and believed that pharmacists were under utilised;

P11 *“To be honest I think that pharmacists are totally under-utilised and I’m not just talking about myself. “*

This frustration was felt to be partly due to the timing of the new pharmacy contract negotiations, and in part to decisions by professional organisations and companies;

P17 *“A lot of it we’re waiting for the RPSGB and Boots to decide what we’re going to do and the new pharmacy contract but yes it’s what we’re supposed to be doing, it’s what pharmacy’s going to be all about.”*

Due to pharmacists not being able to utilise their clinical skills fully within companies such as Boots, many were going to work elsewhere, either instead of working at Boots, or as an additional second job;

P11 *“There are a lot of pharmacists out there who have a massive amount of knowledge, people with diplomas and a lot of them have to go outside Boots to be able to do more clinical stuff with people....”*

There was also a sense of frustration felt by the under utilisation of pharmacists by the GPs, and a feeling of resentment towards the extended professional role of the nurse;

P11 *“I also think that doctors don’t really use us as well because doctors know that we’ve got this kind of information and there could be a better link between doctors and pharmacists, which there isn’t and I think that’s where the nurses are starting to take over really. Because the nurses have the links with the doctors, the doctors are starting to utilise the nurses more than what they are the pharmacists, when really the pharmacists are probably better qualified to answer the questions.”*

There was a general enthusiasm by most of the pharmacists regarding an extended role;

P1 *“....I reckon all pharmacists would welcome the opportunity to get more involved with customers.....”*

This enthusiasm was also expressed on behalf of the pharmacy staff as well;

P2 *“I have chatted to all the staff on the counter and all would welcome a job role that isn’t just that of a glorified sales assistant.”*

Some of the pharmacists were very hopeful that the profession had reached a turning point and that the role would change a lot over the next year. In preparation for this, a couple of the pharmacists had started to undertake personal development activities such as clinical diplomas;

P14 *“I’m really hoping that it’s going to change a lot in the next year or so. I think it will, I think we can do a lot more clinical work which is why I’m doing the diploma.”*

The asthma service was perceived as moving in the right direction for the extended role of the pharmacist, and was something that pharmacists welcomed;

P17 *“Well I hope so because this is what we should be doing, this is the extended role of the pharmacist and it’s been a long time coming. In this store it’s very welcome.”*

There was a hope that pharmacists would be able to deliver more services like this as part of the new pharmacy contract, including additional activities such as supplementary prescribing;

P16 *“Well I’m really quite keen on the supplementary prescribing. It’s not something I’m doing yet but it’s something that I see as a sort of lead in to that and I think we could be able to offer those services when the new pharmacist contract comes in. As long as we’ve got pharmacists who are confident, it’s an opening point of expressing to the public, and the doctors surgeries, that we can do more that we have in the past, we can offer more services and we’re able to do this.”*

5.2.1.2 Pharmacists’ confidence in service delivery

During the interviews, a couple of the pharmacists commented that some of the pharmacy support staff were not confident in talking to customers. This was particularly noticeable in dispensers who worked mainly in the dispensary and very rarely had any customer contact. One particular pharmacy had tried to overcome this

by encouraging the dispensers to have more contact with customers at the prescription desk and over the counter. To help this process they also ran a staff incentive;

P13 *“Some of the team are fine about it, others aren’t that confident.”*

Three of the pharmacists questioned did not feel very confident delivering the asthma service, although one of these commented that their confidence with the service grew once they had actually delivered the intervention;

P17 *“As with anything new, intimidating to start with but once you’ve done a couple it’s OK.”*

One particular pharmacist commented that they would feel more confident delivering the service as long as it fitted in with their routine, and if customers were willing to listen;

P5 *“I would feel totally confident in offering the service as long as it could fit into my routine I’d have more than happy to talk to customers for longer, providing they were willing to listen to what I had to say.”*

Three pharmacists questioned felt completely confident in delivering the service. They felt that it was important to prepare and feel confident in delivering interventions like this, as customers would be able to identify if this was not the case;

P8 *“It’s something that I was more than happy to do and was confident to do. There’s a centre for pharmacy postgraduate education on asthma and that was something that I’d done some time ago, so trying to refresh myself on that so that I was able to give the best possible advice. Because some of it is actually the pharmacist being confident in what they’re about because if you’re not confident it shows and the patients rapidly realise when they’re not getting the best possible advice.”*

This was equally true for when talking to other healthcare professionals about the asthma service;

P16 *“I think you do need that awareness because you’ve got to appear confident. Especially if you’re going into doctors’ surgeries and approaching themselves and the nurses.”*

There was recognition by some of the more confident pharmacists that some of their colleagues might not feel as comfortable talking to the public more as part of the pharmacists extended role;

P8 *“I’ve always been more confident in talking directly to the public, working in front of the public whereas I know that some of my colleagues sometimes aren’t and prefer to remain in the background.”*

5.2.1.3 Pharmacists’ views on the delivery of services

Many of the pharmacists questioned saw brief interventions such as asthma as being part of their core job, and something that they were trained to do;

P6 *“I do it for most prescriptions I hand out – it’s all part of the job and what we’re trained to do.”*

This core counselling extended to other condition areas, and not just asthma;

P15 *“I find it quite comfortable, when we give out prescriptions we always do counselling if they need information on the prescription whether it’s asthma or not.”*

And was the same for any medication dispensed;

P11 *“...personally I don’t like to give anything out knowing that I don’t know whether the person has ever had it before or they don’t know what they’re doing with it because it’s as much use as a chocolate fireguard to be honest.”*

Even though one pharmacist did not feel that they had been delivering the brief intervention, on reflection, they decided otherwise. This service was not seen as an intervention as such, but something that was delivered as part of their day job;

P5 *“Its basic stuff but probably in a way I have also been offering the service – just not necessarily what I would term intervention – more common sense and what I see as part of my every day job.”*

Although the brief intervention was seen as a core activity for many pharmacists, for some, it did help to highlight how much they did already;

P14 *“I think it makes you realise that we do a lot of things and take it for granted and when you suddenly start recording it, it highlights that we do this sort of thing all the time anyway but don’t record it.”*

Other pharmacists involved within the asthma service had used the asthma intervention as an extension to their current activity;

P16 *“I’ve always in the past checked people – you know that they know how to use their inhaler and offer to show them. But we are taking it that bit further if we’re having the intervention and offering to measure their peak flow and spend a bit more time just checking they’re using the inhalers properly.”*

A couple of the pharmacists questioned, although positive about the brief intervention, felt that they had constant demands on their role that limited their long term delivery of initiatives such as this;

P10 *“we have so many things we’d like to do more of, you know one comes to the surface and you think OK, we’ll do this for a bit and then something else comes along. You can only do so much at once.*

Overall, there was a lot of enthusiasm amongst the pharmacists about new initiatives and services such as the brief intervention and asthma service;

P1 *“As pharmacists we always love getting involved in trials and new initiatives”*

P14 *“I’m fully supportive of it and would like to do a lot more.”*

Interventions such as these were seen as adding professionalism to the pharmacist role;

P10 *“...I think it is much more of a professional role than just sticking a label on it and signing it off and handing it over to the patient.”*

P8 *“So in many respects it’s been very useful purely from the pharmacist’s point of view and the professional service we’re able to offer.”*

It was also seen as something that Boots needed to deliver in order to avoid the independent pharmacies gaining a competitive advantage in the future services market;

P2 *“I love the whole idea of intervention and getting closer to our customers. Its definitely the way forward for Boots to go on the pharmacy counter. It’s all about more service and adding value these days and that also applies to us now. We can’t just sit on our laurels and be taken over by all the independents offering a higher level of service.”*

One particular pharmacist’s view stood out from the other interviews, and was quite clear that they saw the pharmacist’s role as dispensing, and any advice or information should be obtained from the customer’s GP;

P5 *“There just isn’t the time to be offering long consultations. If they want that type of information they’ll go to their GPs. We’re here to get them their medication and anything other than that we just don’t have the time. A quick chat, bag up their goods and off they go.”*

Many of the pharmacists questioned felt that interventions such as the asthma service encouraged them to proactively speak to customers with asthma, and was a good opportunity to encourage customers to talk to them about any problems they may have;

P14 *“Its good to focus in and it does encourage you to go in and be proactive, speaking to patients. I mean I’ve got a lot of regular patients with asthma and if they don’t say to me that they’ve got a problem then I might not actually...I might just hand out their regular monthly prescription so it does prompt you to speak to people a bit more.”*

Although some pharmacists would target customers during quieter times, others had used the opportunity to try and speak to every person with asthma;

P15 *“But sometimes when you are very, very busy and you think well I haven’t got time but with the intervention campaign I feel that I’ve got to do it time or not. So in that respect it makes me think I’ve got to do it every single time rather than just when I have time.”*

Brief interventions were seen as a good way of targeting customers opportunistically whilst they were in the pharmacy, particularly as the pharmacist could give them advice without the need for an appointment;

P16 *“It has been very useful, the idea that there is someone who can give information to the customer straightaway as they’re standing there, they don’t have to make an appointment.”*

The brief intervention gave customers the opportunity to ask questions that they might not have thought about before. This was seen as particularly important for those people who might fall out of or be overlooked by GP services;

P12 *“....I think the doctor, it’s the same with every medication really, they explain some bits and if they’re really not sure about it then they come to the pharmacy and if we are busy maybe they don’t bother to ask. But if you start then they, you are giving them the chance to ask you about it so I think it’s good in this way.”*

5.2.1.4 Customers’ views on accessing additional advice from the pharmacist

During the customer interviews, respondents were questioned on the extended role of the pharmacist, in particular pharmacists providing additional services and advice on asthma. The majority of respondents were in favour of receiving additional advice about asthma from the pharmacist, as they did not always receive all of the advice they needed from their GP practice;

C10 *“I wouldn’t mind really, because not everyone knows the certain things about asthma, it’s just hit and miss.”*

Receiving information on a long term condition was not always felt to be appropriate at the GP practice. There was a recognition that information could be given to people with asthma when they presented at the pharmacy with a prescription;

C25 *“I don’t know because if you don’t go to the doctors very often you don’t want to have the information put out there. And to be honest you go to the doctors when you’re feeling ill and you don’t want to be reading information. I think a chemist when you’re buying things or you’re getting a prescription isn’t a bad idea.”*

Respondents also liked the fact that they could talk to someone for advice about their asthma;

C14 *“Well I think myself that anyone that suffers from anything, whether its asthma or whatever, it is nice to talk to someone that you think can give you a bit of advice if you understand them. You know, rather than going to the doctors.”*

Pharmacists were perceived as knowledgeable, and respectful when speaking to individual customers;

C22 *“I have to admit with regard to anything, not just my asthma, the guys in Boots are really, really helpful, they know their stuff obviously, they don’t talk to you like you’re two sandwiches short of a picnic. They give you some respect which is always nice.”*

Respondents were confident when receiving advice from the pharmacist, as they felt that if pharmacists did not know something, they would ask other people, or refer them;

C18 *“If the pharmacist doesn’t know stuff they will ask other people.”*

Although there was a general recognition of the expertise and knowledge of the pharmacist, the confidence in the pharmacy staff was low. Because of this, one particular respondent stated they would always ask to speak to the pharmacist;

C10 *“I think that the pharmacists are very good but I’m not sure about the actual workers who give you the medicine but I ask to speak to a pharmacist anyway.”*

The GPs time was seen as a valuable resource, and as such some respondents would seek advice from the pharmacist for minor ailments. For anything more serious than a sore throat or cough, or for in depth information on a condition, the GP would be the first line for advice;

C25 *“But you always feel that the doctor’s busy and you don’t want to make an appointment if you don’t have to whereas you don’t mind popping into the chemist, you’re paying for the service and it feels different.Sometimes it’s quicker if you can just get simple straight forward advice form a chemist if it’s a minor ailment.”*

Receiving more in depth advice from the pharmacist was attractive to many of the respondents due to the inconvenience of having to make an appointment, and wait to speak to someone at their GP practice;

C34 *“It would be easier because obviously if I needed to go and speak to my doctor, the nurse or the asthma clinic I would need to book it well in advance to do it and sometimes that’s a bit difficult or inconvenient or whatever, whereas if there was someone I could just go and have a chat to or someone who knows what I’m talking about while I’m there, sort of off the cuff, that would be great.”*

Speed of access to a healthcare professional was important to many respondents;

C15 *“Yeah they seem to know what they’re talking about and a lot quicker than the GP, they point you in the right direction.”*

Access to extended advice from the pharmacists was particularly important to those respondents that did not feel that they were getting the right level of support from their own GP;

C18 *“Go to pharmacists rather than the doctor as I have to ring and book an appointment at the doctors. Also our doctor isn’t very helpful.”*

A couple of the respondents liked the idea of being able to access information from the pharmacist, but only as a safety net for when their GP or asthma nurse was unavailable;

C26 *“From my point of view I don’t really need it but if I did and the doctors were closed and the asthma nurse wasn’t around I’d go and see the pharmacist. They’ve got all my information there - its jolly handy. I like this idea of open information.”*

Pharmacist advice was seen as limited, because although they could tell people with asthma about new treatments, consumers would always have to go back to their GP to change anything;

C1 *“It is only advice – you’d have to go to your GP to change anything.”*

One particular respondent commented that pharmacists should have more ability to change certain elements of a prescription without going back to the GP;

C23 *“With the qualifications the pharmacists have I think it would be fine to suggest something different as long as medication the same, just different packaging easier for a child to take, pharmacist should be able to make that choice.”*

The future role of the pharmacist was favoured by many respondents, who saw the GP as someone who diagnosed a condition, and the pharmacist who advised on medication;

C17 *“Is brilliant it’s save me going to the doctors, the doctors just do the test, but the pharmacist will advise me.”*

One respondent recalled an experience he had encountered with a pharmacist abroad, where they had been able to prescribe tablets for him that he could not get from the pharmacists within the UK. They felt that giving the pharmacists more responsibility within the UK would free the GPs up to do other things;

C11 *“Well anywhere in Spain you can go for advice I remember being once being bitten and they told me what to do. You can go to the chemist there and they tell you what to do. It would leave the doctors more free to do other things.”*

Pharmacists were very much seen as a supportive role to provide additional advice that supplemented that of the GP and asthma nurse by three respondents. Although these respondents saw the advice giving role as predominately belonging to their asthma clinic, they felt that if they were to ask a pharmacist for advice on their asthma, they would rather them being able to answer than not. General information on asthma, including the latest news and developments on medication was felt to be the best advice a pharmacist could provide, and would fulfil a function that the GP and asthma nurse does not;

C13 *“We will always need our GPs. They (pharmacists) just help you out when you’re out and about. Keep up the good work is all I can say.”*

A couple of the respondents would take advice from the pharmacist, but would always prefer to go directly to the GP, or alternatively, check it out with the GP at a later date.

C31 *“I would listen to it but probably wouldn’t take it as gospel. Would much prefer to see a doctor for advice. They definitely know what they are talking about.”*

In total, five of the respondents had strong views that the pharmacists did not, and should not have a role in providing advice on asthma, as this was seen as something that should only be provided by the GP or asthma clinic.

- C3 *“I don’t think they could give you anything a GP couldn’t give you. They won’t commit themselves because they’re not GPs – I’d expect them to refer me to my GP anyway.”*
- C11 *“I think personally that they should advise them if its asthma, to go to the doctor because I know that most doctors have an asthma clinic. And it’s not just using them but it’s how to use the products a lot of the time.”*

5.2.3 Discussion of the results

The results presented within this section build on the current literature of the views of both customers and pharmacists towards an extended role for community pharmacists. From these data, I discuss factors that may be affecting service delivery within community pharmacies.

Pharmacists were seen to be an accessible healthcare resource and the benefits of receiving further advice from them included not having to make an appointment, the speed of access, the perceived lack of interest from some GPs, and the inconvenience of seeing a GP, findings that have also been found in previous studies [127, 129]. Others saw advice from the pharmacist as a safety net when a GP or nurse was unavailable. Although the benefits of accessibility of advice were recognised by both pharmacists and customers, there was some confusion over exactly what their role entailed due to the wide range of requests they dealt with. At the time of the study, pharmacists’ advice was felt to be limited compared to their counterparts abroad, as they had no ability to change medication, and had to refer to the GP anyway. This is something that will change over time with the implementation of extended prescribing rights and further reclassification of medicines from prescription to pharmacy status.

Consistent with the results and literature presented within section one of this chapter, there was a cohort of customers who did not believe that it was the pharmacist’s role to provide advice on serious conditions such as asthma, as this was something that should be reserved solely for GPs or nurses. The role of the pharmacist was perceived as someone who could advise on medication and minor ailments, but anything more serious would require referral to the GP. Some of the customers interviewed perceived asthma as something with which they could talk to the pharmacist about, whilst others perceived it as something that was too serious to discuss with the pharmacist. Those who were positive about seeking extra advice and information on asthma from the

pharmacist tended to feel that current information sources on the condition were hit and miss. They did not want to read information on the condition whilst visiting the GP practice as they went there when they were ill and so were not in the best mindset. Pharmacists were seen as a good alternative to providing such information and offered the availability of having a healthcare professional to talk to as and when required.

There was general enthusiasm amongst many of the pharmacists about getting more involved in services, as it was seen to add professionalism to the role. This enthusiasm for change was felt not only by the pharmacists themselves, but also the pharmacy staff. The asthma service was seen as moving in the right direction, and there was a feeling that the profession had reached a turning point where the role itself would change. At the time of the study the new pharmacy contract was being negotiated, and pharmacists had high hopes for what it would deliver. There were high expectations regarding the changes and opportunities this would bring about.

Those pharmacists that were already delivering brief interventions prior to the asthma activity saw this as part of their core role, and the initiative in asthma just made them concentrate on that particular condition area. It gave customers the opportunity to ask pharmacists for advice when they might not necessarily have thought about doing it. Other pharmacists found that interventions like this were difficult to fit into their current roles due to the constant demands and pressures that they were put under. Additional tasks were placed on the pharmacists without any work being taken away, and this, coupled with changing initiatives and priorities, made it difficult for pharmacists to participate in additional services. Savage [140] conducted a review in 1999 to determine whether there was any evidence as to whether professional policy shift away from dispensing towards patient focused care was reflected in the way community pharmacists actually used their time. She concluded that the proportion of time pharmacists spent on customer communication had increased three fold since 1973, but was not mirrored by a decline in time spent dispensing. She suggested that the reprofessionalisation process in Britain was hampered by the continued need for re-dispensing and the limited availability and use of trained support staff.

Pharmacists felt that they had to feel confident in delivering services, and those that did not felt uncomfortable with the concept. Factors that had improved the pharmacist's confidence included preparing beforehand, experience of delivery of the service over time, and the receptiveness of consumers. Those pharmacists that had tried to improve confidence felt this to be important, as they felt customers would be

able to detect lack of confidence in the service delivery, as well as when talking to other healthcare professionals. There was also a lack of confidence in delivery of services by pharmacy staff, particularly those with minimal customer contact.

Despite the enthusiasm for change and hope that the pharmacy contract brought, there was still frustration amongst the pharmacists regarding the lack of progress and opportunities in service delivery to date. This was felt to be brought about by national organisations representing pharmacy, and pharmacy employers. Those pharmacists who had developed their clinical skills felt that they were forced to look for opportunities to deliver extended services outside of community pharmacy. Pharmacists also appeared to demonstrate some resentment towards nurses and the development of their roles, and felt that there was some encroachment on professional boundaries. Although it was evident that some pharmacists were frustrated with the slow pace of change, very few spoke about what they had done to embrace the new role and to make change happen more quickly within their local community. There was still a perception that some pharmacists would not embrace an extended role and were happy with just dispensing prescriptions, either because they preferred not to deliver services and have little contact with customers, or because they did not feel that it was appropriate for pharmacists to offer this type of advice. Although there was a mix of pharmacists attitudes and enthusiasm towards the extended role, it is unclear how divided the professionals in the field are towards it, and whether age or gender would have an impact on their views. The slow pace of change for the profession may be as much due to the behaviour and attitude of individual pharmacists as it is to national organisations and corporations. An editorial by van Mill [141] also concluded that if pharmaceutical care was to stand a chance in the future then pharmacy facilities would need to create enthusiastic professionals who were dedicated to care. In his view, enthusiastic pharmacists could overcome barriers, and would not only stimulate staff, but also engage patients and healthcare professionals.

5.2.4 Summary of section two

Most of these data presented within this section support and further extend work that has been conducted within previous studies and reviews. Potential motivators, facilitators and barriers that have been identified within this section are summarised in Table 26 and Table 27.

Table 26: Pharmacist motivators affecting service delivery

	Motivators
Opportunity to deliver extended role	<ul style="list-style-type: none"> ▪ Enthusiasm for involvement in services and trials by pharmacists and staff ▪ Personal development ▪ Adding professionalism to the role

Table 27: Potential factors affecting service delivery identified from the views of customers and pharmacists

(Please note that this table is presented over two pages)

	Facilitators	Barriers
Public attitude towards the role of the pharmacist and pharmacist advice	<ul style="list-style-type: none"> ▪ Accessibility (speed of access and no appointment required) ▪ Customer receptiveness to advice when in pharmacy ▪ Pharmacists seen as knowledgeable and respectful ▪ Confidence in advice and ability to refer as appropriate ▪ Alternative source of advice to GP (GP time valuable, previous poor experience, speed of access) 	<ul style="list-style-type: none"> ▪ Unclear role because of breadth of requests for advice, and no records made ▪ Poor confidence in advice from staff ▪ Limitations of pharmacist advice (referral, lack of commitment, inability to prescribe) ▪ Poor expectations of pharmacists role
Pharmacists attitude towards their role within services	<ul style="list-style-type: none"> ▪ Services that are incorporated as part of day job ▪ Expectation that pharmacists core role includes services and advice 	<ul style="list-style-type: none"> ▪ Expectation that pharmacists role should be dispensing only – and advice should be given by GP ▪ Frustration of pharmacists ▪ Resentment of pharmacists towards nurses
Service structure	<ul style="list-style-type: none"> ▪ Services that provide opportunity to talk (proactive) ▪ Focus on key services 	

	Facilitators	Barriers
Pharmacists confidence in service delivery	<ul style="list-style-type: none"> ▪ Staff incentives to encourage participation in services ▪ Experience in delivering services ▪ Customers willing to listen ▪ Pharmacist confidence in service delivery ▪ Good preparation prior to service delivery 	<ul style="list-style-type: none"> ▪ Lack of customer contact ▪ Lack of confidence in services
Time		<ul style="list-style-type: none"> ▪ Constant demands competing for pharmacist time
Healthcare professional relationships		<ul style="list-style-type: none"> ▪ Underutilisation of pharmacists by GPs
External environment	<ul style="list-style-type: none"> ▪ Opportunities within new pharmacy contract 	<ul style="list-style-type: none"> ▪ Lack of opportunities to deliver extended service ▪ Delay in new pharmacy contract ▪ Decisions by professional organisations and companies

5.3 Summary of chapter V: Factors affecting the utilisation of community pharmacies and pharmacists' role in services

This chapter of my thesis has looked at when and how people currently use community pharmacies, including the type of advice they ask pharmacists for, and what they think about the quality of that advice. It has also looked at how pharmacists feel about an extended role, and how customers feel about seeking additional advice and help from pharmacists. From both sections, the factors that may be affecting service delivery are summarised below.

As found within the literature review in chapter two, many of the factors affecting service delivery are the opposites of each other, where a factor acting as a facilitator can be reversed to act as a barrier to service delivery. Potential factors affecting delivery can be grouped as follows: the frequency of visit to the pharmacy, choice of pharmacy, utilisation of the pharmacy, type of advice sought, quality of advice experienced, public attitude towards the role of the pharmacist and pharmacists advice, pharmacists attitude towards their role in services, the service structure, pharmacist confidence in service delivery, time, healthcare professional relationships and the external environment. A summary of all the facilitators and barriers identified as potentially affecting the utilisation of community pharmacies and pharmacists role in services from the results presented within this chapter are summarised in Table 28. Where similar themes have also been identified within previous literature, this has also been indicated. In addition to the facilitators and barriers identified within this chapter, the motivators for the pharmacists participating in the study included; enthusiasm for involvement in services and trials, personnel development, and adding professionalism to the role. Similar themes have also been identified within previous literature [14, 16, 22, 28].

All the factors identified from this chapter will be discussed in more detail in chapter nine where final conclusions will be drawn. The next chapter of this thesis goes on to explore the factors that affect service delivery in relation to the asthma condition itself, and the opportunities available for pharmacist interventions.

Table 28: Potential facilitators and barriers affecting the utilisation of community pharmacies and pharmacists role in services

(Please note that this table is presented over three pages)

	Facilitators	Barriers
Frequency of visit	<ul style="list-style-type: none"> ▪ High frequency of visit to pharmacy for general purchases 	<ul style="list-style-type: none"> ▪ Poor frequency of visit to pharmacy for health related reasons
Choice of pharmacy	<ul style="list-style-type: none"> ▪ Use of different types of pharmacies for different services 	<ul style="list-style-type: none"> ▪ Poor loyalty to one pharmacy – requirement for access to centralised medication records <p>[3, 7, 8, 14, 18, 21]</p>
Pharmacy use	<ul style="list-style-type: none"> ▪ Wider target audience for dissemination of advice (patient, carer, parent, partner) ▪ Good use of pharmacy for general purchases 	<ul style="list-style-type: none"> ▪ Poor use of pharmacy for general health ▪ Expectations when in pharmacy depending on shopping mode for health or general purchases, and receptiveness for advice
Type of advice	<ul style="list-style-type: none"> ▪ Good use of pharmacy for medication related queries <p>[6]</p>	<ul style="list-style-type: none"> ▪ Poor use of pharmacy for general health queries
Quality of advice	<ul style="list-style-type: none"> ▪ Previous good experience of pharmacist advice 	<ul style="list-style-type: none"> ▪ Previous poor experience of pharmacist advice

	Facilitators	Barriers
Public attitude towards the role of the pharmacist and pharmacist advice	<ul style="list-style-type: none"> ▪ Accessibility (speed of access and no appointment required) ▪ Customer receptiveness to advice when in pharmacy ▪ Pharmacists seen as knowledgeable and respectful ▪ Confidence in advice and ability to refer as appropriate ▪ Alternative source of advice to GP (GP time valuable, previous poor experience, speed of access) <p>[3, 12, 17, 18, 23, 30, 32]</p>	<ul style="list-style-type: none"> ▪ Unclear role because of breadth of requests for advice, and no records made ▪ Poor confidence in advice from staff ▪ Limitations of pharmacist advice (referral, lack of commitment, inability to prescribe) ▪ Poor expectations of pharmacists role ▪ Perceived limitations of pharmacy advice ▪ Poor perception of the role of the pharmacist compared to other healthcare professionals <p>[3, 7, 16, 18, 21, 26, 32]</p>
Pharmacists attitude towards their role within services	<ul style="list-style-type: none"> ▪ Services that are incorporated as part of day job ▪ Expectation that pharmacists core role includes services and advice <p>[5, 17-19, 30, 32]</p>	<ul style="list-style-type: none"> ▪ Expectation that pharmacists role should be dispensing only – and advice should be given by GP ▪ Frustration of pharmacists ▪ Resentment of pharmacists towards nurses <p>[1, 5, 16, 29, 32]</p>
Service structure	<ul style="list-style-type: none"> ▪ Services that provide opportunity to talk (proactive) ▪ Focus on key services 	

	Facilitators	Barriers
Pharmacists confidence in service delivery	<ul style="list-style-type: none"> ▪ Staff incentives to encourage participation in services ▪ Experience in delivering services ▪ Customers willing to listen ▪ Pharmacist confidence in service delivery ▪ Good preparation prior to service delivery <p>[9, 19, 30]</p>	<ul style="list-style-type: none"> ▪ Lack of customer contact ▪ Lack of confidence in services <p>[5, 8, 19, 25]</p>
Time		<ul style="list-style-type: none"> ▪ Constant demands competing for pharmacist time <p>[1-3, 7, 8, 12, 14-16, 20, 21, 23, 25-29]</p>
Healthcare professional relationships		<ul style="list-style-type: none"> ▪ Underutilisation of pharmacists by GPs <p>[3, 7, 8, 14-16, 18, 19, 21, 23, 25-27, 29, 32]</p>
External environment	<ul style="list-style-type: none"> ▪ Opportunities within new pharmacy contract <p>[5, 32]</p>	<ul style="list-style-type: none"> ▪ Lack of opportunities to deliver extended service ▪ Delay in timing of new pharmacy contract ▪ Decisions by professional organisations and companies

CHAPTER VI

Opportunities available for pharmacists in the delivery of asthma services

6.0 Introduction to the chapter

This chapter of my thesis provides an overview of why asthma was chosen as a condition area to focus on as part of this study. It explores general problems with the condition, and identifies opportunities for community pharmacists to get more involved in helping people with asthma manage their condition better. Many publications exist for asthma, but are not explored in this thesis due to the fact that this study is not investigating the asthma condition itself, nor the outcomes of the service intervention on asthma. Instead, asthma is used as an example to identify factors that affect service delivery such as customer need and demand, which has been identified as both a facilitator and barrier in previous studies [1, 8, 11, 14, 16, 20]. The chapter begins by providing an introduction to asthma itself, the prevalence of the condition, and an overview of the burden that asthma places on both the patient, and the NHS. The results from my study are then presented, followed by a general discussion and initial conclusions on the factors affecting service delivery.

6.1 An introduction to asthma

Asthma is a respiratory condition that causes people to have difficulty breathing due to inflammation in the airways restricting the flow of air. Symptoms of asthma include recurrent wheezing, breathlessness, tightness in the chest and cough. Currently, there is no cure for asthma, although medication is available to prevent and relieve symptoms. Triggers such as house dust mite, pollen, exercise and smoke can often worsen or prolong asthma symptoms.

It is estimated that 5.2 million people within the UK are currently being treated for asthma [142], with 8 million people having been diagnosed with the condition at some point in their lives [143]. Although asthma is the most common long-term childhood medical condition, it also affects a considerable number of adults [142]. Boys are

more likely to have asthma than girls, but are also more likely to grow out of it as they grow older, as by adulthood, 60% of people with asthma are women [144].

The goals of asthma treatment are well established as people with asthma should have very few or no asthma symptoms, little or no use of relief medicines, very few or no long term symptoms, very few or no restrictions on daily activities, and very few or no emergency visits to hospitals [145]. The majority of people with asthma, however, are not managing their condition as well as they could be, as the current level of asthma control falls far short of guideline recommendations for long term management [146]. Asthma UK estimates that approximately 4.6 million people in the UK who should be leading a relatively healthy and active life have everyday asthma. More than 3.5 million people however, 75% of people with everyday asthma, still experience symptoms that regularly restrict their everyday activities [144]. The same study reports that more than 500,000 of these people with everyday asthma have had an asthma attack almost every day. Severe asthma symptoms are experienced by 2.1 million adults and 500,000 children in the UK, and approximately half a million of these people have asthma that is difficult to control despite taking high doses of medication [147]. For the remaining 2.1 million, their symptoms are severe because their asthma is not well managed [147].

Not only does asthma have a significant impact on the person with asthma, but there is also a financial impact on the NHS. The annual cost of asthma to the NHS has been estimated at £889 million, and for a local PCO, £4 million [142]. Asthma also has an impact on the workload of GPs as it is estimated that there are 14,500 first or new episodes of asthma presented each week, and a total of 4.1 million consultations per year [142]. The implications of poor asthma control are widespread, as it can often lead to hospital admission, or even death. Of the 69,000 hospital admissions for asthma [142], it has been suggested that up to three quarters could have been prevented by different prior care [148]. In addition, the financial cost of treating an asthma attack in hospital is over three and a half times as much as treating well controlled asthma [149]. As many as 1,400 people in the UK die from asthma each year [142], of which over 80% are thought to be associated with avoidable factors [150].

The results presented within this chapter explore customer need and demand for services in asthma. I investigate the problems that people with asthma experience including the type of symptoms they suffer from, the level of control they have over

their condition and the restrictions that asthma places on their life. I have also looked at some of the potential reasons behind poor control, including the level of customer knowledge and understanding of their condition and use of medication. These data are then used to explore the opportunities available to community pharmacists, and the factors affecting service delivery. This study does not investigate the outcomes of customers that have participated within the asthma services in any detail, as this is not the focus of the study. The results used within this chapter are taken from the omnibus survey, asthma audits, and customer interviews.

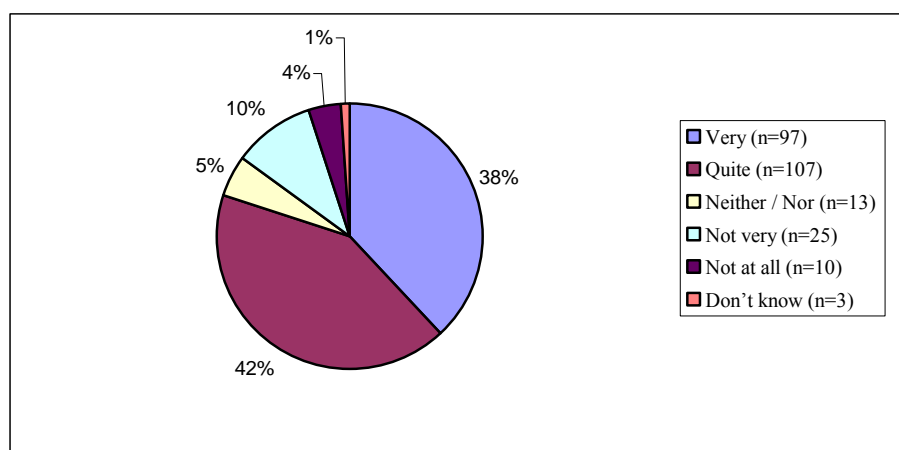
6.2 Results

6.2.1 Condition knowledge

6.2.1.1 Current knowledge of asthma

Respondents that participated in the omnibus survey and the customer interviews were questioned on how knowledgeable they felt about their asthma condition. The results from the omnibus survey are presented in Figure 13. Only 38.0% (n=97) of respondents believed that they, or their partners or child, were very knowledgeable about their condition, with a further 42.0% (n=107) feeling quite knowledgeable. A total of 18.8% (n=48) of the respondents stated that they were not knowledgeable about their asthma.

Figure 13: Omnibus data "How knowledgeable would you say you / they are about your / your child's / their asthma?" (All with asthma, n=255)



Within the customer interviews, a total of 27 people were questioned about their level of asthma knowledge, of which, 37.0% (n=10) felt that they had a good level of knowledge about their condition. Of those that felt very knowledgeable about asthma,

40.0% (n=4) of the respondents thought that their knowledge was as a result of them being diagnosed with the condition since childhood;

C10 *“I feel after this length of time that I know quite a bit about it anyway.”*

A third of the respondents questioned (n=9) believed that they had some knowledge of asthma and knew enough about their condition. One particular respondent felt that her mother was more knowledgeable about her asthma than herself, but she knew enough to get by, and did not particularly want to know anymore;

C9 *“I reckon I know enough to get by and make sure I don’t make it worse. I don’t think I’d want to know anymore. I mean like I said my mum would probably know more but as for me I know to avoid running and stuff and not to go swimming.”*

The remaining 29.6% (n=8) of respondents felt that they had very poor knowledge about their asthma;

C20 *“I don’t really know anything about it, I don’t know what causes it.”*

6.2.1.2 Information sources

Respondents that participated within the customer interviews were questioned on which information sources that they had used to gain knowledge on their condition, of which 23 answered. Most respondents used a variety of information sources over the period of time since they had been diagnosed. Literature sources such as information leaflets, medicines packaging, newspapers and Sunday magazines were used by 52.2% (n=12) of respondents to gain knowledge;

C13 *“When I went to the clinic I got given some leaflets to look at which I did and I found it quite useful. It told me some things to avoid like mowing the grass and the thing about the manmade and natural duvet fillings. I tend to pick up any leaflets I see on it and any new ideas or help I might find.”*

Asthma nurses and clinics were used by 43.5% (n=10) of respondents to gain some of their knowledge on asthma. Respondents appeared to receive very good advice from the asthma nurse and clinic when they were first diagnosed. A few of these respondents still attended asthma clinics on a regular basis as they found them extremely useful. Other respondents felt that they were no longer getting any benefits from attending the clinics so had stopped attending;

C16 *“I went to the nurse at the clinic several times, from making an appointment, they tested my breathing and how it was, it was pretty poor at that time, they gave me a lot of information what to do / leaflets, etc.”*

Friends and family were used as a resource by 26.1% (n=6) of respondents to inform them about their asthma;

C13 *“....and my husband finds things occasionally and either tells me about them or picks up a leaflet. And since I’ve had it I’ve spoken to others about it. You don’t realise until you have it how many people have it and carry inhalers about.”*

Both GPs (n=4) and pharmacists (n=4) were used as an information source by 17.4% of respondents to gain their asthma knowledge;

C22 *“I always ask questions and that’s probably why I am managing it myself, I ask a lot of questions and the doctor always explains it to me, but there are always things you don’t know and it would be useful if there was something like that.”*

The television was also used as an information source by 8.7% (n=2) of respondents, as was the internet (n=2);

C13 *“I tend to like to read the medical pages in the ‘Daily Mail’ too and of course the ‘This Morning’ doctor is quite good on updating you.”*

6.2.1.3 Customer need for new information

Within the customer interviews, 20 respondents were asked whether they would like to know more information about their condition. Only two of the respondents were actively seeking out new information on asthma;

C24 *“I feel more knowledgeable than I did, but there’s still quite a bit more to work out and know about it.”*

A further three respondents stated they would listen to information that was in the media at the time, but would not actively go out and look for it. All the information on asthma was seen to be very repetitive and say exactly the same thing;

C12 *“Only if I hear stuff but I don’t look out for anything.”*

New information or treatments that would make their asthma easier to manage was of interest to approximately a third (n=6) of the respondents questioned;

C31 *“I feel I am in control of my asthma, but always on the look out for new products. So I am interested in things that are new or may help.”*

Just under half of the respondents (n=9) were not interested in finding out any more information about their asthma. Some respondents seemed to have a fear of finding out more;

C14 *“I haven’t read anything on it. I think the less you know about things the better you are. I mean it’s the same with tablets. There’s all these leaflets in and I think at the end of the day if you read them all you wouldn’t have anything would you?”*

6.2.2 Asthma medication

6.2.2.1 Medication knowledge

Respondents within both the asthma audit and the customer interviews were questioned on their understanding of the medication they were using for asthma. As part of the asthma audit respondents were specifically asked whether they knew what their GP had prescribed for them in terms of frequency of taking which medication, the results of which are shown in Table 29. The majority of respondents in both audits could accurately say what was on their prescription, although approximately one in ten of those questioned did not know what they had been prescribed.

Table 29: Asthma audit "Do you know what your doctor / asthma nurse has prescribed for you in terms of frequency of taking which medication?"

Medication knowledge	Percentage distribution	
	Audit 1 (n=119)	Audit 2 (n=112)
Can accurately say what’s on the prescription = yes	86.6	88.4
Doesn’t know / not sure = no	13.4	11.6

As part of the customer interviews, 33 respondents were asked about the type of medication they were taking for their asthma, and the directions for use. The majority of respondents were on a combination of medications to help control their asthma, and described them in a variety of ways. Two fifths (n=13) of the respondents were very knowledgeable about their medication and directions for use. Most of the inhalers were described as branded names, as opposed to the drug name. This was particularly

apparent with Ventolin[®] inhalers, which was only mentioned by the name salbutamol on three occasions;

C10 *“Well Symbicort[®] has steroids to keep the asthma at bay and build my chest up. And the Bricanyl[®] is just to relieve when the tubes in my throat are starting to close. To give me relief.”*

Over half (n=17) of the respondents were aware of the directions for use of their asthma medication, but described their inhalers by colour alone, typically ‘blue’ and ‘brown’;

C12 *“I just have a blue inhaler as they found that I don’t always need help but only when I get short of breath. I always keep a few in the house as I’m terrified of not having any and having an attack. I’m more careful about that since I had Daniel. It kind of gives you a new perspective.”*

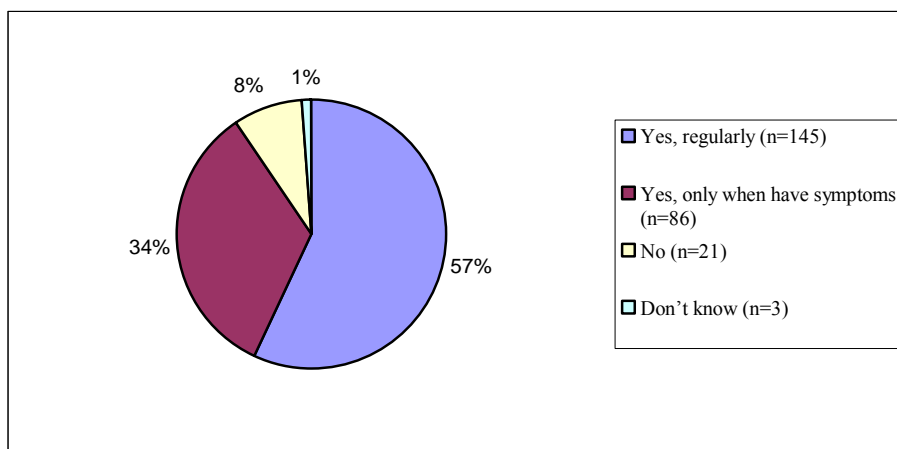
Only three respondents described their inhalers typically as ‘relievers’ and ‘preventers’;

C33 *“For five - six years that I can remember I wasn’t on correct medication, just on relievers. Now they’ve got me on a couple of medications and for the last four years I haven’t really had to use Ventolin[®] at all while on those preventers. On those preventative medications it’s really well controlled.”*

6.2.2.2 Use of medication

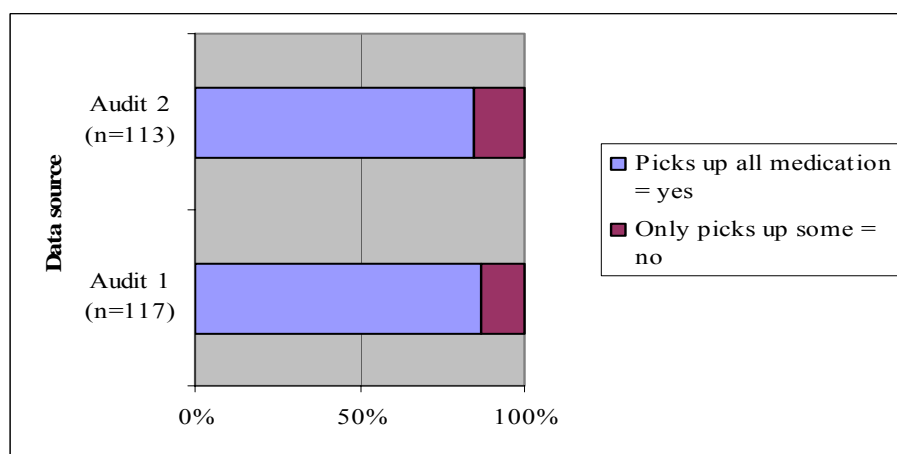
Respondents were asked about their use of asthma medication within the omnibus survey, asthma audit and customer interviews. The majority of respondents, their partners and children (56.9%, n=145) within the omnibus survey regularly took medication for their asthma (refer to Figure 14), with a further 33.7% (n=86) taking medication only when symptoms occurred. No medication was taken by 8.2% (n=21) of respondents.

Figure 14: Omnibus data "Do you / they take any medication for your / their asthma?"
(All with asthma, n=255)



Within both asthma audits, respondents were questioned as to whether they regularly picked up all the medication on their prescription. The results for audits one and two were very similar, as shown in Figure 15. The majority of respondents regularly picked up all the medication on their prescription, however, 12.8% (n=15) of respondents within audit one, and 15.0% (n=17) within audit two, did not regularly pick up all of their medication that had been prescribed for them.

Figure 15: Asthma audit "Do you pick up all the medication on your prescription?"



Within both asthma audits, respondents were asked how many times they took their reliever medication, the results of which are shown in Table 30. Over half of the respondents within both audits (61.2% (n=71) in audit one and 56.6% (n=64) in audit two) regularly used their reliever medication once a day or more. Only 15.5% (n=18)

of respondents in audit one, and 15.0% (n=17) of respondents in audit two, used their reliever medication less than once a week.

Table 30: Asthma audit "How many times do you take your reliever medication?"

Frequency of use	Percentage distribution	
	Audit 1 (n=116)	Audit 2 (n=113)
More than once a day	41.4	41.6
Once a day	19.8	15.0
More than once a week	16.4	19.5
Once a week	6.9	8.8
Less than once a week	15.5	15.0

Respondents were asked whether they used their medication as often as prescribed by the GP within both the omnibus survey and asthma audits, the results of which are shown in Table 31. Within all three data sets approximately one fifth of respondents did not regularly take their medication as prescribed by the GP.

Table 31: Omnibus and asthma audit "Do you / they use your / their medication as often as advised by the doctor?"

Medication use	Omnibus data (%) (n=255)	Audit 1 (%) (n=118)	Audit 2 (%) (n=114)
Yes, all the time	63.2	52.5	47.4
Yes, most of the time	15.2	23.7	31.6
Sometimes	10.8	21.2	15.8
Rarely	7.8	2.5	2.6
Never	3.0	0.0	2.6

Within the customer interviews, 20 respondents were questioned on the use of their asthma medication. Just under half (n=9) of the respondents always used their medication as directed by the GP. One particular respondent had been using his inhalers incorrectly for years until a new GP had explained it to him;

C25 *"Yeah, originally when I first got it I had an absolutely useless doctor and he didn't explain it properly to me and for years I was using too much of the blue, the Ventolin[®], I didn't know that I should have been taking the steroid regularly to prevent the more use of the blue one. A few years ago I got it explained to me so I just do as the doctor said, take the Becotide[®] regularly and the Ventolin[®] when I need it."*

Medication was taken as directed some of the time by approximately one third (n=6) of respondents. The use of medication was very often determined by social events, anticipated triggers, or feeling unwell;

C27 *“Not often no, it just depends on certain circumstances, you know if you’ve been to the pub the night before or.....if I’ve got a cold coming on my chest starts to get a bit sore and I take it then.”*

The use of medication when symptoms occurred and when required, was used by four of the respondents;

C22 *“I basically take my inhalers as and when I need it as opposed to every day like I did up to when I was about 20, so the last five years I’ve just taken them when I’ve either been feeling a little unwell or when I’ve been short of breath. That’s about it really.”*

Only one respondent admitted to rarely or never taking the medication as directed, and had subsequently suffered as a result;

C24 *“I didn’t get into the habit of using the steroid based ones every day like he said cos I didn’t actually need it anymore. So I stopped using it and then I changed jobs about four months ago and became an animal nurse and the triggers came back again.”*

6.2.2.3 Confidence in medication

Only two of the respondents felt comfortable enough with their medication to increase the dosage, without medical advice when they were feeling unwell;

C22 *“It really depends on my general health is with regard to inhalers, because if I’m well I’ll only need probably three of each inhaler a year, if I just have a slight colds and stuff. If I have say two chest infections a year I’m going to need a hell of a lot more than that because I get through them a lot quicker, because what I tend to do is even when my chest infection is gone I’ll use it for a couple of weeks afterwards. It might seem as though I’m better but I know if I don’t keep it up I’ll go back and have a chest infection straight away. I don’t know if that’s the right thing to do or not, my doctors never told me that it’s not, but it seems to work for me and I think if it works you should do it.”*

Some respondents had a fear of their medication and tried to maintain control of their condition to avoid further exposure to drugs such as steroids;

- C11 *“When you’ve had one bad do like I had you don’t want to go back onto steroids it was awful and I’m managing well at the moment.”*
- C29 *“Exactly, I was taking enough (medication) as it is, so if I can avoid it psychologically I do, but once you realise it’s good for you and is not really growing a third head or something, you never know, mutation is always a problem!”*

6.2.3 Symptom control

6.2.3.1 Triggers of asthma

Out of the 28 questioned within the customer interviews, the majority were fully aware of what triggered their asthma. The most common trigger cited was physical exercise or exertion which affected the daily life of two fifths (n=11) of the respondents;

- C14 *“Well if I’m just normally going about me day I’m OK. But if I come to exert myself for instance carrying something upstairs, by the time I get to the top I’m short of breath. And also bending does it. Even bending down to tie me shoe laces, I have to rear up and take a few breaths. I’m gasping by the end of it.”*

Some of the respondents also suffered from hayfever, and consequently pollen was a trigger for their asthma. This affected over a third (n=10) of respondents;

- C13 *“Well I actually think I’ve got a bit of hayfever because I tend to feel worse in the summer. I try not to go out late at night as the pollen seems to get to the back of my throat and causes me to wheeze a bit.”*

Cold or damp weather was also a common trigger, and affected over a third (n=10) of respondents;

- C17 *“It is quite restrictive everywhere you go, in the garden if there’s pollen, if it’s too cold if it’s windy.”*

Dust was a trigger for a third (n=9) of the respondents, some of which had to remove all the carpets within their house to control their condition. Stress at work or home was also a common trigger that affected one fifth (n=5) of respondents;

C25 *“It’s mainly a cough but every now and again if I get excited about something I start coughing or if I get stressed out and nervous about something I get short of breath and I start coughing then as well.”*

Animals appeared to affect one fifth (n=5) of respondents, although this did not always stop them from owning one;

C22 *“Anything can set me off, coupled with the asthma, I’m also allergic to cats and things like that which sets my asthma off, so if I’m around cats my asthma gets worse obviously.”*

Pollution affected four of the respondents, the majority of which was discovered by moving residence or symptom free episodes during vacations;

C26 *“I went out to Spain a few weeks back, I was there for a week and I only needed to use it a couple of times. So pollution in this country doesn’t help, obviously because this is why all the kids have got it these days.”*

Only three respondents recognised colds and flu as a trigger for their asthma. Smoke, feathers and solvents all affected a couple of the respondents;

C26 *“Certain solvents if I’m doing a bit of cleaning, I either have to do it outside or just not use them.”*

Only one respondent had experienced a worsening of her asthma due to pregnancy. A further four respondents were not fully aware of what triggered their asthma.

6.2.3.2 Type of symptoms

A total of 27 respondents within the customer interviews were asked to describe the symptoms they suffered as a result of their asthma. Some of the descriptions were very personal, although the individual symptoms can be broken down into four main areas. Many of the respondents experienced multiple symptoms, the most common being ‘breathlessness’ and ‘difficulty in breathing’, which was described as a symptom by two thirds (n=18) of respondents;

C12 *“I feel like my throat is expanding and almost that I might swallow my tongue.”*

C28 *“Shortness of breath, uncomfortable, it can wake me up in the middle of the night - I can wake up wheezing. Taking the medicine is like immediately effective but it’s, it’s*

hard to imagine if you've never had asthma - it's like a weight on your chest, pressing on you and you can't breathe properly."

Just under half (n=13) of respondents described 'wheezing' as a common symptom of their asthma;

C33 *"Shortness of breath, unable to breathe, really wheezy"*

'Tightness' of the chest was experienced by a quarter (n=7) of respondents;

C10 *"Very tight feeling in the chest and not being able to get any air basically."*

'Coughing' was the least common symptom, and was only experienced by five of the respondents;

C11 *"My eyes itch it's coughing mainly. But then it can make eyes itch and my nose run and my ears hurt. They feel as though they're being pulled from the inside."*

6.2.3.3 Frequency of asthma symptoms

Within the omnibus survey, asthma audits, and customer interviews, respondents were asked how frequently they experienced symptoms from their asthma. The results from the omnibus survey are shown within Table 32, with just under a third of respondents, 27.1% (n=69), experiencing symptoms on a daily basis or several times a week. A total of 16.1% (n=41) were experiencing asthma symptoms weekly or once every two to three weeks, and 54.9% (n=140) were suffering from symptoms on a monthly basis or less.

Table 32: Omnibus data "How frequently do you / they experience symptoms of your / their asthma that effect your / their life, by which I mean you cannot do things you normally would do?" (All with asthma, n=255)

Frequency symptoms	Percentage distribution
Everyday	16.1
Several times a week	11.0
Weekly	7.1
Once every two – three weeks	9.0
Monthly	12.2
Less often	42.7
Don't know	2.0

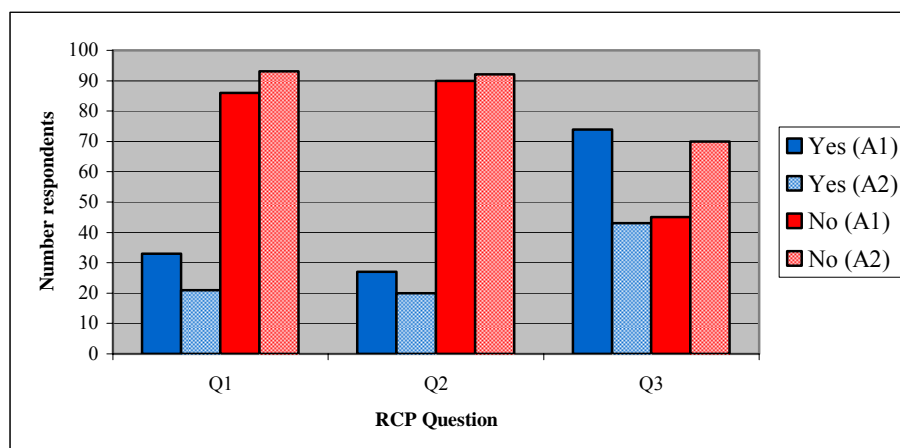
Respondents who participated within the asthma audits were questioned about their level of symptom control, by asking whether they had experienced any of the RCP questions within the last week (refer to Table 33 for sample sizes).

Table 33: RCP questions

RCP question		Sample size	
		Audit one	Audit two
Q1	Have you had difficulty sleeping because of your asthma symptoms?	119	114
Q2	Has your asthma interfered with your usual activities such as housework, work or school?	117	112
Q3	Have you had your usual asthma symptoms, such as coughing, wheezing, tight chest, or feeling breathless during the day?	119	113

A graphical representation of the results from the RCP questions are shown in Figure 16. Within audit one, 27.7% (n=33), and within audit two, 18.4% (n=21), of those questioned had difficulty sleeping because of their asthma symptoms. Many respondents experienced regular symptoms from their asthma, 62.2% (n=74) within audit one, and 38.1% (n=43) within audit two. Only 23.1% (n=27) within audit one, and 17.9% (n=20) within audit two, of respondents felt that their asthma had interfered with their usual activities.

Figure 16: Response to RCP questions within asthma audit one (A1) and audit two (A2)



Within the customer interviews, 13 respondents were asked how frequently they experienced symptoms as a result of their asthma. The majority of respondents, 84.6% (n=11), experienced symptoms on a daily basis;

- C33 *“I think people notice that I wheeze constantly but I think it’s something that I don’t realise that I’ve been doing it. I do have a slight wheeze all the time.”*

The remaining 15.4% (n=2) of respondents experienced asthma symptoms on a weekly basis;

- C13 *“Oh I’d say about three times a week. That’s about the amount of times I have to use my emergency one. I know it’s there for when I need it and just make sure I carry it at all times. It’s my safety net.”*

6.2.4 Control of asthma

6.2.4.1 Level of control

Within the customer interviews respondents were asked whether they believed that their asthma was under control. A total of 21 responses were collected, of which three quarters (n=15) felt that they were in control of their asthma. The feeling of control, for some, was as a result of having the condition for a number of years. For others, control came from management of the condition through use of preventative medication and avoidance of triggers;

- C12 *“Oh I would say almost completely (in control) now. I haven’t had any scares for years. I ‘m just much more careful and the older I’ve got the more sensible in avoiding things and places that set me off.”*

The remaining quarter (n=6) of respondents stated that they were not in control of their condition, and were unsure as to how to gain more control;

- C10 *“I’d like more control really because I’ve always got to look how much spray I’ve got left and have I got another one in the drawer.”*
- C29 *“It is getting slightly worse, but I’m doing everything I’m supposed to do, and I can’t do more than that. I wouldn’t know how to control it apart from what do you do, take your lungs out and wash them? There’s nothing I can do, I can merely follow what’s proposed to me and follow it properly.”*

6.2.4.2 Restrictions on life

As part of the customer interviews, respondents were asked whether they believed that their asthma restricted them in their day to day life. A total of 19 responses were

gained, of which over half (n=10), felt that their asthma had severely restricted their life in some way. It stopped them from doing certain things such as exercise, and for some had a financial impact as their asthma restricted the type of work they were able to undertake. For others who had difficulty walking, it limited the shops they were able to access;

C10 *“Well it’s a nuisance, I know it could be a lot worse because there’s bronchial asthma, which is the worst, but it does hold me back from certain things I want to do.”*

C14 *“I mean I have to be careful everyday what I do……. You know what you can and can’t do at the end of the day.”*

C17 *“It is quite restrictive everywhere you go.”*

Over a third (n=6) of respondents felt that their asthma did not affect their life, but admitted that it did limit them in the activities they could do. There was an acceptance that they just lived with the symptoms and that there were certain activities which they could no longer undertake;

C11 *“If I take my medication, to be quite honest I can do more or less what I want to do. By the time you reach my age you’re not wanting to climb, having said that we used to be big walkers but once you get arthritis you can’t do that either.”*

C19 *“I suppose it does really, but I’ve had it for so long it doesn’t affect me in that it stops me doing things. I mean, I might wake up wheezy and I might be wheezy during the day if a friend has a cat and it’s made me wheezy but I take my Ventolin[®] and I carry on. Unless I’ve been, say, sick with bronchitis doesn’t really effect my day to day being in which I really don’t do much.”*

Only three of the respondents believed that their asthma did not restrict them from doing anything, although they stated that their inhalers were with them at all times;

C33 *“No, it doesn’t stop me doing anything, no. I might have to take a reliever every now and again but it doesn’t stop me doing anything.”*

C28 *“Nothing prevents me doing what I want to do, I still play squash and things but I am aware that these days I can’t go anywhere at all without taking my inhaler with me. I’m very aware that I now need to make sure I take it with me. If I’m going out with a small bag to a dinner or up to London to a gig I have to make sure I have it.”*

6.2.4.3 Management strategies

As part of the customer interviews, respondents were asked how they controlled their asthma. Out of the 15 responses, over three quarters (n=11) of the respondents avoided specific triggers which they knew aggravated their condition. For some, this meant avoiding activities such as mowing the lawn and housework. Others had spent a considerable amount of money replacing items in the house, such as carpets to wooden floors, and cotton sofas to leather. Some respondents had changed their behaviour or lifestyle, by walking to and from work outside rush hour, or by simply limiting the activities they did. One particular respondent was also conscious of avoiding places which could potentially trigger asthma in her son;

C12 *“It certainly feels like that and I’m very careful to avoid things I know might cause me problems and land me in hospital. Plus I want to make sure my Daniel (baby son) doesn’t get it. So I’m definitely avoiding smoky places for him.”*

C19 *“I don’t honestly know if there’s an awful lot more I can do, you know I’ve changed my sofa to leather, all the things that trigger dust and stuff, I’ve got wooden floors, I’ve got hardly any carpet in my house, those kind of things have obviously helped so I don’t know if there is an awful lot more I can do, cos I’m quite diligent in taking my preventer and if I get sick I’ll up it to three times a day instead of twice a day and things like that. I don’t think there’s much more could be done.”*

Smoking had a detrimental effect on one respondent’s asthma, and as a result they had recently given up smoking and noticed a vast improvement in their condition;

C22 *“I did start smoking again, but have stopped again. Obviously smoking didn’t help and it did make my asthma worse. Within a few weeks of stopping I felt a 100% better.”*

A third (n=5) of respondents felt that their asthma was controlled by their medication, and a quarter (n=4) of respondents felt that regular exercising helped to improve their breathing and control their asthma;

C25 *“If I take more exercise. Swimming is good for it because it controls the breathing, you either breathe properly or you drown. And also because the air is moist obviously with the water. Yeah I do find that when I swim more my breathing does definitely improve.”*

6.3 Discussion of the results

The results presented within this chapter have explored customer need and demand for services in asthma. I have investigated the problems that people with asthma experience including the type of symptoms they suffer from, the level of control they have over their condition and any restrictions that asthma places on their life. I have also looked at some of the potential reasons behind poor control, including level of knowledge, understanding of their condition, and use of medication.

Two fifths of respondents from both the omnibus survey and customer interviews believed their asthma knowledge was good, with some feeling that their knowledge came from having the condition for so long. In contrast, one fifth of respondents within the omnibus survey admitted to knowing very little about their condition. This figure was slightly higher within the customer interviews, where a third of respondents felt that they had poor knowledge about their asthma. A European telephone survey of people with allergies, including asthma, also found that only one third of patients questioned claimed they had a good knowledge of their condition [151].

As with other studies [152, 153], participants sought information from a variety of professional and lay sources. Information from healthcare professionals was accessed by a number of media, including face to face, and literature. Other sources of information came from newspapers, magazines and friends and family. Even though these latter sources were not always validated, the quality of information was regarded quite highly by respondents, in particular, advice from friends and family. A survey commissioned by the DH looking at information sources for self care, also found that after GPs, family and friends, magazines and the media were the most popular sources of information [135]. The internet was not widely used as a source of information within this study, as it was only cited by two respondents. A study by Raynor et al. also found that the internet was not widely used as an information source, as too much information was available, and most was from unknown sources and could not be trusted [152]. A more recent survey by the DH found that the internet was used as an information source by 12% of those questioned [135]. However, both the internet and pharmacists were found to be underutilised, where preference to use as an information source outweighed current usage.

Asthma nurses and clinics were quoted by two fifths of respondents as an information source for their asthma, with many respondents attending asthma clinics when first

diagnosed, or following an emergency hospital admission. Very few respondents were still in attendance of these clinics as they no longer felt they were getting any benefits. Alongside nurses, GPs have also been frequently mentioned as a main information source in another study [152]. This study also found that pharmacists were widely used to gain information on the medicines themselves. Within these data, only a handful of respondents had used their GP or pharmacist to gain knowledge on their asthma.

Previous studies have found that patients value individualised information that is delivered by face to face advisors, and generally find these more helpful than medicines leaflets [152]. An evaluation of various methods of asthma education by the 'Global Institute for Asthma' initiative, however, found that patient preference did not always equate with effectiveness [145]. Information needs to be available in several different formats, and should give consistent advice which reinforces the same message [154].

Even though the majority of respondents did not feel very knowledgeable about their asthma, very few wanted to actually find out any more information. Current asthma information was seen to be very repetitive, and not say anything new or different. Other respondents felt that they knew all they needed to know. Previous studies have found that many people with asthma continue to have unmet information needs [155]. A study by Caress et al. to gain insight into key information needs of people with asthma, found that three out of nine core information needs were related to medicines [155]. A further study found that a quarter of people questioned wanted to know more about the long term effect of medicines, and one fifth were interested to know about alternative medicines and complementary therapies [153]. Some respondents within the customer interviews seemed to have a fear of finding out any more information as they did not think they would like what they were going to hear. This seems to be particularly apparent when it comes to the long term use of medication.

Although many respondents were not looking for information, there was an interest in anything that was seen to be new advances in technology, new medication or new information that would help them. The media was seen as a good source for people not actively looking for new information. The need for new information supports findings from previous studies [152, 155], particularly where new developments may lead to safer drugs or a reduction in medication doses [155].

Respondents were recruited into the asthma audit whilst they were within the pharmacy, either as a result of a dispensing or healthcare interaction. Within both audits, one tenth of respondents did not know what their GP had prescribed for them in terms of frequency of taking which medication. Although this number is surprisingly high, it is likely to be an underestimate of the true response due to the nature of recruitment of the respondent, and the fact that they may have been handing in a prescription at the time. The majority of respondents within the customer interviews were on a combination of medication to help control their asthma. As with another study [152], most respondents were fairly knowledgeable about their medication and directions for use, although these inhalers were described in a variety of ways. Many described their inhalers by brand name, which was particularly apparent with Ventolin[®]. Others described their inhalers by colour alone, blue or brown, or by inhaler use, reliever or preventer. Respondents were very conscious of having the ability for immediate access to a supply of Ventolin[®], blue, or reliever inhaler, as this was seen as their 'life line' in case of an asthma attack, and was often described as their 'emergency' inhaler.

Over half of the respondents within the omnibus survey regularly took medication for their asthma. Medication was taken only when symptoms occurred with a third of respondents, and just under a tenth took no medication at all. It is unclear whether these latter respondents possessed any reliever medication for emergencies, but as it was rarely used classed themselves as taking no medication. Unfortunately, the nature of an omnibus survey does not allow further questioning.

Approximately one in seven people within both asthma audits admitted to regularly not picking up all of the medication that had been prescribed for them by their GP. This number is likely to be an underestimate of the true response due to the nature of recruitment, and the fact that the respondent may have felt uncomfortable admitting this to the pharmacist. Unfortunately, due to the nature of the audit I was unable to question the respondent further as to why they did not pick up all of the medication. A study by Watts et al. also investigated how many prescriptions were fulfilled after being issued by the GP, and found that only 70% were dispensed [156]. Within the current data systems, the information regarding uncollected medicines does not normally filter back to the prescribing GP, although the development of the integrated patient care records may resolve this issue to some extent. Cost can be a deciding factor in whether or not people take their medication [157], and could explain why some people with asthma only pick up the inhalers which are absolutely necessary, for

example the reliever. A survey conducted by Asthma UK found that 94% of people with asthma believed that free prescriptions were vital to effective asthma control [157], although at the present time they are not exempt from prescription charges.

A number of studies have concluded that compliance with asthma medication is poor [157], and as little as 65% of patients within the UK regularly take their prescribed medicines [158]. When the DH questioned the public on general medicines use [135], only 82% admitted to taking their medication all or most of the time when their GP, nurse or pharmacist had asked them to. Within the omnibus data and both asthma audits, one in five respondents admitted to not using their medication as directed by their GP. Within the customer interviews, the use of medication was often triggered by feeling unwell, or the occurrence of symptoms. Many respondents also used their reliever medication if they knew they were going somewhere that would affect their asthma, such as a smoky pub, or undertaking an activity such as exercise. A study by Asthma UK also found that medication use varied [147], with some people admitting to easing off their medication when they were feeling well, whilst others religiously followed their drug regime.

Asthma patients are typically prescribed daily preventer medication, such as a corticosteroid inhalers or leukotriene antagonists, supplemented with a reliever inhaler for when symptoms occur. Non compliance problems typically involve an under use of preventer medication, and an overuse of reliever medication [157]. Many patients consider that their asthma can be controlled through the use of reliever medication, rather than the regular use of a preventer [159]. Some evidence of this can be seen through the asthma audits, where three out of five respondents admitted to using their reliever inhaler once a day or more, and six out of seven once a week or more. In the month prior to the ‘Asthma Insights and Reality in Europe’ survey [146], over 60% of respondents had used reliever medication to alleviate symptoms, but only 23% of those questioned had used an inhaled corticosteroid. Other studies have shown that almost three quarters of asthma patients use a short acting bronchodilator at least twice a day [160]. A study looking at the relationship between patients’ beliefs and their reported adherence with medication regimes found that asthma patients were the least likely to believe that their medicines were necessary, the most likely to say that the medication costs outweighed their benefits, and were the least compliant in using their medication [161].

Some respondents within the customer interviews had a fear of their medication and attempted to control the condition psychologically to avoid exposure to steroids. Only two respondents felt comfortable enough to manage their medication, and increase the dosage of both their inhalers if they were feeling unwell. A study by Asthma UK found that people with asthma were concerned about side effects with their medication, and many were discouraged from taking their medicines as a result [147]. This was particularly apparent with parents of children with asthma and younger people. Although people with asthma recognise the central role of medications in the management of their condition, fear and concerns about the adverse effects of prolonged medicine taking is still common [155, 158].

Studies such as the ‘Needs of People with Asthma’ survey have found that 44% of people with asthma knew about allergies, their possible effects and triggers of asthma symptoms [153]. Within the customer interviews, there was a good level of awareness amongst respondents of what triggered their asthma. Triggers such as exercise, hayfever, weather, dust, stress, animals and pollution were commonly recognised by people with asthma. For some respondents, being aware of the trigger allowed them to put in place measures to avoid exposure, such as replacing carpets for wooden floors to minimise dust. Allergen avoidance has been linked with the desire to achieve greater control of asthma by eliminating the cause, resulting in a reduction in medication use [155]. For others, avoidance of the trigger was not always an option, so the respondents managed the resulting symptoms from exposure with medication. This was particularly apparent with respondents with pets which triggered their asthma. Symptoms displayed amongst the respondents were common place with people with asthma, namely difficulty in breathing, wheezing, tightness of the chest and coughing. The way in which respondents described these symptoms however, was extremely personal.

A person with good control and management of their asthma should lead a relatively symptom free life [145]. This was not the case however, within all three data sets where the regular occurrence of asthma symptoms was high. Within the omnibus data, 34% of respondents suffered from symptoms on a weekly basis or more. As part of the asthma audits, (62% within audit one, and 38% within audit two) respondents had experienced regular symptoms from their asthma in the last week, and the majority of respondents within the customer interviews experienced symptoms daily. Other studies such as the ‘Impact of asthma’ survey have also found symptom control to be poor, with as many as 42% of people with asthma experiencing symptoms on all or

most days, and 71% experiencing symptoms weekly [162]. Other surveys have found that as asthma severity increase, so does the frequency of symptoms [153].

Difficulty sleeping was experienced by 28% of respondents with audit one, and 18% within audit two. Other studies have reported figures of sleep disturbance ranging from 25% to 44% where people with asthma were waking at night more than once a week [146, 147, 162].

Respondents seemed to accept the occurrence of daily symptoms as part of their normal life, and something they had to live with. When questioned as part of the asthma audits, only one fifth of respondents felt that their asthma interfered with their usual activities. This number could be an underestimate if people with asthma accept the restrictions that their condition places on them. People with asthma seem to accept the restrictions that the condition places on their lifestyle as demonstrated by key findings from the 'Asthma Control and Expectations' survey [159]. Of those patients who said they usually felt well, around a third experienced daily symptoms, of which just over half accepted limitations on their lifestyle. Other studies that have investigated the impact of asthma on peoples lives have also found that only a quarter of respondents said that asthma had a major impact on their life, despite the high level of symptom occurrence amongst two fifths of total respondents [162].

Given the previous data presented in this section regarding the use of medication and frequency of symptom occurrence, it is surprising to discover that three quarters of respondents questioned within the customer interviews believed that their asthma was under control. Other studies have reported that approximately half of patients with severe asthma symptoms considered themselves to be completely or well controlled [146]. People with asthma tend to underestimate the severity of their condition, and overestimate the level of control, and settle for much less than could be achieved through better management strategies [146]. A quarter of respondents within the customer interviews admitted to their asthma being poorly controlled, but were unsure as to how to improve this. What is good control? To a healthcare professional this would be someone who was relatively symptom-free, to a person with asthma it could mean not being on steroid tablets, or in hospital.

The self care survey found that among those with a long term condition, 43% said that their condition limited their activities [135], equating to a quarter of the English population being limited by a long term condition. Asthma symptoms can have a

major impact on the quality of life of people with asthma by limiting everyday activities [146, 153]. It can place severe restrictions on the life of someone with the condition, and was seen to do just this in over half of the respondents participating in the customer interviews. The emotional and physical impact of asthma varied amongst respondents, and ranged from life changing activities such as giving up work, through to the avoidance of certain situations. Many of the respondents had to change aspects of their life to help them manage their asthma symptoms. This included having to shop in certain places that were within easy walking distance, through to changing their working hours to avoid rush hour traffic and pollution. In a large scale survey by Asthma UK [142], they also found that 42% of people with asthma avoided walking and shopping in congested areas due to traffic fumes, and 40% avoided smoky pubs. Many respondents also avoided exercise because they felt that this was something that they could no longer do, yet research shows that taking exercise and staying fit can help to keep asthma symptoms under control [142]. Conditions like asthma can have a financial impact on individuals by reducing their working income or by changing the home environment to reduce exposure to triggers such as dust. Over a third of respondents felt that their asthma did not restrict them in any way, but did feel that it limited the activities that they could participate in. There seemed to be a general acceptance amongst respondents of the restrictions that their asthma placed on them, and that this was part of their everyday life. It has been suggested that some patients may see symptoms and lifestyle restrictions as integral aspects of having asthma [159]. This research supports recent activity undertaken by Asthma UK [147] which also showed that people with severe asthma either continued with their lives despite their asthma symptoms, or undertook limited activities as they found control of their symptoms difficult. In addition, Asthma UK also found that women were more likely to report a heavier burden of symptoms and limitations on daily life, particularly when it came to exercise and work. Within the customer interviews, there was no difference in reporting of restrictions between males and females, which would not be expected within the small sample of this study.

Despite the level of knowledge a person with asthma has on their condition, there is still a large cohort of people that have poor control of their condition and who experience regular symptoms. As a result of this, many accept the restrictions and limitations that asthma places on their lives. There is an opportunity for community pharmacists to help to identify people with poor control of their asthma through the use of simple questions, such as the RCP. Pharmacists can act as an information source for people wanting general advice on asthma, or can proactively target

customers when they are in the pharmacy. Information could be provided in several formats, and across a variety of topic areas to cater for varying customer needs. Pharmacists could also find a way of highlighting new information and research as and when it becomes available. There is also a need to help people to understand and manage their condition better by helping them to recognise trigger factors for their asthma, and identify strategies for managing symptoms. Pharmacists can also help improve concordance by helping customers to understand their condition better, and by improving their understanding and confidence with medication.

Problems with poor levels of knowledge and understanding of a condition, use of medication, levels of management of a condition, and quality of life are not unique to asthma and are experienced by many people with a long term condition [135]. Although this study uses asthma as an example, the customer need and demand for such services is not unique to this condition. The difficulty is being able to help patients recognise the need for help, and their willingness to access services that provide support and advice from the community pharmacist.

6.4 Summary of chapter VI: Factors affecting the opportunities available for pharmacists in the delivery of asthma services

Although the results presented in this chapter are not new findings, they have helped to update and reinforce previous research carried out that identifies the problems that people with asthma experience. This chapter has highlighted the fact that many people with asthma still have a relatively poor knowledge of their condition and its management. To some, there is a fear of finding out more information about their asthma, but to others they simply believe that they know enough already. Use of medication is poor, with many patients not always picking up all of the medication that their GPs have prescribed. There is a high use of reliever medication, and an under use of preventer inhalers. The majority of patients still experience regular symptom occurrence as a result of their asthma, and readily accept the restrictions that it places on their lifestyle.

People with asthma need to be able to access up to date and reliable information on their condition through a number of medium, including the regular reinforcement of key messages by all healthcare professionals. Most people appear to be responsive to

new information that can help to improve symptom control, or reduce medication use. The expectations of people with asthma need to be raised so that the majority are aiming to be relatively symptom free, with few or no restrictions on their lifestyle. People with asthma need to have a better understanding of how to control their condition, including management strategies and the use of medication.

There is an opportunity for community pharmacists to help to identify people with poor control of their asthma through the use of simple questions. Pharmacists can act as an information source for people wanting general advice on asthma, or can proactively target customers when they are in the pharmacy. There is also a need to help people to understand and manage their condition better by helping them to recognise triggers for their asthma, identify strategies for managing symptoms, and improve understanding and confidence with medication. Although this study uses asthma as an example, the concept around customer need and demand for such services is not unique to this condition, and as such could be applied to other condition areas.

From the opportunities identified within this chapter, a summary of the potential factors that could affect service delivery are summarised in Table 34. Where similar themes have been identified within previous literature, this has also been indicated. As found within chapter five, many of the factors affecting service delivery are the opposites of each other, where a factor acting as a facilitator can be reversed to act as a barrier.

Table 34: Potential factors affecting service delivery identified from the opportunities available to pharmacists in the delivery of asthma services

	Facilitators	Barriers
Customer need	Customer need for service, including; <ul style="list-style-type: none"> ▪ Poor knowledge ▪ Poor symptom control ▪ Poor use of medication ▪ Poor management of condition ▪ Poor quality of life [1, 11, 20]	No customer need for service, good control and management of condition
Customer demand	Demand for service, including; <ul style="list-style-type: none"> ▪ Interest in accessing additional information ▪ Interest in improving management of condition [16]	No demand for the service, or interest in improving condition [1, 8, 14, 16]
Recruitment	Pharmacists able to identify customers easily that require help or support	Customers not easily identifiable
Public attitude	Customers interested in accessing services and advice on particular condition area from the pharmacist	Customers not willing to access services and advice on particular condition area from the pharmacist

All the factors identified from this chapter will be discussed in more detail in chapter nine where final conclusions will be drawn. The next chapter of this thesis presents the results from the delivery of the two asthma services within Boots, and identifies the facilitators and barriers that may have affected service delivery.

CHAPTER VII

Facilitators and barriers affecting delivery of the asthma services

7.0 Introduction to the chapter

So far within this thesis, I have looked at the changes within the health service environment concerning community pharmacy, and the factors affecting service delivery that have been identified within the literature. These results have been presented over a series of chapters, enabling me to investigate the numerous factors that could affect the implementation and delivery of services within community pharmacy. The first of the results chapters looked at the factors affecting the public's utilisation of the community pharmacy and the pharmacist's role in service delivery. Following this, I looked at the factors affecting the opportunities available for pharmacists in the delivery of asthma services. The results presented within this chapter are following the implementation of two asthma services used in this study in an attempt to identify experiential and potential facilitators and barriers affecting service delivery. Details of the two services including implementation methods were provided in chapter three.

Data is presented on the views of pharmacists and customers, as well as operational and environmental factors collected through quantitative methods. Due to the large quantities of data presented within this chapter, I have segmented the presentation of the results into three sections. The first section presents the results from the delivery of the brief intervention in asthma, which was a national service developed centrally. The second section of this chapter presents the second asthma service, which was developed and managed locally. The last section in this chapter looks at the recommendations that have been made by customers and pharmacists for future service delivery, i.e. the potential facilitators. Each section presents the results, a brief discussion, and a summary of initial conclusions. The findings from all the results presented within this thesis are discussed in more detail in chapter nine.

The factors affecting service delivery identified within the literature have already been discussed within chapter two, and are therefore not repeated within this chapter. However, a summary is provided as an aide memoir when reading this section. The

factors can be grouped under key headings comprising: customer need and demand for the service, public attitude, pharmacist characteristics and attitude, training, communication, awareness of the service, recruitment to the service, operational aspects of service delivery, pharmacist confidence in service delivery, support for the service, time, staff resource, remuneration, the pharmacy environment, healthcare professional relationships, evidence of the value of the service, and the external environment.

SECTION ONE

7.1 Delivery of the brief intervention in asthma (service one)

The brief intervention in asthma was designed centrally and implemented nationally throughout Boots during March 2003. The intervention was designed around pharmacists and healthcare staff asking customers with asthma three basic questions to find out their level of symptom control. Based on the response, the pharmacist or healthcare staff would then provide appropriate lifestyle advice to the customer. This ‘brief intervention’ was kept extremely simple to encourage pharmacists and healthcare staff to integrate the intervention into their current practice and role.

Within this section, I provide the results from the delivery of the brief intervention in asthma in an attempt to explore the various factors that could affect service delivery. Data is provided from the customer and pharmacist interviews, along with the mystery customer research. The results presented explore implementation of the service, recruitment to the intervention, delivery rates, frequency of questions that were asked, personnel delivering the interventions, the type of lifestyle advice given, asthma advice provided, the pharmacy environment, and factors affecting delivery as identified by the pharmacists participating in the service.

7.1.1 Results

7.1.1.1 Implementation of the brief intervention

During the interviews, a number of the pharmacists commented on the implementation of the brief intervention, and were extremely positive. The literature that they had received helped to refresh their knowledge on asthma, and the content was found to be very relevant for interactions with customers;

P9 “...I thought it was good, we had all the information and the pharmacist went through it with me, was quite clear to follow. Got all the letters, thought was a good way of putting it across.”

The intervention consisted of asking three simple questions about symptom control and then offering basic lifestyle advice. The pharmacists found this simple structure useful and easy to follow;

P10 *“...quite useful, to give it a more structured view, more professional patter, quite useful to have it done for you.”*

One pharmacist thought that the lifestyle advice was excellent, but would have liked the opportunity to talk through it in more detail with a colleague before they offered the service.

7.1.1.2 Recruitment to the brief intervention

During the interviews, many of the pharmacists were asked how they approached customers about the brief intervention. All of the pharmacists questioned about this responded by saying that they targeted customers when they came in to the pharmacy with an asthma related prescription. This had worked well in most areas, although pharmacies serving high numbers of the elderly population had actually found that this identified more patients with Chronic Obstructive Pulmonary Disease (COPD) than asthma;

P9 *“What we’ve done is we’ve looked at any patients that were asthmatics, looked at their prescriptions and then had a word with them if we had time, what we found was a lot of our patients were COPD patients, with it being an elderly population in XXXXX, rather than asthma.”*

One of the pharmacists had also actively looked at targeting customers that came in to purchase OTC medicines;

P1 *“The few that I did were from different routes. Some were prescription led and the other girl I spoke to was as she asked me for advice on hay fever and how best she could control it.”*

A number of the pharmacists stated they would try and speak to customers as they handed out their prescriptions, and would target those that were particularly at risk;

P10 *“Different ways, sometimes if you see someone with two or three salbutamol inhalers on their own we pick up, or someone who says they don’t want a betamethasone. If you see someone with just a reliever which they shouldn’t use a lot of on their own you would pick that up and think actually why are they using so much of that. Maybe pick up people at risk, scripts that you can see that are new, have come from the hospital, or handwritten by a GP and you just really gauge it, if you’re not busy and that person doesn’t look like they want to rush off, it’s intuition, sometimes if you try*

and push too much information at someone who doesn't want it, it can actually go the wrong way."

Pharmacists that were actively targeting groups of customers for repeat prescription services found the brief intervention to be a useful addition;

P8 *"For me it was very easy because we have a policy of targeting particular groups of patients to see if they want to come onto our repeat prescription collection service so and the types of patients that we go for with that are asthmatics, diabetics, people who have regular repeat medication. Because then it guarantees us those repeat prescription items, also it means we can manage our workload better. So to a degree a lot of the patients were being targeted anyway so this was just something extra we were able to offer."*

Although marketing materials were not provided for the brief intervention, one pharmacist had designed a poster themselves to proactively try and get customers to ask about the service;

P1 *"...what I did was design a poster to put up on the counter. I guess as I panicked that I wouldn't be able to recruit anyone myself at the counter I opted for the route of promoting the service."*

As the intervention was so simple, pharmacists tried to use this to encourage customers to talk to them about their asthma, without feeling pressurised;

P8 *"It was more in the way of, this is something that we're doing, you may feel that it is of benefit to you and if so we're more than happy to progress and go through it with you. What we didn't want to do was to pressurise or sort of force people into it."*

As part of the customer interviews, respondents were asked how they were approached by the pharmacists for the brief intervention. Although the majority of respondents were approached in the pharmacy whilst collecting a prescription or shopping, over half of these claimed that they were approached to take part in a survey;

C9 *"...they said they were doing a survey into asthma and asked if I would mind doing a short interview."*

C22 *“Basically I was getting my prescription for my inhalers and there’s a guy that asked me if I wanted to take part in some asthma research and I think any kind of asthma research is a good thing, there are far too many people that have got it, …..”*

A couple of the respondents had been recruited to the survey by the pharmacists talking to their partners, who had gone in to pick up their regular prescriptions;

C20 *“I wasn’t there so I can’t say. The pharmacist must have mentioned when handing over the inhaler can we take your fiancée’s details or whatever and then someone phoned me a few weeks ago, I don’t mind doing it, anything to help, but I don’t really know anything about it.”*

Over a quarter of the respondents questioned had been approached directly by the pharmacist about their asthma whilst they had been picking up their prescription. Following the discussion, the pharmacist had asked them whether they would be willing to participate in a survey;

C10 *“I went to pick up my prescriptions and she asked me about them and then asked if I would be interested in taking part in an interview regarding the asthma.”*

A total of three respondents had approached the pharmacist themselves, either about a general enquiry on their asthma or with inhaler difficulties;

C13 *“...I was in town and my inhaler didn’t seem to be working properly so I popped in and asked if they could have a look at it for me. I have to say the sales assistant was really helpful and got the pharmacist for me. He realised the cartridge wasn’t fitted properly so got me a new one.”*

7.1.1.3 Delivery rates of the brief intervention

The delivery rates of the brief intervention in asthma were measured using the mystery customer research as a proxy to identify those pharmacies that had implemented, and were delivering the intervention. The total number of mystery customer assessments between May and August 2003 for the asthma scenario was 2756, within 1222 pharmacies. To understand the delivery process in more detail, these data have been broken down for analysis into sub sets for those delivering the brief intervention, pharmacies that were consistently positive, and those pharmacies that delivered the full intervention (refer to Table 35). Due to the nature of these data, there will be an element of overlap within the different data sets.

Table 35: Definition and sample size of all mystery customer data sets

Data set	Definition	Sample	Pharmacies
All data (AD)	Total number of pharmacies assessed with the asthma scenario throughout the four month period	2756	1222
Brief intervention (BI)	Pharmacies that asked one or more RCP question and / or gave lifestyle advice	1989	1105
Consistent positive (CP)	Pharmacies that were assessed more than once and were consistently positive in delivering the BI	1002	410
Full intervention (FI)	Pharmacies that asked all three RCP questions and gave lifestyle advice	41	40

Over the four month period, 2756 mystery customer assessments for asthma were carried out. Of these, 72.2% (n=1989) carried out the brief intervention, 36.4% (n=1002) were consistently positive in performing the intervention, and 1.5% (n=41) delivered the full intervention.

Brief intervention

Throughout the mystery customer assessment period, pharmacies were classed as using the brief intervention if they had asked one or more of the RCP three questions, and / or gave lifestyle advice. During May, 65.7% (n=496) of pharmacies assessed were using the intervention. This rose to 84.3% (n=591) in June and 83.8% (n=650) in July, and then dropped to 48.1% (n=252) in August (refer to Table 36).

Table 36: Overview of mystery customer results between May and August 2003

	May	June	July	August
Total number pharmacies assessed	1263	1265	1395	1406
Pharmacies where asthma scenario carried out	755	701	776	524
No advice given (%)	34.3	15.7	16.2	51.9
Some lifestyle advice given (%)	23.6	26.5	25.9	6.7
Asked one or more RCP question (%)	46.8	61.1	62.2	46.2
Asked all three RCP questions and gave lifestyle advice (%)	1.7	0.9	1.3	2.3
Asked one or more RCP question and / or gave lifestyle advice = BRIEF INTERVENTION (%)	65.7	84.3	83.8	48.1

Consistent positive data

Over the four month period a total of 2756 asthma scenarios were carried out within 1222 pharmacies, of which a number were assessed on more than one occasion. In total, 21.9% (n=268) of pharmacies were assessed once, 39.1% (n=477) were assessed twice, 30.6% (n=374) were assessed three times, and 8.4% (n=103) were assessed four times (refer to Table 37).

Table 37: Frequency of pharmacy assessment versus results for all mystery customer data (n=2756)

Number of pharmacy assessments	Brief intervention	No intervention	Total number assessments	Number pharmacies
1	187	81	268	268
2	703	251	954	477
3	795	327	1122	374
4	304	108	412	103
Total	1989	767	2756	1222

Of those pharmacies assessed twice, 53.7% (n = 256) were consistent in delivering the brief intervention. This decreased slightly to 33.7% (n = 126) consistent delivery in those pharmacies that were assessed three times, and 27.2% (n = 28) in those assessed four times. Over the total four month period of those pharmacies that were assessed more than once, 43.0% (n = 410) were consistently positive in delivering the brief intervention.

The detailed breakdown of delivery within consistent positive pharmacies can be seen in Table 38. One or more RCP questions were asked on 75.5% (n=757) of occasions, whilst all three RCP questions and advice on lifestyle was given on 1.4% (n=14) of occasions. Lifestyle advice alone was given on 29.5% (n=296) of occasions.

Table 38: Delivery of brief intervention within consistent positive pharmacies (mystery customer data, n=1002)

	Frequency	Percentage
Some lifestyle advice given	296	29.5
Asked one or more RCP question	757	75.5
Asked all three RCP questions and gave lifestyle advice	14	1.4
Asked one or more RCP question and / or gave lifestyle advice	1002	100.0

Full intervention data

Pharmacies that asked all three RCP questions and gave lifestyle advice were classed as conducting the full intervention. Over the four month period, a total of 41 mystery customer visits met these criteria, across 40 pharmacies.

During May, 1.7% (n=13) of pharmacies assessed with the asthma scenario conducted the full intervention. This dropped slightly in June to 0.9% (n=6), and then rose again to 1.3% (n=10) in July and 2.3% (n=12) in August.

7.1.1.4 Frequency of question asked by staff

The mystery customer research collected data on which RCP questions were asked. These data have been analysed in sub sections for those pharmacies delivering the brief intervention, those that were consistently positive in delivering the asthma intervention, and those that delivered the full intervention, to be able to compare the results. The views of pharmacists on the use of the RCP questions are also presented.

Brief intervention data (n=2756)

Across all four months data, pharmacy teams consistently asked people with asthma the third of the three RCP questions more frequently than the other two, followed by the second and then the first (refer to Table 39).

Table 39: Frequency of question asked as a percentage of total pharmacies assessed (mystery customer data)

RCP question		Percentage of pharmacies assessed			
		May (n=755)	June (n=701)	July (n=776)	August (n=524)
q1	Have you had difficulty sleeping because of your asthma symptoms?	12.1	14.3	16.8	18.7
q2	Has your asthma interfered with your usual activities?	24.2	21.1	26.3	32.3
q3	Have you had your usual asthma symptoms during the day?	28.5	46.4	41.2	39.1
Pharmacies asking one or more RCP question		46.8	61.1	62.2	46.2

The sum of the frequency of pharmacies asking each individual question is greater than the total number of pharmacies asking any RCP question, as many pharmacies asked more than one question during the period of assessment.

Table 40 shows the distribution of personnel asking each RCP question, as a percentage of the number of that personnel assessed. There was a significant difference between the personnel asking question two, with pharmacists and ‘unknown’ personnel more likely to ask this than ‘non pharmacist’ personnel ($\chi^2=16.493$; $p<0.05$). Pharmacists were also more likely to ask question three than other personnel ($\chi^2=7.276$; $p<0.05$).

Table 40: Type of personnel asking RCP questions, as a percentage of personnel assessed (mystery customer data)

Personnel assessed	RCP question (%)		
	q1	q2	q3
Pharmacist	14.7	28.9	41.6
Unknown	17.2	28.4	37.8
Non pharmacist	15.1	22.0	36.3

Consistent positive data (n=1002)

Pharmacies that were consistently positive, asked question one on 21.4% (n=214) occasions, question two on 34.9% (n=350) occasions, and question three on 54.1% (n=542) occasions. Question three was the most frequently asked question, regardless of the number of pharmacy assessments, followed by question two, and then question one (refer to Table 41).

Table 41: Frequency of question asked as a percentage of consistent positive assessments (mystery customer data)

RCP question		Number of pharmacy assessments (%)			
		Two (n=512)	Three (n=378)	Four (n=112)	Total (n=1002)
q1	Have you had difficulty sleeping because of your asthma symptoms?	22.1	20.6	20.5	21.4
q2	Has your asthma interfered with your usual activities?	30.1	38.1	46.4	34.9
q3	Have you had your usual asthma symptoms during the day?	53.3	54.0	58.0	54.1

Full intervention data (n=41)

By definition, the full intervention involves the pharmacy asking all three RCP questions and giving lifestyle advice, so each pharmacy asked all three questions on all 41 occasions.

Comparison of data sets

Within the full intervention data, 100.0% (n=41) of pharmacies asked all three RCP questions. Across all the other data sets, question three was the most frequently asked, followed by question two, and lastly question one (refer to Table 42). Consistent positive pharmacies asked all three RCP questions more frequently than the BI pharmacies.

Table 42: Frequency of question asked for all mystery customer data sets

Data set	<i>Percentage of pharmacies assessed</i>		
	q1	q2	q3
Brief intervention (n=2756)	15.2	25.5	38.6
Consistent positive (n=1002)	21.4	34.9	54.2
Full intervention (n=41)	100.0	100.0	100.0

Pharmacist views on RCP questions

During the interviews, eight pharmacists were specifically questioned on their use of the RCP questions. Half of the pharmacists were extremely positive about the questions, and thought that they were extremely easy to use;

P2 *“They seemed to work really well and at least it was an easy way of approaching customers in a way that they understood. You know, not too scientific so it put them off.”*

Many of the pharmacists would ask the RCP questions to people that they knew had asthma, or those that seemed interested when collecting their prescription;

P4 *“Where appropriate I managed to ask them, but only those who seem interested or that I have seen regularly when they come in to collect their prescriptions. I might ask how they are getting on with their inhaler and include some of the questions in that.”*

A couple of the pharmacists questioned stated that they used to speak customers with asthma prior to the intervention, so had integrated the RCP questions into that. To

these pharmacists, this type of intervention was seen as something that they should be doing anyway;

P6 *“Usually I just do simple checks with customers whether they have used their asthma medication before and if they haven’t I’ll take them through it briefly just so they understand how it will work and what they should be doing. I do it for most prescriptions I hand out – Its all part of the job and what we’re trained to do.”*

One of the pharmacists did not use the RCP questions in particular, but had come up with their own version of questioning that they had started to use when speaking to customers with asthma;

P5 *“I haven’t really used it I have to admit. You just get on with your job on a day to day basis and if you haven’t got it in your hand you don’t tend to think about it. Although to be fair I have managed to chat to asthma sufferers, particularly if someone has a child with them. I might ask them a few questions if I hear them coughing. Then I might ask if this is mainly at night and whether or not they have been tested for asthma before or if it runs in the family. Then if I think they might have it and they haven’t been diagnosed by their GP I might ask if they are worse if they do any exercise. Its basic stuff really but probably in a way I have also been offering the service – just not necessarily what I would term intervention – more common sense and what I see as part of my every day job.”*

Three of the pharmacists questioned had negative views on the use of the RCP questions. For one respondent, this was because they felt that it was not appropriate for the pharmacist to be asking questions like these;

P9 *“You know the 3 questions, we didn’t really look into that as much as that was more the kind of thing that they would probably inform their doctor or nurse if they were wanting a change, you know sleeping difficulties, or about their symptoms interfering.”*

The questions were seen to be slightly obtrusive to customers by one pharmacist, and difficult to bring into the conversation;

P10 *“I think that it’s a question of time to work out the best way of asking them. I think by asking ‘is your sleep being disturbed’ I think some people would think ‘what – this is asthma’, they don’t connect the two, have to make them realise that there’s a connection before you ask the question.”*

The use of the RCP questions was also seen to be very formal, and some pharmacists found it much easier to talk to people generally rather than asking specific questions;

P11 *“When we talk to them it’s much easier to talk to them generally how they’re getting on as apposed to giving them three - four questions to say ‘are you doing this and are you doing that’, and that tends to put them off when you ask them direct questions as opposed to talking to them about the general state of what their asthma is like.”*

7.1.1.5 Personnel delivering the brief intervention in asthma

As part of the mystery customer research, the personnel delivering the intervention were recorded as either ‘pharmacist’, ‘non pharmacist’ or ‘unknown’. Non pharmacist was the terminology that was used to represent healthcare and pharmacy assistants working on the pharmacy counter and unknown personnel was used if the mystery customer could not distinguish as to whether the person being assessed was a pharmacist or non pharmacist. During the four month period, the mystery customer assessed the pharmacist on 40.3% of the occasions (n = 1112), non pharmacist personnel on 47.6% occasions (n = 1313), and unknown personnel on 12.0% occasions (n = 331).

Brief intervention data

Of the total pharmacists that were assessed over the four month period, 78.7% (n = 875) delivered the brief intervention, and of the non pharmacists assessed, 67.5% (n = 886) delivered the brief intervention. Of the ‘unknown’ personnel, 68.9% (n = 228) were found to be delivering the brief intervention throughout the assessment period. These data show that pharmacists were significantly more likely to deliver the brief intervention than the other personnel ($\chi^2=39.68$; $p<0.05$).

The percentage of unknown personnel conducting the intervention rose in July and August, as shown in Table 43.

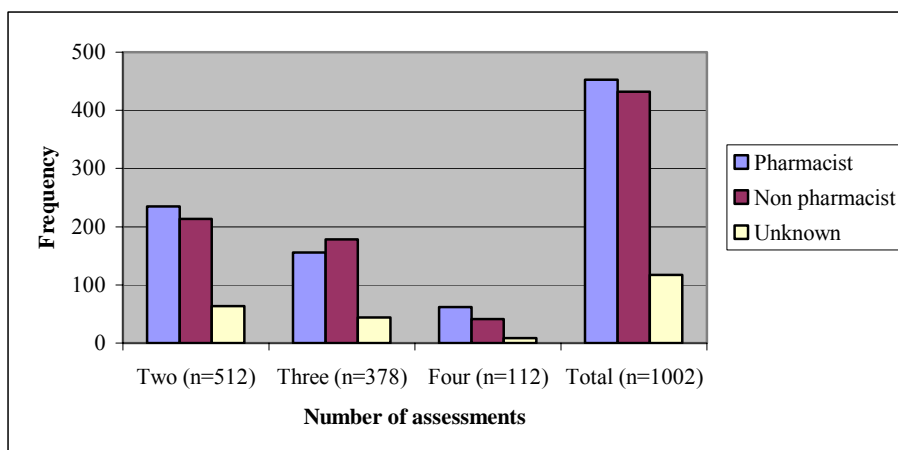
Table 43: Number of ‘unknown’ personnel conducting the brief intervention between May and August 2003 (mystery customer data)

	May	June	July	August
Conducted BI	35	58	96	39
% of total assessed	7	10	15	16

Consistent positive data

Pharmacists carried out the intervention on 42.5% (n=453) occasions, non pharmacist personnel on 43.1% (n=432) occasions, and unknown personnel on 11.7% (n=117) occasions (refer to Figure 17). A Chi test was performed, but no significant difference was found between the personnel that were delivering consistent positive interventions.

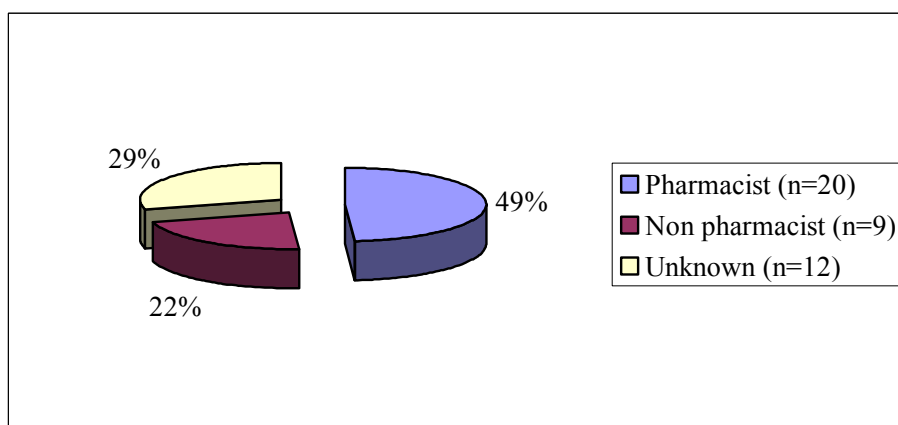
Figure 17: Breakdown of personnel delivering consistent positive interventions (mystery customer data, n=1002)



Full intervention data

The breakdown of personnel delivering the full intervention can be seen in Figure 18. Pharmacists delivered the full intervention on 48.8% occasions (n=20), non pharmacists on 22.0% of occasions (n=9), and unknown personnel on 29.3% occasions (n=12).

Figure 18: Breakdown of personnel delivering the full intervention (mystery customer data, n=41)



Comparison of data sets

Across the brief intervention and consistent positive data sets, pharmacists delivered the interventions more frequently than the other personnel, followed by unknown personnel, and lastly non pharmacists (refer to Table 44). For the full intervention data, 3.6% (n=12) of unknown personnel assessed delivered the intervention, compared to 1.8% (n=20) of pharmacists assessed, and 0.7% (n=9) of non pharmacists assessed.

Table 44: Delivery of the intervention by personnel shown as a percentage of the type of personnel assessed (mystery customer data)

Data set	<i>Percentage performing intervention</i>		
	Pharmacist (n=1112)	Non pharmacist (n=1313)	Unknown (n=331)
Brief intervention	78.7	67.5	68.9
Consistent positive	40.7	32.9	35.3
Full Intervention	1.8	0.7	3.6

7.1.1.6 Type and frequency of lifestyle advice provided

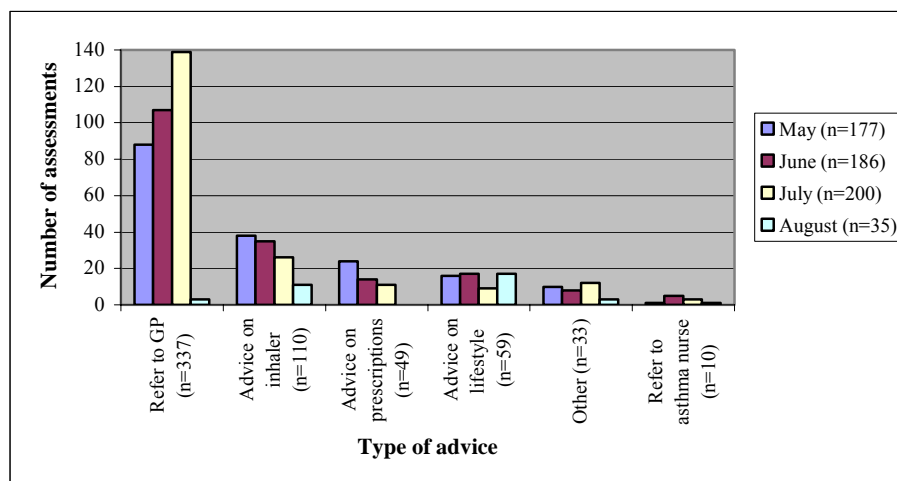
Mystery customers recorded whether advice was given during the brief intervention, and if so, the type of advice given to them. The data presented here has been subdivided to look at the differences between advice given as part of the brief intervention, those pharmacies that were consistently positive in delivering the intervention, and those that delivered the full intervention.

Brief intervention data

Of the total number of pharmacists assessed, 26.1% (n = 290) gave some lifestyle advice. For non pharmacists assessed, only 17.6% (n = 231) gave some lifestyle advice, and for unknown personnel, 23.3% (n = 77) gave lifestyle advice. This difference between staff groups was found to be significant ($\chi^2=26.03$; $p<0.05$).

Figure 19 provides an overview of the type of advice the pharmacy teams gave to people with asthma over the four month assessment period. During May, June and July 2003 the most common type of advice that the pharmacy teams gave involved a referral to a GP (n = 337). This was followed by advice on inhaler technique (n = 110). Pharmacists were more likely to give advice on inhaler technique (n = 70), than non pharmacist (n = 29), and unknown personnel (n = 11) ($\chi^2=59.931$; $p<0.05$). Very few referrals were made to the asthma nurse or clinic (n = 10).

Figure 19: Type of advice delivered as part of the brief intervention between May and August 2003 (mystery customer data, n=598)

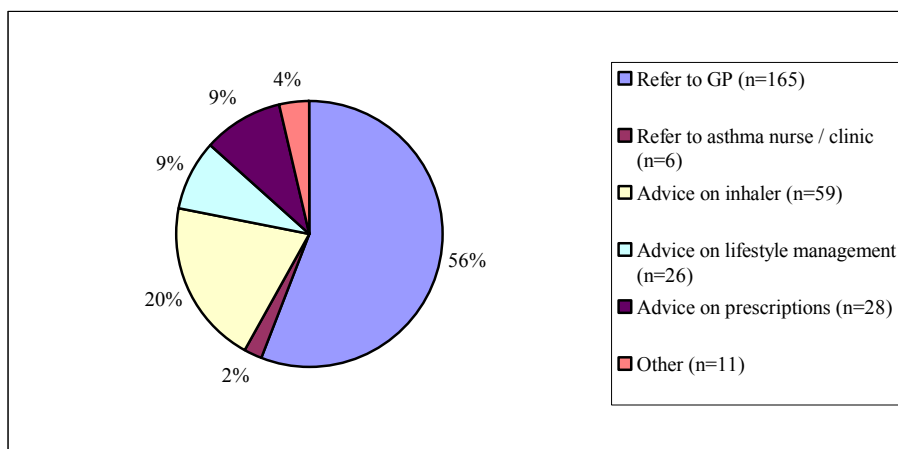


Consistent positive data

Lifestyle advice was given on 29.5% (n=296) of occasions within consistent positive pharmacies. This was delivered by the pharmacist on 48.6% (n=144) of occasions, non pharmacists on 38.2% (n=113) occasions, and unknown personnel on 13.2% (n=39) of occasions. A chi test was performed but no statistical difference was found between the personnel giving lifestyle advice.

The type of advice given was recorded on 99.7% (n=295) occasions, with one set of case notes uncompleted. Mystery customers were referred to the GP on 55.9% (n=165) occasions, given inhaler advice on 20.0% (n=59) occasions, advice on prescriptions on 9.5% (n=28) occasions, advice on lifestyle management on 8.8% (n=26) occasions, other advice on 3.7% (n=11) occasions, and referred to the asthma nurse / clinic on 2.1% (n=6) occasions (refer to Figure 20). Staff were more likely to refer mystery customers to the GP compared to giving other types of lifestyle advice ($\chi^2=15.896$; $p<0.05$).

Figure 20: Type of advice given by those pharmacies delivering consistent positive interventions (mystery customer data, n=296)



Full intervention data

Lifestyle advice was given on all 41 occasions within pharmacies delivering the full intervention. The mystery customer was referred to the GP on 31.7% (n=13) occasions, given advice on lifestyle management on 29.3% (n=12) occasions, given advice on inhaler technique on 14.6% (n=6) occasions, referred to the asthma nurse on 2.4% (n=1) occasions, given advice on prescriptions on 2.4% (n=1) occasions, and other advice on 19.5% (n=8) occasions (refer to Figure 21).

Figure 21: Type of lifestyle advice that was given by those pharmacies delivering the full intervention (mystery customer data, n=41)

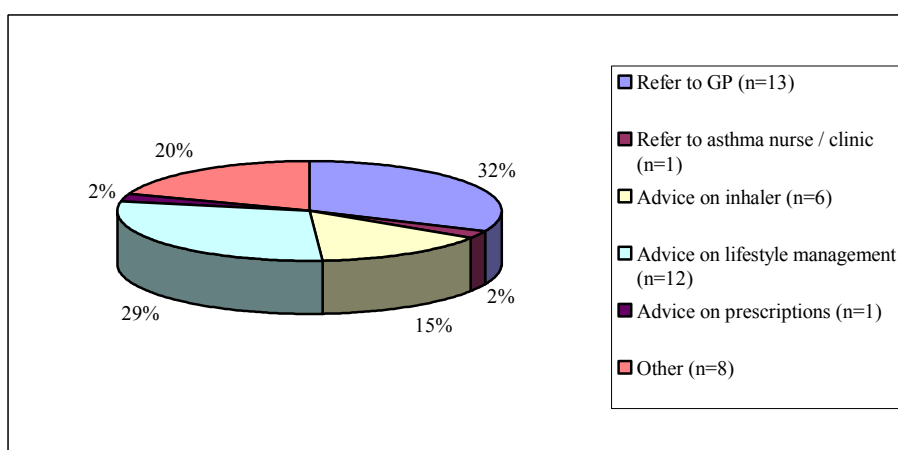
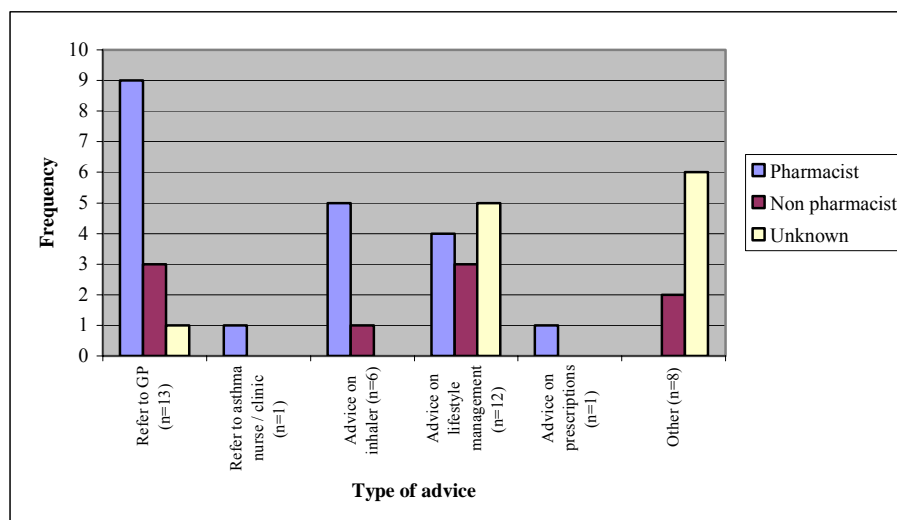


Figure 22 shows the breakdown of this advice by personnel. Pharmacists appeared to be more likely to refer people to the GP (n=9) compared to other personnel (n=4).

Pharmacists also appeared to give more advice on inhalers (n=5) compared to other personnel (n=1).

Figure 22: Type of lifestyle advice that was given by personnel delivering the full intervention (mystery customer data, n=41)



Comparison of data sets

Pharmacies conducting the full intervention gave lifestyle advice on all occasions (n=41). Those pharmacies that delivered a consistent positive result gave lifestyle advice on 29.5% (n=296) occasions, and those pharmacies delivering the brief intervention on 21.7% (n=598) occasions.

Within all the data sets, referring customers to the GP was by far the most common piece of lifestyle advice given. The ranking of other lifestyle advice varied between interventions, as can be seen in Table 45.

Table 45: Order of frequency of lifestyle advice given for all mystery customer data

	Brief Intervention	Consistent Positive	Full Intervention
Refer to GP	1	1	1
Advice on inhaler	2	2	4
Advice on prescription	3	3	5
Advice on lifestyle	4	4	2
Other	5	5	3
Refer to asthma nurse	6	6	5

7.1.1.7 Type of asthma advice provided by pharmacists and staff

From the eleven pharmacists that were questioned about the type of advice they had discussed with customers, all recalled incidents relating to advice on medication. The majority of these interactions seemed to be based around the customers understanding of their inhaler type and use;

P10 *“Lack of understanding of different inhalers, certainly as the range has increased now to preventers, controllers and combination controllers, One gentleman had an inhaler which was red and thought that was just for emergency use only, which actually is quite logical if you see red, but obviously is not what it has been dispensed for but what he has decided on, so better understanding of the different types of inhalers and definitely with steroid inhalers, use of them, getting rid of the powder being left in the mouth, that kind of thing.”*

There was a feeling amongst some of the pharmacists that the reason why most people were keen to talk about their inhaler use, was because they did not get the chance to do this with their GP after their initial diagnosis;

P2 *“It was all medication based. That’s where they seemed to have most of their issues. All three wanted advice on better use of their inhalers. They just don’t seem to get the chance to ask their GP very often as they’re really just collecting prescriptions.”*

P4 *“And if they appear to have a few problems with it I might offer them some advice such as rinsing their mouth out after use and always checking that they have it with them as a precaution. Pretty basic stuff really but it all seems to help as most people don’t get much help after they initially get their inhalers.”*

The pharmacists felt confident in referring customers through to the GP if appropriate;

P1 *“I also referred someone to their GP who seemed to be coughing a lot while they were standing at the counter. They sounded to me like asthma symptoms and they themselves hadn’t thought of this before and took it well when I suggested she speak to her GP and have some tests run.”*

One particular pharmacist had actually spoken to the customer’s GP directly, and as a result had changed their inhaler type;

P11 *“Most of it has just been with inhaler technique. There’s a particular women who felt that her therapy wasn’t working particularly well, she was on high doses of*

prednisolone to try and control her asthma and she was on a maximum dose of Ventolin[®] and after talking to her about inhaler technique and whether it was worse at night and all that stuff, it turned out that she just really didn't know how to use her inhalers and then obviously I advised her it might be worth going for easy breathes, I spoke to the GP about it, the GP said they'd give her a go on easy breathe inhalers to see if it made a difference. So only time will tell I suppose."

The brief intervention and advice were also relevant for people with COPD. The interaction with customers was seen as just giving general advice, rather than an intervention itself;

P9 *"One lady we had it wasn't asthma, it was COPD, she didn't know how to use her Volumatic[®] spacer, so I just showed that to her. We had another inhaler where the lady, her husband, wasn't sure how to use it, went through it with her as didn't have patient information leaflet, so just more technique, not interventions as such that we've changed anything. Mainly given advice."*

Over half of the pharmacists could also recall incidences where they had spoken to people with asthma about identifying triggers of their condition and how to minimise or alleviate these;

P8 *"It's covered a multitude of sins really from basic inhaler technique to how to take care of their inhaler.....Talking about things that may make their condition worse – coughs, colds and things and what to do in that sort of eventuality."*

The majority of the lifestyle advice that was given within the first set of interviews was mainly related to hayfever and allergies;

P5 *"I've been talking a lot at the moment about hay fever and how they could help themselves if they kept away from flowers and stuff."*

The pharmacists felt that although they were not telling customers anything that they would not necessarily know already, they were helping to remind them of how they could help themselves;

P4 *"I told one lady to avoid being out in the evening when pollen is at its highest and that she shouldn't cut the lawn. She seemed pleased with that idea and added that she would now tell her husband that he had to cut it as it would improve her condition.....And then I told another lady to Hoover every day to lower the dust*

levels in her house and to Hoover her mattress every time she changed the sheets. They kind of know they should be doing this but it feels like it works as you're reminding them of how they can help themselves."

The lifestyle advice was seen as practical and simple, and pharmacists believed that most customers they had spoken to seemed interested to listen to this advice;

P1 *"I also gave some general advice to use things like allergy free bedding and to stay outdoors. Fairly practical and simple stuff but most seemed interested to listen."*

Some of the pharmacists varied the length of the consultation period depending on how receptive the customer was at talking about their asthma;

P11 *"Again it depends how receptive the person is. Some people want to talk for 20 minutes; other people don't want to know. Most of the time you're probably talking about five minutes, not much longer than that really because again, they'll answer your questions but you can almost see they're holding back for whatever reason, they're wondering why you're asking all these questions all of a sudden."*

For other pharmacists, the length of the consultation period depended on how busy they were at that time, or whether they had an additional pharmacist supporting them in the pharmacy;

P10 *"It really does depend how busy, if I've got a second pharmacist then you can obviously do more, so it's difficult to say on a day to day basis, you just try and speak to the patients as you hand the medicines out and it might only be 10 – 20 seconds and if you've got more time you could spend a couple of minutes."*

If the pharmacist or the customer were busy and did not have the time to spare straight away, some of the pharmacists used the opportunity to ask customers to come back at a later time to talk about their asthma;

P8 *"The other thing is that it gave us the opportunity to say perhaps by taking part in this you could come back at a quieter time and go through it and we were able to give them more advice about inhaler technique, etc."*

During the customer interviews, respondents were asked what type of things the pharmacist had spoken to them about during their asthma discussion. Each customer described the interaction slightly differently. Although many of the customers felt they

knew quite a bit about their condition already, the interaction with the pharmacist was seen as a chance for them to discuss their condition with someone. The pharmacist interaction varied in length, with some spending a few minutes with the pharmacist, whilst others took about 15 – 20 minutes. The content of the discussion also varied between individuals, but tended to cover areas such as inhaler technique, medication use, symptom control, general information on asthma, and lifestyle tips;

C13 *“He asked me if my symptoms had changed and stuff and if there was anything he could help with.”*

One pharmacist / customer interaction was particularly helpful as the customer had come into the pharmacy to purchase cough medicine, but on further questioning by the pharmacist they realised that they needed further guidance from their GP for a problem with their asthma;

C16 *“She was most helpful went in for something else, she wanted to know what medicines I was on I had a list and one was the asthma, I said I haven’t taken it for two years, she gave me a booklet, asked if I understood everything and said I should see my GP again, as I originally went in for cough medicine.”*

Following the interaction with the pharmacist, two of the respondents also received printed literature. The content of the information provided was not found to be useful in the main, as the respondents felt they knew most of it already. Both did however discover one new piece of information, one in relation to brown inhalers causing sore throats, and the other to mould triggering their asthma.

To five of the respondents, the interaction was perceived as a quick conversation with the pharmacist about their asthma medication, and nothing more. Other respondents that had spoken to the pharmacist did not really feel that they received any new advice;

C12 *“Well they didn’t really discuss it. They just asked me how I was feeling and whether there was anything I had noticed about my asthma that he could help with. So I mentioned the flower rash thing and all they could really say is to avoid having them in the house which is really what I already do. But I know they were just trying to help.”*

A total of nine respondents claimed that they received no advice from the pharmacist, and their interaction with them was purely focused on asking them to participate in a survey;

C9 *“No, they just said someone would ring me to chat about it and I gave my name and they asked for my number and a good time to call.”*

C22 *“Just taking part in the research.....”*

Although one of these particular respondents had not received any advice or information from the pharmacist on this occasion, they did recall a previous experience where they had received extremely positive advice from the pharmacist;

C22 *“They were, they have a really good herbal range of treatments, but with regards to my asthma they said the same as my doctors always said, it’s a steam, eucalyptus stuff, stuff to open my airways. They did recommend when I had a really bad chest infection to get one of those vaporises things, like a triangle that you put tablets in, and they heat it up and it puts eucalyptus and menthol in the air. It’s a Boots thing, I’ve never seen it anywhere else, and it’s absolutely fantastic. Quite a few of my friends and people I know with little children, because they cough the same way we can and it seems to help.”*

7.1.1.8 Delivery of the brief intervention within different pharmacy environments

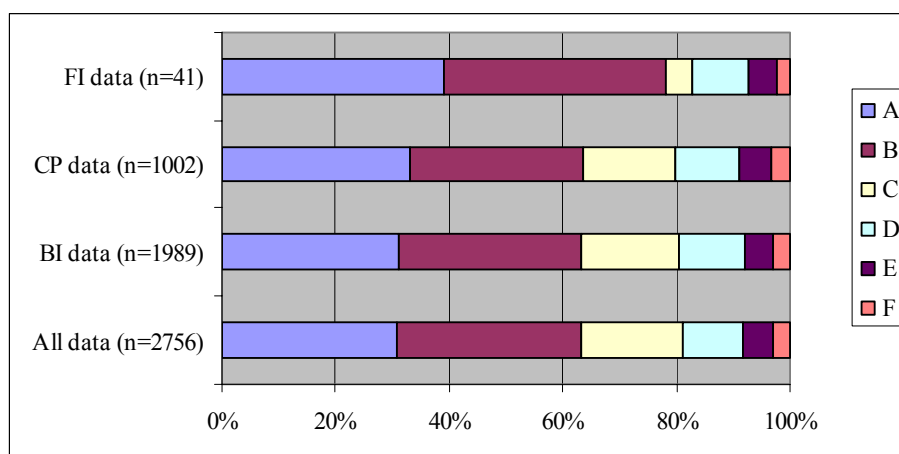
The delivery levels of the intervention across the mystery customer data sets, for each size^m of pharmacy are shown in Table 46 and displayed visually in Figure 23. The brief intervention and consistent positive data followed a similar distribution of pharmacy size to the total pharmacies assessed. Within the full intervention data, there was a larger percentage of ‘A’ (39.0%, n=16) and ‘B’ (39.0%, n=16) pharmacies compared to the other data sets. Pharmacies that were classed as size ‘C’ represented a very small proportion of those carrying out the full intervention (4.9%, n=2).

^m An explanation of the sizing codes are detailed in chapter four

Table 46: Distribution of pharmacy size as a percentage of pharmacies delivering the intervention (all mystery customer data)

Pharmacy size	Percentage distribution			
	All data (n=2756)	Brief intervention (n=1989)	Consistent positive (n=1002)	Full intervention (n=41)
A	30.8	31.1	33.1	39.0
B	32.3	32.0	30.5	39.0
C	18.0	17.3	16.2	4.9
D	10.7	11.5	11.1	9.8
E	5.2	5.2	5.9	4.9
F	3.0	2.9	3.2	2.4
TOTAL	100.0	100.0	100.0	100.0

Figure 23: Distribution of pharmacy size for all mystery customer data sets



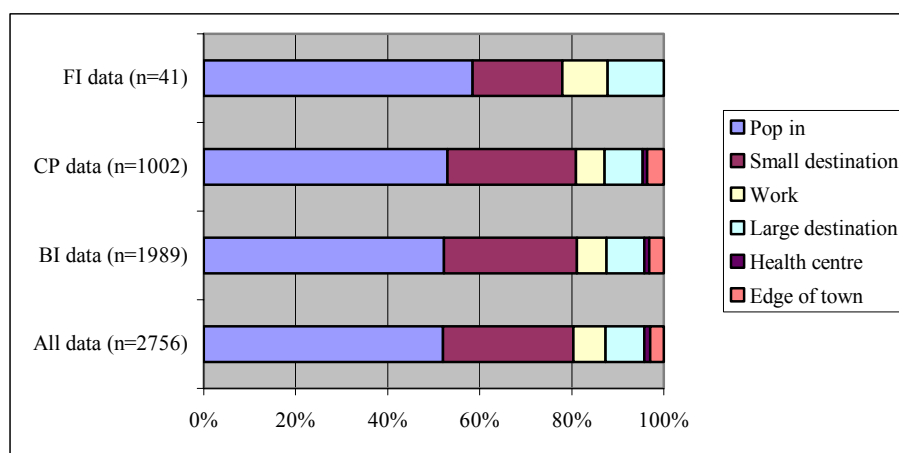
The different delivery levels of the intervention across the mystery customer data sets for each type of pharmacyⁿ are shown in Table 47 and displayed visually in Figure 24. The brief intervention and consistent positive pharmacies follow a similar distribution to the total pharmacies assessed. The full intervention pharmacies had a higher percentage of ‘pop in’ (58.5%, n=24), ‘large destination’ (12.2%, n=5) and ‘work’ pharmacies (9.8%, n=4) compared to the other data sets. ‘Small destination’ pharmacies did not perform as well as they did within the other data sets (19.5%, n=8). No ‘health centre’ or ‘edge of town’ pharmacies performed the full intervention.

ⁿ An explanation of the format codes are detailed in chapter four

Table 47: Distribution of format as a percentage of pharmacies delivering the intervention (all mystery customer data)

Pharmacy format	Percentage distribution			
	All data (n=2756)	Brief intervention (n=1989)	Consistent positive (n=1002)	Full intervention (n=41)
Pop in	52.0	52.2	53.0	58.5
Small destination	28.4	28.8	27.9	19.5
Large destination	8.4	8.2	8.3	12.2
Work	6.9	6.5	6.2	9.8
Edge of town	2.9	3.2	3.6	0.0
Health centre	1.4	1.0	1.0	0.0
TOTAL	100.0	100.0	100.0	100.0

Figure 24: Percentage distribution of pharmacy format for all mystery customer data sets



Brief intervention data

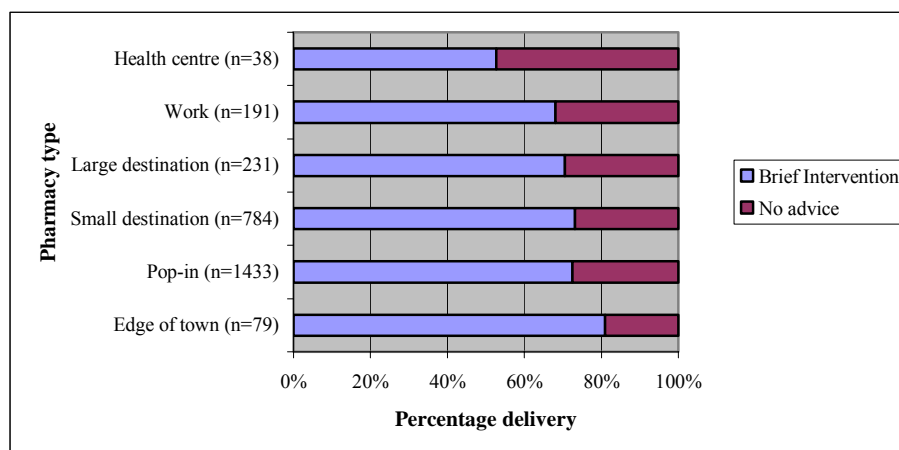
The brief intervention data for pharmacy size follows a similar distribution to that of the total pharmacies assessed, as shown in Table 46. Further breakdown of the data to show the percentage of pharmacies per size delivering the brief intervention is shown in Table 48. No significant association was found between the delivery of the brief intervention and size of the pharmacy.

Table 48: Brief intervention data as a percentage of the pharmacy size assessed (mystery customer data)

Pharmacy size	Brief intervention data (n=1989)	All data (n=2756)	Pharmacies performing BI as a percentage of size assessed
D	228	295	77.3
E	104	142	73.2
A	618	849	72.8
B	637	890	71.6
C	345	497	69.4
F	57	83	68.7

Differences in the delivery of the brief intervention were found between the different pharmacy formats, as shown in Figure 25. ‘Health centre’ locations had the lowest score of 52.6% (n = 20) for delivering the brief intervention, whilst ‘edge of town’ sites had the highest delivery rates of the brief intervention at 81.0% (n = 64). ‘Health centre’ pharmacies were the least likely to conduct the brief intervention compared to the other pharmacy formats ($\chi^2=7.323$; $p<0.05$).

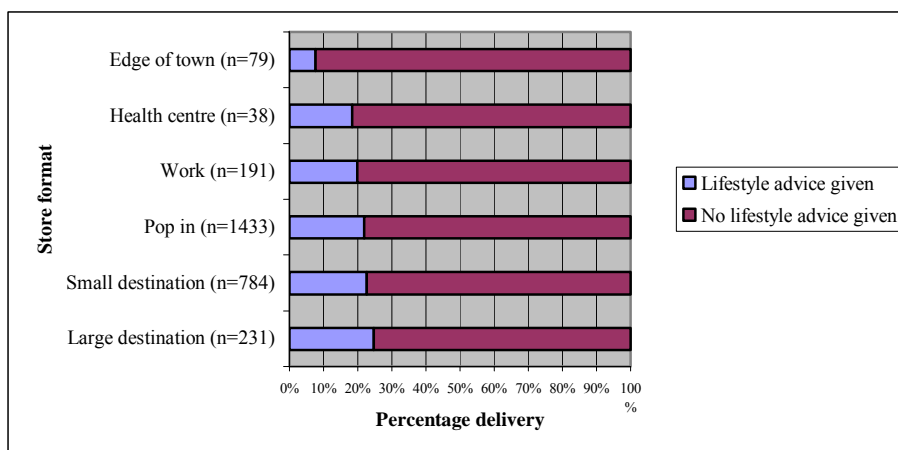
Figure 25: Delivery of the brief intervention within the different pharmacy formats (mystery customer data, n=2756)



There were also differences between the pharmacy formats as to whether lifestyle advice was offered as part of the mystery customer assessment, as shown in Figure 26. Lifestyle advice was given in 24.7% (n=57) of ‘large destination’ pharmacies that were assessed, 22.4% (n=176) of ‘small destination’ pharmacies, 21.9% (n=314) of ‘pop in’ pharmacies, 19.9% (n=38) of ‘work’ pharmacies, 18.4% (n=7) of ‘health centre’ pharmacies and 7.6% (n=6) of ‘edge of town’ pharmacies. ‘Edge of town’

pharmacies were the least likely to give lifestyle advice compared to the other formats ($\chi^2=9.596$; $p<0.05$).

Figure 26: Delivery of lifestyle advice against pharmacy format (mystery customer data, n=2756)



Consistent positive data

The consistent positive data for pharmacy size follow a similar distribution to that for the total pharmacies assessed as shown in Table 46. Further breakdown of these data to show the percentage of pharmacies per size delivering the brief intervention is shown in Table 49. The larger pharmacy sizes ‘E’, ‘F’ and ‘D’, and the smaller size ‘A’, were more likely to deliver a consistent positive result compared to the middle pharmacy sizes ‘B’ and ‘C’. There was a significant difference between the sizes within those pharmacies that were consistent in delivering a positive brief intervention result ($\chi^2=36.44$; $p<0.05$).

Table 49: Consistent positive data as a percentage of the pharmacy size assessed (mystery customer data)

Pharmacy size	Consistent positive data (n=1002)	All data (n=2756)	Pharmacies performing CP as a percentage of size assessed
E	50	142	41.5
A	332	849	39.1
F	32	83	38.6
D	111	295	37.6
B	306	890	34.4
C	162	497	32.6

The distribution of format of consistent positive pharmacies assessed by the mystery customer is shown in Table 47. Further breakdown of these data to show the percentage of pharmacy format assessed that were consistently positive is shown in Table 50. There was a significant difference between consistent delivery of the intervention within the different pharmacy formats ($\chi^2=21.292$; $p<0.05$), with edge of town pharmacies more likely to be consistently positive, and health centre pharmacies the least likely.

Table 50: Consistent positive data as a percentage of the pharmacy format assessed (mystery customer data)

Pharmacy format	Consistent positive data (n=1002)	All data (n=2756)	Pharmacies performing CP as a percentage of format assessed
Edge of town	36	79	45.6
Pop in	531	1433	37.1
Large destination	83	231	35.9
Small destination	280	784	35.7
Work	62	191	32.5
Health centre	10	38	26.3

Full intervention data

Table 51 shows the number of pharmacies by size delivering the full intervention, as a percentage of the total number of pharmacies within that size that were assessed. Pharmacies that were sized 'A' and 'B' appeared more likely to deliver the full intervention compared to other pharmacy sizes, whilst pharmacies sized 'C' seem the least likely to deliver.

Table 51: Pharmacies delivering the full intervention as a percentage of the total pharmacy size assessed (mystery customer data, n=41)

Pharmacy size	Frequency full intervention	Percentage of total pharmacy size assessed
A	16	1.9
B	16	1.8
D	4	1.4
E	2	1.4
F	1	1.2
C	2	0.4

The format of pharmacies conducting the full intervention when assessed by the mystery customer is shown in Table 47. Over half of the interventions were conducted by 'pop in' pharmacies, with 'small destination' pharmacies delivering a fifth of the interventions. 'Health centre' and 'edge of town' pharmacies did not deliver any full interventions across all four months data. Table 52 shows the full intervention data as a percentage of the total format assessed. From this we can see that 'large destination', 'work' and 'pop in' pharmacies appeared to deliver the full intervention more so than the other formats.

Table 52: Delivery of full intervention within pharmacies as a percentage of the total pharmacy format assessed (mystery customer data, n=41)

Pharmacy format	Frequency full intervention	Percentage of total pharmacy format assessed
Large destination	5	2.2
Work	4	2.1
Pop in	24	1.7
Small destination	8	1.0
Health centre	0	0
Edge of town	0	0

7.1.1.9 Factors affecting service delivery as identified by the pharmacists delivering the service

Pharmacy environment

Within the interviews, pharmacists were asked what factors they thought had affected the delivery of the asthma brief intervention. Of those questioned, two of the pharmacists felt quite strongly that the pharmacy environment had played a large factor in the level of service delivery. One of these pharmacists worked in a non dispensing pharmacy and found it extremely difficult to talk to people when they came in to purchase OTC medicines. The second pharmacist's pharmacy had just undergone a major refit. Their old dispensary had not been designed in a way that allowed them to have much customer contact, although this had improved dramatically with the new dispensary. The new environment had made a huge difference to them being able to offer opportunistic advice to customers, and as a result of this they had managed to offer extended advice to four people with asthma on the morning of the interview;

P8 *"The set up that we have now is that we've got a combined reception and dispensary area for the quick items which are primarily the asthma items, you know the inhalers*

and stuff like that. Very often it's literally me that's dispensing out front and I'm able to talk to the customers as I'm doing it, give advice as I'm dispensing which is the thing that's completely different."

One pharmacist thought that the retail environment was not the ideal place to offer advice on asthma, and that this kind of service would be better suited to practice based pharmacists;

P6 *"It would run better I reckon via a practice-based pharmacist. They would be more suited to talk to patients and be able to spend more time than those of us who are retail based."*

Pharmacy resource

Pharmacy resource came up as an issue that affected service delivery by all of the pharmacists questioned. Many of the pharmacists commented that they could have approached more people with asthma, but did not due to their lack of time and resources;

P2 *"I imagine I could have approached 100 over the few weeks as we have lots of asthma related prescriptions. But I would have had to be able to solely do this and not also dispense all the other prescriptions."*

The pharmacists stated they had a number of demands on their time, and this was seen to some pharmacists as yet another job to undertake;

P4 *"It's just not really possible to fit into the daily routine, we're busy enough as it is. We just don't really have the time."*

Pharmacists stated they were fully occupied during the busy period which is when they saw the majority of opportunities to talk to people with asthma. During the quieter periods they did not always get people in that wanted to talk about their asthma;

P2 *"At the busy times like mid morning and lunchtimes there is no way you could offer the service and that's when the bulk of customers pass through the store."*

Some of the pharmacists particularly struggled to deliver the intervention when they were the sole pharmacist, and as such had varying demands put on their time;

P6 *“Time was the sole reason, it’s difficult because I’m usually checking prescriptions on my own, without another pharmacist with me.”*

The intervention itself was not seen as difficult to deliver, but having the right staff in place to support them was important;

P10 *“Just having the time to do it. Really that’s it, and staff to support you covering your job if you’re stood talking to a patient.”*

Some of the pharmacists mentioned that the intervention may have worked better if they had a second pharmacist, or someone from the pharmacy counter helping them conduct the intervention;

P2 *“I guess it might have been more effective if I had someone else to help me or if another staff member on the counter was also involved in the trial and offering the service.”*

One of the pharmacists actually planned the delivery of the intervention when they knew that they had more staff in;

P8 *“I must admit I sometimes did it on particular days when I knew that either I had more staff in or trying not to do it on busy days because sometimes Thursdays and Fridays are mad and on such days it’s just not possible to do the service provision. But generally it wasn’t a problem.”*

A number of the pharmacists commented that the intervention may have worked better in their pharmacies compared to other pharmacies due to the involvement of other pharmacy staff in the service. This was particularly true in pharmacies with pre-registration graduates who had the motivation, enthusiasm, and time to spend with individual customers.

One particular pharmacist felt that the age of the pharmacists delivering the service may have been a factor in the delivery levels in that pharmacy. They perceived older pharmacists as not being so interested in services like this;

P7 *“.....they just want to be glorified dispensers until they retire”*

Customer interest and need for the service

A number of the pharmacists commented that a factor affecting them delivering the asthma service was customers not having the time to talk to them when they came into the pharmacy for prescriptions;

P1 *“And people really don’t have that much time to chat when they’re just popping in to hand in their prescriptions.”*

Despite those customers that appeared interested, few returned at a later date to have a discussion with the pharmacist;

P8 *“The general response I suppose was initial interest and then a very common reply was either ‘Oh I haven’t got the time to do that now or I’ll do it next time that I’m in’ and then maybe I’ve not been in and they haven’t seen me or maybe they’ve never come back I don’t know.”*

Although pharmacists had proactively spoken to many customers with asthma, the majority of customers had not appeared interested in talking about their asthma with them;

P4 *“We did manage to speak to quite a few customers though but most just didn’t seem interested or want to get involved.....They just want to come and go as quick as possible and not stop for a chat.”*

The lack of interest by many customers was because of their long term use of inhalers and as such customers perceived that they did not need any additional advice;

P8 *“And then the other response has been ‘I’ve been using my inhalers for X number of years and I’m more than happy with what I’m doing and I don’t need any advice.”*

There was also a suspicion from some customers as to why they were being asked questions, and what additional advice the pharmacist would be able to offer them over and above what they had already received from their GP or asthma nurse;

P11 *“It’s a difficult thing really because people tend to, when you start asking them things about their asthma treatment, they tend to be almost suspicious as to why you’re asking the question, also a lot of them tend to say ‘I’ve seen the nurse about it and its fine’ or ‘my doctor says its OK’, but when you get to the root of some of the problems*

that people are having a lot of it is because of misinformation been given by either doctors or nurse or friends really.”

Pharmacists found that they struggled to identify people for the service in areas such as mining communities, as many of their customers were found to have COPD and not asthma;

P6 *“A lot didn’t want to listen however and some that I approached weren’t asthma sufferers, a lot had bronchial conditions relating to mining, which is no surprise thinking of the area that we’re in.”*

Pharmacists also stated that they did not like to keep other customers waiting whilst they were talking to people with asthma, so stated that this was a factor as to whether they delivered the service or not;

P6 *“We all have demands on our time these days and you can’t keep customers waiting just so you can chat a few minutes to those that have asthma.”*

Pharmacists were also conscious that customers would feel uncomfortable if they were talking to them whilst there was a queue of customers waiting to be served;

P10 *“...but if you haven’t got time to do it and then it’s impossible and then they feel pressurised as well because there are other people waiting for prescriptions or advice and they start to feel uncomfortable.”*

7.1.2 Discussion of the results

Within this section I have presented the results from the delivery of the brief intervention in asthma to understand the various factors affecting service delivery. The first section of the results looked at the pharmacists’ feedback regarding the implementation of the service. Pharmacists were sent a briefing pack about the intervention and encouraged to participate themselves as well as involving other members of their pharmacy teams. Although only a few comments were obtained from pharmacists, the general feedback about the implementation of the service was positive. Pharmacists found the literature helpful, the structure very simple to follow, and the content very relevant when talking to customers. Due to the simplistic nature of the intervention, the implementation felt more like a briefing for staff rather than the implementation of a service. Although pharmacists were encouraged to deliver the

intervention, it was left entirely up to them as to whether they disseminated the information to their staff, and whether the staff and they themselves delivered it. By keeping the intervention easy to follow, and making the content relevant for customer queries at that time of the year, many of the pharmacists and staff appeared to have taken up the intervention. Using this simple structure and format appears to have worked well for this intervention.

Many of the customers recruited for the intervention appeared to have been identified when they came into the pharmacy with an asthma related prescription. Only one pharmacist questioned had actively tried to recruit customers when they came into the pharmacy to purchase OTC products. Although the pharmacists questioned represented a very small sample of the total pharmacists delivering the intervention, it is disappointing that more of the pharmacists did not actively try and target people purchasing OTC medicines. The likelihood of these customers having uncontrolled asthma and purchasing products to relieve symptoms may have been greater than customers presenting with prescriptions. Unfortunately no other members of the pharmacy staff, such as pharmacy assistants working on the healthcare counter, were interviewed so I am unable to determine whether these staff actively targeted people purchasing OTC medicines.

Pharmacists appeared to have been very flexible in the delivery of the intervention, performing it when they had the time to do so, or when they felt that the customer would be interested. If customers did not look like they were in a rush, or wanted to chat, then the pharmacist would open a dialogue with them about their asthma using a non-threatening approach so that customers did not feel pressurised. The pharmacists targeted people with certain prescriptions that they thought would help identify those with uncontrolled asthma, including those with two or three relievers on their prescription, if they actively said they did not want their steroid inhaler, if it was a new prescription, or if the prescription was handwritten (suggesting an emergency prescription). The intervention was also used by staff as a tool to recruit customers into the prescription collection service, linking it with other initiatives and activities at that time. Although marketing materials were not supplied as part of this service, one pharmacist had actually designed their own poster to try and improve awareness of the intervention and encourage people to ask about it. This particular pharmacist had used their initiative to adapt the service locally. Although not included within this research, anecdotal discussions with several other pharmacists showed that they also recognised

the opportunities for service delivery in asthma, and expanded the service they provided within their individual pharmacies.

As part of the recruitment to research process, samples of pharmacists were asked to recruit customers following an intervention in asthma. This appears to have caused some confusion as half of the customers questioned in this research claimed to have been recruited specifically for the research with no apparent intervention with the pharmacist. This confusion could have been caused by a couple of factors. Firstly, the intervention itself was so simple that customers may not have realised that they were taking part in an intervention and as a result believed that they were just having an informal chat with the pharmacist. This could have been misinterpreted by both the customer and the interviewer. Secondly, the pharmacist may have just approached the customer directly about the survey and not performed the intervention. As the customer data are used to explore a number of factors throughout this research relating to the delivery of general services by pharmacists, the views of all customers were seen as important, and as such, these data have not been separated out.

Mystery customer research has been used as a proxy measure for the delivery of the brief intervention. This has provided me with a guide as to whether pharmacists implemented the intervention, disseminated the information to their staffs, and were delivering the intervention. Although the mystery customers only assessed one person on each visit, it provides an indication of implementation and delivery. By repeating the mystery customer assessment over a period of four months, this increased the likelihood of assessing different members of staff, and therefore provided a more accurate assessment of implementation and delivery of the asthma intervention. From the results we can see that many pharmacies were performing this particular intervention, but the extent of delivery varied across the study period. It is interesting to note that the second pharmacist communication went out to the pharmacies during the month of June 2003, and could account for the rise in delivery levels during this month and the following. Within previous internal trials, I have learnt that pharmacists like to receive regular communication and updates. The fall in activity during August 2003 could be accounted for by the fact that it had been three months since the pharmacists' last communication, and they were due for another during September 2003. If this is so, then regular communications could be appropriate for this target audience to keep them interested and the project sustainable. Service delivery levels may have been prevented from falling if the pharmacists had received two monthly communications, which is something to consider for future service delivery. A number

of pharmacies were assessed on more than one occasion, and delivered a consistent response with the asthma intervention, which helps to support the evidence that the pharmacists integrated this intervention into their current practice.

Pharmacists and staff did not ask all three RCP questions to each customer. Across all four months' data, staff asked the question about daily symptom occurrence (question three) more frequently than the other two. This was followed by the use of the second question, and then lastly by the first. One explanation for this could be the pharmacy staff or customers' perceived relevance of each question, and its ease of use. Question three "*Have you had your usual asthma symptoms during the day?*" is more in line with the content of the conversations that pharmacists and staff might normally have with customers, whereas they may not feel as comfortable asking about asthma interfering with activities or sleep. The use of the questions seemed to vary amongst the type of personnel, with pharmacists using them the most frequently. This supports the notion that the use of specific questions may be related to confidence. One exception to this was the use of question one, which was most likely to be asked by unknown personnel (as a percentage of personnel assessed). It appears that many of the pharmacists and staff felt confident to adapt the intervention as appropriate. This is further supported from findings from the pharmacist interviews, where many of the pharmacists used variations of the brief intervention when speaking to customers. Even those pharmacists that found the RCP questions confrontational and too formal used the concept of the intervention to talk to people with asthma more generally rather than ask specific questions. Interestingly, the pre registration graduate (P9) interviewed expressed quite strong opinions regarding the use of the RCP questions, and believed that this was something that should be delivered by the GP or nurse rather than the pharmacist. As this was the only pre registration graduate interviewed, I am unable to compare their views to others to see whether it is an individual perspective, or something felt by other pharmacy graduates. Whether as an individual opinion or something that is shared amongst many pharmacy graduates, this point of view could be linked to confidence and lack of experience in service delivery.

Over the four month assessment period, the majority of staff that were assessed delivered the brief intervention, whether they were pharmacists or healthcare staff. Although pharmacists were significantly more likely to deliver the intervention compared to other personnel, this is not unexpected. A large proportion of non pharmacist and unknown personnel assessed also delivered the intervention. Given that communications regarding the brief intervention were sent to named pharmacists,

and not any other personnel, it is not unreasonable to conclude that a large majority of pharmacists must have disseminated the information to their healthcare teams. A study by Banks et al. which looked at the role of the medicines counter assistant, found that customers recognised the legitimacy of the medicines counter assistant role to ask questions about symptoms and pharmaceutical consumption [163]. In their study, on a third of the interactions studied where customers had asked for advice, they found that the counter assistants had acted independently without involving the pharmacist. The counter assistants were found to be very positive about their role, highlighting the stimulating nature of their job. The continued deregulation of prescription to pharmacy medicines is shifting the role of the pharmacy support staff away from retail sales towards healthcare provision.

Although half of the full interventions were delivered by pharmacists (as a percentage of personnel assessed), unknown personnel were more likely to deliver the full intervention compared to others. Questions remain about why unknown personnel were unknown as staff are usually easily identifiable in pharmacies. Within Boots all healthcare staffs wear white and blue uniforms (whereas pharmacists are in suits), and all staffs wear name badges with job roles. Confusion may have arisen due to pharmacists taking their jackets off in the summer heat, or newly qualified pharmacists not wearing name badges. The percentage of unknown personnel conducting the intervention rose in July and August which further supports the theory that unknown personnel were likely to be pharmacists.

Over the four month assessment period, the majority of lifestyle advice given was regarding referral to the GP, followed by advice on inhaler use. This result could be seen to be surprising, given the regular communication and updates that were sent to each pharmacist with updated lifestyle advice. However, because of the scenario that the mystery customers presented to Boots staff this was the main outcome expected. The mystery customers also presented the scenario regarding a relative who had asthma, so the pharmacist would have been limited in the amount of advice they could give to them as a third party. An alternative explanation to this finding could be the pharmacist's confidence and ease in referring the customer to the GP; however, it is most likely to be due to the use of the asthma scenario. Unfortunately this is one of the limitations of using mystery customers, and perhaps could have been avoided by the use of a slightly different scenario. There was a significant difference between the personnel delivering the advice as pharmacists were more likely to give advice, followed by unknown personnel and lastly non-pharmacists. Pharmacists were also

more likely to give advice on inhaler technique than any of the other personnel, again something that could be linked to the pharmacist's confidence and experience. Overall, advice on general lifestyle management was quite low across all the data sets, but was more likely to be given from those pharmacies delivering the full intervention. Tips on lifestyle management and general advice were given throughout the pharmacists' communications, and although it is disappointing in the overall delivery data, it is not surprising that pharmacies delivering the full intervention responded to the advice from the communications.

According to the sample of pharmacists interviewed, the main topic of conversation with customers was around the use of their medication, and in particular the misunderstanding of inhaler type and use. Other frequent topics of discussion included advice on symptom control, general information on asthma and lifestyle tips. Pharmacists were surprised at the amount of people that did not know basic information such as rinsing the mouth out after steroid inhaler use, so found the lifestyle advice simple and useful for customers. The intervention offered people the chance to talk about their asthma as this was something that pharmacists felt that many people did not get the chance to do with their GP on initial diagnosis. The pharmacists appeared confident in referring people through to the local GP, although the extent of the relationship with the GPs varied tremendously between individual pharmacists. Those with good relationships appeared to have the confidence to discuss changes in medication directly with the GP.

The length of the consultation with customers varied, with some pharmacists spending a few minutes with the customers, and others spending up to twenty minutes. The length of this interaction seemed to be dependant on a number of factors including how receptive the customer was, how busy the pharmacy was, and whether a second pharmacist was present. Some customers perceived this interaction to be a quick conversation with the pharmacist, whilst others saw it as a service that was provided. If the pharmacist was busy at the time, or the customer wanted a more in depth discussion, then many pharmacists would ask the customer to return at a later time or date. The interactions seemed to be quite personalised with the topic of conversation and length of interaction varying on an individual basis. Pharmacists appeared confident to be able to adapt the services based on both customer and business needs, with some pharmacists even developing an extension of the service they provided to their customers based on the principles of the initial asthma intervention.

Although no significant difference was found between the sizes of the pharmacies delivering the brief intervention, size 'D' pharmacies performed the best (measured as a percentage of size assessed). The larger pharmacy sizes 'E', 'F', and 'D', and the smaller size 'A', were more likely to deliver a consistent positive result compared to the middle size 'B' and 'C' pharmacies. Pharmacies that were sized 'A' and 'B' appeared to be more likely to deliver the full intervention, whilst pharmacies sized 'C' seemed to be the least likely. Although the full intervention pharmacies represent a very small sample, it is interesting that the smaller pharmacies appeared to be the least likely to deliver this. These pharmacies were most likely to be resourced by a single pharmacist with a small team of support staff. The larger size pharmacies delivering the brief intervention were likely to be resourced by a number of pharmacists and a larger team of support staff. The middle sized pharmacies appeared to be the least likely to deliver any of the intervention, and were probably the ones with limited pharmacist and support staff resource (too small for multiple pharmacists yet have a larger business to support than some of the smaller sized pharmacies). The slight differences noted between the sizes of the pharmacies could be accounted for by the number of personnel and size of business. Unfortunately no true conclusions can be drawn from these data due to the variability in personnel assessed by the mystery customer within the individual pharmacies.

Very few studies have investigated the variations in service delivery which may exist between pharmacies operating in different locations [6, 31, 132, 133]. Differences in service delivery have been found within the individual studies, where practice delivery favours 'independent' pharmacies [31], and pharmacies located in medical centre and rural locations [6]. A study by Abu-Omar et al. [132] found that multiple pharmacies were mainly used for medication supply whilst local pharmacies were viewed as healthcare resources where further services and advice were sought. An ethnographic study by Rogers et al. [133] concluded that differences in the environment within which pharmacies were located (socio economic status and compositional effects) influenced the services and advice giving role of the community pharmacy. Those pharmacies that were located nearest to the health centre were dominated by dispensing activities and not advice, whilst those sited in small towns away from the health centres were dominated by product requests. Within my study, 'health centre' locations had the lowest score for delivering the brief intervention, whilst 'edge of town' pharmacies had the highest. The same was also true for delivering a consistent positive result. Arguably 'health centre' pharmacies are ideally placed to target customers directly from the GP practice, and perform a number of brief interventions.

On the other hand, 'health centre' pharmacies rarely have more than one pharmacist on site at any given time and are extremely busy dispensing pharmacies, leaving the pharmacist with very little time for customer interaction and interventions. A study by Sleath [164] also found that pharmacists were less likely to interact with patients when less people were waiting nearby. At the time of this study, the majority of 'edge of town' sites assessed did not have NHS dispensing contracts. The pharmacists within these pharmacies had more time and flexibility to spend with each individual customer, and this could account for the high response to the brief intervention. In contrast to the successful delivery of the brief intervention in 'edge of town' locations, these pharmacies were the least likely to provide lifestyle advice compared to all the other formats assessed. Although the number of 'edge of town' locations is small compared to some of the other types of pharmacies, it is surprising and disappointing that they did not deliver advice alongside the RCP questions, particularly given the extra time and availability that pharmacists were likely to have within these locations. The majority of these pharmacies were unlikely to have NHS dispensing contracts, and customers may have felt more uncomfortable discussing their asthma condition when purchasing OTC products or general goods at the pharmacy counter. For the purpose of these results, the anomaly in the data is more likely to be due to the false scenario presented by the mystery customer and the lack of opportunity for advice and discussion. The number of pharmacies performing the full intervention is small compared to the other data sets, but it is interesting that no 'health centre' or 'edge of town' pharmacies were part of this group. There appeared to be a larger percentage of 'pop in', 'large destination', and 'work' pharmacies performing the full intervention compared to the other data sets. This fits with the data collected on the sizing of the pharmacies, in particular the small number of size 'C' and 'small destination' pharmacies performing the full intervention.

Pharmacists identified a number of factors which they felt could have affected the delivery of the brief intervention. Pharmacists working in non dispensing environments believed that this affected the number of people with asthma that they were able to speak to. Although they were able to talk to customers that presented with queries at the pharmacy counter, they felt that these people tended to be generally shopping and were not necessarily in the right frame of mind to discuss their asthma. Very few pharmacists commented on the lack of consultation space available to them, as most saw the asthma intervention as a brief conversation, and something that was most suited to be delivered over the counter. Where dispensary refits had brought the pharmacist closer to the customer, this was seen as allowing a greater opportunity to

speak to the customer whilst dispensing prescriptions. This was particularly true for customers who waited for their prescriptions, as pharmacists were able to speak to them as they were dispensing their prescription. Although a captive audience, the pharmacists recognised the potential lack of confidentiality due to other people waiting nearby. One pharmacist felt that the retail pharmacy environment was not the best place to talk to people with asthma, and that this was better placed within GP practices. This is an interesting perspective, as often people with asthma, particularly those with uncontrolled symptoms, do not present themselves at GP practices unless it is to collect their prescriptions. Providing opportunistic advice at the pharmacy provides an opportunity for the pharmacist to help the person with asthma recognise their level of control, and the chance for the customer to talk about their condition. Without further data, it is unclear whether many pharmacists feel uncomfortable talking to people with asthma in the pharmacy environment, or whether this is the view of a few select pharmacists.

Time and pharmacy resource were seen as a large factor that affected delivery of the intervention, and was mentioned by all of the pharmacists questioned. Although the busiest times presented the greatest number of opportunities to talk to people with asthma, this was often the time when pharmacists found it difficult to deliver the service. Pharmacists felt that they already had huge demands on their time, and this service was seen to some pharmacists as adding yet another task to their already busy schedule. Those pharmacists that involved other support staff and pre registration graduates felt that the intervention worked well within their pharmacies. This was also true for single handed pharmacies who struggled to deliver the intervention if they did not have good support staff in place. The involvement of support staff appeared to help the pharmacists deliver the service, and provided a greater number of opportunities to target people with asthma presenting at the pharmacy counter. Interestingly, there was a perception by one pharmacist that some of their older colleagues close to retirement age, were not as interested in delivering services like these or extending their role. Differences in the views of pharmacists of varying age on an extended role is not covered within this thesis, but may potentially have an impact on the enthusiasm for change and delivery of services. A review by Berenguer et al. [165] concluded that pharmacists themselves may be the most important barrier towards the development of pharmaceutical care, particularly older generation pharmacists who may lack the professional skills necessary to manage drug therapy and cling to the traditional role of drug dispensers.

Customer time was also seen as a factor that influenced delivery of the intervention, as many customers appeared to be in a rush when visiting the pharmacy and therefore did not have time for a discussion regarding their asthma. This could be influenced by the perception of what they came into the pharmacy for, as often many see the speed of dispensing of a prescription as a determinant of the decision to use that pharmacy, as apposed to the level of service and type of advice available. Many people drop off prescriptions for dispensing in between busy work schedules or during lunch breaks, and often do not have the time, nor the expectation to spend time talking to the pharmacist. Many pharmacists also found that those customers that had been using their inhalers for years questioned the need for further advice. Other pharmacists found that even though some people had been provided with incorrect information by GPs, nurses or friends, the confidence and expectation in advice provided by the pharmacists appeared to be low in some customers. Some pharmacists perceived this as a lack of authority in the advice they provided, compared to that advice delivered by GPs and nurses. The environment and awareness of other customers was not felt to help this, as many pharmacists were conscious of not embarrassing or pressurising the customer into talking to the pharmacist whilst other people were stood waiting. This was particular apparent and problematic for pharmacists dispensing in busy single handed pharmacies, where time spent talking to customers meant delays for other customers waiting. A study by Sleath investigating the pharmacist-patient relationship also found that pharmacists were more likely to interact with patients when less people were waiting nearby [164]. She concluded that the busier a pharmacy was, the less likely pharmacists were to interact with patients.

7.1.3 Summary of section one

The brief intervention in asthma was a service that was designed to be very simple to deliver and through the dissemination strategy pharmacists were encouraged to take local ownership and adapt the service delivery to meet local requirements. This service was successful in being implemented and delivered as shown by the high delivery rates over the four month period. Regular communications to the pharmacists appeared to have kept the project active and sustainable over a longer period of time. Many pharmacists appeared to have disseminated the information to their healthcare staffs, who were then able to offer opportunistic interventions themselves. As the service was very simple, pharmacists and staff were able to integrate it into their everyday practice and use elements of the intervention as they deemed appropriate.

From these data presented within this section, I have identified a number of factors that appeared to have influenced the delivery of this intervention, some helping to facilitate, and others acting as barriers. Those factors affecting the delivery of the brief intervention in asthma are summarised within Table 53.

Table 53: Summary of the experiential factors affecting delivery of the brief intervention in asthma

(Please note that this table is presented over two pages)

	Facilitators	Barriers
Customer need	<ul style="list-style-type: none"> ▪ Usefulness of basic tips and advice ▪ Ability of service to help to identify potential customers 	<ul style="list-style-type: none"> ▪ Perception that do not need advice (particularly if using inhalers for number of years)
Public attitude		<ul style="list-style-type: none"> ▪ Poor level of confidence in pharmacist advice ▪ Level of authority of pharmacist advice compared to other healthcare professionals
Pharmacist attitude		<ul style="list-style-type: none"> ▪ Poor attitude towards role expectations ▪ Limitations of role
Implementation of the service	<ul style="list-style-type: none"> ▪ Simple structure ▪ Ability to adapt and extend service locally 	
Recruitment	<ul style="list-style-type: none"> ▪ Captive audience available e.g. when dispensing prescriptions ▪ High volume target customers visiting pharmacy 	<ul style="list-style-type: none"> ▪ Less opportunity to identify patients, particularly in non contract pharmacies
Pharmacist confidence in service delivery	<ul style="list-style-type: none"> ▪ Confidence to deliver and adapt service to meet customer and business needs 	<ul style="list-style-type: none"> ▪ Lack of confidence and comfort in using particular RCP questions ▪ Lack of confidence in giving advice not related to medicines (outside comfort zone)

	Facilitators	Barriers
Service structure (brief intervention)	<ul style="list-style-type: none"> ▪ Content relevant for time of year ▪ Flexibility in service delivery (content and length of intervention) ▪ Good fit with other initiatives and activities ▪ Ability for pharmacists to expand the service locally, ▪ Regular and updated communications ▪ Simple intervention ▪ Opportunity to improve awareness of symptom control ▪ Providing opportunity to access healthcare professional advice 	<ul style="list-style-type: none"> ▪ Intervention too simple so not perceived as a service
Time		<ul style="list-style-type: none"> ▪ Lack of pharmacist time ▪ Lack of customer time ▪ Pharmacy workload
Staff resource	<ul style="list-style-type: none"> ▪ Involvement of all pharmacy support staff in service delivery ▪ Adequate staff resource available (pharmacy and support staff) 	
Pharmacy environment	<ul style="list-style-type: none"> ▪ Service sited in large and small size pharmacies, and edge of town locations (potential link to resource and how busy pharmacy is) ▪ Accessibility of pharmacist 	<ul style="list-style-type: none"> ▪ Services sited in middle size pharmacies and health centre locations (Potential link to resource and how busy pharmacy is) ▪ Non contract pharmacies (less opportunity to target customers) ▪ Busy pharmacies (customers waiting)

In contrast to this centrally developed and nationally implemented brief intervention, the second asthma service was designed, implemented and managed within a local community setting. The second section of this chapter presents the results from the delivery of this local asthma service.

SECTION TWO

7.2 Delivery of the asthma service (service two)

The asthma service was designed and implemented by a group of pharmacists within their locality during May to September 2003. This ‘asthma service’ was based around identifying people with asthma that would benefit from a consultation with the pharmacist on inhaler technique, medication use and general lifestyle advice.

Questions around symptom control were used by the pharmacy team to identify people with asthma, who were then offered a consultation with the pharmacist. This consultation was based around medication use, inhaler technique, and simple lifestyle advice.

Within this section, I provide the results from the delivery of the asthma service to explore the factors that could affect service delivery. Data is provided from the customer and pharmacist interviews and the asthma audits. The results are presented to explore implementation of the service, external communication of the service, recruitment to the service, delivery rates, structure of the service, personnel delivering the service, the type of asthma advice provided, and factors affecting delivery as identified by the pharmacists participating in the service.

7.2.1 Results

7.2.1.1 Implementation of the service

At the beginning of the project for the asthma service, a group of pharmacists sat down together to design the service and associated materials. This group of pharmacists decided to design the consultation guidelines in the form of a questionnaire. The pharmacists were pleased with the opportunity to design the service itself, and felt that they had a good team working on the project;

P16 *“No I think we have very good meetings to start with when we set up the project and I think the pharmacists who were doing it were all ones who were doing diplomas or were clinically minded so I think they had quite good basic grounding in asthma to start with.”*

Everybody on the team had the chance to input into the service design, and as a result felt confident on the setting up and running of the service;

P15 *“The only difference is the decision when you’ve got a customer in front of you, but how it should be run on the whole, we all put input and I’m happy that my input is in there. So I’m quite happy how the thing was set up and how we’re supposed to run it.”*

Although pharmacists pretty much kept to the structure of the questionnaire, there was some personalisation of the operational aspects of the consultation within their particular pharmacy environment;

P17 *“The only thing I had to work out in my mind after the training, because did a lot of work on placebo inhalers and how to use them and how to use an AIMS^o machine ...and then we got a questionnaire saying this is the type of format for an intervention but it didn’t necessarily ask OK if you get a problem here this is the track you’re going down with inhaler technique, if you get a problem here this is what you’re going to be looking at so you pretty well had to work that out for yourself. But they did say that the questionnaire was only a suggested format and that we could personalise it or use it ourselves.”*

As part of the service set up, the pharmacists organised a training day locally for themselves, other pharmacist colleagues, and pharmacy support staff. Pharmacists found the training day very useful, in particular the opportunity to gain hands on experience with some of the respiratory equipment;

P14 *“We went to a half day training day because a lot of it was hands on, the spirometer, which measures how hard you can breathe in and therefore which inhaler device. It was really good to actually be able to use and try out some of those things because I don’t think you’d be able to pick that up from a booklet because it was very practical.”*

The brief intervention information and fact sheets were also found to be useful prior to the training, both for pharmacists and support staff;

P16 *“We had quite a lot of information, obviously we had the asthma guidelines booklet to start with and we had fact sheets as to how to use the inhalers and then we got the placebos so we were able to play around with them and make sure we were confident using those and the peak flow meters.”*

^o Aerosol Inhalation Monitor (AIM)

The additional training had helped give pharmacists the confidence to speak to people about their asthma;

P14 *“I suppose because we had a bit of training it’s a bit of revision, a bit more confidence to go out and speak to people about that.”*

Other pharmacists felt that their input into the service set up and the additional training had given them extra tools to offer additional and new advice;

P17 *“What it’s given us is, because we’ve had some extra training, it’s given us the tools to offer a new area of advice.”*

Many of the pharmacists had already completed clinical diplomas, although a couple were still undergoing the training. These pharmacists had taken it upon themselves to read up on asthma in preparation for the initial meetings;

P16 *“But because I’m doing the clinical diploma, one of my modules has been respiratory problems and I have done CPPE^P asthma as well so I had actually done quite a lot of reading around the subject anyway. And a lot of that information is available really to any pharmacist.”*

There was also a feeling of professional responsibility and pride in wanting to make sure they had prepared themselves for the service as much as possible;

P14 *“Personally, I’m doing the respiratory module for my diploma at the moment so I made sure I did that to sort of gem myself up. We would expect a certain standard of knowledge from pharmacists on the topic and if they haven’t got it and they’re going to go into a scheme like this then you’d want them to do something about it themselves really. I think it’s a professional responsibility really.”*

Following the initial set up of the service, the team decided to have regular meetings as a group so that they would have the opportunity to share best practice and learnings;

P16 *“We’re just feeding back on what we’ve been doing, how the project’s been going, any things which have been good, things which have been tricky. Because it’s all the stores we’re able to put our points of what we’ve done and it’s just pooling lots of*

^P Centre for Pharmacy Postgraduate Education (CPPE)

resources and ideas. Then we look at where we've gone and where we want to go, what information head office are wanting us to record as the next thing and just look at what we want to do with it – next steps."

7.2.1.2 External communication of the asthma service

Many of the pharmacists participating in the asthma service had approached local schools, GP practices and businesses to raise awareness of the service by displaying leaflets and posters. This had been met with enthusiasm from most of the sites that had been approached to the extent that some pharmacists had been asked to speak on the subject at local schools;

P14 *"We've been sending out posters to local schools and places like that where people will see them and maybe come in and talk to us about it."*

Some pharmacies had additional activities planned for the New Year to try and increase recruitment to the service. In particular, pharmacies within shopping centres planned to host stands outside the pharmacy;

P17 *"After Christmas we're going to have a table outside in the precinct and we're going to do it out of the store to try to capture non – Boots customers but at the moment it is only people that are coming into the store."*

In addition to this, one pharmacy had also approached a local asthma nurse to work with them in helping to raise awareness of asthma and the service;

P13 *"We're actually putting stands outside, it's an indoor shopping centre, in the new year for a week and one of our asthma nurses she's going to just come and be there for a couple of hours on two afternoons. So if we can advertise the fact that so and so asthma nurse is going to be there as well just to see if that increases people wanting to be involved."*

All of the pharmacists involved within the asthma service had been to see their local GP practices to talk about the service prior to it starting;

P16 *"Well we gave them the information that we were asking them the three questions round the asthma guidelines just to see if people are getting attention and if there are any problems just to see if we can kind of rectify them, just by explaining how to use their inhalers, offering to explain and check their technique if they wish us to,*

obviously with a referral if we think that there are any problems. That's an important thing to stress I think, that we would be referring people with the patients consent if we felt there was an underlying problem."

Many of the pharmacists had also discussed referral criteria for the service with their local GPs and asthma nurses;

P13 *"Well basically I went round to our four surgeries and had a meeting with the practice nurse / practice manager and one or more of the GPs and discussed at what level they wanted interventions as apposed to phone calls and where they wanted the intervention sent, whether they wanted it to go to the asthma nurse or the individual GP."*

Where referral criteria were in place, pharmacists would share this information with other pharmacist colleagues. One particular pharmacy had even gone as far as pinning a list of criteria and referral points in the dispensary to help other pharmacists that might be covering on their days off within the pharmacy;

P13 *"So I wrote a list down and put it in the dispensary because there are other pharmacists working here. Then if we need to make an intervention on it we know who to send it off to."*

Overall, pharmacists reported that the feedback from the GP practices was very positive;

P16 *"Some surgeries are very keen on the fact that, anything we can give advice on asthma or smoking cessation which is linked to it, they're very keen on that."*

In some cases, this was related to the benefits of the service helping the GPs meet some of their new contract targets;

P14 *"I don't think it's a problem for GPs, I think probably as the contracts change they're probably quite grateful for any assistance."*

Although the GPs were keen at one practice, the pharmacist had got the impression that the nurses were not due to the professional competition felt between roles;

P16 *"But I have actually had a surgery where they weren't quite so keen because sometimes the nurses think maybe you're a bit after their job. Of course because the*

doctors contracts are coming out and lots of implications there. I think the doctors are quite keen it's more the nurses that may be a little bit on tenterhooks as to what exactly we're doing."

In contrast to this, the relationships with asthma nurses at one practice had taken some time to build but had resulted in them being positive about the service. Despite the support from the nurses, the practice managers and GPs had remained unsupportive;

P17 *"We went round and say all of them and talked to all the asthma nurses and got a very lukewarm reception from them. I actually didn't go, it was the lead pharmacist who is also one of the supplementary prescribing trainees so she is supposed to be getting familiar with them anyway. Whether it was the time of day that she went, it was lunchtime so it should have been quiet enough for the practice managers or asthma nurses to see her. She has built relationships with the nurses, it's particularly the practice managers and the doctors that have been indifferent. We haven't had any issues with the asthma nurses being protective of their role or thinking that we're treading on their toes or anything like that."*

One pharmacist had used the asthma service as an opportunity to build links with their local Primary Care Trust (PCT). From this, they were working together to try and work closely with a particularly difficult GP;

P14 *"Yes the local surgery, he's a rather difficult individual and that was a bit tricky but because of that I have actually developed a stronger relationship with the prescribing pharmacist at the PCT and they're working with me to try and make him understand that we're all trying to achieve the same thing rather than me trying to find his faults which I think is what he thinks. Every doctor has a different attitude so that's just a one off really."*

7.2.1.3 Recruitment to the asthma service

Despite the positive reception received at the GP practices, very few pharmacists had seen any direct referrals from GPs come through to the service;

P15 *"There was very positive feedback from the surgery but I haven't actually seen a referral at this stage."*

Many of the customers appeared to have been recruited into the service whilst collecting prescriptions in the pharmacy rather than from the posters;

P17 *“We haven’t had any feedback from anybody, we haven’t had any clients coming in and saying I saw this on the notice board at work or anything. All the people we have done consultations with have been people we’ve captured or from prescriptions.”*

The external marketing had been extremely time consuming for pharmacists and staff and many felt that they had not got a lot back from spending the time doing this;

P14 *“The marketing side of it has been quite time consuming. I’m not sure we’ve got a lot back from that to be honest.”*

All of the pharmacists had been targeting customers for the service when they came into the pharmacy with a prescription;

P15 *“At the moment it’s through staff approaching them when they bring a prescription in.”*

Some pharmacists had used the RCP questions to recruit customers to the service when handing out prescriptions;

P16 *“When I’ve been getting prescriptions we’ve been doing it actually asking them the questions as the pharmacist is handing the prescriptions out.”*

One pharmacist had also been targeting people over the counter as well as when they presented with prescriptions. This pharmacy had also decided to attach leaflets to prescription bags to raise awareness of the service when they were too busy to talk to people with asthma directly;

P17 *“Well, we are targeting people over the counter, trying to use the lever of people with coughs and colds who are coming to us anyway. We have been trying to keep an eye out for children with a persistent night time cough but we haven’t had many of those show up. We’re also targeting prescription people with inhalers and at the very least even if we’re busy we’re attaching one of the leaflets to the bag so that when we give it out there’s a prompt to remind them of the new service that we offer.”*

This particular pharmacy had actually found that targeting people over the counter was much more successful than targeting those with prescriptions. They felt this was because people presenting over the counter for cough medicines tended to have more problems with their asthma;

P17 *“We haven’t had much feedback from the prescriptions but most of our people, our new clients as it were, are being captured from the over the counter sales. A lot of prescription clients are happy and they know what they’re doing already.”*

Within the customer interviews, eight of the respondents were questioned on how they were approached about the asthma service. All eight respondents were recruited by the pharmacist when collecting their prescription;

C32 *“I was going in for a repeat prescription and they were quite helpful, they were helpful and friendly.”*

One respondent spent time with the pharmacist going through the consultation questionnaire;

C25 *“She very nicely asked if I would....Now let me see, what was it? She was very nice and very polite and it was sort of if there was anything she could help me with my asthma, just asked me a few questions. I had plenty of time, I was in no hurry so we just filled out a little questionnaire.”*

Another respondent had been working quite closely with their local Boots pharmacist anyway, and had helped them out by writing an asthma diary for their clinical diploma;

C29 *“I wrote a report for XXXX (Boots pharmacist) there, detailing what had happened to me because he was doing research at the time and he is now a qualified Asthmatician or whatever it is: ‘Diary of a hopefully short-term asthma condition’”*

Three of the respondents had not actually participated in the asthma service with the pharmacist, but had been approached specifically to take part in the survey;

C27 *“The lady behind the counter asked me, I was picking up my Dad’s prescription as well, and she said would he be interested in taking part in a survey. And I said no not really, he’s 84 and he wouldn’t know what you were talking about but I said, I’m asthmatic if you want to do it on me.”*

Even though these respondents had not received any advice, they were willing to participate in asthma surveys with a view to helping people with asthma in the long term;

C34 *“Yeah, I took a prescription in so when I went back in they had a stack of forms behind the counter and asked me if I would mind, as an asthma sufferer, taking part in a survey which was designed to further the understanding of asthma and hopefully do something about it, so it seemed in a good cause.”*

As part of the second asthma audit, those respondents who had spoken to the pharmacist for advice on their asthma were asked a further question about how they had heard about the service. The results from the audit are shown in Table 54. The majority of respondents had heard about the service from within the pharmacy, and very few people had been made aware of the service through posters or leaflets outside of the pharmacy.

Table 54: Asthma audit two “How did they find out about the additional pharmacist advice?” (n=48)

Method	Percentage distribution
In pharmacy	87.5
Poster / leaflet outside of pharmacy	6.2
Other	4.2
Referral from another	2.1
Family / friend	0.0
Referral from GP	0.0

7.2.1.4 Delivery rates of the asthma service

Pharmacists and staff were not asked to record details of all the interventions they carried out within the pharmacy. Pharmacists were however asked the average number of consultations they carried out on a weekly basis during the interviews. The number and type of consultations varied between individual pharmacists and pharmacies. Many of the pharmacists conducted brief or mini interventions on a frequent basis, but would infrequently hold full consultations. One particular pharmacist had completed two full consultations at the time of interview and over fifty mini interventions. Other pharmacists were regularly averaging about two or three brief interventions a day, and two full consultations a week;

P16 *“I’d say probably, in the day we’re probably looking at about three, obviously different levels of intervention. We’re probably only doing about two a week of anything of any depth.”*

The level of delivery would sometimes vary depending on the number of pharmacists within the pharmacy and who was on duty;

P17 *“I’ve done a couple today so I would think probably two or three each day. It depends which pharmacist you’ve got on and how many pharmacists you’ve got on duty to be honest.”*

7.2.1.5 Structure of the asthma service

A couple of the pharmacists took time to prepare for a full consultation before the customer came in. This would involve looking at their prescription details to gather as much information as possible, and partially filling in some of the details on the consultation questionnaire beforehand;

P12 *“What I normally do is initially when I make the appointment for them obviously I have their prescription at hand so what I do is photocopy the prescription and attach it to the questionnaires then before they come for their appointment I fill in as much as I can with reference to their prescription.”*

Another pharmacist had organised all the service materials required for the consultation in a single box so that everything they needed was to hand;

P17 *“We have a box already filled with the placebo inhalers, the peak flow meter, the peak flow meter diaries and the Boots asthma and allergy leaflets so that we’ve got all the things that we need to help them.”*

Many of the pharmacists had decided to use the three RCP questions as an initial prompt into the service as these were found to help identify people with poor symptom control;

P16 *“But it is the three main questions that is the sort of introduction to try and work out what kind of advice they might need because it gives you a guideline as to how well controlled their asthma is or not.”*

The RCP questions were rated highly by many of the pharmacists who used them;

P14 *“They’re quite good because a lot of people would say their asthma is well controlled but they’ll still answer yes to those questions so they are quite good ones. I think they’re the ones that the British Thoracic Society use as well.”*

Although many of the pharmacists followed the same core structure for both the brief interventions, and longer consultations, they did vary this according to local need. If the pharmacist was too busy at the time, or the customer did not have much time, they would reduce the number of questions and the length of time they spent with an individual customer;

P15 *“I haven’t actually asked everyone the same question but I think they also find it quite comfortable, as long as they haven’t got a queue of customers.”*

Many of the pharmacists found that customers preferred to have a brief or mini intervention rather than a full consultation with the pharmacist;

P16 *“Most of the interventions are just checking when they’re using them and they’re using them as directed..... the minor interventions as we’re calling them.”*

These interventions tended to focus on problems related to inhaler use and technique;

P15 *“The main area is whether they wake up in the middle of the night with asthma symptoms, whether it affects their work, whether they know how to rinse out their mouth after a steroid inhaler, whether they have any problems with their technique. Those are the main points.”*

The structure of the longer consultations tended to follow the questionnaire that the pharmacists designed locally. By following this line of questioning and discussion the pharmacists tended to find that any issues would arise as part of the questioning and conversation;

P17 *“Well, we were largely following the questionnaire we were given and using that as a prompt because as you go through the questions and queries from the patient and issues come up as you’re talking to them.”*

As previously indicated, the majority of pharmacists found that they conducted far more brief informal interventions than full consultations, but this varied depending on customer need and how busy the pharmacy was at the time of interaction;

P15 *“So far it hasn’t been a problem because when I’m really busy I just do a shorter version.”*

Some of the pharmacists had many of their conversations with customers on the shop floor, and as such tended to have quite an informal interaction with them;

P14 *“Because most of mine, the main ones have been when I’ve been approached by customers while I’ve been on the shop floor and you don’t suddenly say ‘stop a minute while I get my sheet of paper’, so you don’t run it as per the pro forma that we’ve got, you run it by what the customer is asking you and what’s relevant to them. I would say they have been more of the informal type.”*

Pharmacists found it far easier to encourage people to talk about their asthma through opportunistic and brief interventions, rather than asking people to come back at a later date;

P17 *“I think it’s the ten minute, would you like to come back and see the pharmacist to review your asthma, those are the ones we’re having less of but we are having more spontaneous interventions, in fact you can often start an interaction going more spontaneously than you can asking people to come back, especially at this time of year because people are just so busy.”*

This was particularly true for some of the smaller stores, who found it much easier to interact with people in this informal way;

P13 *“Yes, because we are a smaller shop we don’t actually have that many full blown consultations so the last few weeks we’ve actually been doing quite a lot of informal chats where we’ve just been checking the patient knows how to use their inhalers, which inhaler to use when, the dosages on them.”*

Customer need also varied between individuals, and therefore pharmacists stated they would vary the type of advice in response to patient needs;

P14 *“Some people are quite competent at using their inhalers whereas other people haven’t got a clue so obviously the level of information you’re pitching is totally different for every customer.”*

This was also the case for those customers that had little time to spare;

P15 *“Obviously there are a few that haven’t got time but when you just say....because we don’t have to go through the whole long list of the intervention you can just pick out*

tips or give them information to get this illness under control so most of them are very grateful and very pleased that we've helped them."

The length of time the pharmacist would spend with each customer varied enormously, not only between individual customers, but also individual pharmacists. Brief, informal interventions would take approximately two to five minutes, with some pharmacists spending between ten and thirty minutes in a full consultation;

P13 *"It depends because if their inhaler technique is quite good it probably only takes about ten minutes but it can take up to about twenty minutes, half an hour."*

Customers that requested a full consultation within one particular pharmacy were asked to make an appointment at a later date that was convenient to them;

P12 *"We arrange the time that's suitable for them and my colleague makes sure that she can go through it with them."*

Pharmacies that were based near to offices often found that it was in fact easier for these workers to return for an appointment at a later time, as they had little time during their lunch break;

P13 *"Or often because a lot of people are office workers etc round here they often prefer to come back so then we'll make an appointment in our diary for when they want to come back."*

Other pharmacies did not operate an appointment system and would offer consultations there and then. As pharmacies became more confident in delivering the service, they often varied the content and timings of the service. Pharmacies that had tried running an appointment system often found that customers were reluctant to return at a later time;

P14 *"I think from the beginning we set it out quite formally, sticking to this pro-forma and obviously as we've gone along we've found that doesn't really work. Particularly in a store like this where patients are going to just pop in, I'm not running an appointment system."*

Other pharmacies varied their practice depending on how busy they were. If it was convenient for both them and the customer then they would try and offer a

consultation there and then. This was often limited however depending on whether they were the sole pharmacist on duty at the time;

P16 *“It has been very useful, the idea that there is someone who can give information to the customer straightaway as they’re standing there, they don’t have to make an appointment. The thing that can be a problem is that the majority of the time we do only have one pharmacist in the dispensary. It can be quite tricky to be able to spend the time especially when you’re busy. Even just a few minutes with a customer can be quite tricky in which case we do have the opportunity to ask them to call back at a later time if it’s not convenient.”*

7.2.1.6 Personnel delivering the asthma service

The pharmacists that were involved with the original design and set up of the service also appeared to take the main lead for the running of the service within the individual pharmacies. These pharmacists took responsibility for updating other colleagues within the pharmacies on a regular basis;

P17 *“I’m not the lead pharmacist so we’ve got one lady that does most of it, she’s not here today, so the rest of us are supporting her in that.”*

All of the participating pharmacies had tried to involve the whole of the pharmacy team in the delivery of the asthma service;

P15 *“The whole team – another pharmacist, all the dispensers, the pre-reg. The healthcare staff has also been briefed.”*

The extent of their involvement however varied between individual pharmacies. Some pharmacists had encouraged dispensary staff to be involved with the initial introduction of the service, and provide informal advice;

P13 *“Well they’re involved in broaching the customers, but also the three trained dispensers have been involved in giving out the informal advice, we’ve encouraged that. The actual full, appointment consultation that’s done by the pharmacist but otherwise the dispensers to get involved with the informal discussions with the patients, or we’re trying to get them to be involved.”*

Within this particular pharmacy, the pharmacist would always carry out any full consultations themselves;

P13 *“If there’s any sort of intervention I always counsel the patient on it as apposed to a dispenser or whatever and we just try and fill the form in straight away so it gets sent to the GP.”*

Pharmacists could see the benefits of using dispensary staff to carry out elements of the service particularly when pharmacist resource was tight;

P12 *“The dispensers are very good at it. Actually sometimes they’re the ones who have really the time to start the chat with them because sometimes if you only have one pharmacist or two in store you’re very busy with checking and maybe phone calls and maybe counter queries things like this so actually they’re the ones who normally start the chat.”*

Three of the pharmacies had pre-registration graduates at the time of the initiative, and had actively encouraged them to be involved with the service from the start;

P16 *“Well he’s been involved in this from the start and he’s really keen. He’s been coming along to our asthma meetings as well.”*

Healthcare staff within one of the pharmacies had been particularly proactive with the asthma service, more so than the dispensary staff;

P17 *“Yeah the counter staff, we were just talking about it this morning and they were asking what sort of advice they could give so I was telling them the sort of things that they could advice people and then they can refer them onto us if that not adequate for the patient. So there’s a bit of a gap, I haven’t seen the dispensers or pharmacy assistants doing much but then we’re quite a busy dispensary so they’re quite busy anyway but the counter staff and the pharmacists are certainly doing a bit.”*

The pharmacists within this pharmacy were keeping the staff enthusiastic and motivated about the service by ensuring that they were kept informed of progress and updates at weekly team meetings;

P17 *“But we’re talking to them at least weekly about it in the briefing meeting to keep it fresh and on the boil.”*

One of the pharmacists’ questioned was also a store manager. Although they were extremely positive and pleased with the delivery of the service within their pharmacy,

they also commented that this was because they had made it a priority which could change depending on other business needs;

P14 *“My dispensers. They’re pretty good at explaining inhaler technique and going through the questions but again it’s being driven by me and if I’m more interested in what crackers I’ve got on the shelf then well...”*

7.2.1.7 Type of asthma advice provided

The majority of advice that pharmacists discussed with customers was mainly around medication use, and in particular, inaccurate, or over use of reliever inhalers;

P13 *“The main ones are using steroid inhalers when required, we get quite a lot of prescriptions for that. And again using the reliever ones on a regular basis.”*

One pharmacist felt that this was because customers did not understand the importance of using them correctly, and no-one had taken the time to explain this to them in the past;

P16 *“The main thing is the steroid preventer inhalers that they’re just not using them. They don’t understand the importance of them because they just see the word steroid and no-one’s actually in the past sat down and explained to them how they work and what they’re doing to them long term. So they’re very under used whereas the blue inhalers are over used.”*

Some people had not been using their inhalers at all which had caused significant problems with their asthma;

P17 *“They have been doing things wrong, they haven’t been using their inhalers properly or they just haven’t been using them at all so they were in need of advice so that was useful.”*

One pharmacist had actually found that the majority of problems had been due to medication dosage and frequency rather than inhaler technique;

P17 *“It hasn’t actually been inhaler technique it’s been more dose frequency and using brown preventers regularly instead of when they feel like it, so more dosage and frequency than actual inhaler technique.”*

Pharmacists were finding that customers did not know simple advice like rinsing their mouth out after using a steroid inhaler, or the correct way of cleaning a spacer device;

P15 *“Really information like rinse your mouth out after a steroid inhaler, that sort of little tips. If you use a spacer don’t wipe it dry because it creates static. Those are the sort of things where they go ‘oh, I didn’t know that.’”*

One pharmacy actually found that the majority of customers within their locality were already receiving good asthma advice from their local clinics;

P16 *“The majority of people it’s just checking they know how to use their inhalers and a few do have problems but most of the people we’re actually getting I’m finding are having attention from the asthma nurse, they are attending clinics.”*

During the cough and cold season, pharmacists were receiving a lot of queries from people with asthma around concurrent OTC medication use, and therapies to help prevent symptoms getting worse;

P14 *“Different types of devices, particularly in the last month or so controlling their symptoms while they’ve got a cold, we can give them quite a lot of advice on dosages and other over the counter medicines that can help enough for them not to be ending up with a chest infection. In what order to use their inhalers. I think that would be mainly it.”*

Very few of the pharmacists received specific requests on lifestyle advice, although some pharmacists would proactively ask this topic as part of the full consultation process;

P13 *“Then at the end go through any lifestyle issues, you know whether they do a lot of walking, exercise, even diet, etc. Just general lifestyle advice and counselling advice on their inhalers – rinsing mouth that kind of thing.”*

Pharmacists would also discuss with customers whether their asthma was restricting them from carrying out any of their normal routine or activities;

P12 *“.....so normally we just ask them about their medication, if it’s working, if their asthma is keeping them from doing normal things, just routine things.”*

The pharmacists stated that they felt confident in referring people through to their GP if appropriate;

P16 *“That’s an important thing to stress I think, that we would be referring people with the patients’ consent if we felt there was an underlying problem.”*

Within the customer interviews, six of the respondents were asked what advice they had spoken to the pharmacist about during their last interaction, the same time that they were also recruited for the interviews. Many of the conversations were related to asthma symptoms and medication;

C25 *“Yes, I think it was if she could ask a few questions for a questionnaire, did I mind that? Not at all. Did I have any questions that she could help with? I’m sure she offered to help. Very nice lady..... I think about the use of the inhaler and also she gave me an empty one to see how I inhaled, to see if I was doing it correctly..... I remember telling her that when I have a cold I take more Becotide[®] and the Ventolin[®], I just increased it. And she asked how often I used them and things like that..... She asked me if I’d been to the local asthma clinic and also I know they do a reading if you blow out, it’s been a while since I did that but that’s about it.”*

Following the conversation with the pharmacist, one respondent also recalled being offered the opportunity to speak to an asthma nurse who was working on the premises at the time;

C33 *“They asked me how long I’d had it for, if I knew the proper way to use the medication, things like did I know I had to rip one out after using it. They offered, they said they had an asthma nurse on the premises and was I interested in talking to her about it.”*

For two of the respondents, the interaction with the pharmacist had not been advice related, but purely to recruit them for research.

C27 *“No it was just about taking part in a survey. I think it was because I wasn’t actually picking up my own prescription.”*

7.2.1.8 Factors affecting service delivery as identified by the pharmacists delivering the asthma service

Within the interviews, pharmacists participating in the asthma service commented on any factors they believed had affected the delivery of the asthma service. All of the pharmacists stated pharmacy resource as a factor affecting service delivery. For two of the pharmacists in particular, being the sole pharmacist on duty had restricted the number and length of consultations they were able to deliver;

P13 *“It’s quite difficult because generally when I work I’m the only pharmacist here.”*

P16 *“The only thing that can be a problem is that, the majority of the time, we do only have one pharmacist in the dispensary. It can be quite tricky to be able to spend the time especially when you’re busy.”*

Throughout the interviews, many of the pharmacists commented on the various demands on their time, which did not always allow them the luxury of spending time with individual customers;

P16 *“It can be the tricky thing in-store because when you’re the only pharmacist in dispensary, you’re supervising the healthcare counter and people are calling out ‘pharmacy’ to you so you have to acknowledge them which means that as you’re talking to someone they can see that you’re being distracted continually which doesn’t look good and you forget where you’ve got to in the conversation.”*

It became apparent that the time of the year that the service had been implemented was particularly bad as it was the busiest trading time for the pharmacies. Priorities were mainly focused on Christmas sales, which made it particularly difficult for the pharmacists to concentrate on asthma services;

P14 *“I think particularly the time of the year we’ve been doing it, in the run up to Christmas, I wouldn’t say it gives me a conflict of interests but it’s difficult to focus on two totally different things at the same time so I’m sure I could have made more interventions.”*

Lack of customer time was also seen as a factor that affected service delivery, which was particularly apparent if the pharmacy was located in commuter and office areas;

P12 *“They say they’re interested but they haven’t got the time...It’s also that the store is in a commuter place so there’s lots of people working here but then they live somewhere*

else so when they come to us for their prescription they come in their lunch break they maybe collect them after work, they go home and that's it."

One pharmacist whose second language was English found it particularly difficult to communicate with customers on a personal level. This was not just a language barrier, but difficulty understanding the body language signs of individuals;

P12 *"I mean I was able to speak English when I came but to treat people it's a little difficult to understand not only the language, the different accents and the slang but also it's a cultural difference so sometimes you find it difficult to see what the mood they're in, the kind of problems they have, what they're expecting from you...so I think that's the difficult bit."*

Only one pharmacist thought that the pharmacy environment caused problems for them in service delivery and this was due to a lack of space within the dispensary area;

P13 *"I think primarily people in our area see us as a major dispensing area – we could do other kinds of things but then it's just finding the space to do it as there isn't really room to turn around in here."*

7.2.2 Discussion of the results

Within this section of the chapter I have presented the results from the delivery of the asthma service to understand the various factors affecting service delivery. The service itself was designed and implemented locally by a group of pharmacists. There was a feeling amongst participants that they had the opportunity to provide input and participate in the project, in particular through the regular meetings that were held throughout the period of the project. The pharmacists appeared enthusiastic and motivated towards the service, and this was demonstrated through their commitment to the project throughout the time period. This level of commitment and ownership of the project could have been influenced by the fact that these pharmacists designed the service themselves, and were keen to prove its success. In effect they owned the project locally, and felt a professional responsibility and pride in delivering the service successfully. The regular meetings appeared to work well and provided an opportunity to share best practices and learnings between the different pharmacies.

Like the service, the training was designed and organised locally. Many of the pharmacists leading the service had already completed, or were undertaking clinical

diplomas. Despite having this knowledge, many of the lead pharmacists undertook additional training on asthma prior to the service training. These pharmacists identified additional clinical modules on asthma, or distance learning training packages that they could undertake to feel more knowledgeable on asthma. The training course was designed to meet local needs and involved both the pharmacists and pharmacy staff. The asthma brief intervention materials were used as pre reading before the course, whilst the course itself involved hands on experience and operational guidance. This additional training and hands on experience appeared to give the pharmacists and their staff the confidence they needed to be able to deliver the service. A review of the literature relating to evidence of community pharmacies involvement in health development concluded that training was a key component in changing pharmacists' behaviour during health promotion programmes [166]. The literature concluded that training increased the pharmacists' involvement in opportunistic health promotion, and resulted in longer consultations between pharmacists and customers.

Pharmacists and their teams spent lots of time and effort promoting the service locally, to try and increase awareness and encourage uptake into the service. This marketing activity was well received by schools and shopping centres, many of whom displayed the posters and leaflets. Despite this activity, the pharmacists were disappointed in the low numbers of people coming to the pharmacy as a result of seeing a poster or leaflet. The poor response from the marketing activity could be due to the effectiveness of the posters and leaflets, or the mechanisms that were used to promote the service, neither of which was measured within this study. By targeting schools and shopping centres the pharmacists hoped to make people aware of the service. The marketing activity may have been successful in doing this, but it was not successful in converting people into accessing the service.

All of the pharmacists involved in the project had spent time going out to their local GP practices to make them aware of the service. The feedback from practices was generally positive, with many discussing referral criteria with the pharmacists. The asthma service was used as a way to help build links and strengthen the relationship with the GPs, with many interested in the link through to GP contracts and local targets. The service seemed to work well as a facilitator in building local relationships, particularly when it was advantageous to the parties concerned. There was some variation in the response from GP practices, with a few GPs and nurses showing no interest in the service at all. This was particularly evident with the reaction of some

nurses and the pharmacists' perception of the threat they posed to their role. Although a couple of the pharmacists experienced hostility from local nurses, others formed close working relationships with their local asthma nurse. In these sites, the nurse and pharmacist worked together to help people with asthma locally to improve control of their condition. Despite all the communication and positive links made with local healthcare professionals, pharmacists received very few referrals from their local GP practices. It is unclear whether healthcare professionals referred people through to the service or not, as this was not measured in this study. If local healthcare professionals had referred people to the service, they may have decided themselves that they did not want to access it. The pharmacists themselves felt comfortable referring customers through to the local GP or asthma nurse if they deemed it appropriate. Whether customers acted on this advice was not measured as part of this study.

Despite all of the external activity to raise the awareness of the service and encourage uptake, the majority of people appeared to have heard about the service whilst in the pharmacy. Most pharmacists recruited customers to the service by asking them questions on symptom control when handing out prescriptions. Only a small sample of pharmacists were actively targeting people presenting at the pharmacy for OTC products. Those that did this found it worked well as a recruitment method. Customers purchasing cough and cold products were presenting with symptoms at the time, and as such, pharmacists found them much more receptive to the service. Some pharmacists may have felt more comfortable recruiting people to the service when presenting with a prescription, than they did with people purchasing OTC products. Pharmacists working in a busy dispensing pharmacy may have had limited opportunity to target people OTC, and could have left this task to the pharmacy staff. The overall impact of in store recruitment methods appears to have been far more effective at increasing the uptake of the service compared to other external activities.

In order to keep the service simple for pharmacists, they were not asked to record the number of interventions they were delivering. During the interviews however, they were asked to provide an estimate of the type and frequency of service they were offering. There was a huge variability in the service that was provided, with many pharmacists delivering brief interventions daily, and the full service only a couple of times a week. The length of the consultations varied, whether it was a brief intervention or the full service. The pharmacists would adapt the service based on how busy they were at the time of the interaction and how responsive the customer was.

Although the pharmacists used the same core structure for the service, they also varied the content depending on local needs. The questions on symptom control were used by many of the pharmacists as an initial prompt to identify poor symptom control, although the pharmacists would often not ask all the questions, but use a combination of one or two, or their own variance on them. If short of time, pharmacists found themselves discussing simple things like inhaler technique, whereas if more time was available then they would go through the structured questionnaire. Many pharmacists often found customers preferred to have these brief or mini interventions rather than the full consultations. It is unclear who ultimately drove the type, length and content of the consultation; demands on the pharmacist's time, the customer's needs, or a combination of both. As the pharmacists had the confidence to adapt the service to meet local needs, it enabled them to offer their services to more customers. If they had stuck with the formal structure of the full consultation then many customers would not have had the benefit of the opportunistic advice that the pharmacists were able to offer.

Pharmacists appeared to be providing advice in a very informal manner, as many utilised the time and space they had available to them at the time. This resulted in the majority of the brief interventions occurring over the counter, or even on the shop floor. The pharmacists found that the majority of customers were more receptive to advice that was offered there and then, as apposed to trying to get them to call back for an appointment at a later date or time. Some pharmacists did try and operate an appointment system, and those that did, found reluctance from customers to return. Appointments that were made at the request of the customer after receiving brief advice and returning for a full consultation appeared to work the best. Customers appeared to be less enthusiastic about appointments that were pharmacist led, and that were made because of lack of resource available at the time. There seemed to be an overall reluctance to book appointments with the pharmacist, as this was not something that customers had had to do with the pharmacist in the past. One of the key strengths of community pharmacy has always been the ability for the general public to be able to access health advice from the pharmacist without an appointment. A shift to appointment based services could require an enormous change in the general public's perception of role of the pharmacist compared to other healthcare professionals, and a behaviour change for customers when accessing services.

It is not surprising that the pharmacists involved in the set up of the service took the lead within their individual pharmacies. Some of these pharmacists were able to

delegate some of the operational aspects of managing the service to other members of the team, and where pharmacies had pre-registration graduates; they were often the key person in the pharmacy helping to manage the project. Pharmacists that had delegated some of the responsibility of the day to day management of the project often found that they were able to manage the overall project more effectively, and tended to be more active in the service activities. Having a lead person responsible for delivery of the service within each pharmacy appears to have worked well for this service.

Pharmacists that involved all members of the pharmacy team in delivery of the services appeared to be far more active than those that did not. There were variations to what extent other staff were involved, but pharmacists tended to engage them in helping to identify people with poor symptom control, and where appropriate, to offer brief advice. Pharmacists who had involved pre-registration graduates tended to find that they had more time available and so were very active in service delivery. The involvement of the pharmacy team in initiatives like this appeared to be very motivational, although the pharmacists found it important to keep them regularly updated to keep the service active. The involvement of pharmacy staff in service delivery provided greater opportunities to make the service more widely available to customers. Pharmacy staff were able to target customers opportunistically when they presented at the pharmacy counter to purchase OTC medicines, or for their prescriptions. It was more cost effective to use pharmacy staff for certain elements of the service delivery, allowing the pharmacist to become more involved when appropriate.

The influence of the store manager on the priorities and focus of the pharmacy team was extremely important. As pointed out by the store manager involved in the project, unless the service was on their agenda then it would be unlikely to get focus within the pharmacy. Individual pharmacists could be extremely keen to deliver services, but unless the support of the manager was acquired they could be fighting an up hill battle. The impact of the time of year could have affected the delivery of the service as much of the store focus was on Christmas sales. Although the busiest time of the year, it was also an opportunity to target the many customers entering the store. Pharmacists who are also store managers, particularly in single store pharmacies, may have a conflict of interest when it comes to delivering professional services over business priorities.

The majority of asthma advice appeared to be around inaccurate, over or under use of medication, with problems being identified with dosage and frequency, as well as inhaler use. There was a feeling amongst the pharmacists that this was due to customers not understanding the importance of medication use, with many customers not previously having had the opportunity to talk to a healthcare professional about medication issues. The provision of simple advice linked to asthma medication use, or concurrent OTC products were well received. Very few requests were made for lifestyle advice, although pharmacists would often bring this up in conversation with the customer. Customers appear to have felt at ease speaking to pharmacists about medication use, but were not as used to, or possibly felt uncomfortable in talking about advice that they would not normally get from the pharmacist.

All the pharmacists interviewed commented on pharmacist resource as a factor that affected delivery of the service. Those working in single pharmacy environments were felt to be at a disadvantage in service delivery. Even though resource was raised as an issue by all pharmacists during the interviews, the majority had managed to work around this for the service by involving other members of the pharmacy team, or by offering the asthma brief interventions. If resource had been made available, it is unclear whether the pharmacists would have delivered more of the brief interventions or full consultations. Linked to the resource issue, the pharmacists also believed that the constant demands on their time (including requests by customers and staffs), was an issue that affected the delivery of the service. Better trained support staff would help to reduce the number of requests coming through by both customers and staff, and enable the pharmacists to utilise their time more effectively.

The lack of customer time was felt to be a factor that affected service delivery, particularly when people were shopping in their lunch hours when their time was very limited. This was found to be particularly problematic in commuter towns, which could help to explain the demand for the informal brief interventions over the full consultations. The pharmacy environment was mentioned by one pharmacist which they felt could have put people off the service. It is unclear whether the pharmacist themselves felt uncomfortable not having a private consultation area to conduct the service, or whether it was the individual customers.

The language barrier was discussed by one pharmacist as a factor that could have affected delivery of the service. This could be linked to the pharmacist's confidence in

using the English language to deliver the service, or the customers being unable to understand what the pharmacist was saying.

7.2.3 Summary of section two

The asthma service was designed and implemented by a group of pharmacists within their locality, and was based around identifying people with asthma that would benefit from a consultation with the pharmacist on inhaler technique, medication use and general lifestyle advice. The service was successful in being implemented, with the pharmacists taking ownership of the project locally. Many of the pharmacy team were involved in helping to identify customers with uncontrolled asthma. Pharmacists had the confidence to adapt the content and length of service locally according to local business or customer needs, and would often carry out asthma brief interventions rather than the full consultations. The local flexibility allowed the pharmacists to offer their services to a greater number of customers.

From these results presented within this section, I have identified a number of factors that appeared to have influenced the delivery of this service, some helping to facilitate, and others acting as barriers. Those factors affecting the delivery of the asthma service are summarised within Table 55. The external marketing used for this project did not result in facilitating the uptake of the service, nor did the communication with local healthcare professionals and expected referrals, and as such are not included in the factors affecting service delivery identified within this section.

Table 55: Summary of the experiential factors affecting delivery of the asthma service
(Please note that this table is presented over two pages)

	Facilitators	Barriers
Customer need	<ul style="list-style-type: none"> Ability to adapt service to customer need Advice that is pharmacist's area of expertise (e.g. medicines related) 	<ul style="list-style-type: none"> Advice that is not perceived to be in pharmacist's area of expertise
Pharmacist attitude	<ul style="list-style-type: none"> Commitment to service Enthusiastic Confidence to adapt service 	
Implementation of the service	<ul style="list-style-type: none"> Local ownership and delivery of the service Service lead in each pharmacy 	

	Facilitators	Barriers
Training	<ul style="list-style-type: none"> ▪ Opportunity for additional training 	<ul style="list-style-type: none"> ▪ Language barriers
Pharmacy communication	<ul style="list-style-type: none"> ▪ Regular communication with team (central and local) ▪ Opportunities to share best practice and learnings 	
Recruitment	<ul style="list-style-type: none"> ▪ In store recruitment ▪ Targeting uncontrolled people with asthma 	
Service structure (asthma service)	<ul style="list-style-type: none"> ▪ Flexibility in service delivery ▪ Simple service to deliver ▪ Ad hoc consultations and advice ▪ Appointments available at the customers request 	<ul style="list-style-type: none"> ▪ Appointments led at the pharmacists request
Management support	<ul style="list-style-type: none"> ▪ Management support of the service 	<ul style="list-style-type: none"> ▪ Lack of management support and prioritisation of other activities
Time		<ul style="list-style-type: none"> ▪ Lack of customer time ▪ Lack of pharmacist time ▪ Demands on pharmacist time
Staff resource	<ul style="list-style-type: none"> ▪ Adequate staff resource available (pharmacists and support staff) ▪ Involvement of all pharmacy staff ▪ Effective use of pharmacy team 	<ul style="list-style-type: none"> ▪ Inadequate resource available (pharmacists and support staff) ▪ Single pharmacists stores
Pharmacy environment		<ul style="list-style-type: none"> ▪ Pharmacy located in commuter towns (potential link to customer time available)

The last section of this chapter goes on to present the recommendations that customers and pharmacists believed would help to improve future service delivery.

SECTION THREE

7.3 Potential facilitators for service delivery identified by pharmacists and customers

The previous two sections within this chapter have looked at the factors affecting the delivery of the brief intervention and asthma service. This section goes on to explore the recommendations made by the pharmacists and customers for future service delivery. These recommendations can also be classified as potential facilitators for service delivery. Data is provided from the pharmacist and customer interviews, and the results presented explore the implementation of the service, staffing, the pharmacy environment, awareness of the service, service delivery, advice on asthma, and advice on other condition areas.

7.3.1 Results

7.3.1.1 Implementation of the service

Within the interviews, two of the pharmacists commented about the need for training for initiatives such as the brief intervention. Although both of these pharmacists liked the information they received, one pharmacist thought that it would have been more effective if they had the chance to attend a training day, rather than just read the materials themselves;

P4 *“The intervention idea is a good one but I think that when we’re dealing with specific ailments such as asthma we might need some more training. You know stuff on the different medications available and a reminder on the symptoms and things that could improve them. Reading leaflets isn’t always a good way to learn and feel confident in what you’re telling customers. I reckon if we had a half day training in the area that we would feel more confident and it might make us ask more people if they would like some advice. The lifestyle advice I gave out is excellent but some of it I could have done with a chat through with someone before I offered it. I ended up picking out the things that I already knew and how I could talk about if they asked any difficult questions.”*

The second pharmacist was late receiving the initial briefing pack, but thought that it would be better if the materials were available for all the pharmacy staff to get involved;

P11 *“...I think that it would have been a good idea to put some sort of asthma training pack in there, purely just for if you’re doing something like this it’s good the whole team getting involved in doing it.....”*

7.3.1.2 Staffing

Many of the pharmacists commented that they enjoyed initiatives such as the brief intervention which allowed them to get closer to their customers as long as they had the time and resource to do it properly;

P1 *“Other than that like I said I reckon all pharmacists would welcome the opportunity to get more involved with customers – as long as we have the time and manpower to be able to provide this added service.”*

They believed that they were offering a better service to their customers, but needed to ensure that they had the time to deliver it;

P5 *“We’re offering a better service and we just need to ensure that we have the time to do it.”*

Some pharmacists felt that pharmacy managers could plan time for the pharmacists to be able to deliver interventions such as this;

P2 *“I enjoy it, it’s just simply the time and level of opportunity to offer it that’s the key issue. And I’m sure that we can sort that internally at management level.”*

Early communication about initiatives such as this would help to ensure that pharmacies had enough time to plan any additional resources required;

P6 *“.....as long as details of such initiatives are sent through early enough with all the information that we might need so that we can work out if we have enough time and resources to take part.”*

Although pharmacists recognised that they did not need to spend a lot of time with customers to deliver the brief intervention, one pharmacist thought that it might be better to manage pharmacist time and resource by having allocated slots of time when people with asthma could come and talk to the pharmacist;

P11 *“...if you’ve got the time to do it, it’s not a massive amount of time that you’re going to be spending with people, it’s just having the organisation and people knowing when you’re there. You could almost have times when people came in to see you.”*

Pharmacists were constantly being interrupted during the course of a normal day, many of which they felt were unnecessary queries. By reducing the level of interruptions by pharmacy staff, one pharmacist thought that this would help to increase the level of time they had to spend with individual customers;

P10 *“Oh, lots of ways, we could have more staff here, that would be nice. We could have less interruptions. We’re always being interrupted, some are reasonable queries that we would need to deal with but a lot aren’t.”*

Only two pharmacists participating within the asthma service had recommendations to make regarding pharmacist resource and future service delivery. Both pharmacists believed that extra resource was required in the pharmacy to carry on delivering interventions like this, although they were aware that funding of this would be an issue;

P15 *“I think well maybe not a lot more but when the company works out how much manpower we need in the dispensary that’s all got to be taken into account and of course it’s all to do with funding and if there’s no funding...its not an easy issue.”*

They believed that extra pharmacist resource would allow them to take customers into a private consultation area so that they could conduct a full intervention with them;

P16 *“I think if we are going to carry on with interventions like this we do need to have more pharmacists in store so you can take someone away from the actual dispensary area itself, sit them down and just completely talk to them as you would do in a surgery.”*

A number of the pharmacists who thought that asthma interventions would be better with additional pharmacy resource, believed that this could be fulfilled by having more support staff, rather than extra pharmacists.

P2 *“We just need to be able to have the time to do it and that could mean more staff on the counter I guess. We would get used to offering it as part of the job and it would become accepted into the routine.”*

Pharmacists saw the benefits of developing roles such as checking technicians, as they would free some of the pharmacist's time to enable them to spend more time with individual customers;

P5 *"I'd like to see that we have cover available to support us when we're providing the intervention service. A dispenser is adequately trained to check prescriptions and research suggests that non-pharmacist checkers check more thoroughly and at the end of the day they can free us up and might allow us to spend more time talking to the customers and offering them some advice."*

Many of the pharmacists believed that this kind of intervention would work better if all the support staff were involved, particularly in pharmacies with a busy dispensary business. They believed that it was important to keep everyone informed and motivated on an ongoing basis in order to keep the service active;

P14 *"I think it will work better in a store where it's busier dispensing and you've got a dispensing team, lots of dispensers and everyone can get on board. It needs everyone on board to keep it going basically."*

One pharmacist had suffered problems within their pharmacy, due to the dispensing team having the service as a lower priority compared to them. They felt that future interventions could be helped by involving other staff more, such as dispensers, and having this kind of service higher on the list of store priorities;

P13 *"And the dispensers....I think when you're working in quite a busy dispensary they feel they should just be doing that and anything else is low on their priorities. Whereas to someone like me it's probably very high on my priority and on the days when I work I'm sort of telling them....."*

One pharmacist felt that it was important to get pre registration graduates and newly qualified pharmacists involved with this kind of initiative. They also thought that training packs could be developed for counter staff so that pharmacists could utilise them to identify and approach people with asthma on their behalf;

P11 *".....purely just for if you're doing something like this it's good the whole team getting involved in doing it and I think especially for pre-reg's or newly qualified pharmacists and also counter staff being aware of what's actually happening, some kind of training pack would be good to show them and talk to them about it and explain these are reasons why people can not be using their inhalers right or their asthma's can be*

getting worse which with their normal pilot highlight to them, the other staff, to be able to pick out people and say maybe that person needs some help or that person needs to be able to talk to you about it, and almost start the conversation off for you before you actually get there, especially if you're going to be checking a script."

7.3.1.3 Pharmacy environment

In total, four pharmacists thought that interventions like the asthma services would be better if pharmacies had private consultation areas. Of these pharmacists making the comments, two had been delivering the brief intervention and two the full asthma service. These pharmacists believed that some customers would not want to talk to them whilst surrounded by other people, and would feel more comfortable in a private area;

P5 *"It would be a good idea if we could invite customers into the screened off Pro-Change™ booths^q so that we have somewhere quiet to talk to them about their medications and symptoms. Some people wouldn't be prepared I reckon to talk about themselves while waiting in the queue."*

Pharmacists also felt that it was important to have consultations with customers where they could talk privately with them, without being interrupted by other staff and customers;

P16 *"But the important thing we have to do is we've got to have the surroundings where we can give undivided attention to the customers as a doctor or nurse would be able to do. Somewhere that's quite private and that we're not being distracted by customers."*

Designated consultation areas would help improve customer awareness for the service, and could be used not only for asthma, but also other health promotional activities;

P13 *"I think it could be probably carried out in a more...I know some of the larger stores have a designated area, you know a proper consultation area. I think if people see that there....if we could have had our machine out and various things out that would have drawn a lot more attention from our customers....."*

^q Pro-Change™ was a computer based smoking cessation programme delivered by Boots during 1999 - 2000

Within the customer interviews, three respondents also suggested that the service could be improved by having a separate area or counter for advice. Respondents felt that many customers would feel uncomfortable about receiving or asking for advice from the pharmacist at the main pharmacy counter in case this held up the queue. One respondent suggested that the separate counter be called a ‘*well-being counter*’ or ‘*health advice counter*’;

C1 “*Boots have a separate counter for everything anyway.*”

In addition to a separate area for advice, one respondent also felt that customers should be able to approach a designated member of staff for advice;

C20 “*Maybe if there were separate compartments in the pharmacy that you could go and get information off one specific member of staff who just deals with that, then yes maybe, but otherwise I wouldn’t really ask.*”

Another respondent thought that the area for advice should be made larger, as the one they had access to within their local Boots pharmacy was extremely small and always crowded. They also suggested that the advice giving area should be well sign posted so that people would be aware that they could access advice from the pharmacist;

C26 “*Probably the lighting. It’s not particularly accessible: it’s not a lone counter, it’s a round semi-circle of a counter and it gets quite crowded in there at times and the actual area of it, because it’s such an important, integral part of Boots I think it could be made larger. The XXXX one is nothing like as good. It wants to be a little bit more accessible and some notices up saying ‘Come and see us, we can answer a lot of medical questions’. I think a lot of the older generation does but the younger generation I don’t think they’d know - they’d go and sit in a doctor’s surgery for hours instead.*”

7.3.1.4 Customer awareness of the service

Within the customer interviews, three of the respondents who had participated within the brief intervention believed that the branding of the service could be improved by calling it an ‘*advice service*’ or simply ‘*over the counter advice*’. One respondent who had participated within the asthma service also thought that instead of calling the service this, it should be termed a ‘*support service*’, as it was supplementing the advice from GPs;

C28 *“An intervention is quite a confrontational kind of word and you know pharmacists aren’t doctors and whatever. I think it should be some sort of support. Like care in the community sort of thing isn’t it, it’s offering additional support.”*

Many of the pharmacists participating within the brief intervention activity felt that having posters and leaflets would help raise awareness of the service, and would encourage customers to ask about the service, rather than just relying on the pharmacist or staff to approach them directly;

P1 *“I think it would be really good if we could have some posters for the next waves, or some leaflets that customers could pick up letting them know about the service. That way they could ask for some information and advice without us only being able to offer it if we spot an opportunity.”*

Having these kinds of materials would help to improve access to the service, rather than pharmacists just being able to offer advice to customers during quieter times;

P2 *“I think it would be a good idea if we could have posters or signs on the counter advertising the service then at least customers could ask for it, even when we’re busy. That way everyone could have access to it and not just those that come in when we’re quiet.”*

One pharmacist also thought that it would be good to have contact cards so that pharmacists and staff could hand these to customers to make an appointment at a later date;

P8 *“I think part of it might be regarding patient awareness that the service is available. But then it’s very difficult with respect to the advertisement of professional services and that then comes into the code of ethics for pharmacists and that can be quite difficult. But it’s trying to make the patient aware so that if for example its my day off or I’m on holiday when they come in that they are still aware of the service so that they can make contact or make an appointment for an appropriate time. It may well be that it’s just something simple like having little cards with the pharmacists name and number on. Not so much saying ‘asthma expert’ but just saying do you need help and advice regarding your condition, your local contact is...Just something like that.”*

One pharmacist had independently designed posters to advertise the service, and had also photocopied the lifestyle advice for customers to take away with them following

the discussion with the pharmacist. Future interventions, they thought, should provide the pharmacist with flowcharts to describe the process to customers.

Pharmacists thought that interventions like this should be an ongoing thing, with general awareness of the public being raised that this advice was available in pharmacies. It was felt by two pharmacists that future services would need advertising outside of the pharmacy environment to try and encourage people to come into the pharmacy for advice. Show material in GP practices and messages on repeat prescriptions were some of the suggestions raised;

P11 *“Then make people aware you’re actually doing it as appose to the first time they know about it they see it or come into the store, you know in the surgeries, putting show material up, the GP’s actually putting it on the repeat slips to say that if you need any advice on inhaler techniques then pop into Boots.”*

Many of the customers also suggested ways they thought that the service could be improved by raising awareness of the service. They believed that the service needed to be promoted better in the pharmacy, so that customers had the option to take up the advice if they wished to. Customers could be made aware of the service via labelling on products, posters and information next to the pharmacy counter;

C19 *“I would probably say the best thing to do is have it at the pharmacy desk because we go there for our medication, it might be have posters or as they hand over your Ventolin[®] to say ‘did you know’ or maybe hand over a leaflet or talk you through something, I think that would be best.”*

Putting leaflets into prescription bags was also thought to be a good way of raising awareness of the service by one respondent;

C34 *“I suppose when handing out prescription have leaflets in the bag with the items, to make people aware these services are available so if people do want to know more they can go and ask.”*

Boots dental and optician departments were seen as well signposted within the store, with dynamic signage. Respondents felt that this was not the same for the dispensary area and that the signage needed to be more dynamic, and clearly sign post the services available;

C26 *“Well they do have notices up but they could be slightly more dynamic..... There are small notices there saying we can pick your prescriptions up from the chemists or the doctors or things like that but I don’t remember seeing anything about offering advice. There again, it’s general knowledge because you can always go and see a pharmacist. But you see so many people, I hate to say it, aren’t very educated in doing things like that. I would but a lot of people just think, oh it’s just the chemist and go and pick their pills up or their aspirins. It needs to be...You see in the Woking Boots they’ve got a very good dental department, it’s all lit up and ‘Come and see us’ and opticians in there as well. The dispensary is very big but it probably could be a bit more dynamic.”*

Boots was seen as a company that took a soft approach to advertising and promotions generally compared to other competitors;

C28 *“One thing about Boots is they’re very softly, softly in all their promotions and everything compared to others. I mean I can’t think of the last time I saw a Boots advert on TV whereas some of the other pharmacies use TV and I don’t think Boots do, maybe they don’t need to because of the turnover and the sales but I think in terms of awareness that might be useful.”*

One respondent felt that as well as advertising the service on till receipts, it would be good to have a tip of the week, or month to encourage repeat users of the service;

C13 *“I think it’s a great idea especially if they could do some kind of leaflet or tip of the week or month perhaps. It might make you visit the counter to see what this month’s tip is. Or perhaps they could put it on your receipt if you buy a related product like they do on bus tickets.”*

The advantage card^r was also seen as a useful avenue to raise awareness of the service, in particular through the associated health and beauty magazine^s;

C22 *“I have a Boots advantage card and if they put an article in the Boots magazine, I do leaf through that. That would reach more people then....”*

One respondent also suggested using the website as a tool to advertise the service;

^r Loyalty card available at Boots

^s Boots magazine which is sent to high spending advantage card users

C34 *“Obviously there’s website advertising, I don’t know how many people go on Boots website or whatever.”*

Within the pharmacies delivering the asthma service, two pharmacists thought that improvements could be made to the service by working more closely with local healthcare professionals. One of the pharmacists thought that the initial communication that they sent to the local GPs could be improved by making it more personalised, instead of the standard letter the team had come up with;

P17 *“The letters that we had something like Dear Health Professional on them which I find a bit cheesy. We should have had a facility to put Dear Dr Smith or whatever on.”*

The second pharmacist felt that working more closely with the asthma nurses, and getting them to come into the pharmacy might help improve future activity.

Within the brief intervention pharmacies, one pharmacist also had some good ideas that if they had known more about the service in advance, they would have liked to have implemented. These were mainly focused around taking the opportunity to work closely with the local GPs and asthma nurses, and appeared to be based around an extended service such as the asthma service;

P11 *“Also give GP referral slips to GP’s so if they want to refer people to us to talk to people about inhaler technique and that kind of thing as appose to taking up their time or the nurses time...”*

P11 *“Then obviously, speak to the asthma clinics to see who is actually running them and what type of advice they’re given so you’re not giving conflicting advice....”*

7.3.1.5 Service delivery

Very few of the pharmacists had any recommendations to make on the service materials that were used within the brief intervention and asthma service. Of the three that commented on the brief intervention materials, one pharmacist thought that the intervention could have been improved by making it slightly more structured, with perhaps the use of a questionnaire. They also thought that future materials should distinguish between asthma and COPD. When questioned about what else they would have liked for the intervention, one pharmacist suggested that sample inhalers would

have been good. They had proactively approached companies for them as a result of the intervention, but had generally found them quite difficult to get hold of;

P10 *“Samples of inhalers that we found quite difficult to get out of some manufacturers. Did get some eventually, but it did take a while to get them, and that was some things that you really need if you’re going to do any kind of meaningful discussion with a patient with a new inhaler.”*

One of the other pharmacists was late in receiving the initial communication, and felt that the service could have been improved by better communication of these interventions and services beforehand so that pharmacists knew what to expect;

P11 *“It wasn’t like this is something that Boots are doing, and that kind of stuff, and I know you’ve got to trial things, but a bit more thought in it really.”*

Only one of the pharmacists involved within the asthma service had recommendations to make regarding the service materials, and felt that future interventions would be better if paperwork was kept to a minimum, and the intervention itself was kept very simple. The same pharmacist also thought that it would be better to send pharmacies a complete kit at the start of the service with all the materials that they needed rather than as separate deliveries. This was because the pharmacies were often inundated with deliveries of materials, and found that things could quite easily get lost as a result;

P14 *“They could almost do with setting up a kit and that’s what you need for each store and send it out.”*

Some of the respondents participating within the customer interviews felt that the asthma service could be improved by having information leaflets available for both adults and children that could be given out when people pick their prescriptions up. The information could contain advice relevant to people with asthma at that time of the year, such as tips to help you through the winter. One particular respondent felt that current literature seemed to be aimed entirely at children;

C22 *“Leaflets I’ve seen before are quite informative but always aimed at children. They’re never aimed at adults, and the thing is, yes, fair enough, a child needs to know how to take their inhaler but I’m 25 and I’m not going to ask a crocodile. Maybe literature aimed at adults with some advice with regard to help through winter, vitamins, herbal*

tablets to help boost immune systems and other things to do to reduce your chance of getting chest infections, all that kind of thing.”

Advice on alternative medication and things that could be used in conjunction with inhalers were also of interest to some respondents. They felt that advice on leaflets and posters should be made available to customers near the pharmacy area;

C34 *“I don’t know, like I said, perhaps put out some leaflets offering alternatives or advice for things to be used in conjunction with inhalers. It all depends, I personally wouldn’t mind being approached, if I was to walk in to the pharmacy and there was a poster there or leaflets there then certainly I would look at them and if someone wanted to approach me on the subject then yes, I’d be amenable to that, that’s not a problem.”*

Respondents felt that it was important for customers to pick up some of the information themselves as they could be doing this for a friend or family member with asthma, rather than themselves;

C25 *“I think on the counter because then it will remind people and they can bring it up, for maybe they don’t need it for themselves, maybe a relative and things like that it can always help.”*

One respondent felt that people did not always pick up or read information leaflets in the pharmacy, and thought that it would be more effective to send information through the post via targeted leaflet drops. This information should be kept very simple, so that customers would spend the time to read it, and not immediately place it in the bin;

C24 *“Can’t think of anything, unless they did information drops to asthma sufferers, these leaflets that are in the store, lot of people probably wouldn’t pick up the leaflet and take the time to read it, so could send through a newsletter or something, with bits of information to do with symptoms or something. Something quick and easy to read, get through the letterbox and not something that you’d want to chuck in the bin, but actually sit down and spend the time to read it. I’m a blood donor and they do a similar thing when they actually send through a magazine regularly and it keeps you up to date on things about good things to do with giving blood, etc, but it’s quite interesting and you then feel part of a special group. I know asthma is slightly different but you’d still feel part, that there are other people out there going through similar things to you.”*

Although the majority of respondents wanted additional written information available, one respondent felt that verbal advice for them would always be more favourable as they were more likely to listen and take the information in;

C19 *“I think verbal advice would be best because I think written things don’t get read properly. I’m terrible for scan reading, and at least I picked the leaflet up, but I think if someone’s talking to you, you have to pay more attention don’t you, otherwise it’s rude.”*

Having recently acquired access to the internet, one respondent stated that they would prefer access to advice and prescription services via this avenue;

C24 *“I’m just in the process at the moment of having a PC installed and if there was something that could be given through Boots pharmacy web address or do something where you could get information on the screen and then have it sent directly to you or something, general information, but you’d still have to physically go to the store and get your prescription, you can’t get it posted out to you which would be quite nice sometimes.”*

A couple of the pharmacists participating within the asthma service thought that the service could be improved if they were able to conduct interventions there and then, rather than asking people to make an appointment at a later time;

P16 *“I think the best thing about it would be if we were in a situation where we were able to give them the advice and do everything there and then. You know rather than ask them to come back which is rather like a doctor or a nurse appointment.”*

In total, three of the customers participating within the brief intervention activity felt that any future services and simple request for advice should be available from the pharmacist on an ad hoc basis, and should just be a case of speaking to the pharmacist when you go into the pharmacy;

C24 *“I think maybe as I pick product it might come into my head, that I might want to ask about such and such. I don’t think I’d want to have a proper sit down formal thing with the pharmacist. I think because everyone is so stuck for time these times you want to be able to just come in, ask the question and then it’s done. Don’t like the idea of actually booking something and going in and sitting down.”*

There was a recognition amongst a couple of the respondents that if they wanted to sit down and speak to the pharmacist for anything other than simple advice, then they would have to make an appointment depending on how busy the pharmacist was at that time;

C19 *“I think for me it would be better on an ad hoc basis, I mean I could understand if you wanted to have a long conversation that you would probably be right having an appointment but if I was in town and just wanted to speak to you about this quick thing that would be nice but would obviously depend on how busy they are.”*

7.3.1.6 Advice on asthma

The majority of respondents within the customer interviews had suggestions to make on the type of advice that Boots should be offering to people with asthma. Of these, many thought that Boots should offer both general advice on asthma and advice on the latest news and developments. They would not see this as a personally tailored service but as an outlet for information on asthma more generally;

C22 *“I know they have to make money out of things but if they know something on lifestyle like you need to eat more of this vegetable or whatever else, but there’s always the latest research and you never hear about it until it’s on the news.”*

Many of the respondents also wanted to be able to access advice from the pharmacist about the avoidance of triggers and other issues they did not feel was appropriate to speak to their GP about;

C19 *“I don’t know really, I guess a lot of mine is triggered by allergies and I’ve noticed something new I might be able to go and talk to them about it and do you think it’s this or is it just a bad day, that’s often quite interesting. Or I would be quite interested if there are other things I should avoid such as food items or I wouldn’t necessarily have to go and see a GP about that.”*

Advising on inhaler type, frequency and use was important to some of the respondents questioned;

C11 *“My granddaughter has something called a spacer its like a big plastic balloon you put one end in your mouth and you put the puffer in the other press it down and breath it in. When Melanie put me on the green puffer she showed me how to use it. I showed her what Holly did and she said I didn’t need to do that all you have to do is breath in*

and out three times. And that is something Boots needs to do. Because there's no use in taking something if you're not taking it properly."

In particular, one of these respondents thought that Boots should offer this type of service to people with asthma who were newly diagnosed;

C23 *"I seem to remember when I first had asthma they gave me different inhalers but that was the doctor more than the chemist. It wasn't Boots who said if you have that one that's easier for a child, although maybe they could suggest that to someone."*

A couple of the respondents thought that the Boots asthma service should include a monitoring aspect, including discussing their peak flow, asthma symptoms, and advice on inhaler use. This was particularly attractive to one respondent who had difficulty getting access to her own GP;

C24 *"Maybe about my peak flow and how I'm feeling and maybe feel that what I'm using hasn't been effective as I'm getting worse, or is there a reason for it, which obviously you could ask the doctor if you can get an appointment but if its anything like my doctor's it's quite hard work and they have this new policy that you can't pre book your appointment if you want one within 48 hours of phoning."*

The role of Boots was seen as filtering through information which would ultimately increase control of asthma and reduce symptoms;

C13 *"Just simple day to day tips I guess. Things that might make you feel better just by making little changes to your life."*

Respondents felt that the most important thing was for Boots to have pharmacists available to answer questions as and when they had them;

C12 *"I guess just stuff that might help you feel a bit better. The main thing I guess is being there to answer your questions when you have them."*

One respondent even suggested that this could be done via a computer terminal or help point within the pharmacy;

C13 *"Perhaps they could have a help point or something or a computer in the store that you could type questions into."*

Advice on alternative treatments or medications was important to one respondent, who felt that they would like to be able to access this information from Boots;

C34 *“I don’t know, like I said, perhaps put out some leaflets offering alternatives or advice for things to be used in conjunction with inhalers.”*

One respondent just wanted to be able to access the dispensary service as quickly as possible with no advice being offered by the pharmacist;

C25 *“No I can’t really, it’s just the way it is. I just head on in there when needed. Nothing I’m sat here thinking I could really do with knowing about this or if they included that I’d be over the moon. Probably just purely a service I’m looking for, the quicker I’m away from the till the better.”*

7.3.1.7 Service delivery in other condition areas

Only four of the pharmacists commented on other condition areas that they thought this intervention could be extended to, of which all felt that it could be extended to most other condition areas. Following the asthma initiative, one of the pharmacists had already started delivering brief interventions for customers with diabetes;

P15 *“It can extend to everything really, all the major diseases like heart disease, people with high blood pressure. All the major things like diabetes.”*

Pharmacists felt that people with conditions that affected their everyday life, or those that had constant medication issues might find this kind of service more beneficial than others;

P2 *“I think people would appreciate advice if they have a constant medication issue. Like someone with diabetes or rheumatoid conditions – things that affect their everyday life and where they take regular medication.”*

Dermatology was also seen as a key area that pharmacists felt they could offer extended advice in that would be useful to both the patient and the NHS, through a reduction in waste medicine;

P10 *“Yes, dermatology certainly. We do a lot with people coming in with creams and ointments, they haven’t got a clue what to use, where and when and how to use it appropriately and that’s quite a big loss to be honest to the NHS as they’re not using the stuff properly so it’s not worth prescribing it in the first place or they go on to*

using much stronger products earlier than they need to. Diabetes and cardiovascular, anti cholesterol drugs.”

Within the customer interviews, five of the respondents mentioned other condition areas in which they thought Boots should offer extended advice services. The majority of respondents mentioned advice services that could be applied to asthma related conditions such as hayfever, allergies and eczema. Other conditions mentioned specific to individuals included irritable bowel syndrome and epilepsy;

C25 *“Well, I also have hayfever and it’s one of these things that people just take for granted and live through but at the time when your eyes are scratching... Because the first year when I got it I just got the pills and it was helping my nose but it wasn’t helping my eyes and a couple of years later I saw a doctor again and he said, have this extra stuff as well and the difference it made: it stopped me wanting to scratch my eyes out. So if there was the same sort of information given out about hayfever and other allergies people would maybe pick up more information.”*

One respondent felt that the Boots advice service was best suited to conditions that may not seem important enough to *“waste time with your doctor, particularly if there is a four week wait”* (C4).

Another respondent thought that people with conditions that affected them on a daily basis should be able to access good lifestyle advice from the pharmacist;

C19 *“I guess other things that people have to do on a daily basis, I can’t think of anything off the top of my head, people with eczema or epilepsy or something, they’re all triggered by things, you know you have to go to the doctor for your prescription but for lifestyle advice I don’t see why it couldn’t come over the counter from a chemists.”*

Other respondents felt that simple measurements such as cholesterol should be available from places such as Boots;

C28 *“Especially with things like cholesterol because most people don’t get their cholesterol checked regularly unless they’re with some kind of private health thing like BUPA, or Well Man clinic through work which costs a fortune. I think it should be some sort of caring for you kind of thing or sort of guiding you through because there are so many things you can get at the counter it all gets a bit out of control.”*

7.3.2 Discussion of the results

Within the last section of this chapter I have presented the recommendations from pharmacists and customers regarding future delivery of both the brief intervention and asthma service. These recommendations are described as potential facilitators due to the fact that pharmacists and customers interviewed believed that these recommendations would help to meet a customer need for the service, and / or help facilitate better delivery of the service.

The overall feedback on the initial content and level of information provided as part of the brief intervention in asthma was good, but some pharmacists commented on the need for additional training. They felt that the option to attend a training day, or discuss the service with their colleagues would have better equipped them with the skills to provide the service. Pharmacists have different needs and training requirements to help them feel confident in service delivery. A literature review by Anderson et al. [166] found that studies investigating the effect of training concluded that it was a key component in changing pharmacists' behaviour and resulted in longer consultations with customers and increased opportunities for healthcare professional involvement. Due to the simplicity of the brief intervention, it was communicated via a briefing document rather than a formal training package. Whilst not wanting to over complicate the service itself, future delivery should consider signposting to additional training or information sources that pharmacists can undertake if they require. The standard training or briefing documents should help meet the needs of the majority, and the additional training help meet the needs of those requiring it. The briefing materials for the brief intervention were distributed solely to pharmacists, with the guidance and expectation that they would communicate the information to their pharmacy staff. As the pharmacy staff had a huge role to play in identifying customers for the service and offering brief advice, future communications should be directed at both pharmacists and their teams.

Many of the pharmacists thought that time and resource was a factor in the delivery of the intervention. They believed that early communication of the intervention to both pharmacists and the management team would have helped with the planning of resource, and the involvement of management would ensure that this was seen as a priority. The brief intervention was designed to be simple to deliver and provide the pharmacists with the opportunity to deliver opportunistic interventions when people with asthma presented at the pharmacy. The pharmacists need for additional time and resource should not have been a factor in the delivery of this intervention, as it was

brief advice that should have taken the pharmacists a couple of minutes to deliver as part of their normal routine. The need for additional resource for this service reflects the lack of spare capacity within the pharmacist's role, as also found in a study by Savage [140]. Within the more detailed asthma service, the pharmacists commented on the need to have additional pharmacist resource when they were delivering the full consultation and were away from the pharmacy area. Whilst pharmacists participating in the asthma service did not comment on the need for additional resource whilst delivering the brief interventions over the counter, they did request resource for those that required their time to deliver full consultations and which took them away from the pharmacy area. The subsequent interim guidance issued by the RPSGB allows the continued operation of the pharmacy whilst the pharmacist is not immediately available due to other professional activities [36]. Whilst not withstanding the need for additional resource for services that require longer time with the pharmacist, the need for additional resource for simple interventions raises questions regarding the deliverability of more complex services within the current pharmacy environment. Some pharmacists felt that they could have managed their time more effectively and made customers aware of allocated times when they were able to offer advice. This limits the accessibility of pharmacist advice by restricting the times that it is available, and reduces the benefits to customers being able to access ad hoc advice on request from the pharmacist. Other pharmacists thought that the constant demands on their time could have been better managed by involving all the pharmacy staff in service delivery, and by having better trained support staff. This would help reduce the number of interruptions and queries they received, allowing them to provide more opportunistic advice and services. Checking technicians were seen as particularly important in helping to free up some of their time, allowing them to provide a better service to customers.

Very few of the pharmacists interviewed mentioned the need for consultation space to deliver the services, and of those that did, they tended to be the pharmacists delivering the more in depth service. Those pharmacists that did mention access to consultation space did so within the context of having it available if required by the customer. Similarly, a recommendation that emerged from the customer interviews was an area within the pharmacy for advice that was well signposted. It appears that pharmacists and customers did not feel uncomfortable discussing advice within the pharmacy area, but both parties would have liked access to space or an area to use if they wanted to. Customers in particular were looking for an area of the pharmacy that was clearly signposted where they could access advice as required. The lack of need for

consultation space for the brief intervention could be due to the simplistic nature and the opportunity to provide opportunistic advice. Stipulating that consultation space is required for the service may add too much formality to this simple service. The use of consultation space for services could be driven by the needs of the customer, the pharmacist, or the type of service offered, none of which were investigated as part of this study. Customer need should not be assumed, but require the pharmacist to check and manage necessary expectations.

Both pharmacists and customers thought that the branding of the service should be clear and say exactly what the service was all about. The wording of the service was important as customers were very clear about the type of advice they expected from community pharmacists to support, and not compete against advice they would expect to receive from their GP. Inappropriate wording of the service could lead to customers misunderstanding the type of advice they would receive and therefore be put off by the service. There is a need to manage the transition of customers' expectations towards receiving more detailed advice from the pharmacist over a period of time.

As well as the branding of the service, respondents felt that there needed to be more awareness of services such as these to improve customer awareness and demand for the service. Posters and leaflets on display would allow customers to pick up information of their own accord. Advertising through the Boots Advantage card, boots.com website and magazines would improve awareness and offer people the opportunity to proactively approach the pharmacist about the service. Advertising of pharmacy services was something that Boots was seen as being particularly poor at in the past, compared to some of its competitors such as Lloyds. Pharmacists also felt that more could be done to raise the awareness of services through the local GPs. Building local relationships through communication of the service and referral guidelines were felt necessary to encourage collaborative working amongst the local healthcare professionals.

There was a mixture of pharmacists that wanted to see the intervention more structured, and those that liked it unstructured so that it allowed greater flexibility in delivery. There was agreement that services needed to be simple, and paperwork kept to a minimum. Some pharmacists expressed the desire for additional support materials such as placebo inhalers to enable them to deliver a better service. In effect, what they were asking for was the asthma service that was designed and delivered by the local pharmacists. It appears that some of the pharmacists delivering the brief intervention

naturally extended the service to the full asthma service as and when required by customers, and those delivering the asthma service condensed it to the brief intervention when required. The solution going forward was a service that combined the best of both, something that allowed the pharmacists to be flexible in service delivery depending on customer or business needs.

Individual pharmacies within Boots receive a tremendous amount of post and stock on a daily basis. Occasionally, the post does not reach its intended destination. Recommendations from the pharmacists were to have the service communication sent to individual pharmacies via a number of media, including the traditional paper method, alongside the intranet. For service materials, the pharmacists recommended that this be sent to pharmacies packaged in one box to avoid any smaller components getting lost within the post or elsewhere within the store.

Customers wanted to be able to access advice via several different medium, including leaflets, internet, and verbal advice from the pharmacist. Leaflets on display in the pharmacy area would allow for people to take the information away with them, to read themselves, or to pass on to a family or friend member. Both pharmacists and customers thought that advice should be available from the pharmacist on the spot, rather than having to make an appointment for a later date. One of the main advantages of pharmacists' advice was the accessibility. Having to make an appointment to access brief advice was seen as removing this advantage. Despite this, those customers who chose to request additional support and help from the pharmacist in a more detailed consultation accepted the fact that they would be required to return at a mutually convenient time.

Customers wanted to access general advice from the pharmacist, and in particular, advice that they would not necessarily go to their GP about. This varied between individuals depending on the type of service and support that they were currently receiving from their GP practice. Those who were well supported wanted advice on the latest news and developments in asthma, whilst those with little support wanted help with the general management and monitoring of their condition. Access to top tips, alternative treatments, and new developments were of interest to most respondents in an attempt to seek out better treatments or new techniques that would help to improve their asthma. Future services need to be flexible enough to allow the pharmacist to recognise the different needs of the individual customers and offer the appropriate level and content of advice.

When asked about other conditions that the brief intervention could be extended to, many of the pharmacists felt that similar services could be delivered for most condition areas, but that it would be particularly beneficial to those conditions that affected everyday life or had constant medication issues. Customers mentioned condition areas that were mostly of personal relevance to them as people with asthma, including hayfever, allergies, and eczema. Advice and support on conditions that affected people on a daily basis was also seen to be of particular benefit. Customers were clear that the advice and support they wanted from pharmacists was on conditions or ailments that they did not want to bother their GP with. Although the type of advice customers would seek from the pharmacist and from their GP is discussed in an earlier chapter, the definition of what conditions customers would class as suitable to discuss is not covered within this thesis. Explicit consent may be needed for future services, which is a new concept for pharmacists who have always assumed implied consent for services to date. Future research should consider what the definition of suitable services and conditions is, and whether it is changing over time with the introduction of the new pharmacy contract and pharmacists involvement in the direct delivery of consumer facing NHS services.

7.3.3 Summary of section three

A number of potential facilitators have been identified based on the recommendations of both pharmacists and customers for future service delivery. These potential facilitators are summarised in Table 56.

Table 56: Summary of the potential facilitators identified by pharmacists and customers
(Please note that this table is presented over two pages)

	Facilitators
Customer need	<ul style="list-style-type: none"> ▪ Services aimed at conditions that affect people on daily basis ▪ Services that deliver advice and support that people would not want to bother their GP with
Training	<ul style="list-style-type: none"> ▪ Opportunity for additional training ▪ Information aimed at pharmacy staff and pharmacists
Pharmacy communication	<ul style="list-style-type: none"> ▪ Early communication of service to pharmacists and managers to enable better planning ▪ Communication via a number of medium ▪ Service materials delivered in one box prior to service commencing (to avoid items going missing)

	Facilitators
Awareness of service	<ul style="list-style-type: none"> ▪ Clearly signposted area or member of staff to go to for advice ▪ Simple branding that explains clearly what the service is ▪ In store support materials to make people aware of the service and give people the opportunity to ask for advice ▪ Advertising outside of the pharmacy to make people aware of the service and help create customer demand
Type of asthma information	<ul style="list-style-type: none"> ▪ Advice available in different formats (verbal and written) ▪ Information leaflets aimed at different target groups, and covering wide range of topics ▪ Information easy to access by individual, for example picking up leaflet in pharmacy ▪ Rotation of themes and advice to keep advice relevant and service sustainable
Service structure	<ul style="list-style-type: none"> ▪ Flexibility of service delivery (level and content) ▪ Simple interventions but opportunity to deliver more in depth service when required ▪ Guidance on additional materials if required ▪ Minimal paperwork associated with service ▪ Ad hoc advice available to customers on request ▪ Longer consultations available if required by the customer
Time	<ul style="list-style-type: none"> ▪ Allocated time to deliver services
Staff resource	<ul style="list-style-type: none"> ▪ Planning of resource to support service ▪ Additional resource (pharmacists and support staff) ▪ Better trained support staff ▪ Involvement of all pharmacy staff in service delivery
Remuneration	<ul style="list-style-type: none"> ▪ Funding for time and resource
Pharmacy environment	<ul style="list-style-type: none"> ▪ Option to take customer to private consultation area
Healthcare professional relationships	<ul style="list-style-type: none"> ▪ Communication with GPs to help build links and working relationship ▪ Working with local asthma nurses

7.4 Summary of chapter VII: Facilitators and barriers affecting delivery of the asthma services

This chapter of my thesis has presented the data following the implementation of the two asthma services used in this study in an attempt to identify experiential and potential facilitators and barriers affecting service delivery.

Both the brief intervention in asthma and the more in depth asthma service were successfully implemented and delivered. Pharmacists delivering both services were flexible in responding to customer and business needs, and would often condense or extend the service as appropriate. Some pharmacists delivering the brief intervention would extend this to a version of the asthma service, and pharmacists delivering the asthma service would often condense it and deliver the brief intervention.

Potential factors affecting delivery that have been identified from the results presented within this chapter can be grouped under the following headings: customer need, public attitude, pharmacist attitude, implementation of the service, training, pharmacy communication, awareness of the service, recruitment to the service, type of asthma information, service structure, pharmacist confidence in service delivery, management support, time, staff resource, remuneration, pharmacy environment, and healthcare professional relationships. Details of the individual facilitators and barriers are listed in Table 57. Where similar themes have been identified within previous literature, this has also been identified.

All the factors identified from this chapter will be discussed in more detail in chapter nine, where final conclusions will be drawn. The next chapter of this thesis details the last set of results looking at the benefits of service delivery to the customers, pharmacists and service provider.

Table 57: Summary of the facilitators and barriers affecting delivery of both asthma services

(Please note that this table is presented over five pages)

	Facilitators	Barriers
Customer need	<ul style="list-style-type: none"> ▪ Perceived usefulness of advice ▪ Advice that is in the pharmacist's area of expertise (e.g. medication related) ▪ Ability of service to help identify potential customers, and recognising potential need for advice ▪ Ability to adapt service to customer need ▪ Services aimed at conditions that affect people on daily basis ▪ Services that deliver advice and support that people would not want to bother their GP with 	<ul style="list-style-type: none"> ▪ Perception that do not need advice ▪ Advice that is not in the pharmacist's perceived area of expertise
Public attitude		<ul style="list-style-type: none"> ▪ Poor level of confidence in pharmacist advice ▪ Level of authority of pharmacist advice compared to other healthcare professionals <p>[3, 7, 16, 18, 21, 26, 32]</p>
Pharmacist attitude	<ul style="list-style-type: none"> ▪ Commitment to service ▪ Enthusiastic <p>[5, 17-19, 30-32]</p>	<ul style="list-style-type: none"> ▪ Poor attitude towards role expectations ▪ Limitations of role <p>[1, 5, 16, 29, 32]</p>

	Facilitators	Barriers
Implementation of the service	<ul style="list-style-type: none"> ▪ Simple structure that is easy to follow ▪ Ability to adapt and extend service locally ▪ Local ownership and involvement in service delivery and design ▪ Service lead in each pharmacy <p>[11]</p>	
Training	<ul style="list-style-type: none"> ▪ Opportunity for additional training ▪ Information aimed at pharmacy staff and pharmacists <p>[1, 3, 4, 11-13, 16, 18, 20, 23-26]</p>	<ul style="list-style-type: none"> ▪ Language barriers where English is not the first language <p>[8, 29]</p>
Pharmacy communication	<ul style="list-style-type: none"> ▪ Early communication of service to pharmacists and managers to enable better planning ▪ Communication via a number of media ▪ Service materials delivered in one box prior to service commencing (to avoid items going missing) ▪ Regular communication with team (central and local) ▪ Opportunities to share best practice and learnings <p>[10, 16, 22]</p>	

	Facilitators	Barriers
Awareness of service	<ul style="list-style-type: none"> ▪ Simple branding that explains clearly what the service is about ▪ In store support materials to make people aware of the service and give people the opportunity to ask for advice ▪ Advertising outside of the pharmacy to make people aware of the service and help create customer demand <p>[1, 11, 16]</p>	
Recruitment	<ul style="list-style-type: none"> ▪ Captive audience available, e.g. when dispensing prescriptions ▪ High volume target customers visiting pharmacy ▪ In store recruitment ▪ Targeting uncontrolled people with asthma ▪ Clearly signposted area or member of staff to go to for advice <p>[6]</p>	<ul style="list-style-type: none"> ▪ Patients not easily identifiable ▪ Less opportunity to identify patients, particularly in non contract pharmacies <p>[16, 24]</p>
Type of asthma information	<ul style="list-style-type: none"> ▪ Content relevant for time of year ▪ Advice available in different formats (verbal and written) ▪ Information leaflets aimed at different target groups, and covering wide range of topics ▪ Information easy to access by individual, for example picking up leaflet in pharmacy ▪ Rotation of themes and advice to keep advice relevant and service sustainable 	

	Facilitators	Barriers
Service structure	<ul style="list-style-type: none"> ▪ Simple interventions but opportunity to deliver more in depth service when required ▪ Flexibility in service delivery (content and length of intervention) ▪ Good fit with other initiatives and activities ▪ Regular and updated communications ▪ Opportunity to improve awareness of symptom control ▪ Providing opportunity to access healthcare professional advice ▪ Ad hoc consultations and advice ▪ Appointments available at the customer's request ▪ Guidance on additional materials if required ▪ Minimal paperwork associated with service 	<ul style="list-style-type: none"> ▪ Intervention too simple so not perceived as a service ▪ Appointments led at the pharmacist's request
Pharmacist confidence in service delivery	<ul style="list-style-type: none"> ▪ Confidence to deliver and adapt service to meet customer and business needs <p>[9, 19, 30]</p>	<ul style="list-style-type: none"> ▪ Lack of confidence and comfort in using particular questions and providing advice that is not related to medicines (outside comfort zone) <p>[5, 8, 19, 25]</p>
Management support	<ul style="list-style-type: none"> ▪ Management supportive of the service <p>[1, 10, 12, 19, 22, 23]</p>	<ul style="list-style-type: none"> ▪ Lack of management support and prioritisation of other activities <p>[1]</p>
Time	<ul style="list-style-type: none"> ▪ Allocated time to deliver services <p>[2, 13, 23]</p>	<ul style="list-style-type: none"> ▪ Lack of pharmacist time ▪ Pharmacy workload and demands on pharmacist time ▪ Lack of customer time <p>[1-3, 7, 8, 12, 14-16, 20, 21, 23, 25-27, 29]</p>

	Facilitators	Barriers
Staff resource	<ul style="list-style-type: none"> ▪ Involvement of all pharmacy support staff in service delivery ▪ Effective use of pharmacy team ▪ Adequate staff resource available (pharmacists and support staff) ▪ Planning of resource to support service ▪ Better trained support staff <p>[1-3, 10-13, 16, 18, 20, 22-24, 26]</p>	<ul style="list-style-type: none"> ▪ Inadequate resource available (pharmacists and support staff) ▪ Single pharmacists stores <p>[7, 18, 23-26, 28]</p>
Remuneration	<ul style="list-style-type: none"> ▪ Funding for time and resource <p>[3, 6, 11, 13, 16, 22, 32]</p>	
Pharmacy environment	<ul style="list-style-type: none"> ▪ Service sited in large and small size pharmacies, and edge of town locations (potential link to resource and how busy the pharmacy is) ▪ Accessibility of pharmacist ▪ Private consultation area available <p>[1, 3, 4, 6, 13, 16, 18, 22, 26]</p>	<ul style="list-style-type: none"> ▪ Pharmacies located in commuter towns (potential link to customer time available) ▪ Services sited in middle size pharmacies and health centre locations (potential link to resource and how busy the pharmacy is) ▪ Non contract pharmacies (less opportunity to target customers) ▪ Busy pharmacies (customers waiting) <p>[2]</p>
Healthcare professional relationships	<ul style="list-style-type: none"> ▪ Communication with GPs to help build links and working relationships ▪ Working with local asthma nurses <p>[3, 5, 11, 13, 16, 18, 19, 24, 32]</p>	

CHAPTER VIII

Motivators of service delivery

8.0 Introduction to the chapter

Previous studies that have investigated the motivators for service delivery have tended to do so from the perspective of the pharmacist [14, 16, 22, 28]. Little thought has been given to the motivations of service users and providers in delivering pharmacy services. To get a true picture of what would motivate customers to access services from community pharmacies, it is important to understand what benefits they would get. Likewise, to deliver the services, you have to understand what motivates pharmacists. Similarly, how the service provider benefits in delivering these services should also be considered. An understanding of the benefits to each of the stakeholders concerned will allow me to consider those factors acting as motivators that are affecting service delivery in community pharmacy.

This chapter of my thesis provides the results from the interview data looking at the benefits of service delivery to the pharmacists, customers, and Boots as the service provider. The benefits to the service provider are presented from the views of customers and pharmacists, and not from the management board of Boots. Anecdotal financial data is briefly discussed in this chapter, but not provided in any detail due to the commercial sensitivity of these data. The commercial reasons for developing and delivering services such as these is discussed in more detail in chapter nine, including my views as Service Development Manager at Boots.

8.1 Results

8.1.1 Benefits to pharmacists

Within the pharmacist interviews, respondents were asked what benefits they thought would come from offering this kind of service. In total, six of the pharmacists believed that this service helped to raise awareness of the role of the pharmacist, and in turn the type of services that a pharmacist could offer;

P15 *“They probably will think that we give advice and we are there if they have questions to ask so they might very well come back to us next time when they have a*

prescription or they have a problem so it raises awareness of what a pharmacist can do for health.”

Many of the pharmacists commented that doing this intervention was good for the image of pharmacy, and would help people realise that pharmacists were available for advice, and not just to sell products;

P1 *“It would be good for the image of the store as people might see how caring we are and that we’re not just here to sell them products”*

The brief intervention was seen as something that would help to change the way that people used pharmacies, in particular for Boots in making them the preferred pharmacy provider for asthma care;

P1 *“You feel like you are helping move things forward and change the way that customers treat you and Boots in general.”*

P8 *“Hopefully for Boots it would make us perceived to be the experts with respect to asthma care in comparison perhaps to other pharmacies.”*

Using services such as this to help raise the awareness of the pharmacist’s expertise and role in advice giving was seen as the right way forward, and something that would be good for both pharmacists and Boots in the long term;

P11 *“And I think if you had a constant stream of like the intervention thing , and people knew that it was something that Boots just did then that would be much better off for us, and for patients and doctors because they’d be aware of it.”*

P5 *“I have no hesitation in that this will only be good for us in the long term.”*

This was particularly important as many of the pharmacists recognised that their role was no longer just about dispensing medication;

P2 *“I love the whole idea of intervention and getting closer to our customers. It’s definitely the way forward for Boots to go on the pharmacy counter. It’s all about more service and adding value these days and that also applies to us now.”*

Pharmacy needed to move with the times and have a role in helping people to look after their own health;

P11 *“...It’s just nice to see that they’re starting to do things that can be really important and I think there are so many avenues that you can go down and get more people into store, but also to help people with their own health because it’s so important nowadays with the fact that GPs are that busy and people are looking to look after their own health that the more good quality information you can give them to help look after themselves the better....”*

Offering good quality services that were beneficial to customers was seen as an essential element that was required to help get people to come back to the pharmacy for repeat services;

P8 *“Sometimes it’s the patient perception – they’re confident with the standard of advice, they’re confident with the dispensing and hopefully they’re happy with the standard of service and that is vital because we need people to come back through the doors time after time.”*

During the interviews, five of the pharmacists commented on how they enjoyed performing the service, and how good it made them feel to be part of this kind of initiative;

P4 *“I like talking to customers and I felt confident with the fact that it was a legitimate trial and could end up helping people improve their lives. That kind of stuff always makes you feel good.”*

This was particularly true for one pharmacist who worked in a non dispensing pharmacy;

P1 *“It made me feel good too and I really enjoyed it – it made it feel like I was working in a dispensing store.”*

Interactions like this with customers made all the staff feel more involved in delivering a better service for customers, and as such, helped to improve job satisfaction;

P2 *“At the end of the day it keeps me and my staff interested and more involved.”*

The service was professionally rewarding for pharmacists, and many used this as an opportunity to undertake personal professional development;

P8 *“It was something that we really enjoyed and certainly from a professional point of view I learnt a lot as I was going through and revising the CPPE package made me aware of things that perhaps I’d forgotten. So generally it was a very useful set up.”*

Five of the pharmacists thought that some of the benefits of this service were around reducing pressure on GPs and targeting those people that could not get access to their GP services. Most asthma clinics locally were vastly overbooked, and services like this were seen as helping to improve access for those people that just needed someone to talk too occasionally, and offer them advice when they might not want to bother their GPs. The asthma service had also helped to revive a PCT intervention scheme in one pharmacy, not just for asthma, but also for other condition areas;

P13 *“At the moment in this PCT we do have standard intervention forms that we’re using and before this asthma campaign the forms weren’t really being used, I think they were being perceived as quite a rude way of talking to GPs because they are for non-urgent referrals really. But this asthma campaign has sort of brought to light with, especially with the other pharmacists but also with the surgeries they’re all aware of these forms and they’ve all reacted to them quite positively. I think it was perceived that if they got one of these in the post it was you know why didn’t they ring us or whatever but the whole point is that it’s non urgent. The intervention forms have been.....and we’re using them for everything now not just asthma.”*

8.1.2 Customer benefits

Of the pharmacists questioned about benefits of delivering services like this in community pharmacy, five thought that improved access to healthcare professionals was of benefit to the customer. Providing healthcare professional advice during lunchtimes, evenings, and the weekends without an appointment was seen as an important element to help improve accessibility;

P16 *“I think just the fact that there is someone on the high street who’s there to actually give them advice, its ready advice there and then at the time of their prescription and they don’t necessarily have to make an appointment. A lot of people are quite glad of it because if they’re working full time they can’t get asthma nurse appointments and a lot of their employers aren’t very happy about them taking time off unless they’re actually, as they see it, ill.”*

Pharmacists believed that it was important for customers to feel like they had someone to talk to about their asthma, particularly when they did not feel that it was appropriate to bother their GP;

P1 *“I think people just need someone to talk to occasionally and offer them some advice when otherwise they would never consider bothering their GPs. We are all so conscious these days of wasting their time so people just ignore their symptoms and think they can sort it by buying OTC remedies but it is not always that straightforward.”*

Services such as the brief intervention were seen to help improve access to advice as the pharmacists were proactively prompting customers by asking the RCP questions when they presented at the pharmacy with a prescription, or to purchase OTC medications;

P9 *“I think it’s really good because patients don’t always ask for advice so when you prompt them or ask if they have any problems or questions it gives them opportunity to mention anything.”*

Pharmacists reported that customers seemed to like the fact that somebody had taken the time and interest to talk to them about their asthma. Very often the pharmacists would find that customers were not aware of basic facts and inhaler techniques with their asthma;

P16 *“I think just the fact that someone genuinely seems to have time and is interested in asking them about their asthma because it’s surprising what they come out with when they’re speaking to you. Often they don’t know basic things and they’re quite happy that someone is there and interested and can maybe give them some ideas that could help them.”*

The pharmacists commented on groups of people that they found had particularly benefited from the service. Overall, pharmacists thought that newly diagnosed people with asthma would benefit the most from services such as the brief intervention;

P5 *“You just don’t know how many people were first time users and at the end of the day they are the ones who would have been most suitable to talk to.....I see the whole intervention thing being for first time users of their medication – that’s why I try and ask them that question whenever I can. That’s when people need the advice and you need to make sure they know how to use it and how it might make them feel.”*

Parents with young children were also seen as a target group that would benefit from this service;

P8 *“But sometimes for newer people who were using them (inhalers) or very often parents with young children who hadn’t any experience of any form of chronic obstructive airways disease they actually found this useful because they were able to learn a little bit as well.”*

Mothers of teenagers and partners of people with asthma appeared very grateful for any additional information and advice from the pharmacist, as these were the people who often witnessed worsening of asthma symptoms or attacks;

P10 *“.....they are quite grateful for some information because they’re the ones who might see someone perhaps have an attack or struggling and not know what to do....”*

Younger people seemed to be more receptive to the brief intervention and willing to talk to the pharmacists compared to the older generation;

P16 *“I find that the younger people tend to be more interested and they’re the ones who will co-operate if I ask them if I can just ask a few questions. They tend to be the ones who are more responsive to questioning, a lot of the older people will be ‘no maybe the next time we’ll answer your questions but not today.’ I think they’re just a bit frightened and don’t know what you’re going to ask them, or ask them to do. But younger people or young mums especially are quite keen on it. I think they’re our biggest market.”*

Pharmacists reported that the elderly population were less receptive in discussing their asthma with the pharmacist, and in particular in checking their inhaler technique. Pharmacists believed that this was because they had been dealing with their asthma and using their medication for a number of years and as such, did not feel they needed any additional help or advice;

P13 *“I have had mainly the elderly people who aren’t so keen on wanting us to check their inhaler techniques etc. I mean they’re probably the worst because, but no they just feel that they’ve used it for long enough and they don’t want to be re-trained or whatever on it.”*

As part of the customer interviews, respondents were asked who they thought would benefit the most from receiving additional advice on asthma from the pharmacist. One

respondent thought that the key areas in which pharmacists offering advice could greatly benefit people with asthma would be to help undiagnosed asthma sufferers realise they might have asthma, and to raise the awareness of different medications and the benefits of each. The latter area was seen as the pharmacist's expertise, and would provide them with information that they did not access elsewhere. Other respondents thought that younger people, parents of young children, and the elderly would find access to this advice particularly useful;

C10 *"Well I think that if you initiate the conversation and I think that the young and the elderly really need the advice because it comes on later in life."*

Respondents that had lived with asthma for a number of years did not see the service as something that would benefit them personally. People that were newly diagnosed, the young or the old, were seen as those that would benefit the most as they would not be used to using devices like inhalers;

C22 *"For me because I've had asthma so long I probably wouldn't take it up, but for people who haven't had it before, my grandfather was diagnosed late, he was given inhalers when he was in his late 60's, he wasn't sure how to use them and everything else. The doctor explained that for older people and younger people not used to using things like that I think maybe that service would be very useful. For my grandfather I know it would have been very useful to him."*

People who had little knowledge of their condition and who would not proactively seek out advice for themselves were seen as ideal target groups that would benefit from this service by two respondents. One of these respondents in particular thought that this advice service would be ideally suited to those of 'more limited intellect' (C2).

Overall the pharmacists thought that customers seemed pleased with the service and advice that they had received, and in particular liked the fact that they took an interest in their asthma;

P1 *"I would say overall they were pleased with the advice that I gave them and the fact that I took an interest in them and appeared to be trying to help them."*

Most people welcomed the advice on medication and lifestyle tips, and even learnt a thing or two along the way;

P8 *“I think for some people it was ‘Ooh I didn’t know that, that’s very useful’”*

Some customers had been extremely happy to spend the time with the pharmacist, as their own GP had not had the time to explain the importance of using their medication correctly;

P16 *“I think they’re very positive. I have had a lot of customers who’ve said ‘Oh what a good idea’ and they’re quite happy to tell you about it. It’s surprising when you actually question people, how few people actually use their inhalers as they should do because they don’t really understand what they’re for and a lot of customers will then turn round and say to ‘well you know the doctor hasn’t got any time, he just told me to use them’. But they don’t really have an understanding of the importance and when to use them and in what order. That’s the main thing. So it is useful, I think the customers are quite glad that someone is there and available.”*

The advice from the pharmacist was a useful refresher to some people with asthma;

P10 *“If you start to talk to someone about it and you’ve got time then they’re quite happy to take more advice even if they’ve had it before. They say ‘oh yes, they said that to me in the clinic’ but they’d forgotten it, it’s a refresher for them...”*

Pharmacists also received a positive reception from customers who knew all they needed to know about their asthma, as during the interactions they were reassured that they knew the latest information and were not missing anything new;

P15 *“I think they are quite glad that you tell them something that they didn’t know and even if they know everything they are still very happy that we approach them and tell them to make sure that they know.”*

Respondents within the customer interviews were asked to give some general feedback on the pharmacist following the brief intervention. All seventeen respondents that were questioned were extremely positive about their interaction with the pharmacist and the manner in which the intervention was conducted. Respondents were put at ease by the pharmacist’s approach, which was seen as friendly, enthusiastic, and non-threatening;

C1 *“It wasn’t the Spanish inquisition, you weren’t forced to answer.”*

One respondent commented that the pharmacist was very knowledgeable and used simple language during the interaction, regularly checking their understanding. They encouraged them to come back if they had any further questions, even bringing their inhalers with them for further guidance if they needed it. Respondents especially valued the fact that the pharmacist had made time for them, sending other customers to a colleague and also talking quietly and discreetly. Other respondents also commented that they liked the fact that the pharmacist had made time to talk to them;

C13 *“He was very friendly and he actually seemed to have time to talk to me which was good.”*

Respondents felt that the pharmacists were personally trying to help them to achieve better control with their asthma;

C12 *“Well they seemed quite helpful and like they were trying to help me and really see if they could help me.”*

C25 *“She gave the impression of being very helpful and concerned that I was inhaling properly.”*

One respondent had a ‘feel-good’ factor after the brief intervention, as it was so rare for them to be asked about their condition and have the chance to talk about it.

Another respondent was grateful for the opportunity to discuss inhaler technique;

C25 *“Yeah, it gives you the impression that they’re interested in whether you’re doing it correctly. Because originally I hadn’t got proper instructions from the first doctor, I’m grateful for any proper instructions afterwards.”*

The pharmacist was seen as knowledgeable in this subject area, and respondents were confident in the advice they received;

C16 *“She was most helpful.....I’m OK about taking advice from pharmacists, she seemed to know what she was talking about.”*

C17 *“Very confident she knows what she is talking about, she will advise what is personally best for me.”*

Where pharmacists had spent time with customers and given them specific lifestyle advice to reduce their symptoms, customers had appeared very thankful;

P1 *“I explained to her that she could cut down on dust and bed mites by doing this and she seemed really pleased to listen and even thanked me afterward.”*

Pharmacists had discussed simple lifestyle advice with customers such as avoiding triggers which had helped a number of customers improve their symptom control;

P4 *“She seemed pleased with that idea and added that she would now tell her husband that he had to cut it (the grass) as it would improve her condition.”*

Some of the customers that the pharmacists had spoken to returned to the pharmacy to let them know how they were doing as a result of acting on the advice they had received;

P4 *“The lady who I recommended hoovering her mattress has already been in to see me and told me that she sneezes less when she wakes up in the morning. She is now hoovering her mattress a few times a week.”*

Some of the customers actually thanked the pharmacists for taking the time and interest in them;

P11 *“...there have been one or two people who have actually thanked me and said ‘nice to see you taking an interest’ which is nice because obviously it means that nobody has been bothered to take an interest before.”*

As part of the customer interviews, respondents were asked whether they had found the advice they had received from the pharmacist during the brief intervention useful. Many respondents seemed to find the practical information on how to use and look after inhalers very useful. Information such as cleaning spacers and rinsing the mouth out after steroid inhaler use had not been previously mentioned to many of the respondents. Even those respondents who had been indifferent to the brief intervention found that they had learnt something new that they did not know before. Pharmacists had also reinforced a lot of information that respondents had previously received from other healthcare professionals;

C13 *“He just reinforced a few ideas that I had. I told him that I sometimes get chesty if I was cleaning and he basically suggested that I get my husband to do the hoovering. I thought it was a great idea but I haven’t managed it as yet. But I’ll keep on the pressure.”*

Respondents appeared confident in the advice they received from the pharmacist;

C16 *“Its about the service, they give you advice if they can, they’re not doctors, but the advice was very good they do know what they’re talking about.”*

Although positive about the advice they received, one respondent commented that they would not want to be offered the advice all the time, but have access to it as and when they needed it;

C13 *“Well I don’t think I would want it all the time as sometimes I’m in a rush but it might be good if you knew it was there if you needed it.”*

Only one of the respondents questioned was disinterested and detached from their condition, and as a result, the brief intervention failed to have an impact on them.

Customers that were interviewed following the asthma service were also questioned on whether they had found the advice they received from the pharmacist useful. All those that responded found the advice they had received useful;

C25 *“Yes actually, I did want to check because when I inhale I make a sort of sucking in noise and my sister, who’s recently become asthmatic, doesn’t and she says I’m doing it wrong. But it turns out I’m doing it right and she’s doing it wrong.”*

The majority of respondents from the asthma service also found the practical information about cleaning inhalers and spacers the most useful advice;

C31 *“Overall the help is really good. She was telling me about cleaning the equipment as well - useful. That’s a good things to know.”*

One respondent had received advice from the pharmacist on a number of occasions, and felt that the pharmacist worked closely with their GP to help them improve their asthma control;

C29 *“Yes, I was very reluctant to use the second inhaler and I remember he said on one occasion “why don’t you use it just before you’re coming here”, as Boots is up a hill and that was one of the more, and I’m reading from my repeat, “XXXX in consultation with my GP suggested I use the Volumatic® spacer to assist in making the treatment more effective and again on my birthday believe it or not, more judicious use of the Ventolin®, so he has over the period. It’s sort of general*

encouragement. When he first took me in he did the blower thing, the strength of breath which they do, this machine that measures the strength of the puff and I was dead, and so that lead on to the Volumatic[®] and we go from there.”

A couple of the respondents felt that the use of questions by the pharmacist had helped them during the interaction and was very thorough;

C33 *“Think the questions asked “Is it under good management” and “would you like to see anyone else” is pretty thorough.”*

One particular respondent was used to this line of questioning by pharmacists within their home country, and so perceived it as normal for pharmacists to ask questions about their condition;

C33 *“I find a lot of places in Australia where I’m from, they ask you those questions all the time, so I’m pretty used to it, they ask you how your asthma is, some medications you have to rinse your mouth out because you can get thrush, so every time back home they reinforce that. And a lot of places have more of an expert you can see if you need to. Pretty normal yeah”*

Respondents within the customer interviews were asked whether the brief intervention had made a difference to their asthma symptoms. Of the six respondents who answered, three had acted upon the advice and seen an improvement in their level of symptom control. These respondents had found the information they had received very useful and informative, in particular the practical advice on cleaning inhalers. Though positive about the intervention, the remaining three respondents had not learnt anything new about their condition. As a result, the intervention had not made any difference to their symptoms or the degree of control they had over their condition;

C18 *“No because it’s something I can control. I’ve had it for 43 years now.”*

Only two of the respondents within the asthma service customer interviews were questioned on the impact of the advice from the pharmacist. Both respondents had acted upon the advice that had been given to them by the pharmacist and had noticed an improvement in their asthma control as a result. One of these respondents had also visited their GP to request a change in medication;

C28 *“So after going into Boots I went to the doctors to say look I’m really going through these Ventolin[®] inhalers quite quickly so they’ve changed my medication so I now have the brown one, I think it’s Becotide[®] something like that, which is more preventative.”*

Respondents who participated in the asthma audits were asked each of the RCP three questions as a measure of their symptom control, the results of which are shown in Table 58. Participants were taken from the general pharmacy population within Boots pharmacies participating in the local asthma service during audits one and two. The first audit was conducted prior to the asthma service commencing, and the second was completed during delivery of the asthma service.

Table 58: Response to RCP questions within the asthma audits

RCP question			Percentage distribution	
			Audit one (A1)	Audit two (A2)
q1	Have you had difficulty sleeping because of your asthma symptoms? (A1 n=119, A2 n=114)	Yes	27.7	18.4
		No	72.3	81.6
q2	Has your asthma interfered with your usual activities such as housework, work or school? (A1 n=117 , A2 n=112)	Yes	23.1	17.9
		No	76.9	82.1
q3	Have you had your usual asthma symptoms, such as coughing, wheezing, tight chest, or feeling breathless during the day? (A1 n= 119, A2 n=113)	Yes	62.2	38.1
		No	37.8	61.9

8.1.3 Benefits to the service provider (Boots)

8.1.3.1 Customer views

Within the customer interviews, eighteen of the respondents were asked what they thought about Boots offering this kind of service. All of the respondents felt that it was a good thing for Boots to be doing, as long as the pharmacists had the latest information and facts;

C10 *“I think it’s a good idea as long as they have the expertise and they have the facts to back them up.”*

One respondent felt that it was appropriate for Boots to offer this kind of service, but did not think that it would offer massive benefits to their customers. This particular

respondent was in the minority, as all other questioned felt that these types of services would be beneficial;

C13 *“Oh definitely, we’re all looking for more information these days and at the end of the day it’s all about getting the best service.”*

Respondents stated that they liked the ease of access to advice within the Boots pharmacy;

C14 *“Well it’s a good idea. At the end of the day you know if you can talk to someone like that it’s sort of – it puts your mind at rest.”*

A couple of the respondents liked the fact that they could access this type of advice from Boots as they would rather go to a pharmacist for advice than bother their GP for the information;

C19 *“That would be nice, more convenient to me than going to the doctors.”*

One respondent commented on the type of queries that nurses and GP’s currently received, and how it was appropriate for many of these to go directly to the pharmacist. As such, services like the brief intervention were seen as a good thing for Boots to be involved with;

C11 *“My daughter’s a nurse practitioner and the things that people go to her with I think what the hell are they playing at why don’t they go and ask at the chemist and they’re doing that at the doctors a lot of them. I think it’s a good idea that Boots are doing that.”*

Many of the respondents believed that Boots was well placed to offer this kind of service to people with asthma, as it fitted with the general concept of them trying to help their customers;

C18 *“Very helpful and do whatever they can as far as I’m concerned.”*

Some respondents felt that Boots was taking an extra interest in them;

C25 *“I thought it was nice of them to put on an extra little bit. I know people like to collect statistics and such like but it wasn’t intrusive or anything so you felt, well they’re taking an interest in their customers.”*

Whilst others felt that services like this gave Boots extra credibility and trust;

C28 *“Well I think it gives you an extra trust in them, it gives it a kind of credibility.”*

To one respondent, Boots was seen as the pharmacy that would be the first to deliver services like this before anyone else;

C34 *“I think it’s a good thing, I mean they’re the largest pharmacy in the country anyway, if anyone is going to do it, then Boots should start it.”*

When asked whether Boots offering this type of advice would make a difference between Boots and its competitors, one respondent thought that it would help to move the others along anyway;

C11 *“Well the competitors could do it as well it would probably gee them up a bit.”*

As part of the customer interviews, respondents were asked what they thought about getting this type of advice from Boots. Some of the respondents felt that they would not want to be offered advice unless they had asked for it, because the times they went into the pharmacy they just wanted to collect their prescriptions and go. They did however, want the reassurance that the advice would be available for when they needed to access it;

C26 *“I would certainly use it if I needed to. Because I’m reasonably in control of mine it probably wouldn’t be very often but it would be jolly useful to know it was there yes.”*

Other respondents stated that they would like to be approached with this type of advice from the pharmacist as they felt that they did not know enough about their condition. They felt they could listen to the advice, but then would not have to act upon it unless they wanted to. Although in favour of this, one particular respondent could see why some people might not like it;

C34 *“Some people have a problem being approached by other people, I wouldn’t, if someone wanted to offer advice to me I’d listen. I don’t have to take their advice, but I can certainly understand some people might have a problem, but I wouldn’t. That would be fine to come to me with advice.”*

A couple of the respondents stated that one of the advantages of getting advice from Boots would be the ease of accessibility to a healthcare professional. One respondent felt that it would be a good idea to access this advice at Boots and felt that it could replace their visits to the asthma nurse which they experienced as highly inconvenient and generally not very useful or up to date;

C19 *“Well that’s great because it’s very difficult to get an appointment at my doctors. I think its most doctors. It’s very busy, lots of people moving out of London to Woking I think they just over subscribe, but that would be great because often I don’t think I need to see a doctor but a medically trained person might be able to point me in the right direction.”*

The main perceived advantage of the Boots offering was that it would be up to date, and respondents expected it to include day to day management advice and news about the latest developments on the market;

C22 *“I’d be quite happy as long as it wasn’t repeat, repeat, repeat. If it was new information or updated then I’d definitely be interested in it, but not if not new.”*

Many respondents had heard a lot of the same information before, and as such were only interested in the new developments in asthma. They did not like being dependent on medication and were always looking for new developments that would help to reduce their dependency on medication and improve their lives;

C4 *“The only time I look for more information is if there’s something in the news – and it usually seems like its new and different, but it isn’t.”*

Within the customer interviews, ten respondents were asked about whether this kind of service would make them visit Boots more frequently. Over half of the respondents said that Boots offering this kind of service would make them go to Boots more frequently, compared to other providers;

C13 *“Yeah, it’s a really good idea and it would definitely make you go there more often I think. Well I certainly would.”*

One respondent felt that by making people feel more welcome with services like this, Boots were likely to sell more medicines as more people would go to them for advice and purchases;

C29 *“They might sell more medicines to start with, but by the same token commercially if you make somebody welcome then you’re more likely to go to them for advice and make a purchase.”*

Three of the respondents valued services like this from Boots, and would recommend it to others;

C31 *“Would recommend it to other people, yes its very good.”*

C17 *“I recommend Boots to others often anyway, as it’s so good.”*

Although one respondent was happy with the service, they would always prefer advice from GPs or nurses;

C32 *“I am quite happy with the service and would recommend it to other people, but advice from doctors or nurses is much better, really in the know.”*

A total of three of the respondents would not visit Boots more frequently as a result of this service. Although two of these respondents welcomed this service, they were already frequent visitors to Boots, so services such as this would not change their frequency of visit. For the remaining respondent, they would continue to use Boots to collect prescriptions only, and use their own initiative to keep themselves educated on asthma management.

8.1.3.2 Financial benefits

Prescription data for asthma items were collected throughout the brief intervention and asthma service. Although detailed results cannot be disclosed due to the commercial sensitivity of the data, the following information is available. The brief intervention activity halted Boots decline in market share in asthma and resulted in a small share increase. Incremental items were estimated in the range of 34,000 to 78,000.

Dispensing data for the eight pharmacies participating in the asthma service showed a 24% increase in asthma prescription volume, resulting in 9,000 incremental dispensing items. There was also a change in the type of medication dispensed, as these pharmacies showed a slight increase in devices, combinations and preventer inhalers dispensed, and a decrease in relievers as a percentage of the total asthma volume.

8.2 Discussion of the results

Within this chapter I have presented the benefits of delivering the asthma services from the perspective of the pharmacist, customer and service provider. A discussion of the benefits of service delivery will help me to understand the motivations of pharmacists participating in the service, customers accessing the service, and Boots in providing the service. Unless each of these groups of individuals are motivated to provide, deliver, and access the service then the service itself will not be successful.

The pharmacists felt that services such as these helped to raise the awareness of the role of the pharmacist and the type of services they could provide. It was seen to be good for the image of pharmacy, not just for Boots, but also for pharmacy in general. There was recognition amongst the pharmacists that they could no longer just dispense medicines and the remit of their role was expanding to deliver more services. Offering interventions such as the asthma service was felt to help encourage people to extend the use of pharmacies for advice and support.

Delivering the asthma services helped to improve the job satisfaction of not only the pharmacist, but also the pharmacy staff. Pharmacists were motivated by the fact that they were helping to improve peoples' lives, and this was particularly evident with pharmacists working in non NHS contract pharmacies. Pharmacists stated that services such as these helped to make them feel like they were still performing the job of a pharmacist, and not that of a general sales assistant. An opportunity could exist to utilise the skills of pharmacists sited in non NHS contract stores, to allow them to deliver more services of this nature. Extended services like asthma could also go in the favour of pharmacy contractors when local PCOs are considering whether an NHS contract should be awarded or not.

Pharmacists felt that delivering services helped to reduce the pressure on GPs and provided them with an opportunity to work more closely with them. Although the benefits to GPs and PCOs are not discussed here, this does need considering when delivering NHS services. GPs can be very target driven, and are likely to be more cooperative if they can see the benefits for their patients and their practices. Benefits of services such as these could include reducing the pressure on their workload, and having access to data that helps to meet their targets within the GMS contract. The benefits to PCOs in commissioning services through community pharmacy could include patient accessibility, value for money and increased service capacity.

Customers highlighted the benefits of the accessibility of the pharmacist, the convenience of the pharmacy locations, and the immediate access to a healthcare professional without an appointment. As pharmacists continue to take on additional roles and responsibilities, the accessibility of their advice could be of most benefit to those working full time and unable to access conventional GP services. This is particular true in light of the new GP contract [59] where GPs are able to opt out of out of hours provision, and as a consequence, no longer deliver services on evenings and weekends. There was a strong feeling that customers did not want to waste GP time with minor queries, particularly if they could access advice elsewhere. This appeared to be a strong motivator for accessing pharmacist time over the GPs.

Some of the customers felt that the use of questions by pharmacists helped provide them with the opportunity to talk to the pharmacist, when they might otherwise not have done so. Other customers felt that they did not want to be 'hassled' with advice, and would just prefer to know that they could access help and support as and when they needed it. Clearly the benefits for individuals differ. It is important to be able to help people to identify if they have a problem with their condition, but at the same time not impose advice onto them. There was a positive response from those customers who felt that the pharmacist was taking time and interest in them to help them to improve the management of their condition. Many of the respondents questioned did not get the opportunity to discuss their asthma with their GP when first diagnosed and seemed grateful for the chance to do so. With so much pressure on GPs' time, they felt that they were unable, or ready to ask all the necessary questions when first diagnosed with asthma. Asthma services were seen to be particularly beneficial to newly diagnosed, parents of young children, and partners of people with asthma. Support and advice were highlighted for both people with asthma, and their friends and family who often observed asthma attacks. Customers who had been using inhalers for a number of years were less responsive to the service, although new developments in asthma were still of great interest. Despite the knowledge of those that had asthma for a number of years, the majority of respondents in both services had learnt something new as a result of the interaction. Many benefited from simple advice, and the pharmacists were surprised at the lack of knowledge on basic techniques. Those respondents that had not received basic instructions on inhaler technique and management were extremely motivated and supportive of the pharmacist services as a result. Respondents that had acted on the advice had noticed an improvement in their symptom control. The service had helped to build

relationships locally with customers, with some customers going back into the pharmacy to update the pharmacist on their progress.

Within the second asthma audit, those responding yes to the RCP questions on symptom control were lower than in the first audit, which was particularly apparent within question three. Although no direct conclusions can be made, this could be as a result of the increase in activity locally to help to improve awareness of asthma and its management.

The asthma services were provided at a cost to Boots, and as such the motivations for the company doing this need to be considered. Motivators for services commissioned by the DH, local PCOs or GPs, would be different to those discussed here and are not covered within this chapter. The views within this chapter are provided by the pharmacists and customers interviewed. Further discussion and commercial implications of the wider benefits to service commissioners and providers is discussed within chapter nine.

Delivering extended services was seen as a good thing for Boots to get involved with, and something that gave the company extra credibility and trust. Customers felt that Boots were taking extra interest in them, something that is seen as key to the company brand. It was also expected for Boots to lead the way with services, which other pharmacy retailers would then follow suit into providing similar services.

As well as increasing the trust in the brand within Boots, driving footfall into stores is another important motivator when assessing the viability of services. Over half of the respondents questioned stated that services like the asthma ones would make them go to Boots pharmacies more often, and there was a strong feeling that they would also recommend the services to others. This provides a strong motivator for Boots involvement in services. Both the brief intervention and asthma service increased the volume of asthma medication dispensed during the service activity. It is not surprising that the asthma service increased the volume of asthma prescriptions dispensed more so than the brief intervention, particularly given the increased support locally and length of consultation. What is unclear is whether the increase in volume was due to new customers bringing prescriptions into the pharmacy, or existing customers bringing in more prescriptions. Due to the level of data collected I was unable to distinguish between new and existing customers.

Alongside the increase in volume of asthma medication dispensed, there was also a change in the ratio of type of medication dispensed. During the asthma service activity there was a shift towards more combination and preventer inhalers, and asthma devices being dispensed, and a decrease in the ratio of reliever inhalers dispensed. Although the data cannot be directly linked with individuals participating in the asthma service, this could be as a result of the delivery of the asthma services within that locality. An increase in combination inhalers, relievers, and devices would imply that people with asthma within that locality were having more control of their asthma by using the appropriate type of medication.

8.3 Summary of chapter VIII: Motivators of service delivery

This chapter of my thesis has looked at the benefits, or motivators of service delivery to the pharmacist, customer, and service provider. It is important to understand the benefits of service delivery to each of the stakeholders concerned in order to recognise those factors which may be affecting service delivery.

For both asthma services, clear benefits were identified for all the stakeholders concerned. For pharmacists, this was primarily around the enjoyment of delivering services and the job satisfaction it provided. The opportunity to build relationships with both customers and other healthcare professionals was also seen as important, as was raising the awareness of the extended role of the community pharmacist. Customers benefited from the accessibility of this type of advice, and were interested in new developments for the treatment and management of asthma. Information needed to be up to date, and personalised to the individuals needs. Particular groups of individuals, such as newly diagnosed, were seen as being more motivated for accessing these types of services. To service providers such as Boots, the delivery enhanced the public image of the company, driving footfall into the pharmacies. Business benefits are important for the sustainability of services, and this was demonstrated within both asthma services.

A summary of the potential motivators identified within this chapter are detailed in Table 59. Where similar themes have been identified within previous literature, this has also been identified.

Table 59: Potential motivators of service delivery

Stakeholder	Factors	Motivators
Pharmacist	Public image of pharmacy	<ul style="list-style-type: none"> ▪ Raised public awareness of the role of the pharmacist <p>[16, 28]</p>
	Pharmacist role	<ul style="list-style-type: none"> ▪ Extension of the pharmacist role <p>[16]</p>
	Job satisfaction	<ul style="list-style-type: none"> ▪ Professional satisfaction ▪ Helping to improve peoples' health <p>[14, 22, 28]</p>
	Relationship building	<ul style="list-style-type: none"> ▪ Enhanced relationships with customers, GPs, and PCOs
Customer	Access to advice	<ul style="list-style-type: none"> ▪ No appointment necessary ▪ Convenience of pharmacy locations ▪ Availability when required ▪ Offered by pharmacist to customers (push model), AND available to customers when required (pull model) ▪ Alternative healthcare professional resource to avoid wasting GPs time with minor queries
	Type of advice	<ul style="list-style-type: none"> ▪ Personalised advice useful to individuals ▪ New information, medication, and techniques ▪ Impact of advice (improvement in symptom control)
	Target groups	<ul style="list-style-type: none"> ▪ Member of target group who may be more motivated and responsive to advice (for example; newly diagnosed, parents with young children, mothers with teenagers, partners of people with asthma, less experienced inhaler users)
	Relationship building	<ul style="list-style-type: none"> ▪ Pharmacists expressing an interest, and taking the time to talk to customers about their condition
Service provider (Boots)	Image	<ul style="list-style-type: none"> ▪ Enhanced credibility and trust ▪ Leading the market ▪ Recommendations to friends and family
	Business	<ul style="list-style-type: none"> ▪ Increase in prescription business ▪ Increase in frequency of customer visits

All of the factors identified within chapters five, six, and seven, along with those above, will be discussed in more detail within the next chapter.

CHAPTER IX

Factors affecting service delivery within community pharmacy

9.0 Introduction to the chapter

The final chapter of my thesis begins by providing a summary of this study and general research findings presented throughout this thesis. I then go on to discuss the factors affecting service delivery that have been identified as part of this study, including recommendations for future service models. The chapter then goes on to reflect on the methods used within this study and discuss the limitations of the results. The final conclusions are then presented along with questions for future research that have been identified through the course of this study.

9.1 Review of the thesis

The review of the literature was split into two parts, the first exploring the development of the health services strategy in England and how this has opened up a number of opportunities for community pharmacy. The Government is committed to providing a health service that is based around the needs of the patient, and has focused on providing prevention programmes that help to keep people healthy, making healthcare more accessible, and reducing health inequalities. New providers are required to help deliver the NHS vision, and in particular, the importance of the role of the community pharmacist has been emphasised. Despite the number of opportunities available for community pharmacy, the implementation and delivery of NHS and private services is proving difficult and slower than expected. The second part of the literature review provided an overview of the facilitators [1-6, 9-13, 16-20, 22-28, 30-32], barriers [1-5, 7, 8, 12, 14-16, 18-21, 23-32] and motivators [14, 16, 22, 28] affecting service delivery within community pharmacy which have been identified from the literature. These factors included; customer need and demand, public attitudes towards the pharmacist, pharmacist characteristics and attitude, training, communication, awareness of the service, recruitment to the service, operational aspects of service delivery, pharmacist confidence in service delivery, support for the service, time available, staff resource, remuneration for the service, pharmacy

environment, healthcare professional relationships, evidence of the value of the service, and the external environment. The review concluded that there is a need to understand more about the various factors affecting delivery of services in community pharmacy, and ways to overcome barriers and enhance facilitators and motivators. This would enable service providers and commissioners to identify key obstacles that would hinder service development and delivery, and focus on primary facilitators and motivators that would enhance them.

The overall aim of this study was to investigate factors affecting service delivery within a national pharmacy chain, from the perspective of pharmacists and consumers, using asthma services as an example. Data were collected to explore the current environment and opportunities available to pharmacy, the factors affecting service delivery, and to identify recommendations for future service models. The impact of the design and route of service implementation were studied through two different types of asthma services. The 'brief intervention' in asthma was designed centrally and implemented nationally throughout Boots, whilst the 'asthma service' was designed and implemented locally by a group of pharmacists. The principles behind action research were used during this study for the implementation and delivery of both services. A triangulation of qualitative and quantitative methods were used throughout this study, including an omnibus survey, audits, mystery customer research, customer and pharmacist interviews, and a review of the dispensing data.

The public's current utilisation of community pharmacies and the pharmacist's role in services was explored. A high proportion of respondents visited the pharmacy on a regular basis to purchase general toiletries, or for medication purchases or queries. Three quarters of respondents regularly used one pharmacy, with a quarter choosing to use a combination of providers. Reasons cited for the choice of provider included loyalty, convenience, and the quality of staff and service. Those that had spoken to the pharmacist for advice in the past rated the quality of this advice highly.

Pharmacists were seen as an accessible healthcare resource and the benefits of receiving advice from them included not having to make an appointment and the speed of access. There was some confusion over the exact role of the pharmacist due to the wide range of general requests that they dealt with. The pharmacist's role was felt to be limited as they were unable to change any medication directly, which often resulted in a referral back to the GP. The role of the pharmacist was seen as someone who could advise on minor ailments and medication – but for anything more serious

would require referral to a GP. Despite the enthusiasm for change and the hope that the pharmacy contract brought, there was still huge frustration amongst the pharmacists regarding the lack of progress and opportunities for service delivery to date.

Asthma was chosen as a condition area to focus on for this study. Many people with asthma still have a relatively poor knowledge of their condition and its management. To some, there was a fear of finding out more information about their asthma, but to others they simply believed that they know enough already. Use of medication was poor, with many customers not always picking up all of the medication that their GPs had prescribed. There was a high use of reliever medication, and an under use of preventer inhalers. The majority of people still experienced regular symptom occurrence as a result of their asthma, and readily accepted the restrictions that it placed on their lifestyle.

People with asthma need to be able to access up to date and reliable information on their condition through a number of media, including the regular reinforcement of key messages by all healthcare professionals. Most people appeared to be responsive to new information that could help to improve symptom control, or reduce medication use. The expectations of people with asthma need to be raised so that the majority aim to be relatively symptom free, with few or no restrictions on their life. People with asthma need to have a better understanding of how to control their condition, including management strategies and the use of medication.

There are opportunities for community pharmacists to help identify people with poor control of their asthma through the use of simple questions. Pharmacists can act as an information source for people wanting general advice on asthma, or can proactively target customers when they are in the pharmacy. There is also a need to help people to understand and manage their condition better by helping them to recognise triggers for their asthma, identify strategies for managing symptoms, and improve understanding and confidence with medication. Although this study uses asthma as an example, the concept around customer need and demand for such services is not unique to this condition, and as such could be applied to other condition areas.

The brief intervention in asthma was a service that was designed to be very simple to deliver and through the dissemination strategy, pharmacists were encouraged to take local ownership and adapt the service delivery to meet local requirements. This

service was successful in being implemented and delivered, as shown in the high delivery rates over the four month mystery customer assessment period. Regular communications to the pharmacists appeared to have kept the project alive and sustainable over a longer period of time. Many pharmacists seem to have disseminated the information to their healthcare staff who were then able to offer opportunistic interventions themselves. As the service was very simple, pharmacists and staff were able to integrate it into their everyday practice and use elements of the intervention as they deemed appropriate.

The asthma service was designed and implemented by a group of pharmacists within their locality and was based around identifying people with asthma that would benefit from a consultation with the pharmacist on inhaler technique, medication use and general lifestyle advice. The service was successful in being implemented, and the pharmacists took ownership of the project locally. Many of the pharmacy team were involved in helping to identify customers with uncontrolled asthma. Pharmacists had the confidence to adapt the content and length of the service locally according to local business or customer needs, and would often carry out asthma brief interventions rather than the full consultations. The local flexibility allowed the pharmacists to offer their services to a greater number of customers.

For both asthma services, clear benefits were identified for all the stakeholders concerned. For pharmacists, this was primarily around the enjoyment of delivering services and the job satisfaction it provided. The opportunity to build relationships with both customers and other healthcare professionals was also seen as important, as was raising the awareness of the extended role of the pharmacist. Customers benefited from the accessibility of this type of advice, and were interested in new developments for the treatment and management of asthma. Information needed to be up to date, and personalised to the individuals needs. Particular groups of individuals, such as newly diagnosed, were seen as being more motivated for accessing these types of services. To service providers such as Boots, the delivery enhanced the public image of the company, driving footfall into the pharmacies. Business benefits are important for the sustainability of services, and were demonstrated within both asthma services.

This large scale study has used a triangulation of data to investigate the factors affecting service delivery within community pharmacy, and includes the collection of data from the pharmacists delivering the service, the views of customers accessing the service, and the operational delivery of the service. Although previous literature has

investigated some of the factors affecting service delivery, this is the first large scale study within the UK that has investigated the barriers, facilitators and motivators relating to the market opportunity, the role of the pharmacist within services, and the implementation and delivery of a locally and nationally led service. The findings from this study have already provided valuable insights and learnings that have been utilised within Boots itself as part of the development of new services.

9.2 Discussion of the factors affecting service delivery in community pharmacy

This study has investigated the factors affecting service delivery in community pharmacy by looking at the current utilisation of community pharmacies, the pharmacist's role in service, the opportunities for delivering services in asthma, the factors affecting delivery of services themselves, and the benefits of service delivery. The barriers and facilitators identified throughout this study can be grouped under similar themes and are associated with the following factors: current pharmacy utilisation, customer need and demand, attitudes of customers and pharmacists, implementation of the service, training, pharmacy communication, awareness of the service, recruitment to the service, the type of advice available, the service structure, the pharmacist confidence in service delivery, management support, time, staff resource, remuneration, pharmacy environment, healthcare professional relationships and the external environment. Details of the individual facilitators and barriers are provided in Table 60. Where these factors are presented in a positive light they are seen as facilitators, and when presented in a negative light, barriers. Where the individual factors have already been identified within previous studies, this is indicated within the table.

The benefits of service delivery to the pharmacist, customer and service provider have been investigated within this study, and are referred to as motivators. Those motivators that have been identified for the pharmacist included the opportunity to deliver an extended role, to improve the public image of pharmacy, increased job satisfaction, and relationship building. Customer motivators were based on the accessibility of advice, type of advice, membership of a particular target group, and the opportunity to build relationships with a healthcare professional. The motivators to the service provider were based on the image of the company, and the business benefits and return on investment. Details of the individual motivators are provided

within Table 61. Where the individual motivators have already been identified within previous studies, this is indicated within the tables.

This is the first large scale study of its kind to look at all the factors involved from the perspective of both customers and pharmacists, and many of the facilitators and barriers identified extend beyond those provided within the current literature. In addition, the service implementation methods, the type of advice, and the service structure have not been recognised as factors affecting service delivery within previous studies. The motivators identified within the previous studies have been from the perspective of pharmacists only. This study has looked at the perspective of not only pharmacists, but also the motivators to customers and the service provider.

Table 60: Summary of the facilitators and barriers identified throughout the study (*Factors identified as experiential facilitators and barriers)

(Please note that this table is presented over seven pages)

	Facilitators	Barriers
Current pharmacy utilisation	<ul style="list-style-type: none"> ▪ High frequency of visit to pharmacy for general purchases ▪ Use of different types of pharmacies for different services ▪ Wider audience for dissemination of advice (patient, partner, parent) ▪ Good use of pharmacy for general purchases ▪ Good use of pharmacy for medication related queries [6] ▪ Previous good experience of pharmacist advice 	<ul style="list-style-type: none"> ▪ Poor frequency of visit to pharmacy for health related reasons ▪ Poor loyalty to one pharmacy – requirement for access to centralised medication records [3, 7, 8, 14, 18, 21] ▪ Poor use of pharmacy for general health ▪ Expectations when in pharmacy depending on shopping mode for health or general purchases, and receptiveness for advice ▪ Poor use of pharmacy for general health queries ▪ Previous poor experience of pharmacist advice
Market opportunity (customer need and demand)	<ul style="list-style-type: none"> ▪ Perceived usefulness of advice* ▪ Ability of service to help identify potential customers, and recognising potential need for advice* ▪ Ability to adapt service to customer need* ▪ Customer need for service, including; poor knowledge, poor use of medication, poor management of condition, poor quality of life ▪ Services aimed at conditions that affect people on daily basis [1, 11, 20] ▪ Services that deliver advice and support that people would not want to bother their GP with ▪ Demand for service, including interest in accessing additional information, and interest in improving management of condition [16] 	<ul style="list-style-type: none"> ▪ Perception that do not need advice* ▪ Advice that is not in pharmacist's perceived area of expertise* ▪ No customer need for service, good control and management of condition ▪ No demand for the service, or interest in improving condition [1, 8, 14, 16]

	Facilitators	Barriers
Public attitude	<ul style="list-style-type: none"> ▪ Accessibility (speed of access and no appointment required) ▪ Customer receptiveness to advice when in pharmacy ▪ Pharmacists seen as knowledgeable and respectful ▪ Confidence in pharmacist advice and ability to refer as appropriate ▪ Alternative source of advice to GP (GP time valuable, previous poor experience, speed of access) ▪ Customers interested in accessing services and advice on particular condition area from the pharmacist ▪ Advice that is in the pharmacist's area of expertise (e.g. medication related)* <p style="text-align: right;"><i>General:</i> [3, 12, 17, 18, 23, 30, 32]</p>	<ul style="list-style-type: none"> ▪ Unclear role of pharmacist because of breadth of requests for advice, and no records made ▪ Poor confidence in advice from staff ▪ Limitations of pharmacist advice (referral, lack of commitment, inability to prescribe) ▪ Poor expectations of pharmacists' role [3, 7, 16, 18, 21, 26, 32] ▪ Poor level of confidence in pharmacist's advice* ▪ Level of authority of pharmacist's advice compared to other healthcare professionals* ▪ Customers not willing to access services and advice on particular condition area from the pharmacist
Pharmacist attitude	<ul style="list-style-type: none"> ▪ Services that are incorporated as part of day job ▪ Expectation that pharmacists core role includes services and advice ▪ Commitment to service* [5, 17-19, 30, 32] ▪ Enthusiastic* [30] 	<ul style="list-style-type: none"> ▪ Expectation that pharmacists role should be dispensing only – and advice should be given by GP ▪ Frustration of pharmacists ▪ Resentment of pharmacists towards nurses ▪ Poor attitude towards role expectations* [1, 5, 16, 29, 32] ▪ Limitations of role*

	Facilitators	Barriers
Service implementation	<ul style="list-style-type: none"> ▪ Simple structure that is easy to follow* ▪ Ability to adapt and extend service locally* ▪ Local ownership and involvement in service delivery and design* ▪ Service lead in each pharmacy* 	
Training	<ul style="list-style-type: none"> ▪ Opportunity for additional training* ▪ Information aimed at pharmacy staff and pharmacists <p><i>General:</i> [1, 3, 4, 11-13, 16, 18, 20, 23-26]</p>	<ul style="list-style-type: none"> ▪ Language barriers where English is not the first language* [8, 29]
Pharmacy communication	<ul style="list-style-type: none"> ▪ Regular communication with team (central and local)* [10, 16, 22] ▪ Opportunities to share best practice and learnings* ▪ Early communication of service to pharmacists and managers to enable better planning ▪ Communication via a number of media ▪ Service materials delivered in one box prior to service commencing (to avoid items going missing) 	

	Facilitators	Barriers
Awareness of service	<ul style="list-style-type: none"> ▪ Pharmacists able to identify customers easily that require help or support ▪ Clearly signposted area or member of staff to go to for advice ▪ Simple branding that explains clearly what the service is about ▪ In store support materials to make people aware of the service and give people the opportunity to ask for advice ▪ Advertising outside of the pharmacy to make people aware of the service and help create customer demand [1, 11, 16] 	
Recruitment	<ul style="list-style-type: none"> ▪ Captive audience available, e.g. when dispensing prescriptions* ▪ High volume target customers visiting pharmacy [6] ▪ In store recruitment* ▪ Targeting uncontrolled people with asthma* 	<ul style="list-style-type: none"> ▪ Customers not easily identifiable* ▪ Less opportunity to identify customers, particularly in non NHS contract pharmacies* [16, 24]
Type of advice	<ul style="list-style-type: none"> ▪ Content relevant for time of year* ▪ Information easy to access by individual, for example picking up leaflet in pharmacy* ▪ Advice available in different formats (verbal and written) ▪ Information leaflets aimed at different target groups, and covering wide range of topics ▪ Rotation of themes and advice to keep advice relevant and service sustainable 	

	Facilitators	Barriers
Service structure	<ul style="list-style-type: none"> ▪ Ad hoc consultations and advice* ▪ Appointments available at the customer's request* ▪ Simple interventions but opportunity to deliver more in depth service when required* ▪ Flexibility in service delivery (content and length of intervention)* ▪ Good fit with other initiatives and activities* ▪ Regular and updated communications* ▪ Opportunity to improve awareness of symptom control* ▪ Providing opportunity to access healthcare professional advice* ▪ Guidance on additional materials if required ▪ Minimal paperwork associated with service ▪ Services that provide opportunity to talk (proactive) ▪ Focus on key services 	<ul style="list-style-type: none"> ▪ Appointments led at the pharmacist's request* ▪ Intervention too simple so not perceived as a service*
Pharmacist confidence in service delivery	<ul style="list-style-type: none"> ▪ Confidence to deliver and adapt service to meet customer and business needs* ▪ Staff incentives to encourage participation in services ▪ Experience in delivering services [16, 17, 19, 24] ▪ Customers willing to listen ▪ Pharmacist confidence in service delivery [9, 19, 30] ▪ Good preparation prior to service delivery 	<ul style="list-style-type: none"> ▪ Lack of confidence and comfort in using particular questions and providing advice that is not related to medicines (outside comfort zone)* [5, 8, 19, 25] ▪ Lack of customer contact ▪ Lack of confidence in services

	Facilitators	Barriers
Management support	<ul style="list-style-type: none"> Management supportive of the service* [1, 10, 12, 19, 22, 23] 	<ul style="list-style-type: none"> Lack of management support and prioritisation of other activities* [1]
Time	<ul style="list-style-type: none"> Allocated time to deliver services [2, 13, 23] 	<ul style="list-style-type: none"> Lack of pharmacist time* [2, 3, 7, 8, 12, 14-16, 20, 23, 25-27, 29] Pharmacy workload and demands on pharmacist time* [1, 21] Lack of customer time* [26] Constant demands competing for pharmacist time
Staff resource	<ul style="list-style-type: none"> Involvement of all pharmacy support staff in service delivery* Effective use of pharmacy team* [2, 12, 13, 20, 22-24] Adequate staff resource available (pharmacists and support staff)* [1, 3, 16, 26] Planning of resource to support service Better trained support staff 	<ul style="list-style-type: none"> Inadequate resource available (pharmacists and support staff)* [7, 18, 23-26, 28] Single pharmacists stores*
Remuneration	<ul style="list-style-type: none"> Funding for time and resource [3, 6, 11, 13, 16, 22, 32] 	
Pharmacy environment	<ul style="list-style-type: none"> Service sited in large and small size pharmacies, and edge of town locations (potential link to resource and how busy the pharmacy is)* Accessibility of pharmacist* [18, 20] Private consultation area available [1, 3, 13, 18, 26] 	<ul style="list-style-type: none"> Pharmacies located in commuter towns (potential link to customer time available)* Services sited in middle size pharmacies and health centre locations (potential link to resource and how busy the pharmacy is)* Non contract pharmacies (less opportunity to target customers)* Busy pharmacies (customers waiting)* [2]

	Facilitators	Barriers
Healthcare professional relationships	<ul style="list-style-type: none"> ▪ Communication with GPs to help build links and working relationships [3, 5, 11, 13, 16, 18, 19, 24, 32] ▪ Working with local asthma nurses 	<ul style="list-style-type: none"> ▪ Underutilisation of pharmacists by GPs [3, 7, 8, 14-16, 18, 19, 21, 23, 25-27, 29, 32]
External environment	<ul style="list-style-type: none"> ▪ Opportunities within new pharmacy contract [5, 32] 	<ul style="list-style-type: none"> ▪ Lack of opportunities to deliver extended service ▪ Delay in timing of new pharmacy contract ▪ Decisions by professional organisations and companies

Table 61: Summary of the motivators identified throughout the study

Stakeholder	Factor	Motivators
Pharmacist	Opportunity to deliver extended role	<ul style="list-style-type: none"> ▪ Enthusiasm for involvement in services and trials by pharmacists and staff ▪ Personal development ▪ Adding professionalism to the role ▪ Extension of the pharmacist's role <p><i>General:</i> [16, 22]</p>
	Public image of pharmacy	<ul style="list-style-type: none"> ▪ Raised public awareness of the role of the pharmacist [16, 28]
	Job satisfaction	<ul style="list-style-type: none"> ▪ Professional satisfaction ▪ Helping to improve peoples' health <p><i>General:</i> [14, 22, 28]</p>
	Relationship building	<ul style="list-style-type: none"> ▪ Enhanced relationships with customers, GPs, and PCOs
Customer	Access to advice	<ul style="list-style-type: none"> ▪ No appointment necessary ▪ Convenience of pharmacy locations ▪ Availability when required ▪ Offered by pharmacist to customers (push model), AND available to customers when required (pull model) ▪ Alternative healthcare professional resource to avoid wasting GP's time with minor queries
	Type of advice	<ul style="list-style-type: none"> ▪ Personalised advice useful to individuals ▪ New information, medication, and techniques ▪ Impact of advice (improvement in symptom control)
	Target groups	<ul style="list-style-type: none"> ▪ Member of target group who may be more motivated and responsive to advice (for example; newly diagnosed, parents with young children, mothers with teenagers, partners of people with asthma, less experienced inhaler users)
	Relationship building	<ul style="list-style-type: none"> ▪ Pharmacists expressing an interest, and taking the time to talk to customers about their condition
Service provider (Boots)	Image	<ul style="list-style-type: none"> ▪ Enhanced credibility and trust ▪ Leading the market ▪ Recommendations to friends and family
	Business	<ul style="list-style-type: none"> ▪ Increase in prescription business ▪ Increase in frequency of customer visits

One of the benefits of using action research is the opportunity to learn from the study as it progresses. Both the services studied throughout this thesis have already been rolled out across Boots pharmacies. The success of the brief intervention in asthma led to subsequent brief interventions in other topic areas being implemented during 2004/05. To keep the staff and customers interested, the themes were rotated every two months, and included brief interventions for smoking cessation, hypertension, blood pressure, arthritis, diabetes, and obesity. Pharmacists were sent communication packs on the initiatives which included continuing professional development for themselves and other members of the healthcare team, and information leaflets for customers. All information was designed alongside the appropriate patient organisation to include the latest information and research available and was timed to fit with key events. Since the implementation of the new pharmacy contract [37], this service has now evolved to fulfil the contractual requirements linked to the promotion of healthy lifestyles and prescription linked interventions. In addition to this, the local asthma service is also in the process of being rolled out across Boots pharmacies. This service has evolved to link with the advanced service requirements within the new pharmacy contract for MURs.

The learnings from this study have also influenced the design, implementation and delivery of other pharmacy services within Boots. The most successful of these is the Chlamydia screening and treatment service that is being delivered by all 216 Boots pharmacies in London on behalf of the NHS. An application of the learnings from this study led to the success of winning this two year contract with the DH. This service was designed to take advantage of the current pharmacy utilisation by the target age group and to meet an unmet customer need. The service was planned so that it was not only simple for pharmacists and pharmacy staff to deliver, but also simple for customers to access. Where possible, the barriers to testing have been removed. The distribution of vouchers near to general products that the target age group purchase, and outside of the pharmacy, enable greater awareness of the service, and provide customers with the opportunity to access the service with minimal embarrassment – without having to say the word Chlamydia! Results are communicated to customers via their chosen route, with the option of text, phone or letter. Positive patients and their partners are able to return to any Boots pharmacy in London to access treatment. Paperwork has been kept to a minimum within the pharmacy, with the majority of information recorded at the laboratory performing the testing. The pharmacists and staff involved in the service are enthusiastic and feel that they are making a difference to peoples' health by providing the service. Each area has a service lead who co-

ordinates any external activity and local training. The management team support the pharmacies and regularly monitor activity levels and feedback on progress. Each pharmacy is automatically remunerated for any service activity, and is targeted on services sales. Pharmacies located near to train, bus and tube stations perform extremely well at the service, due to the anonymity offered within these types of environments. The pharmacies work closely with other local healthcare professionals and providers to offer referrals into the Boots service, and from Boots into more extensive screening services. The service has proved highly successful with consumers, with over 18,000 kits issued within the first six months. It has also proved successful to Boots as a service provider, with the decision taken to roll out a national private Chlamydia service in over 1300 Boots pharmacies from October 2006.

Based on the factors identified throughout this study, and the learnings applied in subsequent services, a number of recommendations for service design, implementation and delivery have been made below. Consideration of these factors may help to improve the sustainability and scalability of future pharmacy led services.

a) Current pharmacy utilisation

Some NHS services, such as MURs, require the customer to be registered at an individual pharmacy for a period of time before they are eligible for that service. Other services can be accessed by any member of the public presenting at any pharmacy. Customers may prefer to use different pharmacies for different purposes, as not every pharmacy offers the same services. Access to patient medication records will help to facilitate the use of multiple pharmacies for various services. When designing the service, consideration needs to be placed on how the general public currently uses an individual pharmacy, and the service should build on these core strengths. For example, pharmacies dispensing high volumes of prescriptions in local communities are likely to have a high proportion of people with long term conditions and should target services to that group. In contrast, services for sexual health may be better operating in pharmacies where there are less regular prescription customers and more general purchases. Before designing and implementing services, there is a need to recognise the current customer base and usage of the pharmacy. It is far easier to target services at existing customers, than it is to recruit new customers to the pharmacy.

b) Market opportunity (customer need and demand)

For a service to be successful there has to be both a customer need and demand for that service. Customer demand should not be assumed, as customers may not recognise that they need help, or they may not actually want help. The use of simple questions can help customers to recognise the fact that their condition is uncontrolled. The service itself should meet an unmet need for something that is currently not provided, or something that is not currently accessible to all. Services should be aimed at people that have conditions that affect their daily life, or for advice and support that they do not want to bother their GP with. There needs to be a reason why customers would want to access new services, or services from alternative providers.

c) Public attitude

The pharmacy profession needs to work together to improve the public's attitude and use of community pharmacies, so that they are seen as a member of the primary healthcare team. Pharmacy services should play on the core strengths of the profession, namely the accessibility and convenience of access to healthcare professional advice. The deregulation of medicines from prescription only to pharmacy status, and the introduction of independent prescribing will provide pharmacists with the opportunity to have greater authority and involvement in patient care. It will also provide increased convenience to customers accessing pharmacy services as they will not have to return to their GP for medication. As the number of services pharmacists provides increases, and the number of customers experiencing these services increases, then hopefully the confidence in pharmacist advice will also improve. The word of mouth from friends and family has a positive influence on perception and access of services and products.

d) Pharmacist attitude

There are a number of pharmacists that are not interested in delivering services, but these tend to be in the minority. The majority of pharmacists and healthcare staff are extremely positive and enthusiastic about delivering an extended role. Identifying local leads that are particularly enthusiastic and driven can help to motivate other pharmacists and staff delivering the service. They can also be used as a local expert and point of reference for other pharmacists. Services that utilise their expertise help to improve job satisfaction and professional reward. Creating a positive attitude towards a service helps the pharmacist and staff to overcome any barriers for delivering the service, as they will often come up with potential solutions themselves. Although barriers are still identified, these pharmacists are more likely to ask for help

to overcome any problems, rather than letting the barriers overcome the service. Although most of the barriers can be aided by external intervention, pharmacist themselves still need to be proactive in seeking opportunities to extend their role, and should not rely on everything being done for them.

e) Implementation of the service

Having different services operating in pharmacies using different service specifications can be difficult to manage within large organisations. The key is to provide some standardisation and tools for pharmacies to adapt and use at a local level. This encourages local ownership of the service, and allows flexibility in service delivery. Services that are too rigid in nature do not allow for any local variation or flexibility for the pharmacists and staff to vary depending on local customer or business needs. The use of service leads to co-ordinate and manage the implementation and delivery of the service encourages local responsibility and ownership.

f) Training

Training helps to improve the confidence of pharmacists and staff. The training should not be too onerous, but should meet the requirements and standards for professional service delivery. Training should be standard, with the signposting to other materials if the trainee requires. Guidance and experience of practice consultations provide a forum for feedback to improve confidence on service delivery. Training should be available to all staff involved in the service delivery. Briefings should also be made available to other staff working within the pharmacy so that they are able to signpost customers as appropriate. This is particularly true for services that may be of a sensitive nature and that need to be handled discreetly.

g) Pharmacy communication

Pharmacies are often bombarded with mail, both from external and internal sources. Communication on the services should be clearly signposted, and available via a number of media to improve the awareness by pharmacy staff. This should include briefings at pharmacist meetings before the service is implemented to help raise the awareness and enthusiasm for the service. Initial service packs should arrive within the pharmacies in one package that includes everything required to operate that service. Regular communications to the pharmacists and the managers monitoring the service help to keep the focus and interest in the service on an ongoing basis.

h) Awareness and recruitment to the service

Marketing activity outside of the pharmacy can be used to create awareness, but materials within the pharmacy and recruitment by pharmacy staff are critical to aid conversion to the service. The use of marketing can sometimes help to create a customer demand for the service, and drive footfall into the pharmacy environment. Working with patient organisations around key dates and initiatives can help to drive the public awareness of certain problem areas. Although the marketing was not effective for the asthma service, it has been shown to work in driving demand for the Chlamydia service. Once within the pharmacy, customers need to be clearly signposted to where they can access the service. This can be via signage materials inside the pharmacy, or pharmacy staff proactively recruiting people to the service. Services targeted at prescription customers should be located in pharmacies that have a high proportion of the target group visiting the pharmacy as this is an ideal opportunity for staff to recruit customers to the service. The use of simple questions, as in the asthma services, can help to identify people who have a condition which is uncontrolled, or who may be in an at risk group. Services targeted at non prescription customers should find other ways to recruit customers to the service. For example, messages and vouchers can be placed near to products that the target group buy, or via targeting groups of customers through routes such as the Boots Advantage card kiosk. The use of vouchers provides a tool to direct people to the pharmacy counter to ask about the service.

i) Type of advice

The advice available should be up to date, and provide the latest news and information for that particular condition or ailment. Rotating the advice, and keeping the content relevant for that time of year helps to keep customers interested in the service and support available. Advice should be available via a number of media, including the internet, as well as verbal and written information leaflets. Working with key patient organisations also helps to add credibility to the advice provided, and offers referral channels for customers wanting additional help and support. The depth of advice available should be flexible, to enable brief or detailed advice depending on customer need and time available.

j) Service structure

The service should be simple so that it is easy for pharmacists and staff to deliver, and is easy for the customer to understand. The use of toolkits enables the pharmacist to be flexible in service delivery, and adapt the length of consultation and the content

depending on the customer or business need. This worked particularly well with the delivery of the brief intervention and the asthma service, as this resulted in the two distinct services merging into one asthma service, with variable content and timing of delivery. The service should meet a customer need and have clear consumer messages. Keeping paperwork to a minimum is essential to encourage delivery by pharmacists and staff. If data does need to be recorded, then the use of alternative ways should be investigated. This could include recording data in alternative settings, or the use of till based systems. For example, the Chlamydia service relies on staff recording age on the tills when handing out the kits to customers. Customer details for the service are then recorded at the laboratory where data is entered onto the database.

Linking the service to other initiatives provides clear messages and focus for pharmacy teams. Designing the service to operate as an extension of activity that pharmacists are already delivering makes the service even easier to operate. It is also important to involve all members of the pharmacy team in service delivery as appropriate, allowing the service to be more scaleable. Pharmacy staff can be used to identify customers for the service, or provide brief opportunistic interventions or elements of the service over the counter. Customers are used to accessing immediate advice by the pharmacists, and this should be available at all times. Where the pharmacist is too busy to offer advice or services, they should still aim to offer brief advice, and provide the customer with the opportunity to return at a convenient time. Where possible, appointments should be made at the request of the customer. To keep services sustainable, they should evolve over time to fit with other initiatives, or service requirements. Both asthma services have done just that, and have evolved to meet the pharmacy contract requirements of prescription linked interventions and MURs.

k) Pharmacist confidence in service delivery

The more experience a pharmacist has in delivering services, the more confident they tend to feel. The use of training and forums to practice consultations can help to improve this confidence. Local colleagues and experts in service delivery can also act as role models and provide examples of best practice. Linking a service to an activity that the pharmacist is already undertaking helps to make it easier to deliver. This was the case for the Chlamydia screening service which was linked to the routine activity of selling a product.

l) Management support

Management support of services provides clear focus and accountabilities for service delivery by pharmacy staff. If the management team are not aware of a service, or if it is not on their priority list, then no matter how much enthusiasm individual members of the team may have the service delivery will be hampered by other priorities and initiatives. Briefings to area and regional teams before the initiative can help to raise the profile and support for the service. Internal stakeholder management can help to make the service a business priority and provide clear targets and accountability for pharmacy staff and the management teams. Providing regular feedback on performance helps to keep the service sustainable.

m) Time and staff resource

Time and staff resource are linked together as having the appropriate resources in place, frees up time for service delivery. The type of resource required very much depends on the service being delivered. For example, if the pharmacist is required to deliver all elements of the service that is time intensive, then a second pharmacist may be required during times of service delivery. If the service requires brief or opportunistic advice by the pharmacist then this could be managed by a single pharmacist by having the appropriate support staff in place. The greater use of accuracy checking technicians will help to release pharmacists' time from some of the traditional dispensing roles, which in turn would then enable greater contact with customers. Services that utilise other members of the pharmacy team enable greater opportunity for delivery during the normal working day. Flexibility in the content and length of service delivery will also enable pharmacists and staff to respond to customer and business needs.

n) Remuneration

Although the brief intervention and asthma services were free to the customers (as the service was paid for by Boots centrally), funding for time and resource were still presented as a potential factor affecting service delivery. Remuneration for service implementation and delivery will vary between individual services, pharmacy organisations, and local commissioners. Organisations like Boots may choose to fund services that offer benefits to the business such as increased loyalty, prescription or product purchases. Private services that offer benefits to the public may attract customer funding for services, particularly those that offer access to services that are not currently provided by the NHS. Services that offer benefits to the NHS such as the prevention of long term complications, hospital admissions, reduced wastage of

medicines, or freeing up GP time may attract NHS funding. Due to the current financial constrictions of the NHS, any new services delivered by pharmacists would have to fit with key priorities and local targets. To obtain NHS funding the services would have to improve patient care by providing increased capacity or accessibility in a cost effective manner. Relying on NHS remuneration for services could hamper the development of the extended role of the pharmacist due to the cash flow restrictions and problems currently experienced by PCOs. Pharmacists should look at alternative means of funding service delivery, such as commercial organisations, DH initiatives, and insurance providers. Although remuneration has also been highlighted as a factor within many of the studies identified within the literature [3-8, 11-16, 20, 22, 23, 25-30, 32], this can not be the only factor at play as MURs are remunerated nationally within the new pharmacy contract [37], yet problems with service delivery still exist [77].

o) Pharmacy environment

As already discussed, the type of pharmacy best suited to services may vary depending on the type of service being considered and the target group of customer. Services targeted at prescription customers may not be particularly successful in pharmacies without NHS contracts. Likewise, services targeted at young people who are not high prescription users may not be successful in high volume dispensing pharmacies located near to health centres. Services that require anonymity may be better placed in pharmacies with a high volume of commuter traffic, whilst services that build local relationships may be better located in pharmacies serving static populations. The location and type of pharmacy the population serves should be a primary consideration for the target group the service is aimed at. The resource in the pharmacy should be dependent on the current volume of workload and the additional work that the new service presents. Consultation space should be available for pharmacists and customers to utilise, but should not always be presumed as an absolute requirement for service delivery. The use of consultation space in some services may be more off putting for certain groups of customers.

p) Healthcare professional relationships

Pharmacists should alert any stakeholders that need to be aware of the service, including local healthcare professionals who may interact with the target group. This could include building relationships with local GP practices or other local service providers. The relationship with other healthcare professionals is important to present a coherent approach to individual patients. Referral into and out of services may be

two way, with local practices referring patients to the pharmacy services, and pharmacists referring patients to the GP using agreed guidelines. For example, for the Chlamydia service pharmacists are able to refer positive patients wanting further testing for other sexually transmitted infections to local NHS clinics. Before visiting local healthcare professionals, it is important to determine how the pharmacy service will benefit their patients and themselves as key stakeholders. The service may help to free up some of their time to focus on other activities, or may help them to deliver local targets.

q) External environment

It is important for pharmacists to be aware of the external environment and opportunities that can help them deliver an extended role. Local service innovators should be aware of PCO local development plans and key priorities, and in particular, areas which are not currently being achieved. On a national scale, it is important to align services with key DH targets or customer needs. Services can be designed to customer, NHS and / or business needs and priorities. The remuneration for the service may vary depending on the key beneficiaries and funding sources available.

r) Benefits and motivators of service delivery

For services to be delivered, whether private or NHS, there have to be clear benefits to all the stakeholders concerned. At the heart of the service, the customer has to see some advantage to using the service in community pharmacies. This could be a new service that is meeting an unmet need, or a service that provides increased convenience, accessibility, or benefits to the individuals concerned. If the NHS is commissioning the service, they would expect to see a cost effective service that provides the customers with improved care, prevention of long term complications, a reduction in hospital admissions, medicines wastage, or GP time. The service would also need to fit with local priorities and targets. For a pharmacy organisation to deliver a service there would need to be clear financial benefits. Community pharmacies are privately owned business that operate NHS services, and provide private services and products to consumers in a competitive market. Although individual pharmacists may deliver the services because of increased job satisfaction and care to customers, the management team would need to see benefits to their individual pharmacies. This can be met by targeting management teams on service delivery and crediting individual pharmacies for service delivery.

These recommendations have been based on the factors identified throughout this study, and the learnings applied in subsequent services. Consideration of these factors during service design, implementation and delivery may help to improve the sustainability and scalability of future pharmacy led services.

9.3 Reflections on the study and limitations of the results

The asthma services studied within my thesis were developed and implemented by myself as part of my development role within Boots, and were used as an example to study service implementation and delivery within community pharmacy. Although developed for commercial reasons, these services provided an ideal example to study as part of my PhD. The data collection methods that I have used within this study have been chosen with both research and commercial interests in mind. Whilst the research has been undertaken utilising resources available to me within my job at Boots, all analysis of the data presented within this study has been conducted by myself as a researcher conducting a PhD and independently outside of the work environment. Although there was a potential conflict of interest in delivering both commercial and research objectives concurrently, I do not believe that this has affected the outcomes of the data. An understanding of the factors affecting service delivery is critical to organisations such as Boots, as well to the wider pharmacy and academic community. My role as service development manager in Boots has enabled me to design, implement and control all elements of the services being studied. This is something that I would have been unable to do if I was not in charge of service development, particularly if I was not employed by a pharmacy organisation and was investigating this purely from a research perspective. My personal development from undertaking a research study and the learnings I have gained has also enhanced my work performance. As such, I believe that investigating the factors affecting service delivery from both a research and commercial perspective has enhanced the study and enabled me to fully understand the bigger picture.

During the initial stages of my PhD I focused on the effect of the implementation route on the success of a service, but broadened this as my PhD progressed to include all factors affecting service delivery. Whilst the collection of data from several sources has enabled me to analyse the data to fit with the change in focus, it was not originally designed to do so. Additional questions may have prompted further factors to be identified within this study. Although I have been able to add the commercial and

business perspective into this study, it may have been useful to interview other stakeholders and commissioners to add to this perspective.

This study was designed to look at the factors affecting service delivery in community pharmacies, using asthma services as an example. As such, the methods of data collection were not designed to measure patient outcomes following the interventions. Although anecdotal feedback was gained from customers and pharmacists, no evidence was collected to evaluate whether the interventions with the pharmacist resulted in beneficial health outcomes. For the NHS to commission services of this nature additional data would need to have been collected to measure the health benefits of delivering these types of asthma services. These could include improved adherence to medication (resulting in a reduction in medicine wastage), and improvement in symptom control (leading to a reduction in hospital admissions and prevention of long term complications). The most rigorous methods to collect these types of data are often in the form of randomised controlled studies.

The dispensing data was collected and monitored throughout the brief intervention and asthma service in order to assess the financial benefits to Boots. Due to the fact that the brief intervention was implemented within all Boots pharmacies, no control data were available. As such, the differences between the asthma dispensing data for Boots were tracked against the total asthma market within the UK. Although no other asthma activity was undertaken within Boots at the time of this study, no direct correlation can be made between the rise in market share and the brief intervention activity due to the absence of control data. Although control pharmacies were used to compare the dispensing data from the pharmacies conducting the asthma service, these controls had also been conducting the brief intervention. Ideally, pharmacies conducting no asthma activity would have been used as controls.

Research agencies were used to conduct the omnibus survey, and perform the interviews with both customers and pharmacists, providing anonymity to the interviewee. Due to the semi structured nature of the interviews, there was variability on the content of the data collected between individual respondents, which was also increased by the use of interviewers from a research agency. Each interviewer probed the respondents to varying degrees, on different questions. The likelihood of this may have been reduced by the use of a more structured questionnaire, but would have resulted in less rich data. Bias may also exist within the interviews as the issues raised may be a reflection of the interviewees pressing concerns at the time of data

collection. The use of a research agency to collect the data also resulted in the transcripts within quarter one being transcribed manually, which may have compromised the comprehensiveness of the data collected, as being preoccupied with transcribing, the interviewer is less able to pick up and develop issues as they are raised by the respondent. Whilst the use of research agencies allowed for large volumes of data to be collected, they may have resulted in less comprehensiveness of the data.

The use of existing data collection methods allowed me to collect data from several sources, but did present constraints as to the type of information that could be collected. Mystery customers were used for data collection within the company on a monthly basis, and as such, operated within certain guidelines. The design of the asthma scenario and collection of data was limited within these existing constraints. For example, mystery customers did not carry out the pharmacy scenario if there were more than four customers present at the pharmacy counter at the time of assessment. This restriction was one of the pre set parameters, so that the mystery customers did not disrupt the pharmacy counter any further during busier times. If these data had been collected, they would have provided a more accurate snapshot of the advice given during busier times. As a result, the factors identified from the mystery customer data will not provide a true representation of all the factors affecting service delivery when the pharmacy is busy. The use of a triangulation of data methods will have helped to reduce the limitations presented from using this method of data collection and the constraints it presented.

Within each quarter, ten pharmacists were selected to recruit customers to research. Although there are advantages in the use of pharmacists and staff to recruit customers to research, this is extra work for them, and bias may exist in their recruitment method. Staff may have varied recruitment depending on the perceived customer response, and how busy the pharmacy was at the time. Individuals who chose to participate in the first place are often self selecting, and their comments may not be applicable to the wider population. The pharmacies were initially selected for customer recruitment to research based on a variety of formats and geographical locations. Due to recruitment problems within the pharmacy, the quota for the quarter one interviews were not reached, and led to additional selection criteria being used over the subsequent months. Despite the additional criteria for selecting the pharmacies to recruit customers to research, the overall response was extremely disappointing. This led to a small number of sites recruiting a limited number of

customers to interview. Previous studies have shown that more community pharmacists want to be involved in research [167, 168], but that a number of barriers exist [168, 169], namely cultural and professional barriers, and practical and financial barriers. It is unclear from the research whether the pharmacists themselves did not attempt to recruit customers, or whether the customers themselves were not interested. Feedback from the pharmacists involved suggested that it was the latter reason, although no data was collected from customers to substantiate these findings. The pharmacists may not have had the chance to undertake the recruitment exercise, and may have felt uncomfortable saying this to company representatives. The limited number of pharmacy sites recruiting customers to research led to a smaller sample of customers recruited. Because of the smaller sample size to select from, this will have resulted in less randomisation of the customers selected for interview. Further problems were experienced with this recruitment methodology, as pharmacists did not always recruit customers to the research following an intervention in asthma. This was mentioned by a handful of customers within the interviews. This data has still been included within the results, as these customers provided valuable feedback on pharmacy utilisation and services.

As customers were recruited to interview whilst visiting Boots pharmacies, this may have resulted in less generalisability of the results regarding general pharmacy use. This was important however in order to obtain feedback on the asthma services. Despite this flaw in the recruitment methodology, a number of the customers interviewed regularly used other pharmacy providers. Bias may also exist in the content of the pharmacists interviews as although they were feeding back through a third party, the data was ultimately for the company that employed them. As a result, they may not have been as honest as they would have been if reporting back to an external source.

Whilst the results were collected from the delivery of asthma services within one organisation, experienced by pharmacists working in that organisation, and customers visiting pharmacies within that chain, many of the factors affecting service delivery should still be applicable to services for other condition areas, and delivery within other pharmacy environments. The recommendations suggested within this study have already proved successful within other condition areas, but have not been tested within other pharmacy settings.

9.4 Final conclusions

This study has investigated the factors affecting service delivery in community pharmacy within the UK, using asthma services as an example. The barriers and facilitators identified throughout this study can be grouped under similar themes and are associated with the following factors: current pharmacy utilisation, customer need and demand, attitudes of customers and pharmacists, implementation of the service, training, pharmacy communication, awareness of the service, recruitment to the service, the type of advice available, the service structure, the pharmacist confidence in service delivery, management support, time, staff resource, remuneration, pharmacy environment, healthcare professional relationships and the external environment. Where these factors are presented in a positive light they are seen as facilitators, and when presented in a negative light, barriers.

The benefits of service delivery to the pharmacist, customer and service provider are referred to as motivators within this study. Those motivators that have been identified for the pharmacist included the opportunity to deliver an extended role, to improve the public image of pharmacy, increase job satisfaction, and relationship building. Customer motivators were based on the accessibility of advice, type of advice, membership of a particular target group, and the opportunity to build relationships with a healthcare professional. The motivators to the service provider were based on the image of the company, and the business benefits and return on investment.

Based on the factors identified throughout this study, and the learnings applied in subsequent services, a number of recommendations for service design, implementation and delivery have been made below. Consideration of the following questions during service design, implementation and delivery may help to improve the sustainability and scalability of future pharmacy led services.

- a) What is the current customer base and usage of the pharmacy?
- b) What is the customer need?
- c) Is there a customer demand for the service?
- d) Do customers want to access the service from community pharmacies? Or is a change in consumer attitude required?
- e) Do pharmacy teams want to deliver the service? How are you going to motivate and create a positive attitude?

- f) How will the service implementation process create local ownership and responsibility for the service?
- g) What training will be provided to help pharmacists and support staff deliver the service?
- h) What briefings are planned to brief other members of team not involved in service delivery?
- i) What communication will be provided to pharmacists, support staff, and management teams prior to service implementation, during implementation and during delivery?
- j) Who is the target customer?
- k) How will customers be recruited to the service?
- l) What activities are planned to drive awareness of the service and to convert people into accessing the service?
- m) What advice will be provided and in what format?
- n) How will the service be structured? Is it simple to deliver? Does it offer flexibility in service delivery?
- o) What will be done to help improve pharmacists' confidence in service delivery?
- p) How will the management team be engaged to ensure the service is seen as a priority?
- q) What resources are required to deliver the service? Is this a restructure of current resource, or is new resource required?
- r) How will the service be funded and by whom?
- s) How will the service be measured and monitored?
- t) What type of environment is required to deliver the service?
- u) Who are the stakeholders that need to be aware of the service?
- v) How will local healthcare professionals and other providers be engaged in the service?
- w) How does the service fit with NHS or business priorities?
- x) What are the benefits of delivery of the service to all stakeholders (customer, pharmacist delivering the service, commissioners, service provider)?
- y) Can each of the stakeholders clearly see the benefits during service delivery?

This is the first large scale study of its kind to look at all the factors involved from the perspective of both customers and pharmacists, and many of the facilitators and barriers identified extend beyond those provided within the current literature. In addition, the service implementation methods, the type of advice, and the service structure have not been recognised as factors affecting service delivery within

previous studies. The motivators identified within the previous studies have been from the perspective of pharmacists only. This study has looked at the perspective of not only pharmacists, but also the motivators to customers and the service provider. Based on all the factors identified throughout this study, a number of recommendations have been made for future service delivery.

9.5 Future research questions

My research into the factors affecting service delivery in community pharmacy has highlighted a number of areas that warrant further investigation on this matter. A list of future research questions are detailed below:

1. People with uncontrolled asthma often purchase cough products to help alleviate symptoms. As such, are people presenting at the pharmacy counter to purchase OTC products more likely to be less in control of their asthma? Can the same be said for other condition areas? Should pharmacists be targeting more people OTC for opportunistic advice and services? Do pharmacists feel as comfortable recruiting customers to services when they are in the pharmacy purchasing OTC products, compared to when they present with a prescription? What is the role of the pharmacy counter staff in helping with this process?
2. There are mixed attitudes between pharmacists about their extended role in services. Do these attitudes vary by age, gender or employment status (multiple versus independent)?
3. The timings of consultations vary between customers, individual pharmacists delivering the service, and the service itself. Who drives the length of consultations between customers and pharmacists? Is it the customer? Or the pharmacist?
4. Many community pharmacists are now delivering multiple services within their pharmacy. Are the factors affecting service delivery different between pharmacies offering single or multiple services? Are they different between different types of services? How will they operate in the pharmacy? Who will be in charge of co-ordination of diaries and time management?

5. Multiple factors have been identified within this study as affecting service delivery. What is the importance of each factor? Are some rated more highly than others, or do they have an equal impact? What are the main barriers that need to be overcome, or facilitators that need to be in place to tip the balance towards service delivery?
6. The general public is used to accessing pharmacy advice and services without an appointment. With the move to deliver more in depth services this is not always possible, and many pharmacists now have to operate appointment based systems. How do customers feel about this? Is it acceptable to the public to make appointments for community pharmacist services? Is it taking away the unique selling point of community pharmacists?
7. The pharmacist is a valuable but expensive resource. Are they the best people to deliver services? Is it better to use a mixture of the healthcare team to be able to provide a cost effective service that utilises pharmacists' expertise appropriately? Is it acceptable to customers to receive elements of services by other members of the team? Do they notice any difference? If this happened, how would it affect the patient's perception of what a pharmacist does?
8. Pharmacists are starting to get more involved in helping people manage their long term conditions. This involves advice, as well as monitoring and testing services. Does the general public like receiving in depth advice on long term conditions from community pharmacists? Or do they prefer brief advice? How confident are they in the pharmacists' advice? Does this differ between condition areas? Explicit consent may be needed for some services in the future – is this a new concept for pharmacists that have lived with implied consent for services up until now? Is the perception of the pharmacist's role in long term conditions changing as a result of the new pharmacy contract?
9. The traditional use of the community pharmacist for advice has mainly related to medication queries or minor ailments, with very little advice sought on general health. The Government and pharmacy profession are attempting to change this and increase the public's use of the pharmacist for general health enquiries. Are there barriers in place to customers accepting this? Do they trust the pharmacist's advice? Does this vary by age or condition area? Or is it related to payment of services and goods?

10. The majority of community pharmacies already have, or are in the process of implementing consultation space into their premises. The new pharmacy contract requires the need for such space before pharmacists can deliver advanced services. It is not appropriate to conduct all services in this space. Some customers may feel more relaxed having confidential conversations on the shop floor, as apposed to in a defined consultation area. This has been found to be particularly true for the Chlamydia screening service that Boots is operating in London on behalf of the NHS. Who defines the need to use the consultation space? Is it the pharmacist, customer or the service?
11. The public use pharmacies to buy general products as well as medical purchases. This is particularly true for some of the large multiple pharmacy chains and supermarkets. Is there an opportunity to target customers for health advice and services whilst they are in the pharmacies shopping for non medical products? How receptive are customers to receiving health messages and advice when they are in this shopping mode?
12. Pharmacists often refer patients through to GPs or nurses if they think it is appropriate. Do patients follow this advice and book a subsequent appointment at the GP practice? Similarly, if GPs refer patients to a pharmacist led service do they follow this advice and act on the referral?

APPENDIX A

Brief intervention information pack

TAKE CONTROL OF ASTHMA

Attached:

Summary asthma management guidelines [BTS / SIGN]

Fact sheet

FAO The pharmacist

Dear colleague

Boots is working with the National Asthma Campaign to help make the lives of people living with asthma easier. We are helping people with asthma understand their condition so that they can achieve a better quality of life; and we are raising money which will help fund vital National Asthma Campaign research into the causes and ultimately a cure, for asthma. Pin badges will be on sale from 7 April 2003; and your store will be briefed on the fund-raising activities via a separate communication. In addition, your store will be sent a document on charity guidelines.

Pharmacists and healthcare staff have a key role to play in this partnership. Research undertaken by Boots shows that people with asthma want more lifestyle information that will make a real difference to managing their condition.

The accompanying guidelines outline a brief intervention that you could make which will help patients identify whether their symptoms are well controlled. These can provide an opportunity, if appropriate, to provide additional lifestyle advice.

This briefing pack also includes a fact sheet on appropriate seasonal advice regarding hayfever, for a person with asthma. We will be sending you updated advice and information on a quarterly basis, enabling us to keep you informed of how the campaign activity is going and highlighting other opportunities for you to get involved.

We have also included a summary of the updated BTS / SIGN guidelines on the management of asthma in this pack, providing the latest advice and evidence on asthma management. [British Thoracic Society / Scottish Intercollegiate Guidelines Network]

Alongside this activity, we will also be looking at running a number of trials to study the effect of different types of pharmacist intervention on patient outcomes. This will provide learnings in the management of long term medical conditions that will help shape the role of the pharmacist in the future.

I hope that you find this a professionally rewarding campaign that will demonstrate our commitment to healthcare. If you have any queries or comments, please feel free to contact Tracey Thornley on 0115 949 2186.

Yours sincerely

Steve Churton
Assistant Pharmacy Superintendent

March 2003

PHARMACY GUIDELINES

Introduction

There are over 5.1 million people in the UK currently receiving treatment for asthma, with an estimated 8 million people who have been diagnosed with asthma at some point in their lives. Asthma is estimated to cost the NHS over £850m per year, and the number of new cases is continually rising with GPs in the UK seeing over 18,000 first or new cases per week.

Asthma is not well controlled with over 74% of people affected by symptoms, often resulting in severe restrictions on lifestyle. Boots is working with the National Asthma Campaign to help make the lives of people living with asthma easier. We are helping people with asthma understand their condition so that they can achieve a better quality of life; and we are raising money which will help fund vital National Asthma Campaign research into the causes and ultimately a cure, for asthma.

As pharmacists, you have a unique opportunity to interact with the customer in helping them to understand and manage their asthma better. This opportunity may arise when speaking to customers who come in to store to collect prescriptions or to purchase OTC products to relieve their symptoms. As a result of the campaign activity you may also notice an increase in the number of people presenting at the Pharmacy to speak to you about their asthma in general.

This briefing pack outlines the most up to date information for asthma management, and we hope that you find it a useful aid to deal with any queries that you might have.

Brief intervention

To help identify people whose asthma is poorly controlled and to help build a picture of their overall wellbeing, you may wish to use one or all of the following three questions, recommended by the Royal College of Physicians:

- “Have you had difficulty sleeping because of your asthma symptoms (including cough)?”
- “Have you had your usual asthma symptoms during the day (cough, wheeze, chest tightness or breathlessness)?”
- “Has your asthma interfered with your usual activities (e.g. housework, work, school, etc)?”

If appropriate, you may want to consider giving the respondents some advice from the attached fact sheet.

Continuing Professional Development

As a healthcare professional and easily accessible to all patients, you can make a difference to the quality of life of patients with asthma. To enable you to fulfil this role, use the CPD cycle found on StoreNet, to identify the gaps in your knowledge. Once you have identified your learning needs, use the information supplied in this pack to support your Continuing Professional Development. You may wish to record this learning as evidence of your CPD.

Lifestyle advice

Boots conducted some research last summer, which showed that people with asthma want more lifestyle information that will make a real difference to managing their condition. We are going to be providing you with quarterly fact sheets with seasonal advice that is relevant to people with asthma at that particular time of year. This also provides us with an opportunity to update you on the success of the campaign and to keep you posted on fundraising activities locally.

This quarter's theme is about hayfever and asthma, due to the season and occurrence of these conditions within families who are allergy prone. We hope that you find the attached lifestyle facts both interesting and useful.

Customer Advice and Information Leaflet

An updated information leaflet will be sent through to stores in April to help support this campaign. The content of this leaflet will be based around advice to help customers take control and manage their asthma, hayfever and eczema. It can be used as a tool to help support the advice that is given by the pharmacy team.

Guidelines on the Management of Asthma [BTS / SIGN]

The guidelines for asthma management in the UK have recently been updated. We have incorporated a summary document of this latest advice and research within this pack, to help you when communicating with customers.

Next Steps

If you have any questions or queries regarding the campaign activity or intervention, then you can contact Tracey Thornley via EBC on corporate destination, or by telephone on 0115 949 2186.

We will be evaluating the outcomes of this partnership and campaign with the National Asthma Campaign, and any resulting activity that it may drive in the pharmacy. As such, we would appreciate you contacting us with any examples where the brief intervention has had a positive outcome for patients.

Don't forget to look out for further quarterly updates including the latest fact sheets.

Further Reading

Useful websites:

www.asthma.org.uk - National Asthma Campaign

www.sign.ac.uk - The Scottish Intercollegiate Guidelines Network from which you can download and print the British Guidelines on the Management of Asthma

www.asthmaweb.net – Requires registration which is free and it also provides you with access to The Respiratory College (www.therespiratorycollege.com) with further links to respiratory sites and journals

www.lunguk.org - British Lung Foundation

www.brit-thoracic.org.uk - British Thoracic Society

www.allergyfoundation.com - Allergy UK

APPENDIX B

Asthma service questionnaire for pharmacist consultations

Good morning / afternoon, I was wondering if I could ask you a few questions about your asthma. It will take about five to ten minutes and any information you give me is strictly confidential.

1. Gender M / F Approximate age _____
2. Patient's initials _____
3. Where did you hear about this service? _____
4. Could you tell me what your doctor or nurse has prescribed for you for your asthma and how often you should take it?

If no – Follow up

If yes -

Medication	Frequency	Variation from Rx

5. Do you use the above medication as prescribed? (*record in variation column*)
6. If not, are there any reasons why?

7. Have you experienced any of the following in the last week?

	Yes	No
Have you had difficulty sleeping because of your asthma symptoms?		
Have you had your usual asthma symptoms, such as coughing, wheezing, tight chest or feeling breathless during the day?		
Has your asthma interfered with your usual activities such as housework, work or school?		

8. How often do you take your reliever?

More than once a day	
Once a day	
More than once a week	
Once a week	
Less than once a week	

9. When did you last have an asthma review with your doctor / nurse? _____

10. Do you have any concerns about your treatment or inhaler technique?

11. Have you been advised to rinse your mouth out after using your preventer? Y / N

12. Do you use a peak flow meter? Y / N

13. Have you been given any other practical advice? Y / N

14. PCS offered? Y / N / NA

15. If you smoke have you considered stopping? Y / N / NA

16. Do you have any other questions?

17. Referral required? Y / N (*If yes, summarise reason below*)

18. If referral required – Permission gained?

N - Advise to contact GP

Y – See below & gain signature

Name:	D.O.B.
Address:	
Patient Signature:	
Dr:	Surgery:

19. Is patient on medilink?

N – No further action

Y – Make dated note on record of interview

Thank you for your time, please don't hesitate to contact me if you have any queries

APPENDIX C

Omnibus survey questionnaire

Q1a Have you or anyone in your immediate family i.e. your partner or child/ren, been diagnosed with any of the following conditions?

READ OUT AND ROTATE

Asthma	Yes / No
Diabetes	Yes / No
Hypertension i.e high blood pressure	Yes / No
High cholesterol	Yes / No
Osteoporosis i.e. brittle bones	Yes / No

If "No" to all, then close. If "Yes" to any, then ask for each.

Q1b You mention [iteration mentioned from above]. It is yourself, your partner or your children who suffer with [iteration mentioned from above].

Yourself

Partner

Child/ren

NOTES FOR INTERVIEWER

- If the respondent has two or more children that suffer from the same condition please confirm that the following questions will be asked in relation to the child suffering worst with the condition.
- The following questions are linked from Q1b. The order of priority going into Q2 is as follows:
 1. Yourself – Asthma
 2. Yourself – Anything else (first mention)
 3. Partner / child – Asthma
 4. Partner / child – Anything else (first mention)

I would now like to talk to you about your/your child's/your partners [iteration taken from Q1b using the order above]

Q2 How knowledgeable would you say you/they are about your/your child's/their [iteration taken from above]?

- Very knowledgeable
- Quite knowledgeable
- Neither knowledgeable nor un-knowledgeable
- Not very knowledgeable
- Not at all knowledgeable
- Don't know

Q3a Do you/they take any medication for your/their [iteration taken from above]?

- Yes – regularly
- Yes – only when have symptoms
- No
- Don't know

Answer Q3b if "Yes" at Q3a Otherwise, go to Q4

Q3b Do you/they use your/their medication as often as advised by the doctor?

- Yes, all the time
- Yes, most of the time
- Sometimes
- Rarely
- Never
- Don't know

Ask all

Q4 How frequently do you/they experience symptoms of your/their [iteration mentioned from Q1b] that effect your/their life, by which I mean you cannot do things you normally would do?

- Everyday
- Several times a week
- Weekly
- Once every 2 weeks
- Once every 3 weeks
- Monthly

Less often
Don't know

Q5 Have you/they asked the pharmacist for advice related to your/your child's/their [iteration mentioned from Q1b] in the last 6 months?

Yes
No
Don't know

Answer Q6 if "Yes" at Q5 Otherwise, go to Q8

Q6 What was this concerning? Anything else? DO NOT PROMPT

Lifestyle advice e.g. diet, smoking, fitness
Medication
Products
Services
Symptoms
Other (specify)

Q7 On a scale of 1 to 5 where 1 is very poor and 5 is excellent, how would you/they rate the quality of information you/they were given by the pharmacist?

1
2
3
4
5
Don't know

Ask All

Q8 Which of the following stores or chemists, would you say you/they collect your/their prescription from most often?

Asda
Boots
Co-op
Lloyds
Moss

Safeway

Sainsbury's

Superdrug

Tesco

Other local chemist chain

Other shop/store

Doctors surgery

Independent chemist (by this I mean not part of a chain)

I got my prescription delivered by the store

Q9 Do you or your partner have a Boots advantage Card?

Yes

No

Don't know

CLOSE

APPENDIX D

Asthma audit questionnaire

Introduction: Say "Good morning / afternoon / evening. I was wondering if I could ask you a few questions about your asthma. It will take around five minutes."

1. Indicate gender of respondent
Male..... ☐
Female..... ☐
2. Use best estimate for age:
Under 18..... ☐
18-44..... ☐
45-64..... ☐
65 and over..... ☐
3. Ask: Do you know what your doctor / asthma nurse has prescribed for you in terms of frequency of taking which medication?
Can accurately say what's on the prescription = yes..... ☐
Doesn't know / not sure = no..... ☐
4. Ask: Do you pick up all the medication on your prescription?
Picks up all medication = yes..... ☐
Only picks up some e.g. only picks up relievers but leaves preventers = no..... ☐
5. Ask: Do you take your medication as often as prescribed by the Doctor?
Yes, all the time..... ☐
Yes, most of the time..... ☐
Sometimes..... ☐
Rarely..... ☐
Never..... ☐
6. Ask: How many times do you take your reliever medication?
More than once a day..... ☐
Once a day..... ☐
More than once a week..... ☐
Once a week..... ☐
☐

Less than once a week.....

7. Ask the patient whether they have experienced any of the following within the last week:

	Yes	No
Have you had difficulty sleeping because of your asthma symptoms?		
Have you had your usual asthma symptoms, such as coughing, wheezing, tight chest or feeling breathless during the day?		
Has your asthma interfered with your usual activities such as housework, work or school?		

Close “Thank you – that’s all. Thank you for taking part in this survey.”

During the second audit the following set of questions were also asked;

8. Ask: Have you spoken to a Boots pharmacist about your asthma in the last three months?

Yes (complete questions 9, 10 and 11)..... ☐

No (finish and close)..... ☐

9. If yes, ask what was the advice about?

Lifestyle advice..... ☐

Medication ☐

Products..... ☐

Services..... ☐

Symptoms..... ☐

Other (specify)..... ☐

10. On a scale of one to five, ask how useful did they find the information that the pharmacist gave them (one is not very useful, five very useful)

11. Ask: How they found out about the additional pharmacist advice?

In store..... ☐

Referral from GP..... ☐

Referral from A N other..... ☐

Poster / leaflet outside of store..... ☐

Family / friend..... ☐

Other..... ☐

Close “Thank you – that’s all. Thank you for taking part in this survey.”

APPENDIX E

Mystery customer research questionnaire

E. DISPENSING

ACTION: Join the queue for the dispensary and follow the guide below based on how long you queue for, if you are acknowledged & how well the queues are managed;

1. *If you queue for 2 minutes and receive no acknowledgement then answer E1a as code 1 & answer E2 & E3 and move to the next section*
2. *If you are acknowledged within 2 minutes then queue for another 2 minutes. If by this time you are not served then answer E1a as code 2, answer E2 & E3 and move to the next section*
3. *If you are acknowledged within 2 minutes and are served after a further 2 minutes then answer E1a as code 3 and complete the 'quick question' enquiry (below)*
4. *If served within 2 minutes then answer E1a as code 4 and complete the standard enquiry (below)*

Standard enquiry

You want to enquire about your brother/sister who has asthma. It is coming up to the hayfever season and his/her asthma is getting worse. You do not feel that he/she controls his/her asthma very well as he/she is always running out of his/her blue inhaler. Ask whether or not you can get replacement inhalers directly from the pharmacist rather than having to go to the doctor for a prescription.

If asked, your brother/sister seems to suffer from wheezing symptoms quite regularly which is leading you to believe that they are not controlling it well. The pharmacist may ask about the brown inhaler – say that your brother/sister does not use this very much and has not had it replaced for months.

N.B. The blue inhaler is for relief of symptoms and the brown inhaler is for prevention.

Quick question enquiry

You are enquiring on behalf of a member of your family who has a number of

prescriptions every month and you just want to know how much it costs to get a pre-payment certificate.

Please answer all questions based on the response given apart from E9 & E10

E1a What happened at the Pharmacy counter? SINGLE CODE

- I was not acknowledged within 2 minutes
[complete E2 and E3 and then move to next section]
- I was acknowledged within 2 minutes but still did not get served within a further 2 minutes
[complete E2 and E3 and then move to next section]
- I was acknowledged within 2 minutes and served within a further 2 minutes
[complete the quick question enquiry]
- I was served within 2 minutes
[complete standard enquiry as normal]

E2 Where there any signs of the queue being managed? SINGLE CODE

[i.e. extra staff being called to help or extra tills being opened]

- Yes 100
- No 0
- N/A – there was no queue R

MAX = 100

E3 Which option best describes how you were acknowledged? SINGLE CODE

- Even when they are busy serving other customers, staff are aware of what is going on around them. They smile and make eye contact with me and say something if appropriate 100
- Staff are aware of what is going on around them and make an effort to acknowledge waiting customers 70
- Staff appear to be aware of what is going on around them, although they do not acknowledge waiting customers 30
- Staff appear oblivious as to what is going on around them. They can only focus on one thing at a time and are not even aware that other customers are waiting 0

MAX = 100

E4 Which option best describes how you were greeted? SINGLE CODE

- As soon as they see me, staff make eye contact, smile, greet me in a warm and natural way and say something appropriate 110
- Staff make eye contact and greet me in a genuine way when I am close 77
- Staff greet me but it is in a mechanical way which makes me feel they are just going through the motions 33
- Staff do not greet me or acknowledge me even when I am close 0

MAX = 110

ACTION: If you are not initially served by the pharmacist, ask if you can speak to someone from the dispensary. It is not essential that you are served by the pharmacist but you must request to speak to someone from the dispensary.

E5 Were you served by a pharmacist? SINGLE CODE

- Yes
- No
- Not clear

ACTION: If you conducted the 'quick question' enquiry please code E6 & E7 based on how the member of staff dealt with your query re: pre payment certificate

E6 Which option best describes how well the member of staff established your needs? SINGLE CODE

- The member of staff asks relevant questions in an open and friendly way to ensure she fully establishes my needs 110
- The member of staff asks relevant questions in an open and friendly way and establishes most of my needs 77
- The member of staff does not really ask sufficient questions to establish my needs 33
- The member of staff does not ask any questions or attempt to establish my needs 0

MAX = 110

E7 Which option best describes how well the member of staff recommended a product? SINGLE CODE

- The member of staff is very knowledgeable about the product area. She explains how the products will benefit me and recommends a suitable product(s). She offers information on related products and services 90
- The member of staff knows the area well. She is able to make a recommendation and explains how the product will benefit me. She does not mention related products and services 63
- The member of staff has some knowledge of the products but is not very confident. She is not comfortable recommending a product and does not fully explain product benefits 27
- The member of staff is unable to help me. She has limited product knowledge of the area 0

MAX = 90

E8 What were you offered as a solution/given as a cost? SINGLE CODE

Write in

Please answer E8a if you conducted the standard enquiry

E8a Please indicate whether the member of staff did any of the following (code all that apply)? MULTI CODE

- Give lifestyle advice (Please detail below)
- Ask if your brother/sister has difficulty sleeping
- Ask if your brother/sister is suffering from any symptoms affecting their day to day activities
- Ask if your brother/sister is suffering any usual asthma symptoms during the day
- N/A – asking quick question enquiry

E9 Did the member of staff recommend any other products or services e.g. the Repeat Prescription Collection Service? SINGLE CODE

- Yes 100
- No 0
- N/A – asking quick question enquiry R

MAX = 100

E10 Which option best describes your experience at the Dispensary counter in terms of integrity? SINGLE CODE

- I really feel like I can trust the staff. They try to recommend or give me advice on the product which is right for me, whether or not it is a Boots brand and whether or not they make a sale 100
- I am quite confident that the advice given or the product recommended is right for me 70
- I feel as if the staff are obliged to promote or sell certain products or their own brand (e.g. Boots brands) even though they may not be quite right for me 30
- I feel like the staff just want me to buy a specific product regardless of what I need or want 0
- N/A – asking quick question enquiry R

MAX = 100

ACTION: Thank the pharmacist and explain that you will talk it through with your brother / sister / member of family before making a decision
--

E11 Which option best describes the parting you received? SINGLE CODE

- Staff thank me and say goodbye in a warm and friendly way. They say something extra that's appropriate to me. They maintain eye contact and I have all of their attention until I am ready to leave 110
- Staff thank me and say goodbye in a warm and friendly way. I have all of their attention until I am ready to leave 77
- Staff thank me or say goodbye but it might sound rather mechanical. I might feel a bit rushed 33
- Staff finish serving me and do not say goodbye or thank you. They move quickly on to the next customer 0

MAX = 110

E12 Please write comments about your experience in this scenario

APPENDIX F

Customer interview questionnaire

Introduction

Inform respondents that we are conducting the survey on behalf of Boots and that their feedback is invaluable in the development of products and services provided by them. Inform them of the MRS Code of Conduct and confidentiality and that all of the information will remain anonymous and confidential and that they will never be referred to in person. They should also advise us of any questions that they would prefer not to answer.

As a background to the interview inform them that the overall objective of the research is to help Boots evaluate the success of the added value asthma services and in the development of the pharmacy offering.

- Explore socio-demographics
- Any other family members with asthma? Who?
- Can I just check, have you or anyone in your immediate family i.e. partner / children, been diagnosed with any of the following conditions in addition to asthma - diabetes, hypertension, high cholesterol, osteoporosis?
- If yes to any of the above - who is it that suffers?

Respondent/Asthma Sufferer Background

- Invite respondents to spontaneously describe their condition in order to develop a customer profile and to build a rapport with them during the interview.
- How long have they suffered from their condition?
- What asthma symptoms do they have?
- How frequently do they experience symptoms that effect their life e.g. cannot do things that they normally do?

Everyday

Several times a week

Weekly

Once every 2 weeks

Once every 3 weeks

Monthly

Less Often

- What affects / triggers their asthma?
- Does their asthma get worse at certain times of the day? Year?
- Do other members of their family suffer from asthma? Who?
- Explore how they deal with their asthma – do they visit their GP and if so how frequently? If not, why not?
- How do they deal with their asthma? (medication, avoidance triggers, other)
- Do they visit their GP or Nurse for regular asthma reviews? If not, why?
- Do you take any medication for your asthma?
 - Yes - regularly
 - Yes - only when have symptoms
 - No
 - Don't know
- If yes, what medication are they on for their asthma? Explore preventer inhaler (brown), reliever (blue) or tablets.
- Do they know what their medication is for?
- Do they use their medication regularly as advised / prescribed by Doctor?
 - Yes, all of the time
 - Yes, most of the time
 - Sometimes
 - Rarely
 - Never
- Do they use any additional OTC remedies to help relieve their asthma symptoms?
- Explore how knowledgeable they feel about their condition
 - Very / Quite Knowledgeable
 - Neither knowledgeable nor unknowledgeable
 - Not very / Not at all knowledgeable
- How they have achieved this?
- Do they seek information on how they can alleviate their symptoms and if so where / what etc.?
- Do they continually seek more information / advice / helpful hints etc. on how they can improve their condition? If yes, are there certain periods of the year when this occurs e.g. summer & hayfever etc.?
- How in control of their condition do they feel and would they like to improve this? If yes, what can they think of / suggest as to how they could achieve this?

Pharmacists

- In this section seek to evaluate their current usage of pharmacists both in general term and in relation to their asthma condition.
- How often do they visit pharmacy stores?
- Which pharmacist do they use?
Asda, Boots, Co-op, Lloyds, Moss, Safeway, Sainsburys, Superdrug, Tesco, Other local chemist chain, Other shop/store, Doctors surgery, Independent Chemist (not part of a chain), prescription delivered (record multiples if applicable)
- How do they use their pharmacist – simply to collect prescriptions, advice etc.?
- Thinking of their asthma in particular, have they approached their pharmacist for advice in the last 6 months?
Yes
No
Don't know
- If yes, what was this concerning?
- Anything else? (*Do not prompt*)
Lifestyle advice e.g. diet, smoking, fitness
Medication
Products
Services
Symptoms
Other (specify)
- How helpful do they feel they were?
- On a scale of 1-5 where 1 is very poor and 5 is excellent, how would you / they rate the quality of information you / they were given?
- What type of advice? What was it concerning?

Boots Asthma Intervention

- How often do they visit Boots stores? Is it for general purchases? Or prescriptions?
- Do they or their partner hold an advantage card? Yes/No
- If not already discussed explore where Boots fits into their asthma management
- Why did they initially enter Boots on **this** visit e.g. asthma specific – prescription collection, advice, media campaign, links with national Asthma Campaign, browsing, usual store etc. ?

- I understand that you recently visited Boots and spoke to the Pharmacist about your condition – invite respondents to describe how this occurred and what they spoke to the Pharmacist about
- How did the intervention occur – did they ask for advice or was it prompted by the pharmacist?
- How did the conversation with the pharmacist make them feel?
- Explore initially how they felt about this advice and how this makes them feel about Boots – this will enable us to fully evaluate the consumer experience
- Explore in detail their conversation with the pharmacist – what information did they receive and how useful do they feel this was?
- Have they acted or intending to act on this advice?
- How do they feel about receiving lifestyle / product advice from a Boots pharmacist and how valuable do they feel this service is?
- Would the intervention service encourage them to visit Boots pharmacy more often – probe and explore?
- Thinking of the advice they have received, what other information/areas do they think would be useful to them and other customers? This can include asthma and any other conditions that they think relevant e.g. Osteoporosis, CHD etc.
- Would they like to see an extension in more asthma services delivered by their pharmacist? Or more services around other chronic conditions?

Service Offering

- Explore how they felt the pharmacist dealt with them as customers and how they provided the advice, referring to specific symptoms and advice offered, and tone & language – clarity etc.
- How confident did they feel about the advice provided – were they already aware of the suggestions made
- What difference do they feel this will make to their everyday lives?

Post Intervention Service

- Now that they have received the advice, has it made any difference to their condition/symptoms and if so how? Have they seen any improvements in their health or do they expect to in the future?

Quality of life

Symptom control

- Have they changed the products they use or anything else in relation to their asthma?
- Do they feel more / less in control of their condition?
- How much do they feel in control of their condition? Has the intervention improved them taking their medicines?
- Would they recommend this pharmacy advice to anyone else?
- Throughout the interview listen as to how they describe the intervention – do they call it a service, knowledge transfer, advice etc.? If not already covered, explore fully how they consider it in their view.
- How do they relate the intervention service to that provided by their GPs? Explore whether or not they would visit their GP more / less as a result *This relates to how much self control and management they have.*

Boots and NAC

- Evaluate their awareness of the link between Boots and the National Asthma Campaign (NAC) and if aware encourage them to explain
- What have they seen –leaflets, press articles, Boots magazine, pin badges etc.?
- How valuable do they feel this link is and the benefits to Boots customers?
- How do they think consumers should be made aware of the intervention offer?

Summary and Conclusion

- Invite respondents to provide their overall views and comments about the intervention service that they have received and invite them to discuss how they feel about this in relation to the Boots brand and offering and in relation to pharmacists
- What suggestions could be made to the offering – thinking of asthma and other conditions?
- Would you like to talk to a healthcare professional in more detail about your asthma?

Provide them with NAC helpline, pharmacist or GP contact details

Thank & Close

APPENDIX G

Pharmacist interview questionnaire v1

Introduction

Inform respondents that we are conducting the survey as part of the Asthma Intervention pilot study that is going on in Boots stores across the country for a year. Highlight the fact that their feedback is invaluable in the development of products and services offered by Boots. Inform them of the MRS Code of Conduct and confidentiality and that all of the information will remain anonymous and confidential and that they will never be referred to in person. They should also advise us of any questions that they would prefer not to answer.

As a background to the interview inform them that the overall objective of the research is to help Boots evaluate the success of the added value asthma services and in the development of the pharmacy offering.

Background

- Age, gender of Pharmacist etc.
- How long have you worked for Boots? How long have you been based at this store? How many stores have you worked at in the last 12 months?
- How much interaction or advice did you give to a person with asthma prior to this intervention?
- Do they personally know anyone who suffers from asthma? Who? How do they deal with it?

Asthma Intervention – Pharmacist Opinions

As an introduction to the Asthma intervention discussion, invite Pharmacists to spontaneously tell you what they understand of the offer and their thoughts and comments so far in relation to the trial, customer feedback etc. This will provide us with a 'real' understanding from their point of view in relation to customers etc.

Where necessary/applicable probe on the following:

- What do they think of the idea of providing customers with advice/info on relieving their asthma symptoms?

- Have they been able to offer the service so far and how easy / difficult have they found this? If difficult, why?
- Have they used the three questions as outlined on the brief sent out informing them of the trial? E.g. difficulty sleeping, asthma interfering with usual activities etc.
- What do they think of the idea behind the brief intervention – e.g. more involvement for opportunistic brief interventions for Pharmacists in conditions such as asthma?
- How do they normally interact with customers? How often do customers ask them for advice and what conditions do they commonly relate to?
- How much time do they normally spend with customers? Does this vary? Is there a range? Do they feel more comfortable having a brief intervention that is semi structured, or not?
- Invite them to explain how they see themselves e.g. Pharmacist only, advisor, councillor etc. Do different types of customer treat them differently – e.g. have more confidence in them?

Asthma Intervention – In Practice

Explore the Pharmacists reactions to the intervention service in ‘real’ situations e.g. when dealing with customers:

- How frequently have you conducted the intervention since the trial began?
Approximately how many times do you get the opportunity daily / weekly?
- How do you feel about speaking to customers about their asthma and then offering them advice on their condition?
- Explore whether or not they feel their role has changed when offering this advice – and how this makes them feel e.g. increased job satisfaction, helping customers, increased job load?
- How long is the average intervention / conversation taking? Do you have enough time and how has this impacted on workload?
- Who in their department is providing the service – themselves, pharmacy staff etc.?
- Have they briefed the rest of the pharmacy team?
- What is the feedback from the rest of their team?
- Invite the pharmacist to describe a recent example of the intervention being offered to a customer e.g. prompt for conversation, symptoms, recommendations / advice given etc.

- What have been the most common issues raised by customers that you have been able to help them with?
- And what advice have you been giving – is it from the list supplied by Boots in the Asthma pack? What are their thoughts on the advice they have been provided with – have they any suggestions on additional info / sources etc?
- Have they been using the three questions from the RCP? What type of lifestyle advice have they been giving?
- What are their thoughts on the advice they are receiving from head office? What themes do you think should appear? When?
- Where have they seen information about the campaign internally? (Options could include: briefing pack, pharmacy first, ideas for life, intranet, focus, health and beauty)
- Which advice do they feel is most readily accepted by customers and how have they reacted when you have provided this?
- What are their own personal thoughts on the campaign e.g. Percy and Penny Puffer fish pin badges etc.
- What are their thoughts on having National Asthma Campaign as the charity of choice? Do they think that we should be linking pharmacy healthcare campaigns with charity of choice in the future?
- What effect do they think the offer/service will have on the Boots brand, increased customer footfall etc.?

Customer Feedback

- What has been the initial reaction from customers when you have offered them advice and information? What feedback have you had from customers?
- How satisfied do you think they have been with the advice?
- Explore the issues that customers have raised with Pharmacists – have you been able to advise them on all queries so far?
- If not, would more training help in this area – any suggestions at this stage how Boots can improve the offering?
- What are the most common symptoms / conditions that they have talked to you about?
- Have any customers returned for more advice and / or have they any feedback so far e.g. improved customer wellbeing etc.?
- Were any customers aware of the new campaign? If yes did they mention their source e.g. NAC website, press, stores etc.?

Future Intervention

- Thinking of the brief asthma intervention trial, what other conditions do you believe this would work well with?
- What else do you think you / Boots could do in relation to this service? E.g. fuller intervention etc.?
- What are your thoughts on offering a similar service for e.g. Osteoporosis, CHD etc.? Any other suggestions?
- If you had the freedom, how would you offer an intervention offer? Explore any suggestions here – and listen for potential barriers etc.
- Do they think there are any barriers?

Thank & Close

APPENDIX H

Pharmacist interview questionnaire v2

Introduction

Thank you for agreeing to take part in the customer research recruitment process for the asthma brief intervention. The customer and pharmacist research is very valuable to us as we aim to use this as a feedback mechanism, and provide useful insights into other programmes going forward. Unfortunately we were not as successful as we hoped to be in recruiting customers into the research programme, and we understand this to be for a variety of reasons. We are very interested in collecting the feedback from the pharmacists involved to capture the experiences and learnings, so that we can amend the process for recruitment in quarter two. We would really appreciate you helping us by spending 15 minutes talking to the interviewer and answering the following questions.

Explain that the interviewer is independent of Boots.

Questions

- Name
- Store Number
- Do you use the asthma brief intervention? If not, why not?
- Do you ask the RCP 3 questions? Give lifestyle advice?
- How frequently would you say you do this?
- Approximately how many people did you approach in store during this time period?
- How many people do you think you could have approached but didn't?
- How many people did you recruit into research?
- Over how many weeks?
- How did you approach customers? [OTC purchase, Prescription, Advice]
- Thinking about all the people you spoke to about this research, what would you say their overall response was? [positive, negative, surprised]
- On a scale of 1 (easy) – 5 (difficult), how easy would you say it was to recruit customers into the research programme

- Did you have any problems with recruiting?
- If so, what were they? [Explore operational and customer issues]
- Are there any recommendations that you would make for future recruitment purposes? What are they?
- Would you be willing to take part in studies like this in the future?
- On a scale of 1-5, how confident do you feel in approaching customers for recruitment? [self efficacy]
- On a scale of 1-5, how confident do you feel in being able to deliver an extended role for pharmacists? What, if anything, needs to change? [self efficacy]
- What pharmacy services have you taken part in the past?
- Gender
- Age
- Position in store
- Is this the store where you are usually based?
- How many years is it since you qualified as a pharmacist?
- Where did you do your pre registration training [hospital, community or industry]?
- Have you ever worked in hospital pharmacy?
- Do you have a Post Graduate Diploma, MSc, etc?

Thank & Close

APPENDIX I

Abbreviations

AD	All Data
AIM	Aerosol Inhalation Monitor
AS	Asthma Service
B	Baseline data
BI	Brief Intervention
BTC	Boots The Chemists
CE	Continuing Education
CHD	Coronary Heart Disease
COPD	Chronic Obstructive Pulmonary Disease
CP	Consistent Positive data
CPPE	Centre for Pharmacy Postgraduate Education
CPS	Cognitive Pharmacy Services
CS	Cognitive Services
DH	Department of Health
EPS	Electronic Prescription Service
FI	Full Intervention
GMS	General Medical Services
GP	General Practitioner
IT	Information Technology
LEP	Leading Edge Practitioner
LPS	Local Pharmaceutical Services
MUR	Medicines Use Review
NAC	National Asthma Campaign
NHS	National Health Service
NPA	National Pharmaceutical Association
NSF	National Service Frameworks
OFT	Office of Fair Trading
OTC	Over The Counter
PC	Pharmaceutical Care
PCCP	Pharmaceutical Care Certificate Programme
PCO	Primary Care Organisation
PCT	Primary Care Trust

PDP	Professional Development Pharmacist
PGD	Patient Group Directive
PIPC	Pharmacists Implementation of Pharmaceutical Care
POM	Prescription Only Medicine
PPA	Prescription Pricing Authority
PSNC	Pharmaceutical Services Negotiating Committee
Q	Quarter (one to four)
QOF	Quality and Outcomes Framework
RCP	Royal College of Physicians
RPSGB	Royal Pharmaceutical Society of Great Britain
SPSS	Statistical Package for Social Sciences
UK	United Kingdom
USA	United States of America

APPENDIX J

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