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Development of a European Centre of Excellence (CoE) for Research in Continuing Professional Development (UPGRADE)

Catherine Fitzgerald ^a, Giuseppe Aleo ^a, Dyanne Affonso^a, Witold Orlik ^a, Paulann Grech ^b, Cristina García-Vivar ^c, Nina Kilkku ^d, Jane Wray ^e, Aisling Culhane^f, Zoltán Balogh ^g, Manuel Lillo-Crespo ^h, Nigel Harrisonⁱ, Mario Gazić^j and Thomas Kearns ^a

^aEuropean Centre of Excellence for Research in Continuing Professional Development, Faculty of Nursing and Midwifery, Royal College of Surgeons in Ireland, Dublin, Ireland; ^bDepartment of Mental Health, University of Malta, Malta; ^cDepartment of Health Sciences, Public University of Navarre, Spain; ^dSchool of Social Services and Health Care, Tampere University of Applied Sciences, Tampere, Finland; ^eFaculty of Health Sciences, University of Hull, Hull, UK; ^fDepartment of Research and Policy Psychiatric Nurses' Association Ireland, Station House The Waterways Sallins, Co Kildare, Ireland; ^gCollege Professor Head of Nursing Department, Vice Dean for Clinical Relations, Faculty of Health Sciences, Semmelweis University, Budapest, Hungary; ^hFaculty of Health Sciences, University of Alicante, Alicante, Spain; ⁱPro Vice Chancellor & Dean, Faculty of Health, Education, Medicine and Social Care, Anglia Ruskin University, Cambridge, UK; ^jPresident of Croatian Nursing Council, University of North, Zagreb, Croatia

ABSTRACT

The European Centre of Excellence (CoE) for Research in Continuing Professional Development (UPGRADE) is a pan-European network of researchers, clinicians, regulators, educators, and professional bodies, established in 2020 through a consensus group of experts, who defined its mission, vision, values, aims and objectives. The Centre's aim is to advance the science of Continuing Professional Development (CPD) for healthcare professionals through research and dissemination of best practices for CPD. Debate among UPGRADE partners and interchange of research data will yield best practices across countries to optimise quality CPD programmes. Collaboration, information exchange and communication among CPD experts will be facilitated through UPGRADE via an online Community of Inquiry (CoI). UPGRADE aims to evolve as a driving force network of academics and health professional leaders in research, education, professional regulation, and clinical practice whose collaborative work ensures quality and safe person-centred care. UPGRADE members are from 22 European countries, represented by strategic leaders in diverse sectors of health, policy, academia, and professional organisations. Three research-working groups constitute the pillars of UPGRADE, which addresses gaps in research, collect and create critical databases, and solidify the effectiveness of CPD.

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interprofessional research

Introduction

On European healthcare frontlines, Continuing Professional Development (CPD) is clearly defined, prominently in two ways. First, the Executive Agency for Health Consumers defined "CPD" as the "systematic maintenance, improvement, and continuous acquisition and/or reinforcement of the life-long knowledge, skills and competences of health professionals. It is pivotal to meeting patient, health service delivery and individual professional learning needs. The term acknowledges not only the wide ranging competences needed to practice high-quality care delivery but also the multi-disciplinary context of patient care" [1]. This definition of CPD is comprehensive; makes salient patient relationship skills, regulatory and ethical developments, research, and inter-professional collaboration [2] which embodies the spirit and vision of UPGRADE.

CPD's importance to healthcare professionals is clearly stated in clause number 15 of the Directive 2013/55/EU of the European Parliament and of the Council of 20 November 2013: "Continuous professional development contributes to the safe and effective practice of professionals [...]. The measures taken by Member States to promote continuous professional development for those professions should be communicated to the Commission, and Member States should exchange best practice in that area. Continuous professional development should cover technical, scientific, regulatory and ethical developments and motivate professionals to participate in lifelong learning relevant to their profession" [3]

These two definitions underpin the multidimensional nature of CPD and evaluate the impact of CPD that the new European Centre of Excellence UPGRADE envisions to capture through its research groups (see [Figure 1](#) and

CONTACT Catherine FITZGERALD  catherinefitzgerald@rcsi.ie  European Centre of Excellence for Research in Continuing Professional Development, Faculty of Nursing and Midwifery, Royal College of Surgeons in Ireland, Dublin, Ireland

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Figure 2). European Union (EU) Member States responsible for implementing CPD in their countries (per local needs, procedures, and regulations), often encounter challenges that have a common global nature, such as the recent global Covid-19 pandemic, the rapidly growing older population with complex healthcare needs [4] and the global health workforce shortage [5]. However, UPGRADE upholds a keen awareness that CPD is not merely a mandatory or voluntary collection of credits. UPGRADE aligns to CPD as a driving force whereby healthcare professionals activate professionally driven processes that effectively transform clinical practice and propel multiprofessional healthcare teams to provide high quality, safe, and efficient care to patients and their families [6].

A significant portion of effective ongoing education and training for health professionals is completed in informal ways. This includes an individualistic collection of courses and/or credits, healthcare team huddles [7] practice-based learning by observing colleagues at work [8] and critical thinking via communicating among health professionals [9] which are often

preferred by health professionals because learning is directly intertwined with their daily practice [6]. The need to capture the effectiveness of this important mode of delivery of CPD continues to be a challenge.

Despite an abundance of studies regarding the importance of CPD in healthcare, evidence of CPD impact on healthcare outcomes is modest. The situation is even more dismal when it comes to evaluating the impact of CPD on health professionals' performance and patients' outcomes. Samuel et al (2021) in their scoping review found many studies reporting outcomes at Kirkpatrick level four (=Results) were not statistically significant and less than 20% mentioned the cost of interventions [10]. This is also evident in a recent scoping review of economic evaluation of CPD by Orlik et al (2022) [11]. This review found that most studies focused exclusively on the cost of CPD activities rather than outcomes. CPD evaluation is crucial, because there is evidence that gains in knowledge are not automatically reflected in clinical practice and improvements in patient outcomes [12,13]. The healthcare industry requires "value for



Figure 1. Conceptual Model - CPD for Health Professionals.

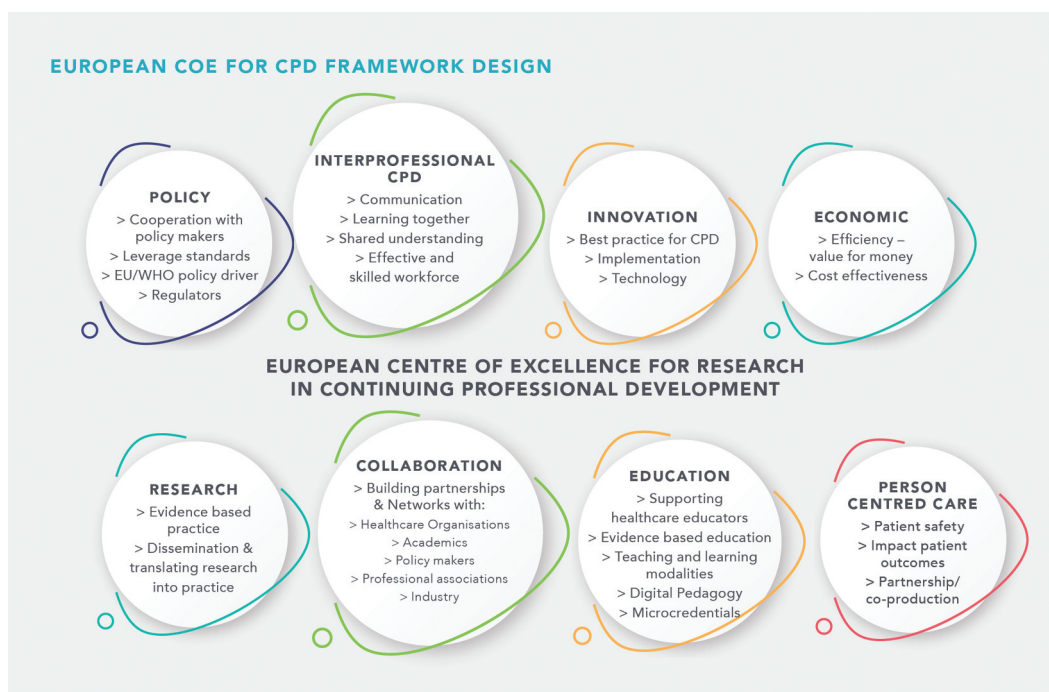


Figure 2. European Centre of Excellence Framework Design.

money” evaluation. The same principle applies to CPD in a healthcare context, as it is a mechanism supporting and assuring the delivery of quality and efficient healthcare system. Jackson et al. (2015) reported that the evaluation of CPD would be beneficial not only for the individual practitioner, but also for teams and organisations, and ultimately patients and their families [14]. The Health Foundation reported a scarcity of models and tools to estimate CPD impact in healthcare [14]. Hence, it is important to develop and apply tools pertaining to CPD evaluation. A recent publication by Allen et al. (2021) described the development, reliability and validation of a new survey instrument to measure the impacts of CPD activities, known as “the CPD impacts survey (CPDIS)” [12]. This tool addresses issues in evaluating the impact of CPD but needs further evaluation.

Another important aspect that deserves further research is the dissonance between health professionals’ actual CPD needs and organisations’ expectations of their professional development, whereby health professionals do not feel supported in terms of time and resources by their managers despite their motivation to improve their skills and knowledge [15]. CPD is instrumental to ensure quality clinical practice and patient safety, thereby it is often integrated in regulators’ registration standards [16] or embedded in the codes of professional conduct and ethics [17]. Yet, implementing CPD is not an automatic process and

mandates the support of healthcare managers [18,19]. Their role is essential, particularly in ensuring favourable work environments (e.g. protected time, sufficient staffing, and resources). Healthcare managers also enable local facilitators that champion and reinforce life-long learning during daily clinical practice, particularly upon completion of CPD activities [18,20,21].

European Response to CPD Challenges: An inter-professional Centre of Excellence

UPGRADE was launched in response to global CPD needs through the specific aim of making research and scholarship its core engine to address opportunities and challenges, such as inter-professional CPD programs [22,23]. The European Centre’s multidimensional foci underscored eight dimensions of priorities: research, policy, innovation, economics, collaboration, person centred care, interprofessional CPD and education (Figure 2)

The global COVID-19 pandemic made salient the importance for health professionals to have updated knowledge and skills to cope efficiently and effectively with unexpected crises, and rapidly change to reinforce the resilience of healthcare system [23,24]. In the context of this global emergency, the enormous value of digital innovations to foster online CPD rapidly emerged.

Patient safety issues, as proliferated throughout the global Covid-19 pandemic, have significant economic

and public health impacts, including social, psychological, and emotional consequences that are common to all countries. Amidst ongoing health workers shortages, migration of health professional from poor countries to richer countries, along with concomitant cross-border mobility of health professionals in Europe, access to information and interchanges regarding CPD best practice is essential to ensure healthcare quality and safety. Knowledge of CPD as a science-based phenomenon, which is rooted in science-driven activities, innovative strategies and practices, are motivators of healthcare transformation involving multiple researchers from multi-disciplinary backgrounds. Thus, UPGRADE harnessed leadership and experts in the field of CPD, for collaboration among stakeholders to enable the sharing of best practices and to identify and address gaps in research. UPGRADE fosters reflection, integration, and flexibility to achieve international priorities for patient safety [25,26].

Therefore, the interprofessional and pan European characteristics of UPGRADE will facilitate building “meta capacities” for health professional development, by improving learning ergonomics, organisational and governance capacity, and supporting the establishment of legal and institutional frameworks in research and higher education [27]. The meta-character of these factors underlies they are facilitators of change rather than direct result of change themselves [27].

Structure and Governance of the UPGRADE Centre of Excellence

Professor Kearns’s work with the World Health Organisation (WHO) workforce leaders and other international leaders was the initial catalyst for his vision to create a new centre of excellence (COE) for

research in CPD. His leadership among international leaders enabled the collaboration needed to grow and develop a new COE.

Initially based at the RCSI’s Faculty of Nursing and Midwifery in Dublin, UPGRADE Centre of Excellence [28] was launched in February 2020, by a Pan-European core group of experts (researchers, clinicians, regulators, professional body representatives) that currently constitute the advisory committee, which underlies its structure of governance (see Table 1). Experts were chosen according to their competencies regarding knowledge, skills, teaching, regulatory and political experience in the field of health professions’ continuing professional development. UPGRADE is currently funded by the RCSI Faculty of Nursing and Midwifery and by research grants obtained through the centre. The purpose of the advisory committee is to provide strategic direction and leadership that propels the Centre to uphold its vision “to advance the science of continuing professional development (CPD) for healthcare professionals in Europe that ensures quality and safe people-centred care”.

The advisory committee functions to attain the following outcomes:

- Promote the Centre within professional networks and with sponsors, scope opportunities to grow the Centre of Excellence, enhance interest and participation and ensure relevance and currency
- Ensure the implementation of tasks and oversee activities relating to the Centre
- Continue to welcome new members across all disciplines
- Monitor and ensure the Centre adheres to effective corporate governance practices and transparency in decision making

Table 1. Governance of the UPGRADE Centre of Excellence.

Advisory Board Members	
Prof. Thomas Kearns	Director of the UPGRADE Centre of Excellence Executive Director of the Faculty of Nursing & Midwifery, Royal College of Surgeons in Ireland, Dublin, Ireland)
Prof. Nigel Harrison	Pro Vice Chancellor & Dean, Faculty of Health, Education, Medicine and Social Care, Anglia Ruskin University, Cambridge, UK.
Prof. Dyanne Affonso	Royal College of Surgeons in Ireland, Dublin, Ireland
Prof. Cristina García-Vivar	Department of Health Sciences, Public University of Navarre, Spain
Mr. Mircea Timofte	President of the Romanian Order of Nurses, Bucharest, Romania and of the European Council of Nurses, Brussels, Belgium
Dr. Lamproz Bizas	Treasurer of the Executive Board of the Hellenic Regulatory Body of Nurses, Athens, Greece
Dr. Nina Kilkku	School of Social Services and Health Care, Tampere University of Applied Sciences, Finland
Dr. Paulann Grech	Department of Mental Health, University of Malta, Malta
Prof. Zoltán Balogh	Head of Nursing Department, Vice Dean for Clinical Relations, Faculty of Health Sciences, Semmelweis University Budapest, Hungary
Dr. Aisling Culhane	Research & Policy Advisor, Psychiatric Nurses’ Association Ireland, Sallins, Ireland
Dr. Mario Gazić	President of Croatian Nursing Council, University of North, Zagreb, Croatia
Professor Theodoros Koutroubas	Faculty of Economic, Social and Political Sciences and Communication, Université Catholique de Louvain, Belgium Director General of the European Council of the Liberal Professions (CEPLIS)

- Review research costings, approve budgetary spend and maintain budget oversight
- Foster interprofessional collaboration to advance the Centre's network aims.
- Regularly review overall performance against key performance indicators (KPIs) and strategic goals.
- Recommend advisory committee objectives for 2021/2022.
- Monitor and review the progress of research on a regular basis and benchmark performance against relevant standards.
- Review risk register/audit process for risks
- Supporting Public and Patient Involvement throughout the Centre's activities

A written report on the centres activities is provided to each Faculty of Nursing and Midwifery board meeting and an annual update is also provided for the Faculty of Nursing and Midwifery annual report 2020/2021 [29]. The Centre Director (TK) oversees planning and implementation of the evaluation pertaining to governance via bi-annual reviews, which promotes 'Best Practices and Policies' in sustaining the Centre over time.

The Centre of Excellence was an important step in developing the evidence base through cross-disciplinary collaborative research activities and knowledge exchange. The Centre's current member organisations are from 22 countries including Albania, Belgium, Croatia, Faroe Islands, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Malta, Netherlands, Portugal, Romania, Slovenia, Spain, UK, and USA, ensure global relevance and outreach. The Centre welcomes new members from all healthcare disciplines, including CPD member organisations. Currently, there is no membership fee to join the centre.

Objectives of UPGRADE Centre of Excellence

The primary objective of UPGRADE is twofold: a) develop collaborative research agenda to further understanding the impact of CPD activities on patient safety, health outcomes, and on healthcare organisations and their staff, and b) to facilitate knowledge exchange about CPD best practices across countries.

Secondary objectives include:

- Develop a shared understanding of what CPD means at a European level and ongoing development of standards for CPD.
- Advance understanding of CPD's economic impact to inform development of sustainable and cost-effective CPD.

- Create a European platform for health professional CPD to facilitate multi-stakeholder collaboration, engagement and exchange knowledge of best practices for CPD (i.e. a Community of Inquiry).
- Enable access to a global network of researchers, educators, clinicians, and advocacy groups in CPD for health professionals.

UPGRADE has an advisory board of over 10 experts that meet online, every 3 or 4 months, to receive updates on the research working groups and to provide guidance and feedback to the core UPGRADE team (Table 1).

Research-working Groups

Three research-working groups (RWG) activate the CoE structure. The aim of the RWGs is to organise, coordinate and develop key CPD research activities. The Centre collaborates with experts in specific fields to guide its initiatives. Interdisciplinary collaboration among research teams and stakeholders permeates each working group.

This newly developed centre upholds the forward thinking and changes that characterise the quest for excellence on the global landscape. Specifically, the movement from only focusing on outcomes of research findings towards broader, multi-dimensional consequences of a COE actions, known as "impact", evident from publications by the Institute of Medicine (IOM) in the US [30] and other international organisations such as the American Medical Association (AMA) Council on Medical Education and the American Nurses Credentialing Center (ANCC). The AMA has established a set of criteria for international agreements, which requires specific criteria for any CME/CPD activities to include the assessment or evaluation of the quality of the activity and how well it met its purpose and/or objectives [31]. The ANCC is an organisation that promotes excellence in nursing CPD in the US [32]. The ANCC provides the opportunities for the US and non-US organisations (e.g. health ministries, nursing organisations, and employers) to obtain ANCC accreditation of CPD activities for nursing. Among numerous criteria required to obtain ANCC accreditation, applicant organisations need to identify strategic goals and quality outcome measures, and evaluate outcome measures pertinent to enhanced nursing CPD or patient outcomes. Thus, the vernacular of impact frames the research strategies of working groups described below.

Table 2. Strategies and actions developed by the research-working groups of UPGRADE.

Strategy Enablers	Strategic Actions
1) Develop and strengthen collaborative research projects among European and national partners.	<ul style="list-style-type: none"> ● Implement an outcomes and policy focused programme of CPD research. ● Conduct, build and facilitate research via networks among academic and diverse CPD experts. ● Influence and leverage standards to drive change via evidence-based practice and data towards a shared changed vision of CPD. ● Be a centre of CPD best practices, inclusive of information exchange for how CPD is developed and delivered that embraces health information technology. ● Translate research into practice; disseminate research findings to improve patient outcomes and patient.
2) Building capability and Capacity, by enhancing management systems, organisational effectiveness, and digital infrastructure.	<ul style="list-style-type: none"> ● Enhance management systems. ● Improve organisational effectiveness through continuous process improvement. ● Continue to invest significantly in our digital infrastructure. ● Enhance our programme through internal and external stakeholder engagement.
3) Partnerships and collaboration with policy makers are critical success factors of UPGRADE	<ul style="list-style-type: none"> ● Create a strong culture of partnership with existing and new strategic alliances and partners. ● Collaborate with policy makers to make an impact at EU level. ● Strengthen national and international collaborations with a wide range of partners

RWG #1: Evaluate Impact of CPD

RWG #1 Current research has mixed findings regarding CPD impact. A priority concern is that existing CPD activities do not produce meaningful long-term change in the behaviours and attitudes of healthcare professionals and improvements in healthcare outcomes [13]. Although a plethora of studies have examined CPD participation, user satisfaction and knowledge acquisition very few studies have evaluated its impact on clinical performance, healthcare outcomes and patient safety. Therefore, the aim of this RWG is to evaluate the impact of CPD activities on clinical performance, healthcare outcomes and patient safety but also how managers of health organisation may influence the success or failure of CPD programmes. The relation between data on patient healthcare outcomes and CPD activities will be studied.

RWG #2: Digital Pedagogies for CPD

Digital innovation has created novel ways of delivering CPD programmes and is constantly evolving with new applications in the field of healthcare. Computers, mobile devices and Internet access provide powerful teaching, learning and knowledge acquisition opportunities in terms of technology-enhanced teaching and learning for CPD. The aim of RWG #2 is to investigate how digital technologies facilitate CPD for healthcare professionals and how different approaches to teaching and learning can be applied to educational approaches for CPD.

RWG #3: Economic Impact of CPD

Knowledge regarding the expense and value associated with educational methods informs decisions and choices about CPD activities for healthcare professionals, healthcare organisations as funders and the educational institutions that provide CPD programmes. Such knowledge informs the sustainability and efficiency of CPD programs. In these times of changing healthcare, economic restraints within healthcare services and workforce shortages, it is essential that sustainability and efficiency of CPD programs be a fundamental part of the healthcare service. Despite calls for increased economic accountability in health professional education, economic evaluations of CPD programmes remain a challenge with a limited number of published studies in this field. RWG #3 investigates the economic impact of CPD on healthcare organisations and the return on investment. Experts in health economics comprise this group.

The work of the three RWGs is supported by three main strategic enablers and their corresponding strategic actions. The first strategy is to develop and strengthen collaborative research projects among European and national partners. Second, is building capability and capacity, by enhancing management systems, organisational effectiveness, and digital infrastructure. Third, to promote partnerships and collaboration with policy makers, which are critical success factors of UPGRADE (Table 2)

Conclusions

UPGRADE will drive forward collaborative research through participating European members' countries

generating diverse impacts such as health professionals' preparedness for emergencies and healthcare challenges, patient safety, healthcare outcomes, and high-quality care. European partnerships and stakeholders will empower CPD research initiatives that lead to dissemination of best practices, innovation, resources, policies, and knowledge. Thereby synergy towards shared goals in the European context of health care systems among its health professional workforce flows. A European Centre of Excellence is timely to achieve collaborative research discoveries, which reveal multidimensional CPD impacts and its applications for "Best Practices" across countries and thereby influences globally.

The benefit of collaboration with European and International partners cannot be underestimated. Through collaboration, resources are pooled, ideas shared, relationships and partnerships proliferate. Amidst current gaps in CPD research, UPGRADE collaboratively addresses these gaps, support healthcare professionals and their organisations and improve healthcare outcomes and professional practice.

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Disclosure statement

The authors declare that they have no known competing financial interests or personal relationships that could appear to influence the work reported in this paper.

ORCID

Catherine Fitzgerald  <http://orcid.org/0000-0002-3542-3869>

Giuseppe Aleo  <http://orcid.org/0000-0002-1306-3364>

Witold Orlik  <http://orcid.org/0000-0002-9405-5357>

Paulann Grech  <http://orcid.org/0000-0001-5485-0893>

Cristina García-Vivar  <http://orcid.org/0000-0002-6022-559X>

Nina Kilkku  <http://orcid.org/0000-0003-1207-0682>

Jane Wray  <http://orcid.org/0000-0001-5959-6978>

Zoltán Balogh  <http://orcid.org/0000-0002-1202-1111>

Manuel Lillo-Crespo  <http://orcid.org/0000-0003-2053-2808>

Thomas Kearns  <http://orcid.org/0000-0001-5396-854X>

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