REVIEWS

US and International Health Professions' Requirements for Continuing Professional Development

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There is not a comprehensive global analysis of continuing professional development (CPD) and continuing education (CE) in the major health professions in published literature. The aim of this article is to summarize findings from the US and international literature on CPD and CE practices in the health professions, comparing the different requirements and frameworks to see what similarities and challenges exist and what the future focus should be for the pharmacy profession. A literature review was conducted on CPD and CE in selected health professions, namely pharmacy, medicine, nursing, ophthalmology, dentistry, public health, and psychology. Over 300 papers from the health professions were retrieved and screened. Relevant articles based on the abstracts and introductions were summarized into tabular form by profession, minimum requirements for licensure, nature of credits, guidelines on how to record CE and CPD activities, and specific CE and CPD definitions. Wide variations exist among the health professions. Lessons learned from this information can be used to further clarify and define the role of CE and CPD and self-directed lifelong learning in pharmacy and the health professions.

Keywords: continuing professional development, health professions, framework, requirements

INTRODUCTION

Appropriate education during pharmacy school prepares individuals to become pharmacists. No pharmacy program can prepare students with all the knowledge, skills, and abilities they will need during the course of their career. In today's ever-changing world of medical and technological advances, it is critical for pharmacists to recognize and develop the habits and skills of lifelong learning.

According to the International Pharmaceutical Federation (FIP), continuing professional development (CPD) is "the responsibility of individual pharmacists for systemic maintenance, development and broadening of knowledge, skills and attitudes, to ensure continuing competence as a professional, throughout their careers."[1] Ultimately, CPD is the self-directed lifelong commitment of pharmacists to ensure that patients are provided with pharmaceutical care in a safe and effective way. Among other responsibilities, there remains a crucial obligation and priority for pharmacists to ensure their patients' safety, well-being, and best interest.[2]

The importance of continuing education (CE) has been emphasized in pharmacy for many years. Continuing education can be defined as a structured learning experience that includes various modules and activities in which practicing pharmacists can engage to maintain professional competence.[3] Boards of pharmacy regulate pharmacy practice in the United States, including in all 50 states, the District of Columbia, Guam, and Puerto Rico. Boards of pharmacy require a specified number of hours of board-approved CE in order for pharmacists to renew their license to practice.[4] Florida was the first state where CE was mandated for pharmacists in 1965.[5] It is very important to understand the difference between CE and CPD and realize that the purpose of CPD is not to replace CE. In fact, CE is an integral part of a professional's CPD. The purpose of CE is to keep up to date with the new concepts and ways of delivering pharmaceutical services; whereas, the purpose of CPD is to recognize and address those and other learning needs by reflecting

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on professional practice, creating and implementing a plan, and more importantly, evaluating the success in meeting those needs.[6]

The CPD approach has been described as a 4-stage cycle, consisting of Reflect, Plan, Learn (previously Act), and Evaluate (Figure 1). Record and Review is an integral part of all 4 stages. Some have described CPD as a 5-phase cycle with Record as the separate, fifth stage.[6]

Health care practitioners' personal reflection on their professional practice is an essential part of learning in any healthcare field. They can reflect on their practice in 1 of 2 ways: scheduled or unscheduled. Scheduled reflection ("on practice") is done periodically (eg, annually or biannually), whereas unscheduled reflection ("in practice") is completed in response to day-to-day experiences in practice.

Planning is done after learning needs are identified during the reflection stage. A realistic plan can be developed to meet both short-term and long-term learning needs and goals. Typically this plan fits the individual's learning style and includes a set timeline and priorities.[7]

The Learn or Act phase entails implementing the plan. Continuing education comes into play at this stage of CPD. Learning can be achieved by outcome-driven activities. However, the activities, which typically have a predefined outcome, can be structured (eg, CE activities, short courses, certificate programs, and live and online programs) or unstructured (eg, discussions with colleagues or mentors, expert counsel, and other professional activities).[7]

The Evaluate phase consists of reflecting on each of the aforementioned stages of the CPD cycle. Evaluation should occur at least annually to ensure not only appropriateness and effectiveness of the plan and its implementation, but also the outcomes and impact of the learning.[7] Evaluation does not necessarily have to be done only by the practitioner; it can be supplemented by the practitioner's peers, supervisor or manager.[6]

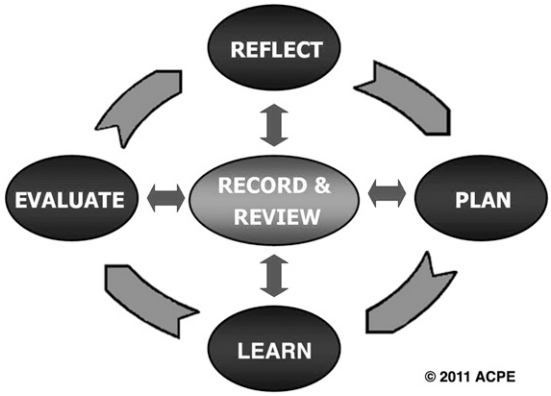

Figure 1. Continuing Professional Development Cycle. Reprinted with permission of the Accreditation Council for Pharmacy Education, Chicago, IL.

Alongside the sequential stages of the CPD cycle, documentation continues to be an integral part. Documentation serves as a tool for a professional to have all of their reflection, planning, learning, and evaluation readily available to use when needed, either to provide evidence of learning, professional development, practice changes, organizational improvement, or patient outcomes, or to support and guide future learning (hence, Record and Review). Documentation is frequently in a portfolio format, either electronic or paper-based.

While the traditional CE approach is still valuable in and of itself, CPD is essential to evaluate and document the outcomes achieved. Continuing professional development requires healthcare practitioners to take responsibility for their own learning and to identify and improve the knowledge, skills, and attitudes necessary to maintain their competence. As mentioned in FIP's *Global Pharmacy Workforce and Migration Report*, "competence is the first and most fundamental responsibility of all healthcare providers and must be reinforced throughout the years of practice."[3]

According to the Accreditation Council for Pharmacy Education, North Carolina was the first state board of pharmacy to allow pharmacists to adopt a CPD approach as an alternative for completing the necessary CE hours to maintain their license.[8] During 2006-2007, a 5-state CPD pilot program for practicing pharmacists was undertaken. The participating states were Indiana, Iowa, North Carolina, Washington, and Wisconsin. The primary purpose of the pilot was to stimulate a shift in the pharmacy profession towards implementation of a CPD approach. The secondary purpose was to evaluate the effectiveness and feasibility of such an approach as well as the tools and instruments developed for the pilot. The research study consisted of 232 pharmacists who were randomized into control and study groups, where pharmacists participated in several educational interventions and completed both a prestudy and poststudy survey.[5] This study was the first in the United States to introduce and examine the effectiveness and feasibility of a structured CPD approach for the professional development of pharmacists. As a result of this study, the investigators concluded that with consistent training, support, and follow-up, pharmacists could develop the knowledge, skills, and attitudes to adopt a CPD approach to lifelong learning.[5]

Since that pilot study, several studies have been published evaluating the development and impact of some or all components of CPD in the United States. McConnell and colleagues concluded that pharmacists were more likely to have improved learning behaviors with a CPD

approach than those who participated in continuing professional education (CPE).[9]

Bellanger and colleagues determined that most pharmacists correctly identified the major components of CPD but were not convinced that developing and maintaining a written plan or maintaining a portfolio would increase their ability to meet patient needs.[10]

Following adoption in 2009 of CPD as an alternative to the traditional approach of pharmacists earning a minimum number of hours of CE to maintain their license, the State of North Carolina conducted a random CPD portfolio audit.[8] As a result of this audit, the State concluded that "pharmacists completing CPD training are capable of following the CPD process with some potential challenges in the documentation aspect."

Development and implementation of the CPD framework in the profession of pharmacy is still in progress. Several countries such as Australia, Canada, Great Britain, and New Zealand have begun adopting CPD approaches.[6,8,11] Australia currently has both CE and CPD systems in place for pharmacists. The Pharmaceutical Society of Australia has designed a recommended framework for the recording of CPD. However, each jurisdiction decides how the CPD requirement has to be demonstrated.[12] Canada's largest province, Ontario, has a 2-part registration system in place that determines the requirements for pharmacists' lifelong learning. Each year pharmacists must elect themselves as Part A or Part B pharmacists. Part A pharmacists are involved in direct patient care, whereas Part B pharmacists are involved in non-direct patient care.[13] The practice of pharmacy in Ontario is governed by the Ontario College of Pharmacists (OCP). Pharmacists from both Part A and Part B have to maintain a learning portfolio of continuous professional development that is then submitted to the OCP.

In Great Britain, the Royal Pharmaceutical Society and the General Pharmaceutical Council are the 2 professional bodies responsible for pharmacy.[14] Prior to September 2010, the Royal Pharmaceutical Society of Great Britain was responsible for both the professional and regulatory aspects of pharmacy. The need for CPD was first identified in Great Britain in 1996, and as a result, CPD was piloted in 1999. Following the pilot, CPD was introduced to the pharmacy profession in Great Britain with an approved recording format introduced from 2002-2004.

Continuing professional development has been mandatory since April 2006 in New Zealand. The concept of CPD was first introduced in New Zealand in 2001, followed by a 4-year pilot program leading to finalized requirements for CPD in 2005.[13] The Pharmaceutical Society of New Zealand's CPD program, ENHANCE, is the only recertification program for pharmacists to demonstrate that they have maintained their practice competency, and is accredited by the Pharmacy Council of New Zealand.[15]

The objective of this article is to summarize work done towards various CPD frameworks and approaches in different healthcare fields such as dentistry, medicine, nursing, pharmacy, and psychology. While CPD appears to be a simple concept, its implementation holds many challenges. As of the time of this review, the authors could not find a comprehensive global analysis of CE and CPD in the major health professions. This literature review will focus on results and implications that have arisen from implementing a CPD framework in various healthcare fields, which in turn will help inform future educators and accrediting and regulatory bodies in various healthcare fields.

LITERATURE SEARCH AND FINDINGS

The authors searched the literature using PubMed, Ebsco, WileyOnline, and Science Direct to identify published studies discussing CPD. The authors considered all human research articles, review articles, and meta-analyses that were published on or before February 1, 2013, and were either published in English or could be translated into English. Editorials, comments, letters, and news articles were not considered. The search strategy included the following MeSH terms: continuing professional development, continuing development, CPD, dentistry, medicine, nursing, and pharmacy. Different combinations of these keywords were used. The search yielded 150 potential articles. After screening titles, abstracts, and introductions for content relevant to CPD or CE frameworks, all nonapplicable articles were eliminated. Thirty-eight research papers and reviews were found to be applicable to the review purpose. After consulting with other healthcare professionals, an additional 5 manuscripts were added to this review. Simultaneously, websites with several countries' professional standards and recommendations regarding CPD were reviewed and summarized. A table was used to organize information on each country. The data were shared with team leaders on FIP's Education Development Team, who provided feedback and comments. Representatives from the different professions and different continents also contributed comments for validation and verification of information.

The main focus of this article was on published literature. A comprehensive review of every professions' and countries' website on CE and/or CPD was not feasible. We found that several accrediting and regulatory bodies existed for different health professions in each country. Not all countries reported complete, current

specific requirements for each health profession.[16] The respective professions' information obtained from the literature and websites on major countries using CPD are summarized in Table 1, while observations based on additional information obtained from the literature are summarized in the discussion and in Table 2.

The current expectations for countries leading in CPD among the health professions as published on various websites and in the literature are shown in Table 1. The terms and definitions used varied tremendously from country to country and the requirements were not uniform. In some instances, the term continuing professional development appeared to be used interchangeably with continuing education. Furthermore, some countries used *continuing* professional development, while others used *continuous* professional development; Qatar used continuing *pharmacy* professional development. The majority of systems were based on hours or credits earned, and focused on completion of structured educational activities. However, some systems allowed a mix of structured and unstructured learning activities (Table 2). Several examples were found in the literature indicating some movement toward a greater emphasis on self-direction, self-assessment of learning needs and goals, direct relevance of the learning to the practitioner's daily practice, and practice change.

DISCUSSION

Based on the diverse nomenclature and use of terminologies among health professionals depicted in Table 2, it would be advantageous to have some consensus and consistency on terminology as well as what is expected

Table 1. Summary of CPD Requirements in the Countries Leading in CPD

Country	Dentists	Nurses	Pharmacists	Psychologists	Physicians
Australia	Must complete a minimum of 60 hours of CPD activities over 3 years.[17]	At least 20 hours of continuing nursing professional development per year.[18,19]	Forty CPD credits for the 12 months ending 30 Sept 2013. Accredited pharmacists must obtain an additional 20 CPD credits within the 12-month CPD period.[20]	Must complete 30 hours of CPD activities for the registration year, and of the 30 hours, at least 10 hours must be peer consultation.[21]	Most must complete a minimum of 50 hours of CPD per year. Separate requirements exist for those holding limited registration or specific area of practice.[22]
Canada	50-90 hours of CPD per 3-year cycle. All 10 provinces have their own mandatory requirements.[23]	Published data missing.	Every pharmacist must document in the learning portfolio and participate in the Practice Review Process at least once every 5 years for Ontario.[24]	Published data missing.	Maintenance of Certification (MOC) program requires all members to complete 400 credits of CPD in a 5-year cycle.[25,26]
Great Britain	At least 250 hours of CPD every 5 years. At least 75 hours need to be "verifiable" CPD.[27]	At least 35 hours of CPD learning activity relevant to practice every 3 years.[28]	Nine CPD entries per year.[3]	Minimum amount of time needed for engagement in CPD is between ½ and 1 day per month.[29]	Published data missing.
New Zealand	At least 80 hours of verifiable CPD hours. Minimum 12 peer contact activities over every 3 years.[30]	Sixty hours of professional development per 3 years.[31]	Minimum of 20 points annually and 70 points in 3 years.[32]	Published data missing.	Fifty hours of CPD per year.[33]

Table 2. Continuing Professional Development Requirements for Health Professions

Country	Requirements
	DENTAL PROFESSIONALS[a]
Canada[23]	Compulsory. Fifty to ninety hours every 3 years. Each province sets its own requirements. It is voluntary in Nunavut Territory. CPD requirements are unknown for Northwest Territory and Yukon Territory.
China[34]	Compulsory. Certain hours in a 5-year period.
Latvia[23]	Compulsory. Two hundred fifty hours in 5-year period. Twenty hours must be verifiable. One hundred hours (40%) must be from attendance at academic lectures organized by Latvian Dental Association (LDA) and Institute of Stomatology.
United Kingdom[35]	Compulsory. Two hundred fifty hours in 5-year cycle. Seventy-five hours must be verifiable. Recommends completing 50 hours, including 15 verifiable hours per year.
United States[23]	Compulsory in 45 states for dentists. Forty-seven states for dental hygienist, 12 states for dental assistants (nurses). Ranges from 100 hours every 5 years to 20 hours every 2 years depending on state.
France[36]	Voluntary. No relicensure requirements. Encouraged to take 2 modules of continuing education a year.
Germany[36]	Voluntary. No relicensure requirements.
Hong Kong[37]	Voluntary. In the process of becoming mandatory.
India[23]	Voluntary. In discussions about mandatory processes.
New Zealand[37]	Voluntary. Developing new Code of Practice.
Philippines[23]	Voluntary. Previous policy was voluntary 60 points of CPD every 3 years, but this was removed.
Singapore[23]	Voluntary. Reported plan to become mandatory in 2005.
Thailand[23]	Voluntary. Work group within Dental Council of Thailand to develop annual CPD requirements.
	NURSING PROFESSIONALS[b]
Australia[38,39]	Mandatory. Twenty hours of CPD, relevant to nurses' practice.
Canada[40]	Mandatory.
United Kingdom[41]	Mandatory. Thirty-five hours over 3 years.
United States[42]	States compulsory: Alabama, Alaska, Delaware, Kansas, Kentucky, Louisiana, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Mexico, Ohio, Texas, Utah, West Virginia, Wyoming. Requirements vary from state to state and by what type of nurse.
	PHARMACISTS[c]
Canada[10]	Certain provinces have mandatory CPD.
United Arab Emirates[43]	Varies from emirate to emirate whether it is mandatory or not. Abu-Dhabi requires 20 CE hours.
United Kingdom[14]	Mandatory. Nine CPD entries/records each year.
United States[5]	Mandatory. Minimum number of CPE in specified period, varies from state to state.
	PSYCHOLOGISTS
United States[44]	Forty-four states are compulsory. Most common requirement is 40 hours of CPD in 2-year period.
Scotland[45]	Mandatory. Chartered psychologists must complete 40 hours of CPD per year. Four of the 6 National Occupational Standards categories must be met.
United Kingdom[46]	Mandatory. Varies by professional bodies and societies on the requirements.

(*Continued*)

Table 2. (*Continued*)

Country	Requirements
	PHYSICIANS
Canada[16]	Voluntary. Colleges have requirements if you would like to be a member and acquire a certificate.
	Royal College of Physicians and Surgeons of Canada: 400 credits of CPD in 5-year cycle. Weighted system, 1 credit=1 hour of activity, some activities are given more credit.
Croatia[47]	Mandatory. One hundred twenty points in 6-year license cycle (20 points each year). Sixty points can be from the same type of CME/CPD activity.
Cyprus[47]	Voluntary. One hundred fifty points in 3-year cycle. Seventy-five points may come from the physician's own specialty. Provided certificate of successful participation.
Egypt[47]	Voluntary. CME counts toward doctor's additional qualifications.
France[47]	Voluntary. CME/CPD: 150h/credit points in 3 years.
Greece[47]	Voluntary. CME is considered an ethical obligation. There are no specific requirements.
Israel[47]	Voluntary.
Italy[47]	Mandatory. Weight point system (credits change according to activity). Ten credits = max points earned per day.
Malta[47]	Voluntary.
Portugal[47]	Voluntary. Fifteen days paid leave is allowed per year for CME after 10 years of service.
	Free TV channel for doctors with CME activities.
Romania[47]	Mandatory. Two hundred credits within a 5-year cycle.
France[47]	Voluntary. Legal regulations have been introduced.
Serbia[47]	Voluntary. A meeting was held in 2006 to discuss legal regulations for CME and the Serbian Medical Chamber awarding a certificate for CME after completing 100 points every 5 years. Currently, CME is established in the Serbian Society of Medical Doctors. It is voluntary to be a member of the Society.
Slovenia[47]	Mandatory. Seventy-five credits of postgraduate education. Credit point system is similar to European Accreditation Council for Continuing Medical Education European Union of Medical Specialities (EACCME UEMS). Recertification every 7 years.
Spain[47]	Voluntary.
Turkey[47]	Voluntary.
United States[25]	Voluntary. American Board of Medical Specialties (AMBS) has set the standards for recertification.
	Some medical specialty boards, medical societies and associations, health maintenance organizations, insurers, partners in medical practices may require CME for regular recertification.
United Kingdom	Accident and Emergency physicians: 50 credits over 5-year period. Half credits should be through clinical subjects. One hundred hours of reading per year has been recommended.[48]
	Radiographers: mandatory in 2001. Exploring ways to implement in 2005.[49]
	Royal College of Pediatrics and Child Health: started CPD in Jan 2000. Two hundred fifty credits over a 5-year period. Equal internal and external CPD.
	1 hour=1 CPD credit. Eighty percent must be clinically relevant. Maintain activities in portfolio.[50]

[a] For Australia, Malaysia, and Sweden, articles were found but inadequate details were provided to meet the criteria for inclusion.
[b] For the Netherlands, an article was found but inadequate details were provided to meet the criteria for inclusion.
[c] For Australia, New Zealand, Singapore, and South Africa, articles were found but inadequate details were provided to meet the criteria for inclusion.

in certain professions to emphasize the need for continuing professional development. Regulatory models should be designed based on the best available evidence of which approaches and strategies are effective in achieving meaningful learning and professional development, improved performance and practice change, and ultimately improved patient care. Based on the literature review, requirements for CE and CPD were not always evidence based. More research is needed to determine what is effective and appropriate.[51]

During the course of compiling this information, the authors could not find published examples of documented improvement of outcomes when reflection, planning, evaluation, and learning were used in programs in several countries with one exception. The work published by McConnell and colleagues demonstrated positive changes in behavior resulting from the adoption of the CPD model in a setting where the traditional CE model had been used.[9] The authors therefore propose that pharmacy programs use the CPD model, which already has been adopted by the International Pharmaceutical Federation (FIP).[1] As described above, the model requires the pharmacists to reflect, plan, learn, evaluate, record, and review the documentation for their personal CPD. This model also uses all the strategies that have been found to be effective in bringing about learning and practice change.[9] The authors believe that a discussion among stakeholders from the different global entities could begin that conversation and disseminate it profession wide.

Detailed findings of this literature review were shared at the 2013 FIP World Pharmacy Congress CPD/CE focus group meeting to invite key global leaders in this area to provide feedback and discussion, and to encourage continued publications and agreement on similar language around the definition of and process for CPD. Recommendations and findings from this focus group will be shared at the 2014 FIP congress.

In the United States, initial discussions have taken place within the pharmacy profession about defining CPD and what competencies and skills are needed to accomplish self-directed lifelong learning. Several components of the CPD process are included in the current Center for the Advancement of Pharmacy Educational Outcomes for professional students.[52] Other countries that have not initiated the process could begin to adopt similar language from countries that have more experience with these approaches. Ultimately, clarity around expectations for CPD and CE will enhance the ability to maintain self-directed lifelong learning habits while developing competencies in the rapidly changing and evolving world of health care. All professions should develop a framework to support lifelong learning to ensure a continued positive impact on patient care and safety over the next several decades.

CONCLUSION

Even though CPD has advanced in the last 5-7 years, the published literature is not reflective of current activities. While there is a lot of information on this topic in the literature, only 25% of the articles that met the initial search criteria provided the type of information the authors were seeking. This could be a result of limited funding in the area of CPD and CE. For several countries and professions, there is a reasonable level of publication on these topics, but for other countries and disciplines little has been published on the requirements for CE and CPD, the rationale or evidence for the requirements, or the effectiveness of the system in terms of achieving its intended purpose. Questions still remain regarding the need for voluntary or mandatory CPD.[38] Health professions in general and pharmacy in particular are encouraged to publish more work on CE and CPD.

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