Continuing Professional Development/Continuing Education in Pharmacy: Global Report

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Developing the heath care workforce of the future:
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Colophon

This report together with the questionnaire and data from the Continuing Professional Development/Continuing Education in Pharmacy: Global Report are available for electronic download from: www.fip.org/educationreports

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Contents

Foreword

Human resources for health are at a critical low. The World Health Organization estimates that the current shortage of health workers is in excess of 7.2 million worldwide and by 2035 the estimates are that the shortage will be 12.9 million. Pharmacists in particular are lacking in the workforce in many countries, additionally education and training needs to be strengthened globally.

Pharmacy needs a vision, globally, that encompasses the sharing of experiences, gathering of evidence and collaborative guidance to facilitate country-level initiatives.

FIP*Ed* is the name given to the component group of FIP that is bringing together all of FIP's efforts in transforming and strengthening professional pharmacy and pharmaceutical sciences education globally. It is organised as a cross-cutting initiative that includes both Boards of FIP as well as its governance bodies. More than one hundred practitioner and scientific educators and over one hundred and thirty deans of schools of pharmacy from throughout the world are involved in Congress programming on educational issues. The FIP*Ed* team prepares technical and policy papers on key areas of pharmaceutical education, contributes to an on-line international journal on pharmacy education, gathers leaders in pharmaceutical education to establish a future agenda for transformation of pharmaceutical education and links educational policy issues to national needs for workforce development, capacity building and quality assurance.

All of these initiatives are closely tied to enhancing appropriate medication use for the improvement of medication use in global health systems. With a strong emphasis on competency development across the continuum of pharmaceutical workforce for practice and science, the FIP*Ed* Action Plan articulates a five year commitment to a number of key priorities, including the planning for and execution of a global conference on the desired education for future pharmacy practitioners and scientists.

Education is the foundation for advancement in both pharmacy practice and the pharmaceutical sciences and the strengthening of educational programmes in the global community of universities and training centres are integral parts of FIP's Vision for 2020. Expansion of pharmacists' roles and scopes of practice to assure safe, effective and efficient medication use is strongly reliant on educational programs that are socially accountable and meet international standards for quality. In that vein, FIP*Ed* has partnered with the World Health Organization (WHO), the United Nations Agency for Education and Social Development (UNESCO) as well as several universities and national organizations.

FIP*Ed*'s Five Year Strategic and Action Plan is now available in several languages. It is an exciting commitment to improving medication use through a properly educated and trained pharmaceutical workforce.

The Global Report on Continuing Professional Development/Continuing Education in Pharmacy is the first publication of its kind to provide a baseline on the current status, activities and trends of professional development and lifelong learning in pharmacy and pharmaceutical sciences. We share this knowledge from our Members to our Members and beyond, to trigger dialogue and action towards stronger policies and continuing education for health. We hope that this will stimulate collaborations/partnerships between all stakeholders, including professional organisations and universities taking up the important role of advocating transformation of continuing professional development education at the national level.

Henri R. Manasse Jr, PhD, ScD (Hon), FFIP
FIP Education Initiative (FIP*Ed*) Steering Committee Chair

PART 1

KEY MESSAGES

The concept of Continuing Education (CE) has been around for decades, but the term Continuing Professional Development (CPD) is relatively new. In 2002, the International Pharmaceutical Federation (FIP) defined CPD as *"the responsibility of individual pharmacists for systematic maintenance, development and broadening of knowledge, skills and attitudes, to ensure continuing competence as a professional, throughout their careers."* This is an on-going cyclical process involving: self-appraisal, developing a personal learning plan, taking action or implementing the learning plan, and evaluation.

In a recent literature review on CPD and CE in health professions across the globe, it was observed that while many countries have attempted to incorporate this cyclical approach to lifelong learning, there is significant variability between the frameworks of CPD and CE in each country.

Evolution in the approach to CPD/CE continues to occur as countries learn from their implementation experiences. Despite the advancements of CPD/CE in the last 5-7 years, this review indicates that the published literature does not fully reflect current activities, and professions are encouraged to publish more work on CPD/CE.

In 2013, at the FIP congress in Dublin, a focus group of CPD/CE leaders and other interested participants was convened. The main focus was to report the findings of the literature review and advocate for further literature publications. The discussions centred on how different countries could learn from one another as experience is gained from implementing CPD/CE concepts.

This technical report resulted from the discussions, as a resource to share the current information, and to assist countries at different points on their continuum of learning about and implementing Countinuing Professional Development principles.

The FIP*Ed* Education Development Team (EDT) created a survey to identify quantitative and qualitative information on CPD and CE globally. Experts were invited to submit country case studies by summarising information on the following: current drivers at the national or regional level; the status of implementation relative to FIP's CPD/CE Framework; challenges faced; lessons learned; tools that helped in each CPD stage; plans for the future; and links with national or regional strategies for health care services/delivery.

Data was gathered for the Continuing Professional Development/Continuing Education Report from 66 countries and territories, responses involved quantitative and multiple-choice items concerned with continuing professional development, continuing education and registration processes. The sample comprises 66 countries and territories, with some under-representation from African nations and good representation from Europe and The Americas.

A full summary of findings from the survey and case studies are presented in this technical report. The intent of the CPD/CE Domain of FIP Education Initiative (FIP*Ed*) is to act as a resource for organisations to design or revise policies to align with the current global perspective around the continuing development of competent professionals, so they are able to perform excellent service, teaching, research and practice.

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PART 2

INTRODUCTION

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Summary

• The International Pharmaceutical Federation (FIP) encourages the principle that pharmaceutical organisations around the world help to provide pharmacists with opportunities for Continuing Professional Development, motivate pharmacists to participate in Continuing Professional Development, and establish quality assurance systems for Continuing Professional Development.

• Several studies addressing pharmacists' attitudes and perceptions towards Continuing Education (CE) indicated that pharmacists generally support and value CE for professional growth/development and maintaining licensure. Some barriers have been listed, such as: time constraints, lack of resources, lack of motivation and interest, lack of accreditation system, system and technical problems, facilitation and support issues, and poor understanding of the CPD process.

• Countries around the world currently have a variety of systems in place for CE in pharmacy, spanning from traditional continuing education requirements to full implementation of the more extensive continuing professional development approach.

• For pharmacists who participate in continuing professional development training, the use of tools to facilitate the process is associated with improved success, thus making the availability of resources imperative to the expanded implementation of continuing professional development.

Context

Continuing education is defined by the Accreditation Council for Pharmacy Education as a *"structured educational activity designed or intended to support the continuing development of pharmacists and/or pharmacy technicians to maintain and enhance their competence."* [1]. CE in pharmacy is typically delivered in the form of lectures, workshops, or written home-study materials and is required by many countries around the world for the renewal and maintenance of pharmacist licensure [2].

A statement adopted by the International Pharmaceutical Federation (FIP) in 2002 defines continuing professional development (CPD) as *"the responsibility of individual pharmacists for systematic maintenance, development, and broadening of knowledge, skills, and attitudes, to ensure continuing competence as a professional, throughout their careers."* [3]. Contrary to traditional approaches to CE, the most pervasive CPD model utilises a cycle that encompasses reflection, planning, acting (learning), evaluating, and recording as the key elements of the learning process [3, 4]. Ultimately, it is considered to be a self-directed, outcomes-focused approach to lifelong learning [2, 4, 5].

In recent years, adoption of the concept of CPD to expand traditional CE in pharmacy has begun to increase around the world, initially in United Kingdom, Canada, and New Zealand [3-6]. In current recommendations, FIP encourages pharmaceutical organisations around the world to help provide pharmacists with opportunities for CPD, motivate pharmacists to participate in CPD, and establish quality assurance systems for CPD [3]. In the United States, the Accreditation Council for Pharmacy Education is now aiming to incorporate CPD as a quality improvement strategy for CE activities [4]. It has been widely accepted that CE alone is insufficient for successfully meeting lifelong learning needs of health professionals; however, the extent of CPD implementation in countries around the world has varied from none to extensive [6].

Some of the barriers listed in a review article include time constraints, lack of resources, lack of motivation and interest, system and technical problems, facilitation and support issues, and poor understanding of the CPD process. However, the review was limited to studies published in United Kingdom and only focused on these specific outcome measures, limiting the global applicability of the results [7].

Pharmacist perceptions of Continuing Education around the world

Several survey-based studies have been published to assess pharmacists' attitudes and perceptions towards CE. It has been found that pharmacists generally support and value CE for reasons such as professional growth and maintaining licensure [8]. A survey conducted revealed that the top 3 perceived enablers to lifelong learning are: a personal desire to learn, requirement to maintain professional licensure, and enjoyment provided by learning as a change from routine [9]. Another study has identified the most common motivating factors to participation in CE activities as *"gathering practical knowledge"* and *"keeping scientific knowledge up to standard."* [10].

Barriers to participation in CE have also been studied [9-12]. Surveys of Flemish, Egyptian, and Qatari pharmacists commonly cited time considerations and excessive workload or job constraints as barriers to CE participation [10-12]. Other barriers identified from pharmacist surveys included cost, lack of program accreditation, and uninteresting subjects. The findings from these studies exhibit themes similar to those found in the review of British studies, indicating that pharmacists have similar views of CE enablers and barriers across many countries [7].

Pharmacists from around the world have also expressed similar preferences for CE topics. Across the pharmacy literature, pharmacists have identified topics relating to therapeutics/pharmaceutical care as the highest-ranked area of interest [9-14]. Subjects relating to pharmacology, pharmacy practice, or clinical skills often followed. Results of a study revealed that the category of *"patient care functions"* (i.e., analysis of drug related information, evaluating and monitoring therapeutic response, reviews on current drugs) was the top-ranked preference for CE topics for staff pharmacists, managers, plus directors in independent, chain, or hospital pharmacies [15]. Conversely, pharmacy owners ranked the category of *"implementing pharmaceutical care"* (i.e. planning and marketing of pharmaceutical care services, developing value-added services, reimbursement) as their most-preferred CE topic.

Continuing Education learning methods

Pharmacists participate in CE through a variety of delivery methods and formats. The most common CE formats seem to use printed materials, lectures and seminars, internet-based materials, symposia at professional meetings, videos/CDs/audiotapes, workshop-based training, telephone conferencing, and live Internet discussions [16].

Several studies have been conducted to evaluate the most successful and preferred methods of CE delivery [17-20]. Among the studies, a theme that emerged is the preference for live programmes versus online or webinar programmes. In a study comparing pharmacists' perceptions of a live versus webinar version of the same CE programme, it was found that the group participating in the live programme was more satisfied with the learning experience [18]. Specifically, although both groups indicated that they met their learning objectives, the live program participants were more positive about the value of the presentation, perception of the presenter's interest, and the program's commercialism. Another study revealed a range of preferences for CE delivery, including small-group workshops, independent reading of CE, and internet-based activities; however, there was a common preference for interactive CE activities that include problem solving and feedback from instructor [19].

Similarly, a study of pharmacists participating in a face-to-face versus webinar-based tobacco cessation CE programme revealed that face-to-face learners reported higher likelihoods of performing the taught components of tobacco cessation counselling in their practices [20].

Taking this concept a step further, different methods of live CE delivery (e.g., lecture versus workshop-based CE activities) have been compared. Combined approaches include lecture plus large-group case discussions and lecture plus small-group training. It was found that lecture plus small-group sessions resulted in significantly higher knowledge and participant satisfaction scores [21, 22].

Pharmacist perceptions of Continuing Professional Development

As the process of CPD continues to be explored, questions have arisen regarding pharmacists' knowledge and attitudes towards the newer CPD approach.

A study revealed that the majority of pharmacists from Texas, USA, were able to correctly identify the definition of CPD; however, nearly half of the respondents had not heard of the CPD concept prior to completing the survey, and over half were unsure of its professional benefits [23]. Evaluating a more specific component of CPD, a focus group of pharmacists in the UK, did not feel that keeping a CPD record contributed significantly to their practices [24]. A study of Scottish pharmacists in 2008, aimed to evaluate the attitudes and habits of pharmacists towards CPD prior to implementing a mandated country-wide system [25]. It was found that respondents reported spending a median of 40 hours per year on CPD; however, 9.8% of pharmacists reported not participating in CPD at all. When compared with hospital pharmacists and primary care pharmacists, community pharmacists were found to undertake the least amount of CPD hours. In a follow-up study, an attempt was made to determine what factors affected Scottish pharmacists' attitudes towards CPD [26]. It was narrowed to four factors: (1) positive support in the workplace, (2) access to resources and learning needs, (3) confidence in the CPD process, and (4) motivation for CPD.

Younger pharmacists showed significantly more intrinsic motivation than older pharmacists. Personality traits of pharmacists utilising CPD have also been studied [27]. It has been found that, prior to the mandatory implementation of CPD in Great Britain, British hospital pharmacists who voluntarily utilized CPD by keeping a portfolio were more likely to get along with others, and were more conscientious than pharmacists who did not choose to keep a CPD portfolio with no differences observed in age or gender. It is unknown how such findings would differ under the now-mandatory CPD system.

Continuing Professional Development versus Continuing Education

In an attempt to answer questions regarding the benefits of CPD, some studies have emerged that compared outcomes of pharmacists participating in traditional CE versus those using CPD [28-30]. A study was conducted where pharmacists of a common employer were randomised into a traditional CE group or a group completing three CPD workshops [28]. A significantly higher percentage of pharmacists in the CPD group reported changing their learning behaviours and identifying specific learning objectives, documenting their learning plan, and adhering to their learning plan, indicating that pharmacists using the CPD approach were more likely to report improvement in learning behaviours than pharmacists participating in traditional CE. In regards to pharmacy practice,

a significantly higher percentage of pharmacists in the CPD group reported that aspects of their pharmacy practices improved, including their interactions with health care providers, patient care, and professional knowledge and skills [29]. The CPD group also reported that time was a significant barrier to completing education activities more frequently than the CE group. It has also been found that a year long structured educational intervention can help to support pharmacists' utilisation of CPD [30].

Training and instruments to facilitate Continuing Professional Development

The novel and multi-faceted nature of CPD as a quality improvement to traditional approaches to CE introduces the need for pharmacists to receive training and guidance in order to develop the necessary skills and attitudes and successfully implement the CPD process into their practices [31, 32]. As discovered previously, [23] most pharmacists are unfamiliar with the CPD process prior to completing the programme. Interestingly, community pharmacists who were preceptors for a college of pharmacy reported accomplishing planned learning activities more than non-preceptors in their pre-program survey [33]. To further evaluate the outcome of the training programme, a random quality assurance audit of pharmacist CPD portfolios was conducted. A total of 10 portfolios were submitted, 60% of which were rated "adequate" or "comprehensive." Others were rated "insufficient" or "incomplete." It was concluded that pharmacists are able to successfully follow the CPD process; however, a systematic approach with more instruction regarding documentation is necessary [3, 32, 33].

A number of tools have been developed to guide pharmacists through the CPD process [34-36]. A framework was developed and tested to help pharmacists select both relevant and impactful CPD activities, allowing quantification of the overall value of CPD [34]. A study was conducted during an annual professional meeting, where participants were given a CPD planning worksheet intended to guide them in planning their CE activities. In a post-meeting survey, pharmacists were asked questions regarding achievement of sustained learning, application of learning and learning plan, documentation of CPE, and achievement of learning objectives [35]. When compared with a control group, the participants using the CPD planning worksheet reported a higher percentage of positive responses in all areas, indicating that benefit came from the provided CPD tools. Similarly, a study revealed that 70% of pharmacists who wrote "commitment-to-change" (CTC) statements after attending a CE program reported fully implementing the change six months after completion of the programme [36].

Another example of a CPD instrument that guided pharmacists in the process of reflection, was reported in a study where participants were sent CE reading material along with web-based questionnaires that assessed the cognitive impact, use, and expected benefits of the information provided. This type of approach required participants to reflect upon their learning experience in order to appropriately complete the questionnaire [37].

Conclusion

Countries around the world currently have a variety of systems in place for CE in pharmacy, spanning from traditional CE requirements to full implementation of the more extensive CPD approach. In a recent literature review conducted on CPD and CE in selected health professions (pharmacy, nursing, medicine, ophthalmology, dentistry, public health and psychology) [38], it was observed that *"wide variations exist among the health professions. Lessons learned from this information can be used to further clarify and define the role of CE/CPD and self-directed lifelong learning in pharmacy and the health professions."* [38].

Pharmacists from all countries tend to have similar opinions regarding CE, such as a desire to learn about topics relating to pharmaceutical care and a preference for live, small-group sessions. Collectively, studies of CPD and its components have demonstrated that pharmacists using CPD practices have better self-reported outcomes in terms of the quality of their learning, leading to improved self-assessment of learning needs and overall pharmacy practice. However, significant challenges slowing the widespread adoption of CPD include pharmacist unfamiliarity with the process and its time-consuming nature. It has been seen that pharmacists who underwent training on CPD and those using tools to facilitate the process were more likely to use it successfully, thus making the availability of these resources imperative to the expanded implementation of CPD.

Still, many of the current published studies surrounding CPD are dependent on survey-based responses. Moving forward, additional studies should be conducted looking at more objective outcomes, such as measurements of pharmacist performance, in order to establish best practices for widespread CPD implementation. Furthermore, additional studies investigating pharmacy student education on and exposure to CPD principles will be extremely valuable in educating the next generation of pharmacists as pharmacy continuing education continues to evolve.

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PART 3

A GLOBAL DESCRIPTION OF CONTINUING PROFESSIONAL DEVELOPMENT/CONTINUING EDUCATION IN PHARMACY

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Summary

The Continuing Professional Development/Continuing Education in Pharmacy Survey (CPD/CE) was conducted using Arabic, English, French, Japanese, Mandarin, Portuguese and Spanish translation survey *pro forma*; this resulted in continuing education and continuing professional development data for 66 countries and territories.

From the resulting sample, half of the countries and territories surveyed have used or implemented the recommendation of 2002 FIP Statement on Continuing Professional Development as part of their own national professional infrastructure development.

The survey results show that the provision of CPD/CE activities is conducted by multiple providers - pharmaceutical professional associations, the higher education sector, employers, commercial education providers, and national professional regulators bodies; on average, respondents reported three or more categories of education/CPD provider. Funding provision also shows plurality of provision, most notably 88% of respondents reported some form of self-funding in operation. Additionally, 77% of this survey report contributions by pharmaceutical companies for professional development activities.

When comparing the wealth and income of countries and territories, the wealthier countries/territories tend to have a greater proportion of private (or commercial) provision as part of the national CPD/CE provider mix.

Regarding the requirements to maintain registration or licensure (for those countries and territories who require it), the majority use a "credit" or point system (75%). However the use of a portfolio (in combination with credits or single method) is becoming common (35.4%).

Professional development frameworks (competency based approaches) are being gradually implemented globally. The trends seem to indicate that the adoption or development of foundation and advanced level frameworks is increasing across countries and territories. It is clear that advanced practice, as a recognised scope of activity that can be described by developmental frameworks, is a current item of interest for national associations.

3.1 Introduction and methods

The 2014 global continuing professional development/continuing education in pharmacy survey was conducted between January 2014 and May 2014.

FIP member organisations, country and territory level contacts from regulatory, professional and government agencies, were approached for responses to a survey asking for quantitative and multiple-choice responses concerned with continuing professional development, continuing education and registration/licensing processes. National demographic and economic data was also collected.

The survey was developed in collaboration with the FIP Collaborating Centre (University College London, School of Pharmacy) and the FIP*Ed* Education Development Team. The survey tool was made available in 7 languages (Arabic, English, French, Japanese, Mandarin, Portuguese and Spanish). The dataset was quality assured and checked with respondents before being prepared for analysis. The survey tool, data tables and the report are available for download from www.fip.org/educationreports.

Frequencies and valid percents (taking into account missing data for some items) are reported here[a]. Some tables show multiple responses from single countries and territories and hence may sum to more than 100%. Cases are single countries and territories.

3.2 Descriptive report on the sample

The resulting sample comprises 66 countries and territories, with some under-representation from African countries and territories and good representation from Europe and The Americas (see table 1). This global survey did not receive data from nations in South-East Asia region.

Table 1: Sample response and WHO Regional comparison[b].

	Sample *Number of cases (n)*	Total WHO *membership (n)*
Africa	13,6% (9)	23.7% (46)
Eastern Mediterranean	9.1% (6)	11.3% (22)
Europe	37.9% (25)	27.3% (53)
The Americas	28.8% (19)	18.0% (35)
Western Pacific	10.6% (7)	13.9% (27)
South East Asia[c]	0.0% (0)	5.7% (11)
Total	**100% (66)**	**100% (194)**

[a] Note: Some tables show multiple responses from single countries and territories (and hence may sum to more than 100%) and reported frequencies account for missing values.
[b] Note: China Taiwan is included in the Western Pacific region in all the analyses.
[c] Note: This global survey did not receive responses from countries and territories in South-East Asia WHO region.

For the sample of 66 countries and territories, 50% stated that they had used or implemented the recommendation of the **2002 FIP Statement on CPD** as part of their professional development policy. Table 2 shows this uptake, split by WHO region, with African and Western Pacific countries and territories having the highest proportional uptake of the FIP recommendations (χ^2 = 10.3, p=0.04).

	No	Yes
Africa	33.3%	66.7%
Eastern Mediterranean	66.7%	33.3%
Europe	70.8%	29.2%
The Americas	38.9%	61.1%
Western Pacific	14.3%	85.7%
Total (n)	**50.0% (32)**	**50.0% (32)**

3.3. Provision and funding of Continuing Professional Development and Continuing Education for the workforce

The provision of CPD and CE suggests a plurality in the education provision market, with most countries and territories in this sample nominating multiple providers for the pharmaceutical workforce. Table 3 shows the categories of CPD education providers by countries or territories (with countries/territories on average reporting 3 or more education provider types) with professional bodies and academic sector being the most frequently reported provider categories.

**Table 3:** Providers of CPD/CE cited per country and territory.

Type of providers	Countries/Territories (n)
Pharmaceutical professional associations	90.6% (59)
Universities	83.1% (54)
Employers	55.4% (36)
Private providers	52.3% (34)
Profession Regulator	30.8% (20)
Other	24.6% (16)
Total	**336.8% (66)***

*n=66 cases with multiple responses: in total 219.

In the majority of cases (91% of the sample) the professional body or association is identified as a provider, and academia is cited by 83% of countries and territories. Figure 1 shows a relative comparison of education provider categories by total market (for this sample), which again shows that professional bodies and academia account for the majority.

At a national level, employers and private providers are cited by over half of the sample, and interestingly, the national profession regulator is cited in about 31% (in 20 cases) with countries in the Eastern Mediterranean and Western Pacific WHO regions reporting the largest proportion of *"education provider"* regulators (Table 3). It is of interest to note that some countries have indicated that regulation and CPD/CE provision could be seen as a conflict of interest and, like with other medical professions, should have a separation of activity between statutory regulation and the provision of CPD or professional development. This issue perhaps warrants further investigation by what exactly is meant by *"provision"* in this context.

Figure 1: All providers of CPD/CE cited per country and territory.
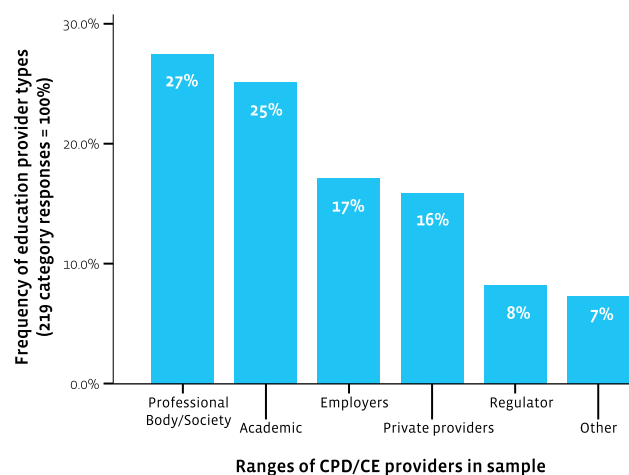
Industry, pharmaceutical companies and wholesalers were the most frequently reported category of provider under "other", reported by 17% (11) of the respondent sample, although clearly separated from the category of "private provider".

Funding provision for CPD activities also shows a plurality, and both Table 4 and Figure 2 show that financing for CPD and CE comes from a variety of different sources, most notably 88% of countries have an expectation that individual pharmacists would be expected to provide some form of self-funding for professional development activities. Noteworthy is that 77% report contributions by pharmaceutical companies and a similar proportion (74%) indicate that employers contribute to CPD/CE.

Overall, it seems in most countries there is a mixed economy with regard to the funding for CPD/CE, with sources mostly being drawn from self-financing, commercial organisations and employers, as shown in Figure 2.

Table 4: Source of funding for CDP/CE cited per country and territory.

Funding sources for CPD/CE	Countries/Territories (n)
Self-financing	88.7% (55)
Pharmaceutical Companies	75.8% (47)
Employers	72.6% (45)
Government/public	40.3% (25)
Total	**277.4% (62)***

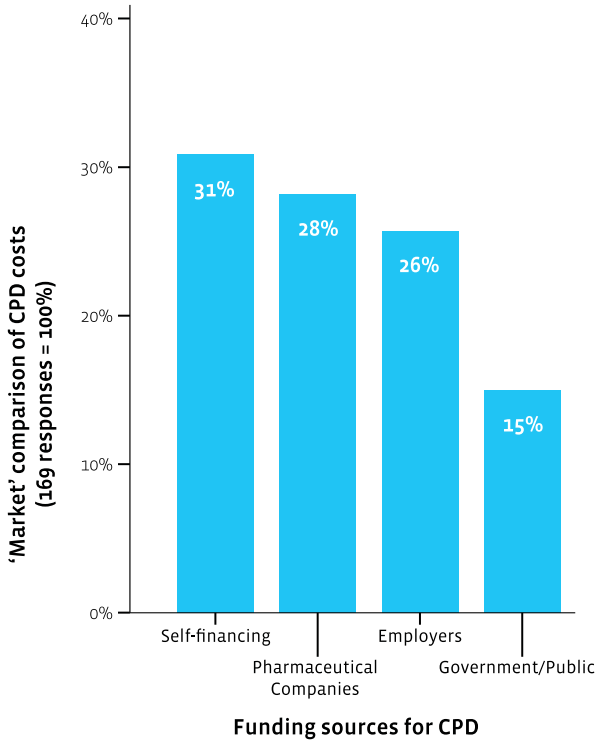*n=62 cases with multiple responses: in total 172.

Table 5: Type of providers cited for CPD/CE by country/territory based on the wealth of the countries (according to the World Bank category) *[n=65 cases with multiple citations].*

Type of providers for CPD/CE	World Bank Classification			
	Low Income	Lower Middle Income	Upper Middle Income	High Income
Pharmaceutical professional associations	100% (5)	87.5% (14)	94.1% (16)	88.9% (24)
Regulator	60% (3)	25.0% (4)	23.5% (4)	33.3% (9)
Academic	80% (4)	75.0% (12)	94.1% (16)	81.5% (22)
Employers	60% (3)	31.3% (5)	58.8% (10)	66.7% (18)
Private providers	20% (1)	25.0% (4)	52.9% (9)	74.1% (20)
Other	20% (1)	0% (0)	41.2% (7)	29.6% (8)
Column frequencies (n=64)	5	16	17	27

Figure 2: Sources of funding for CPD/CE cited per country and territory.

Figure 3: Proportions of cited providers of CPD/CE by countries/territories and World Bank category (n=65 countries and territories with multiple citations).
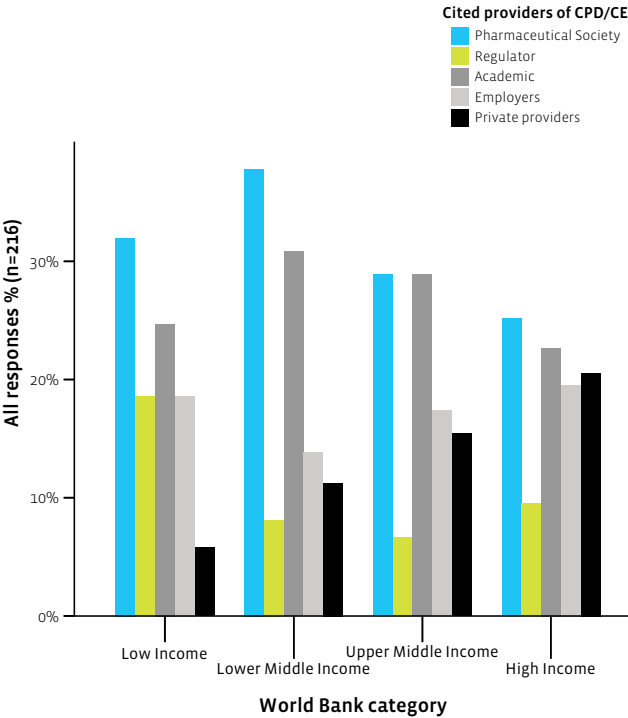
Comparing the wealth and income of countries and territories (as categorized by World Bank Classification) the proportions of cited providers of CPD/CE are more or less equivalent, with the exception of "private providers" (see Table 5, reading across rows and Figure 3); 66% (29 of 44) of nations in Upper and High income bands cite "private providers" compared with 25% (5 of 21) countries and territories banded as Lower or Low income. Wealthier countries and territories have a tendency to have more private provision as part of the national CPD/CE provider mix.

Table 5 uses cases (countries and territories) as the frequency; as respondents were able to provide multiple responses, Figure 3 shows the frequency of all responses by World Bank category.

This further illustrates that the higher income countries and territories tend to have a larger proportional contribution to the CPD provision market by private, or commercial providers. The market for pharmacy education provision is clearly linked with national wealth and is an indication of inequalities across global regions.

3.4 Accreditation and Quality Assurance issues

Thirty one countries and territories (52%) indicate a national registration examination as part of the licensing process, with The Americas and Eastern Mediterranean regions having the lowest frequencies of examination process in place.

Table 6: Regulatory and licensing agencies (n=56 countries and territories).

	Percent (n)
Council or Board (non-governmental)	44.6% (25)
Government agency or Ministry	41.1% (23)
Academia sector or HEI	14.3% (8)
Total	**100% (56)**

Half of the sample countries and territories responding to this question indicated that after registration, there were no further regulatory or educational requirements to maintain registration (50%, 31). Those countries and territories with a registration examination were twice as likely to have continuing requirements in place (X^2 = 5.5, p=0.02).

The types of national regulatory or licensing agencies are listed in Table 6, from which it is possible to see that regulation and licensing for the majority of countries and territories is either an independent agency or a government/ministry activity.

The requirements for maintaining registration or license (for those countries and territories who do require educational maintenance of license, 33 of 62 countries and territories who responded to this question) are multiple and listed in Table 7. The majority of respondent countries and territories used a 'credit system' (76%) as the principal means of continuing registration; however, the use of a portfolio type system (whether in combination or a single method) was cited by a third of those with educational maintenance CPD (33.3%, 11).

When this is cross tabulated with wealth and income levels, more than double the proportion of high income countries (41%) have a 'portfolio' as part of the CPD maintenance requirements, compared with 20% of low income countries and territories.

Table 7: Maintenance requirements for registered pharmacists.

	National Cases (n)
Credits/points system	75.8% (25)
Combination portfolio & credits	21.2% (7)
Peer Review	15.2% (5)
Portfolio based	12.1% (4)
Other	24.2% (8)
Total	**148.5% ***

*n=33 cases with multiple responses: in total 49.

Other categories of ways of maintaining registration provided by the sample include periodic OSCE-type assessments (objective, structured, clinical examinations), reflective diaries and records, and certification systems based on periodic attendance at national training centres.

3.5 Professional development activities

The FIP Education Initiative has been following the development of competency (or developmental) frameworks since 2009. FIP Member Organisations have been asked if pharmacist and pharmacy technician frameworks have been, or are being, developed as a mechanism for professional development. Table 8 shows the cumulative results since 2009, centred on 'foundation' scope of practice. The majority of this sample indicates actions on developing and adopting competency-based approaches to describing scope of practice; in 2012 FIP launched a Global Competency Framework, GbCF (v1) which now in use or adapted by a number of countries worldwide [1].

Table 8: Trends in the use and implementation of developmental or competency frameworks.

Pharmacists	2009 Workforce Report (n=52)	2013 Workforce Report (n=81)	2014 CPD Report (n=66)
Yes	38% (20)	33% (27)	47% (31)
In development	25% (13)	21% (17)	21% (14)
No	37% (19)	46% (37)	32% (21)
Total for Yes/In development	63%	54%	69%

Pharmacy Technicians	2010 Workforce Report (n=41)	2013 Workforce Report (n=74)	2014 CPD Report (n=62)
Yes	20% (8)	24% (18)	27% (17)
In development	22% (9)	11% (8)	18% (11)
No	59% (24)	65% (48)	55% (34)
Total for Yes/In development	42%	35%	45%

However, there is an association with Anglophone countries and the development or implementation of frameworks, with 89% of the Anglophone countries in this sample indicating they were developing developmental frameworks, against 59% of non-Anglophone nations (x^2 =5.11, p=0.024). This may be an artifact resulting from more Anglophone countries returning the survey questionnaire (but mitigated by having the survey available in 7 languages). This does deserve further investigation as interest in scope of practice and linkages with developmental practice continues to gain traction with professional bodies.

In addition, with this current survey, 44% (28) countries and territories have responded that an advanced practice framework is in operation or being developed, which is a new finding. The trends seem to indicate that the adoption or development of foundation level frameworks is increasing across countries and territories and that advanced practice, as a recognised activity that can be described by developmental frameworks, is a current item of interest for national associations.

Reference

1. International Pharmaceutical Federation – Pharmacy Education Taskforce (2012). *A Global Competency Framework for Services Provided by Pharmacy Workforce* (on-line). The Hague, The Netherlands: International Pharmaceutical Federation. Available from: www.fip.org/pe_resources.

PART 4

Overview of the cases studies

Australia: 27,339 registered pharmacists; CPD mandatory since 2010; a common framework for weighting of CPD activities provides guidance for pharmacists and CPD providers; for the CPD year 2013-14, pharmacists must undertake 40 credits of CPD activity; credits/points system; *Accreditation body*: Australian Pharmacy Council.

Canada: 36,174 registered pharmacists; CPD-type, CE-type and hybrid systems in use according to the different provinces; the CCCEP developed a framework for competency-mapped accreditation; *Accreditation body*: Canadian Council on Continuing Education in Pharmacy (CCCEP).

Croatia: 3,070 registered pharmacists; Pharmacists' licenses are renewed every six years via the competent authority (Croatian Chamber of Pharmacists) based mostly on points collected through organised education events; Credits/points system.

Japan: 276,517 registered pharmacists; Japanese Pharmacists Association lifelong learning support system (JALS) with a portfolio system – voluntary (20,000 are using); Professional Standards and guidelines to climb step-by-step through the Clinical Ladder; Types of existing Programmes: Continuing Education Credentialing Programmes, Special Training Programmes, and Pharmacy Specialties Credentialing Programmes; *Accreditation body*: Council on Pharmacists' Credentials.

Namibia: 347 registered pharmacists; CPD is compulsory in Namibia but capacity and resource constraints reduce the opportunity to provide comprehensive quality education; Practitioners can be awarded credit on a number of different levels through the professional accreditor as well as university credit; Modular CPD approach.

New Zealand: 3,351 registered pharmacists; pharmacists are required to self-assess against the Council Competence Standards once every three years, and must now accumulate points based on the hours of learning completed, instead of demonstrating outcome credits; mandatory CPD since 2005; *Accreditation body*: Pharmacy Council.

Northern Ireland: Mandatory CPD; online portfolio has an option to allow the assessor to view the portfolio; a four-stage CPD cycle (Reflection, Planning, Action and Evaluation), each cycle has to address 9 elements; Northern Ireland Centre for Pharmacy Learning and Development developed the CPD system, which was adopted and implemented by the pharmacy regulator (Pharmaceutical Society of Northern Ireland).

Oman: 1,358 registered pharmacists; the Ministry of Health (MOH) has put in place robust CPD systems and structures; Oman Assistant Pharmacy Institute plays a pivotal role not only in faculty development activities for its staff but also in the follow-up of its alumni in the service sector; *Accreditation body*: Oman Medical Specialty Board.

United States of America: 275,000 registered pharmacists; all states and territories mandate CE for maintenance of licensure; CPD an option in three states; ACPE has on-line CPD educational resources that address all four CPD stages for pharmacists, pharmacy technicians, student pharmacists, and CE providers; AACP's Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes (2013); *Accreditation body*: Accreditation Council for Pharmacy Education.

Australia: Mandatory Continuing Professional Development since 2010 in a credits/points system

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According to the Pharmacy Board of Australia Continuing Professional Development Registration Standard *"Continuing professional development is the means by which members of the profession continue to maintain, improve and broaden their knowledge, expertise and competence, and develop the personal and professional qualities required throughout their professional lives"* [1].

Summary

27,339 registered pharmacists in Australia at 30 June 2013 [2].

Majority of pharmacists work in Australia's network of community pharmacies; others work in hospitals, education, industry and regulatory affairs, research, and in advocacy and consultancy roles.

Prior to 2010, pharmacists registered with their state/territory pharmacy board. Only some states mandated CPD as a requirement of registration.

As a result of the introduction of the National Registration and Accreditation Scheme (NRAS), the Australian Health Practitioner Regulation Agency (AHPRA) and the Pharmacy Board of Australia (PBA) were established.

From 2010, Australian pharmacists registered with the PBA, and no longer with their jurisdictional authority.

In 2010, PBA introduced national mandatory CPD as a requirement of pharmacist registration. This is a legislative requirement under Health Practitioner Regulation Law and the authority for this is defined via the Continuing Professional Development Registration Standard [3].

A common framework for weighting of CPD activities provides guidance for pharmacists and CPD providers.

The details of this framework are defined in the PBA's Guidelines for Continuing Professional Development [4]. This framework has a three tiered classification system for CPD activities and allocated CPD credit levels:

- **Group one activities:** information accessed without assessment. CPD credits are awarded at one credit per hour of CPD activity.

- **Group two activities:** where knowledge or skills are improved with assessment. CPD activities are awarded at two credits per hour of CPD activity.

- **Group three activities:** where a quality or practice-improvement initiative is facilitated. CPD activities are awarded at three credits per hour of CPD activity.

For the CPD year 2013-14, pharmacists must undertake 40 credits of CPD activity.

Current drivers

- Greater awareness of National Competency Standards Framework for Pharmacists in Australia [5].

- Use of the competency standards framework to guide professional development, through development of a professional practice profile, and learning plan to guide the selection of relevant CPD activities.

- Enhanced focus on quality of educational events; accredited activities must comply with new Australian Pharmacy Council (APC) Accreditation Standards for Continuing Professional Development [6].

- Mandating at least 50% of annual CPD credit requirements must be Group two or Group three activities (described above), to encourage CPD activities that focus on demonstration of knowledge gained.

- Given CPD has become a mandatory requirement of pharmacist registration in Australia since 2010, Australia would be considered a maturing country with regards to the FIP CPD/CE framework. Whilst PBA audit data shows high levels of compliance with annual CPD credit requirements, few Australian pharmacists are assessing their learning and development needs, and planning and implementing a structured learning program. Although pharmacists must record participation in CPD activities and retain these records, it is unclear as to whether pharmacists are evaluating the resulting improvements in their professional practice.

Challenges faced in the implementation

- Pharmacists focussing on number of CPD credits offered by a CPD activity rather than considering the relevance of the CPD activity to their practice and as part of a structured learning plan.

- Education providers releasing large volumes of education activities without focussing on adult learning principles and education quality, e.g., advertising events with claims such as *"gain all your annual CPD credits in one weekend!"*

- Some providers avoiding CPD accreditation because of the stringent requirements of the Australian Pharmacy Council CPD Accreditation Standards [6] (Pharmacy Board CPD Guidelines [4] do not require all CPD to be accredited).

Lessons learned

• Mandating CPD as a legislative requirement drives compliance (Note: the Health Practitioner Regulation Law [3] mandates CPD for all registered health professions, not just pharmacy).

• Whilst an annual CPD credit requirement does support pharmacist on-going education, it primarily supports continuing education, and not continuing professional development (the tiered classification system is helpful, but some pharmacists are driven by the number of credits offered by an educational event rather than relevance of the CPD activity to their practice).

• Some CPD activity providers also appear to be more focussed on providing maximum numbers of CPD credits rather than rigour in the quality of the education.

• More work needs to be done to link competency standards, pharmacist learning plans and competency mapping of CPD activities.

Key tools that helped in each stage

a. *Reflect* - National Competency Standards Framework for Pharmacists in Australia [5] and mapping of CPD activities to the competency standards.

b. *Plan* - Pharmaceutical Society of Australia personal learning plans and 'Using standards to guide your CPD' [7] a reference card to support pharmacists to meet the Pharmacy Board of Australia CPD requirements).

c. *Act* - On-line tools to assist pharmacists to record their CPD activities are available.

d. *Evaluate* - Australian Pharmacy Council CPD Accreditation Standards [6] define the requirements of CPD providers to deliver quality CPD activities and evaluate their delivery of such activities.

National strategies for health care services

There is an expectation of the public that health practitioners will remain competent to practice throughout their professional life (not just at the time of initial graduation and registration) in the interests of public safety and quality of healthcare. This has been facilitated through the enactment of the requirements set out in the National Law [3] in relation to all health practitioners' obligations to undertake CPD and to advise the Board when applying for renewal of registration that the Board's CPD requirements have been met.

As professional practice changes and evolves, so too do the competencies of pharmacists and therefore the requirement for on-going CPD. The model of pharmacy has evolved to reflect the changing focus of pharmacy practice from one dominated by a product supply process to one incorporating professional services. Recognition of advanced pharmacy practice, pharmacist prescribing and other expansion of practice will see further strengthening of CPD requirements that better comply with the FIP CPD/CE framework.

Plans for the future

More work needs to be done to link competency standards, pharmacist learning plans and competency mapping of CPD activities, and raise awareness of pharmacists of differences between continuing education (CE) and continuing professional development (CPD).

References

1. Pharmacy Board of Australia - PBA. (2010) *Continuing Professional Development Registration Standard* (on-line). Available from: www.pharmacyboard.gov.au/Registration-Standards.aspx

2. Pharmacy Board of Australia/Australian Health Practitioner Regulation Agency – PBA/AHPRA. (2013) Media release 1 Nov 2013 (on-line). Available from: www.pharmacyboard.gov.au/News/2013-11-01-media-release.aspx

3. Australian Health Practitioner Regulation Agency - AHPRA. (2010) *Health Practitioner Regulation National Law* (on-line). Available from: www.ahpra.gov.au/Legislation-and-Publications/Legislation.aspx

4. Pharmacy Board of Australia - PBA. (2014) *Pharmacy Guidelines for Continuing Professional Development* (on-line). Available from: www.pharmacyboard.gov.au/Codes-Guidelines.aspx

5. Pharmaceutical Society of Australia - PSA. (2010) *National Competency Standards Framework for Pharmacists in Australia* (on-line). Available from: www.psa.org.au/supporting-practice/national-competency-standards

6. Australian Pharmacy Council - APC. (2013) *Accreditation Standards for Continuing Professional Development* (on-line). Available from: http://pharmacycouncil.org.au/content/index.php?id=21

7. Pharmaceutical Society of Australia - PSA. (2010) *Personal Learning Plans and 'Using standards to guide your CPD'* (on-line). Available from: www.psa.org.au/education/about-cpd/learning-plans

Canada: Different CPD/CE processes for the different provinces (CE-type, CPD-type and hybrid systems in use)

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Summary

Canada is comprised of ten provinces and three territories, with a total of over 36,000 pharmacists (see Figure 1) [1]. Although there are some national processes (e.g. national licensing exam, national standards), each region has its own requirements for licensure and maintenance of competence. With respect to continuing education (CE) and continuing professional development (CPD), all provinces require pharmacists to engage in on-going learning to maintain competence; however, the process varies from province to province.

Some provinces have a CE-type system, requiring attainment of a certain number of CE hours or units per year. In addition, a certain proportion of the hours or units must be derived from accredited CE.

Other provinces require on-going education using a CPD-type system. In these provinces, although learning must be documented on an on-going basis, a specific number of units or hours are not required and the type of education is not specified. The professional is expected to engage in the education required to maintain competence, and in these provinces, there is generally some type of competency assessment for which a pharmacist may be randomly selected.

Figure 1: National statistics for pharmacists in Canada 2013.

Jurisdiction	Pharmacists practicing in community (%)	Pharmacists practicing in hospital (%)	Pharmacists in other settings (%)	Total licensed pharmacists
Alberta	N/A	N/A	N/A	4,264
British Columbia	3,372(65.5)	829(16.1)	950(18.4)	5,151
Manitoba	1,003(74.8)	312(23.3)	26(1.9)	1,341
New Brunswick	617(75)	158(19.2)	48(5.8)	823
Newfoundland and Labrador	500(76.5)	111(17)	43(6.5)	654
Northwest Territories	45(90)	5(10)	0	50
Nova Scotia	978(78.3)	183(14.7)	88(7)	1,249
Nunavut	30(100)	0	0	30
Ontario	8,770(68.4)	2,025(15.8)	2,020(15.8)	12,815
Prince Edward Island	135(73.8)	30(16.4)	18(9.8)	183
Quebec	6,233(76.4)	1,469(18)	458(5.6)	8,160
Saskatchewan	998(70.5)	250(17.7)	168(11.8)	1,416
Yukon	29(76.3)	5(13.2)	4(10.5)	38
Canadian Forces*	78(75.7)	0	25(24.3)	103
TOTAL CANADA	22,710(62.7)	5,377(14.8)	3,823(10.5)	36,174

Note - N/A: Not available.

CE-type system:

• Saskatchewan, Manitoba, New Brunswick, Nova Scotia, PEI, Newfoundland – 5,666 pharmacists (15,7% of the total workforce);
• Require attainment of a certain number of CE units or hours per year;
• May require that a certain proportion of the units are derived from accredited CE;
• A certain percentage of learning portfolios / logs may be audited each year (depends on the province).

CPD-type system:

• Ontario, Quebec – 20,975 pharmacists (58% of the total workforce);
• Learning must be documented on an on-going basis;
• A specific number of CE units or hours are not required;
• Type of education is not specified – i.e. accredited CE, non-accredited CE, work place learning;
• Self-assessment is required every 1-5 years (depending on the province);
• Competency assessments, potentially including knowledge assessment, practice-site based assessment or OSCE, are undertaken for a certain percentage of randomly selected pharmacists each year.

Hybrid system:

• Alberta, British Columbia – 9,415 pharmacists (26,3% of the total workforce);
• Learning must be documented on an on-going basis;
• Learning must be documented as a demonstration of application in practice (incorporates use of the CPD cycle);
• Require attainment of a specified number of CE hours per year;
• Type of education is not specified – i.e. accredited CE, non-accredited CE, work place learning;
• Self-assessment is required in British Columbia every year (under development in Alberta);
• A certain percentage of learning portfolios / learning records are randomly audited each year;
• Practice-site based assessments are in place or being contemplated.

Current drivers

Many provinces in Canada have enacted legislation enabling an expanded scope of practice for pharmacists, such as administering injections or initial prescribing for various disease states/conditions. In order to practice to this new level, the need for on-going CPD is heightened.

Canada is "maturing" with respect to CPD/CE. Some provinces have fully adopted a CPD model and other provinces have adopted portions of the model.

In many provinces, legislation requires continuous learning by healthcare professionals. In addition, several of the pharmacy regulatory bodies have incorporated a CPD model into their quality assurance process.

Challenges faced with the implementation

The challenges vary depending on where each province is on the CPD continuum:

• Resources to establish a CPD programme;

• Resources to audit compliance / provide feedback;

• Some pharmacists continue to have a difficult time understanding the value of the CPD system (e.g. those not in direct patient care; those resistant to change; those that believe the CEU (continuing education units) system is more effective);

• Identifying pharmacists requiring additional guidance or mentoring with respect to application of newly-acquired knowledge into their practice.

Lessons learned

• The CPD approach to learning is embraced more by those that had a mentor / colleague demonstrating use or those that incorporated a similar approach during their undergraduate education;

• The flexibility of the CPD approach allows those with specialised practice to engage in learning that is most beneficial to their particular practice (e.g. non-pharmacy conferences, workplace learning, research, etc.);

• There is value in focusing on an outcome in practice (i.e., applying newly-acquired knowledge to practice);

• Pharmacists support the CPD process when the impact in practice is recognised;

• The CPD cycle enables a continuous learning process, and becomes a valuable platform to reinforce continuing competence within practice.

Key tools that helped in each stage

a. *Reflect* – provision of feedback either through a self-assessment tool or audit of portfolio.

b. *Plan* – self-assessment tool helps in identifying learning needs and prioritising them.

c. *Act* – availability of quality CE programs or other learning opportunities (e.g., being a preceptor to students; being involved in practice research, etc.).

d. *Evaluate* – reflective questions as part of documentation to encourage transfer to practice or requirement to document demonstration of application in practice.

National strategies for health care services

In Canada, many pharmacy CE programmes are accredited by a national body, the Canadian Council on Continuing Education in Pharmacy (CCCEP). With the introduction of various expanded scope activities (e.g., administering injections), regulatory bodies realised that in order to ensure appropriate training for a particular activity, an education programme would have to meet pre-determined competencies in addition to being a quality learning activity. CCCEP developed a framework for competency-mapped accreditation. Using this system, educational programmes that addressed the appropriate competencies could be accredited on a national basis enabling recognition by each provincial regulatory body in their authorisation process for an expanded scope activity.

Plans for the future

Representatives from regulatory bodies across Canada are working together to create more consistent processes for quality assurance by sharing tools and resources. Included under the umbrella of quality assurance are self-assessment tools, learning portfolio tools and audit tools.

Reference

1. National Association of Pharmacy Regulatory Authorities – NAPRA. (2013). Available from: http://napra.ca/pages/Practice_Resources/National_Statistics.aspx?id=2103. Accessed 17 November, 2013.

Croatia: Registration renewal every six years with a 'credits/points' system

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Summary

Croatia is a Central – Eastern European country, member of the European Union, and has a population of 4.4 million. Pharmacies are a part of the primary health care system, and various forms of ownership are permitted. Some pharmacies are state-owned (20.4%), others independently owned by pharmacist individuals (27.6%), while pharmacy chains can be owned by pharmacist or non-pharmacist individuals (50%).

Pharmacists' licenses are renewed every 6 years via the competent authority (Croatian Chamber of Pharmacists) based mostly on points collected through organised education events. To renew the license, several activities can be used: participation in pharmaceutical congress (active or passive), e-learning, student mentoring, manuscript publication, teaching etc. It is fairly common to accumulate credit points through these activities.

An average Croatian pharmacist is much more engaged in CE than CPD activities. But, since 2009 there is a process in which the initiative is taken by individuals, with or without the help of others, in order to determine their learning needs, identify human and material resources for learning, formulate goals, choose and implement appropriate learning strategies, and evaluate learning outcomes. The draft of the Global Competency Framework, launched by FIP in 2010 (GbCF v1 available from: www.fip.org/pe_resources), has been used in more than 300 pharmacies (from several chain pharmacies) so far to assist with this process, including assessment, self-assessment, interpretation of the results, and development of individual competencies.

Neither documenting learning activities nor documenting professional work is obligatory in the portfolio of a graduate pharmacist, so pharmacist's professional work and development cannot be assessed from written documents. To keeping a learning portfolio is also not an obligation for pharmacists in Croatia, and it is not yet a part of the licensing process. Hence, in countries like Croatia, it is crucial to develop an alternate evaluation system for assessing competencies.

Although pharmacists' new roles and pharmaceutical care have been promoted in Croatia over the past decades, the primary role of community pharmacists is slowly changing. Many pharmacists remain in the traditional role of medicine supply, dispensing and compounding medicines. Standards, national protocols and the development of new services that includes more clinical skills and decision-making are implemented in some pharmacy chains, driven by innovators and enthusiastic colleagues. A framework for competency development is now in the process of publication and implementation at the national level.

In summary:

· The CPD approach is starting to spread in Croatia and the neighbouring countries;
· Croatia is a local leader in implementing global standards in pharmacy education;
· A learning portfolio is not required for pharmacists nor students;
· Many changes and initiatives come from the private sector;
· The main focus areas in education are: pharmaceutical care protocols, competency development, communication skills, and pharmacy interventions.

Current drivers

· Private sector initiatives (both education, industry and practice) are expanding;

· The Global Competency Framework (FIP version 2012) is in use in more than 30% of pharmacies;

· The Croatian Pharmaceutical Chamber is producing standards and protocols for educational activities;

· The Croatian Pharmaceutical Society is designing educational activities according to the main principles of Quality Assurance suggested by FIP;

· Regional collaboration is growing;

· The University has started to organise CE activities for pharmacists.

Croatia is at the beginning of the process to transform CE to CPD activities and is a leader in the region, currently implementing internationally recognised global tools for competency development and education. Since the Zagreb workshop in January 2013 on planning learning activities (individual, organisational and national level), almost 30% of pharmacies have started the competency evaluation process and initiated educational activities based on their needs.

Challenges facing implementation

· There is inconsistency in the quality of educational activities;

· No national education plan has neither been accepted nor published so far;

- A learning portfolio is neither required nor frequently used in pharmacy practice;

- It is very easy to acquire points for license renewal;

- There is lack of collaboration between stakeholders in education at the national level;

- There are limited opportunities for practitioner engagement as speakers/lecturers in University educational activities.

Lessons learned

- Documentation is essential for the CPD approach;

- All stakeholders have to be willing and ready to collaborate;

- A call to "Commit to change" is useful to include during educational activities;

- SMART objectives are helpful to achieve desired outcomes.

Key tools that helped in each stage

Global Competency Framework first used in Croatia is currently spreading into Serbia, Bosnia and Herzegovina, Macedonia and Montenegro and was used in the planning and evaluation phases of CPD.

National strategies for health care services

CPD/CE activities are still to be aligned with the needs of society. Health insurance systems currently do not recognise the importance of this connection with the role of the pharmacy profession. Some activities are just beginning to link societal needs to the development of the pharmacy profession.

Plans for the future

The Croatian Pharmaceutical Chamber is working on several levels to foster the changes in pharmacy education; practitioners and educators are included in this work. The FIP Global Competency Framework is about to be adapted on a national level. The CPD approach to pharmacist learning will be more promoted among pharmacists in individually tailored education activities. Implementing new services requires development of the pharmacy workforce and that is the main message to understand in the future.

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Japan: Japan Pharmaceutical Association Lifelong Learning Support System, on-line portfolio system

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Summary

In order to maintain and develop the knowledge and skills of pharmacists in Japan, the challenges in CPD/CE (e.g., the system, the programmes in diverse areas at different levels, and the quality) are being tackled at both national and regional levels.

In line with the FIP CPD/CE statement and Quality Assurance framework, the Japan Pharmaceutical Association (JPA) launched the new on-line CE system, JPA lifelong learning support system, called JPALS in April 2012. The JPALS introduced the portfolio system along with the Professional Standards developed by the JPA in 2009 and guidelines to climb step-by-step through the Clinical Ladder to be recognised at each level.

There are still several remaining challenges in CPD/CE for Japan, such as developing the skills and knowledge to adopt the CPD process under a voluntary system, establishing adequate assessment methods and measures for a portfolio-based system, and raising the awareness and recognition from the public on the skills and knowledge that pharmacists continuously develop.

Current drivers

Pharmacists need to attain and maintain their knowledge and skills in order to meet the expectations from patients, medical professionals and the society in general. To achieve this purpose, as well as respond to demands from the Ministry of Health, Labour and Welfare (MHLW), and the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Continuing Education Credentialing Programmes were established and driven by the Japan Pharmacists Education Centre (JPEC). This system allows all pharmacists in Japan to access broad learning opportunities and resources and assess as their achievements. At the advanced level, 13 pharmacy specialty education, training and credentialing programmes (such as in cancer, infection control, and homecare) are provided by related organisations or institutes. The regional level also supports the CE/CPD needs of their local pharmacists. In facing the super-aging society in Japan, a regional pharmaceutical association, Ueda Pharmaceutical Association, held the workshop for 'Home Medicine Review' in

collaboration with the Pharmaceutical Society of Australia. Furthermore, the Council on Pharmacists' Credentials (CPC) has a key role to assist the development of the CE programmes, advertise and share information about programmes to all pharmacists, and to ensure the quality of these programmes through accreditation. Under the CPC's umbrella in collaboration with several organisations, such as the Japan Pharmaceutical Association (JPA), the Japanese Society of Hospital Pharmacists (JSHP), the Japanese Society of Pharmaceutical Health Care and Sciences (JSPHCS), the Association of Private Pharmaceutical Schools of Japan, and the Conference of Academic Deans of National and Public Pharmacy Schools, there are many CE programmes offering learning opportunities to pharmacists [1, 2].

Since the establishment of the JPEC in 1989, a system/framework for CE in Japan has been developed. Responding to the rapid advancement in medical and pharmaceutical technologies globally as well as the expanding roles of pharmacists, there are three main types of CE programmes in Japan, namely General Continuing Education Credentialing Programmes, Special Training Programmes, and Pharmacy Specialties Credentialing Programmes [1]. Having these programmes for generalists and specialists is intended to meet the learning needs for all pharmacists at different levels. For participants' convenience, most CE providers use the same system of units to be collected by participants, which enable them to apply the certification to a certain CE provider attending several different CE programmes (Figure 1). Currently Pharmacy Specialties Credentialing Programmes cover the following fields: cancer, psychiatry, HIV, infection control, and pharmacotherapy during pregnancy and lactation. Special Training Programmes expand the pharmaceutical fields to the traditional Kanpo medicine (traditional Chinese medicine), paediatric medication, diabetes, and nutrition support [3, 4].

Figure 1: Process of becoming a certified pharmacist in Japan [adapted from 5]

1. Obtaining the Pharmacist Training Notebook from the CE Provider

↓

2. Candidates participate in training courses and receive training stickers upon completion of individual courses

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3. Recording the training and learning as well as sticking the training stickers on the Training Notebook

↓

4. Submitting the Training Notebook and the application form to the CE provider

↓

5. Being certified and registered – Renewal every 3 years

To improve and maintain the access to learning opportunities and high quality learning, CPC was established in 2004, and functions to accredit the CE provider and share information about these programmes with pharmacists. Currently there are 20 providers accredited by CPC. Some Pharmacy Specialties Credentialing, have a quality assurance system developed by individual providers [1].

In emphasising the need for the development of a new lifelong learning system corresponding to the change in the undergraduate pharmacy programme from a 4-year to a 6-year system as well as the implementation of the CPD framework proposed by FIP [6], the JPA launched a new CE system: the JPA Lifelong Learning Support System (JPALS) in April 2012. The JPALS is open to all pharmacists but not compulsory, has an online portfolio system to record the content and an e-learning system for lifelong learning for pharmacists in alignment with the CPD cycle: *Reflect*, *Plan*, *Act* and *Evaluate*. As of the end of March 2013, approximately 20,000 pharmacists used the JPALS. This JPALS currently focuses on the learning towards a generalist, which have 5 different levels of a generalist. To become a certified pharmacist towards a highest level of generalist in the JPALS (level 5), pharmacists have to submit at least 24 portfolio entries (minimum 6 portfolio entries per year), as well as passing a web-based examination related to each level of professional standards. After a certified as the level 5 pharmacist, the pharmacists can apply to the higher-level criteria as a specialist in the particular field. The criteria of higher than level 5 will be defined latter [7].

For the development of JPALS, the JPA also developed the *Professional Standards (PS)* required of pharmacists in 2009. The PS consists of 383 items, encompassing 5 areas: (1) humanism, (2) rational use of medicines (safety, efficacy and economics), (3) regional health promotion (prevention of drug abuse, self-medication, and anti-doping activity, etc.), (4) risk management, and (5) compliance with laws and regulations. With the PS as indicators to be achieved, self-directed lifelong learning is now supported with the use of a portfolio-based system in JPALS and accomplished by undergoing an examination, such as a Web test, and advancing step-by-step up the Clinical Ladder (CL) [8].

Challenges faced with the implementation

Even though the development of a CPD/CE system in Japan has been significant, there remain many challenges to fully develop the framework. These challenges relate to the following three points: there is no mandatory CPD/CE system in Japan, the application of the CPD cycle as an approach to lifelong learning in individual practice, and the qualitative assessment of CPD portfolios.

The CPD/CE system in Japan is not mandatory for pharmacists after licensure, but voluntary. Under this model, all pharmacists need to understand the necessity and the responsibility for their own CPD. For successful and meaningful lifelong learning, pre-service education should

instil in pharmacy graduates the concept of and approach to lifelong learning/CPD, and the learning skills needed in the CPD framework. In addition, motivation is a key impetus for the CPD process [9]. Thus, professional work and learning environments should be maintained for pharmacists to encourage them to direct their own CPD.

In the application of the CPD cycle as an approach to lifelong learning as we can clearly see from the development of the JPALS, pharmacists in Japan are facing a challenge to develop the necessary skills and knowledge for the application of the CPD cycle into their own lifelong learning. In order to implement CPD, participants need to learn the steps of the CPD cycle and how to convert all learning into meaningful evidence in their personal portfolio. The deliberate and consistent training, support, and follow-up is needed.

Finally, the development of a qualitative assessment of portfolios is a big challenge in Japan. In the Clinical Ladder of the JPALS, an examination is considered as an assessment to move to the next ladder rung. To successfully establish the qualitative assessment of CPD efforts, assessment training and time required to assess the qualitative criteria will need to be taken into account.

Lessons learned

• Under the situation where pharmacists are recognised as a member of the health care team, with ever-changing pharmaceutical technology, pharmacists are expected to practice at general to advanced levels in broad pharmaceutical fields. To establish a firm, consistent, and transparent CPD framework for pharmacists, the collaboration between governments, pharmacy profession-related organisations, and pharmacy schools is essential;

• Moreover, periodic accreditation cycles to maintain and improve the quality of the learning programmes are important. To obtain the trust from other medical professionals and the population, the accreditation system also needs to be transparent. The foundation and the activities of the CPC assist with the process of quality assurance of pharmacists' CPD efforts;

• It is also vital to disseminate the concept of the CPD framework and its necessary learning skills to complete the CPD cycle. To promote seamless lifelong learning right after licensure at the advanced level, the components of pre-service education need to be taken into account for the implementation of the CPD framework in Japan.

Key tools that helped in each stage

At the Reflection stage, the JPEC provides the Indications for Self-Evaluation (available at: http://www.jpec.or.jp/english/indicators.html). The JPA also developed the professional standards required of pharmacists [7]. Professional Standards are intended to help pharmacists identify their own learning objectives for the Planning stage. At the Action stage, there are many education programmes from a general practice level to a speciality practice level which are accredited by the CPC. During the Evaluation stage, the Professional Standards listed on the JPALS on-line system can be used to evaluate learning achievement. The portfolio system provided helps with documentation at each stage of the CPD cycle.

National strategies for health care services

Pharmacists in Japan are considered as members of the health care team and expected to improve and maintain new knowledge, skills, attitudes and behaviours to ensure the provision of patient care with optimal medication therapy to improve patients' and public health in a continuously changing and increasingly complex health care system [7]. In line with the advancement of medical and pharmaceutical care, the growing roles of pharmacists in the health care team led to the development of pharmacist specialists in particular fields. The achievements towards professional development addressed the need for a firm and transparent CPD framework for pharmacists [3]. In addition to these needs, MHLW and MEXT demanded the establishment of a consistent CPD framework to ensure lifelong learning after licensure, and subsequent quality assurance [1]. Furthermore, although many pharmacists are learning to develop their skills and knowledge by CPD programmes, this fact would be little known to the general public. It would be necessary for pharmacists' organisations to advocate that pharmacists have adequate knowledge and skills that translate to positive patient health outcomes.

Plans for the future

Currently, Pharmacists Specialities Credentialing Programmes, which are organised by each specialist group, institute, and association, have taken on the responsibility to assure the quality of programme providers in spite of the set of standards developed by the CPC, an organisation of a public interest incorporated association. To improve and maintain the quality of programmes and certified pharmacists, periodic accreditation by external programme provider organisations should be required: the CPC plans to take responsibility for these programmes as well as the other General Continuing Education Credentialing Programmes in the future [1].

Currently, JPALS is used for professional development at the generalist level. The development of the advanced level (Clinical Ladder) is on-going with the plan to use this in JPALS lifelong learning process for pharmacists in Japan. The advanced level in CL will be developed in collaboration with other pharmacy-related organisations and existing Pharmacists Specialities Credentialing Programmes.

Finally, for the seamless learning from undergraduate to advanced level, a closer collaboration between the pharmaceutical profession-related organisations and schools is required.

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Namibia: CPD programme, a pragmatic approach in a resource stretched setting

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Summary

• CPD is compulsory in Namibia but capacity and resource constraints reduce the opportunity to provide comprehensive quality education;

• The new School of Pharmacy identified CPD as one of Namibia's greatest needs in retaining and improving competence in the country;

• A broad programme has been launched to encompass various needs including involvement of different professional groups as well as different cadres within the pharmacy profession;

• Practitioners can be awarded credit on a number of different levels through the professional accreditor as well as University credit;

• This CPD programme represents a pragmatic approach in a resource stretched setting.

Current drivers

• There is serious shortage of healthcare professionals in Namibia, particularly in pharmacy (347 pharmacists total), with huge demands on public healthcare infrastructure and high rates of communicable and non-communicable disease;

• Lack of expertise within the health professions;

• The creation of new health education Schools of Pharmacy and Medicine;

• Creation of the National Health Training Centre to train Pharmacist's Assistants in the Ministry of Health and Social Services (MoHSS) since 1992.

Although CPD has been compulsory in Namibia for a number of years, the desire to meet this professional requirement has not yet been achieved. Namibia is getting to grips with new regulations and proposed pharmaceutical policy and the new education programmes cannot provide a quick fix to the huge needs in Namibia. However, the University's place in setting the standard of CPD is clear, as the only provider of higher education in health in Namibia. Lessons are being learned from other settings to improve efficiency of delivery of CPD without sacrificing quality.

Challenges faced in the implementation

• Not enough practitioners in higher education to support the CPD programme;

• Practitioners (the market) are distributed sparsely across a wide geographical area;

• Pharmacists are accustomed to free CPD provision from pharmaceutical industry/interest groups thereby reducing the likelihood of paying for this service;

• Attitudinal change towards competence rather than completion of a task (CPD) for the sake of retaining registration;

• Not enough practitioners as part of the accreditation body to truly ensure that the compulsory CPD policy is enacted;

• Lack of technical 'know-how' for implementing a robust online system to support the CPD process.
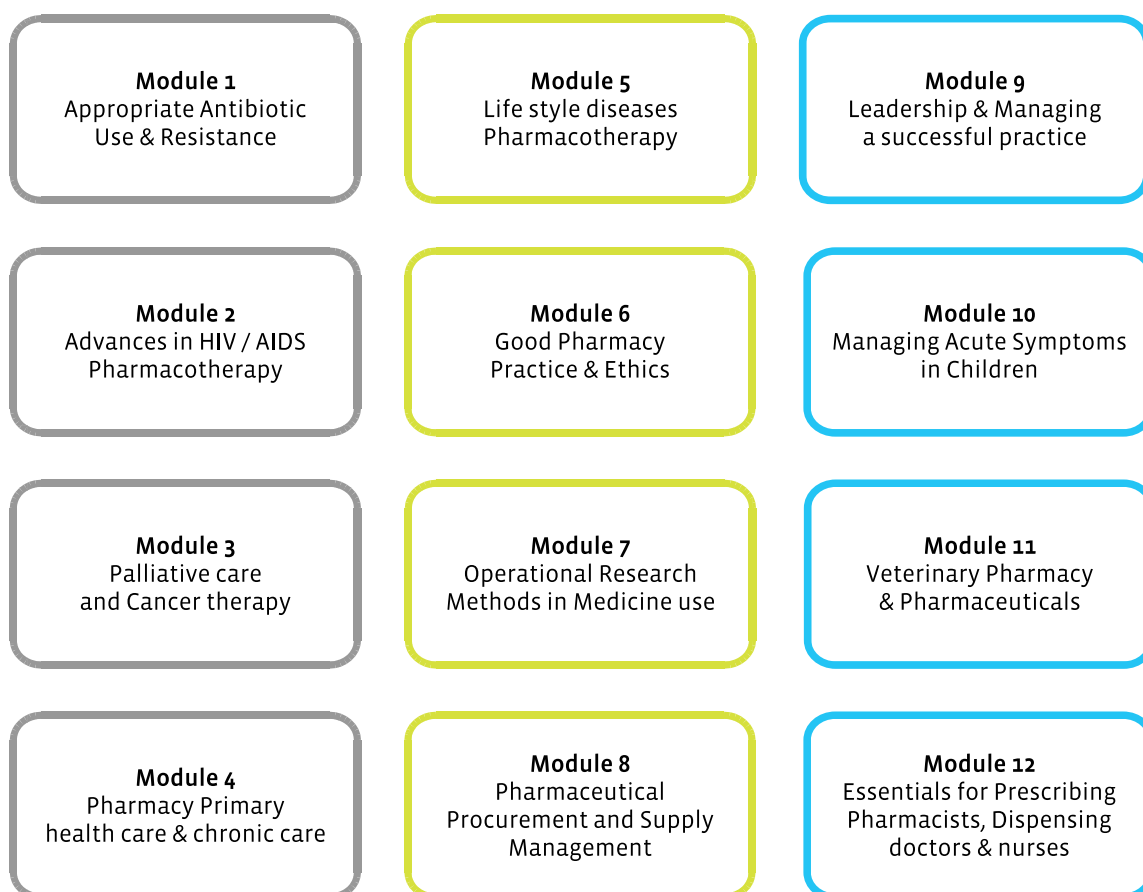
Lessons learned

• There is no quick solution;

• It is easier to start something from scratch than to change an existing practice;

• Making use of existing resources and partners to support.

Key tools that helped in each stage

The CPD Model Matrix in Namibia is comprised of modular CPD units at three different levels: **Level 1** being one-off activities (e.g. one hour lecture) that a number of different healthcare practitioners could benefit from; **Level 2** being a comprehensive module (e.g. set of 4 activities) incorporating *Level 1* but that would more likely be orientated to pharmacy practice (e.g. rational use of medicines; Pharmacy Law and Ethics); and **Level 3** being the culmination of undertaking a specific number of modules (from *Level 2*, e.g. set of 10 modules) to result in a post-graduate certified qualification through the University (Figure 1).

Figure 1: Proposed CPD module structure in Namibia.

Module 1 Appropriate Antibiotic Use & Resistance	**Module 5** Life style diseases Pharmacotherapy	**Module 9** Leadership & Managing a successful practice
Module 2 Advances in HIV / AIDS Pharmacotherapy	**Module 6** Good Pharmacy Practice & Ethics	**Module 10** Managing Acute Symptoms in Children
Module 3 Palliative care and Cancer therapy	**Module 7** Operational Research Methods in Medicine use	**Module 11** Veterinary Pharmacy & Pharmaceuticals
Module 4 Pharmacy Primary health care & chronic care	**Module 8** Pharmaceutical Procurement and Supply Management	**Module 12** Essentials for Prescribing Pharmacists, Dispensing doctors & nurses

National strategies for health care services

It is refreshing that a country, such as Namibia, with all its challenges in healthcare delivery, lack of capacity and expertise, has chosen from a regulatory standpoint to enact CPD as a compulsory entity of professional membership and registration. Although the challenges have been described, there is a great opportunity for a country with such a small, sparsely distributed population to effect change through collaboration between the public and private sectors, so it can be enforced across sectors and across professions.

The University's primary education focus makes it the perfect partner both of the public and private sector to implement a comprehensive CPD programme. The Pharmacy Council of Namibia under the Health Professions Councils of Namibia (HPCNA), has required that health professionals – including pharmacists and pharmacist's assistants - undertake minimum Continuing Professional Development (CPD) to remain competently registered.

Plans for the future

A learning portfolio is neither required nor frequently used in:

• The implementation of additional CPD modules;

• Certifying the CPD programme, offered through the University;

• Building on the CPD programme to initiate post-graduate programmes in Pharmacy.

New Zealand: Started mandatory CPD in 2005, after revision in 2010 a new framework was implemented in 2013

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Summary

As of 30 June 2013, New Zealand has 3,351 pharmacists on the practicing register, all of whom must undertake mandatory continuing professional development (CPD).

In 2005, the Pharmacy Council endorsed a framework for re-certification that was based on the four steps (Reflection, Planning, Action, Outcomes) of the CPD model.

In 2010, the Council convened a working party to review the framework and make recommendations for change.

Pharmacists are required to self-assess against the Council competence standards once every three years, and must now accumulate points based on the hours of learning completed, instead of demonstrating outcome credits.

Participation is measured in points across three groups of learning activities.

Group 1
Presentations and activities with limited or no attendee interaction
Includes reading journal articles, listening to a presentation, attending conferences
Maximum recognised: 35 points in three years
1 point per 1 hour of activity

Group 2
Learning activities where new knowledge is demonstrated by assessment
Includes formal college courses, university post graduate studies, assessed CE articles
2 points per 1 hour of activity

Group 3
Practice improvement is demonstrated by recording evidence of practice outcomes, reflective identification and evaluation of learning
Demonstrates practice improvement by: • Identifying learning need, • Planning and undertaking relevant learning activities, and • Recording examples of outcomes that show sustainable and beneficial change
At least two goals every three years.
5 points + (non-assessed + assessed) points per completed goal

Pharmacists must complete a minimum of 20 points annually and 70 points in three years, which includes a minimum of 10 points from Group 3 (significant learning goal).

Peer group activities are encouraged. A learning peer is a pharmacist colleague who confirms that the learning has occurred and provides feedback on the learning activities, including feedback on each step of the learning goals in Group 3.

Current drivers

Council standards for conduct, ethics and performance require all pharmacy professionals to maintain and improve the quality of their practice. This is accomplished by keeping work related knowledge and skills up-to-date.

CPD has been a mandatory requirement in New Zealand since 2005, therefore, New Zealand would be considered a 'maturing' country with respect to CPD/CE. Although the Council audit processes indicate a high level of engagement and competence, not all pharmacists have engaged with the framework or requirements wholeheartedly. The reflection step in the CPD cycle is difficult for some pharmacists to understand and it is unclear how well this step is being done across the profession.

Challenges faced in the implementation

• Ensuring pharmacists engage with the CPD cycle that includes reflection on their practice;

• Changing the focus of CPD to meaningful learning rather than collecting CE points;

• Minimising cost constraints for pharmacists to undertake formal CPD programmes;

- Making the recording or documentation of learning less onerous;

- Identifying those pharmacists who require additional mentoring or guidance to steer away from the point-collecting mentality;

- Ensuring relevant support for pharmacists in non-traditional roles.

Lessons learned

The new framework is very new (implemented in April 2013) so New Zealand is still very much in the beginning phase. Lessons learned at this early stage are:

- Re-certification requirements mandated in legislation [1] means all pharmacists must participate;

- CPD programme providers must have strategies in place to engage pharmacists in professional development;

- Ensuring CPD providers have a robust on-line system for pharmacists to maintain their individual records;

- Pharmacists must be offered an opportunity to evaluate the quality of the programme;

- Providers must have IT systems in place for the purpose of monitoring the participation of individual pharmacists. Providers must also be able to produce summary reports on the participation of all pharmacists enrolled in the programme.

Key tools

The Pharmacy Council does not provide CPD; instead Council accredits CPD providers. The points below represent Council activities at each stage.

a. *Reflect* – assessment of the 2005 CPD framework to determine if change was required to improve engagement by the profession, and what that change was.

b. *Plan* – a Council-appointed working group developed a new recertification framework.

c. *Act* – an expression of interest (EOI) process was undertaken inviting organisations to register their interest in developing and delivering recertification programmes that meet the framework.

d. *Evaluate* – on-going monitoring of the programme providers will be done against Council requirements.

National strategies for health care services

The HPCAA [1] requires all health professionals to undertake CPD, just as the public expect all health professionals to be competent and fit to practice throughout their career. Although some highly specialised clinical pharmacists are working in new areas of practice, e.g., designated prescribing, with greater expectations of competence, the New Zealand Government's *Better, Sooner, More Convenient Primary Health Care* initiative requires all community pharmacists to be involved with and to deliver more personalised primary health care. This has recently been built into the community pharmacy service agreement, as has the need to develop and build on a quality improvement plan for service delivery.

The Council's competence standards are also currently under review and will reflect these requirements. Professional boundaries are also changing, enabling tasks to be done in a way which frees up the time of the most highly trained professionals and hospital services to focus on patients with the most complex needs. Further expansion of pharmacist services, e.g., vaccinations and anti-coagulation monitoring, will focus attention on maintaining competence and undertaking learning that is relevant to the new services and healthcare environment.

Plans for the future

To monitor CPD providers to ensure programmes are adaptable to the learning needs of pharmacists including the required balance of reflective and non-reflective learning for CPD. The optimum balance of the two will vary for pharmacists according to their practice setting, experience and learning preference. To ensure pharmacists understand the requirement to make learning relevant to their practice, rather than being involved in learning that is simply opportunistic.

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Northern Ireland: On-line portfolio maintenance and accredited training records

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Summary

When developing a system in which CPD portfolios can be assessed it is important to build the system with assessment as the guiding principle.

The training of assessors is key to achieving consistency in assessment.

Even with appropriate training of assessors there will be variation in scoring and therefore it is important to have quality assurance (QA) checks as part of the system. A rapid turnover in assessors tends to reduce consistency.

On-line portfolio maintenance, submission administration, assessment and feedback are much easier to implement and less expensive to operate than a paper-based system.

Pharmacist understanding of the distinction between CE and CPD is key to enabling them to successfully build a portfolio.

In Northern Ireland, specific additional pharmaceutical services attract a payment. Pharmacists have the opportunity to provide additional services covered by the health insurance.

Current drivers

In the UK, a number of high-profile cases of criminality, incompetence and/or cover-up by health professionals prompted the government at that time to require health professionals to become more accountable for their actions and to demonstrate their competence on an on-going basis. CPD for pharmacists has been implemented since 2007 and it is considered advanced in this area.

In 2004, the Department of Health (DoH) funded Northern Ireland Centre for Pharmacy Learning and Development (NICPLD) to develop a system of CPD for pharmacists in Northern Ireland. Key elements were to:

- Develop a definitive CPD on-line portfolio;
- Define objective standards against which portfolios could be assessed;
- Establish an appropriate support system for pharmacists;
- Enable monitoring/assessment of portfolios, with remediation schemes as appropriate;
- Provide financial estimates of running costs for the system.

The project ran over two years, at the end of which (2006) the system was fine-tuned and responsibility for rolling-out mandatory CPD to the profession passed to the pharmacy regulator.

Challenges faced in the implementation

Keys to success were administrative websites for the regulator and an assessment website for assessors to remotely access pharmacists' portfolios. To comply with data protection, the pharmacist online portfolio had an option to allow the assessor to view their portfolio. A guiding principle (and the most challenging aspect) was that the portfolio should be assessable.

- It was used a four-stage CPD cycle (*Reflection*, *Planning*, *Action* and *Evaluation*), in which each individual cycle had to address 9 elements.

- The percentage of acceptable CPD cycles in a CPD portfolio determined the overall portfolio acceptability.

- The levels of inter-assessor agreement (75-83%) were higher than those reported elsewhere.

- Lack of agreement was highest at the acceptable/ unacceptable interface.

- Agreement tended to decline with assessor turnover, suggesting there is a learning curve for new assessors.

National strategies for health care services

In Northern Ireland, specific additional pharmaceutical services attract a payment. These services require training, which is a pre-requisite to providing the service. Examples of such services include:

- medication review;
- medicines use review;
- public health services (e.g. smoking cessation);
- services to care homes;
- substitution prescribing.

The Health Board is the commissioner for such services and it makes payments to the community pharmacy. To enable pharmacists to confirm that they have undertaken accredited training, we have developed a training tracker. Once trained, the pharmacist can, via their portfolio, check a link to have their name added to the list of accredited service providers. This list can be accessed by the Health Board to:

- confirm the pharmacist has been trained before they authorise an initial payment for a new service; or

- identify an accredited community pharmacy that can provide a particular pharmaceutical service in a specific location.

Plans for the future

Northern Ireland Centre for Pharmacy Learning and Development developed the CPD system, which was then adopted and implemented by the pharmacy regulator (Pharmaceutical Society of Northern Ireland). Despite the CPD system being in place for almost seven years, it has taken six years for legislation to change to enable sanctions for non-compliance with CPD regulations.

In the UK, the requirements for regulation of healthcare professionals differ between the professions, as do the sanctions for non-compliance with CPD or breaching regulations, such as the code of ethics. In the UK there has been discussion about harmonising regulation of the health professions into one regulator to ensure consistency and fairness. It remains to be seen if this will happen.

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Oman: Continuing Professional Development systems for all health professionals

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The Ministry of Health (MOH) has put in place robust Continuing Professional Development (CPD) systems and structures aimed at enabling all health professionals to provide quality care to patients through continuously updating their knowledge, competencies and attitudes in their relevant fields of practice.

These systems and structures are centrally coordinated, managed, supported and monitored by the Directorate of Continuing Professional Development (DCPD) and guided by specific CPD Ministerial Directives and policies to cater for the comprehensive CPD needs of all categories of health care professionals.

Health care professionals, including pharmacists, are catered for in their CPD needs and are required to keep abreast of developments in pharmacy practice and the pharmaceutical sciences, professional standards requirements, the laws governing pharmacy and medicines, and advances in knowledge and technology relating to use of medicines.

In this context, DCPD in coordination with the established CPD structures in all the hospitals and governorates supports the pharmacists in:

• Assessing their learning and development needs and the preparation of need-based CPD programmes;
• Planning and implementing structured learning programmes as well as recording and evaluating the impact of their learning in their professional practice;
• Allocating an appropriate budget and relevant educational resources for planning and conducting CPD programmes.

As a consequence, this ensures that their CPD programmes planned, organised and conducted either at the local or national levels are in line with the Ministerial CPD policy, which requires that the CPD activities:

• Are need-based and driven by SMART objectives and supported by adult learning principles. Based on the identified needs, DCPD prepares an *Annual Planned Calendar of Events* which is made accessible to all the concerned stakeholders in the various health disciplines in which pharmacy is also prominently featured;
• Incorporate instructional methodologies that are relevant and appropriate for the intended objectives and the learning has immediacy of application in the work settings;
• Are effective in the learning process and where necessary initiate remedial intervention for enhancing and improving the planning and delivery of future CPD programmes.

The preparation of CPD providers in these competencies and skills are not only to ensure that the planned programmes are standardised according to educational principles but also a mandatory requirement for the accreditation of these programmes. Oman Medical Specialty Board (OMSB) is the accrediting body for all CPD programmes conducted in the country. Pharmacists and other health care professionals are all required to acquire a specified number of CPD credits both category I and II within a determined time frame and cycle in the relevant discipline.

• *Category I activities* - Formal and highly structured learning activities provided by recognized educational or scientific institutions or professional bodies that are accredited by OMSB or other recognized accreditation bodies.

• *Category II activities* - Self-learning planned activities commonly conducted individually or in groups to address the needs identified locally by specific specialty or department.

The acquisition of these credit points, form an integral part of performance appraisal, renewal of license to practice, tenure of service, promotion and other benefits.

To ensure the enhancement and sustainable development of CPD in the Ministry, DCPD also conducts annual CPD review and monitoring visits to all the health care institutions. These visits provide an opportunity to monitor the progress of the CPD initiatives and programmes, the status of the CPD accreditation, address current and emerging challenges, provide recommendations for improvement and determine the status of the implementation of the previous year's visits' recommendations, as well as provide on-the-spot consultation and technical support on all CPD issues and concerns.

An annual CPD review and monitoring report is prepared and circulated to all the stakeholders, which serves the purpose of sharing identified good practices as well as highlighting achievements and the DCPD recommendations for improvement in each health discipline in the respective institutions.

The Oman Assistant Pharmacy Institute (OAPI) also plays a pivotal role not only in faculty development activities for its staff but also in the follow-up of its alumni in the service sector. The institute offers a variety of professional development programmes to practitioners to meet their learning needs, enabling them to retain their capacity to practice safely and effectively within their evolving career and scope of practice as well as acquiring new knowledge.

A similar approach has also been adopted by the Directorate General of Pharmaceutical Affairs and Drug Control (DGPA-DC), Directorate General of Medical Services (DGMS) and the Directorate of Rational Use of Medicine (DRUM) to work collaboratively with the pharmacists in the private sector to support their CPD initiatives and addressing prevailing challenges in the delivery of pharmaceutical services to the public in line with the Ministerial Directives in this respect.

United States of America: Developing Continuing Education process for re-licensure since 1965

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Summary

In 1965, Florida became the first state to mandate continuing education (CE) for pharmacists' re-licensure. In the early 1970s, the American Pharmaceutical Association-American Association of Colleges of Pharmacy (APhA-AACP) Taskforce on Continuing Competence in Pharmacy (1972-74) determined that CE was the best mechanism for assuring pharmacists' proficiency [1]. In 1974, the APhA Board of Trustees recommended that the Accreditation Council for Pharmacy Education (ACPE) develop a system of accreditation for CE, and the following year ACPE introduced accreditation standards for CE providers. Currently, ACPE accredits approximately 350 CE providers.

In the 2000's, the pharmacy profession began exploring different approaches and strategies to enhance CE and its outcomes. Statements and policies relating to continuing professional development (CPD) were adopted by a number of national and state pharmacy organizations, including the National Association of Boards of Pharmacy (NABP), AACP, ACPE, the American Society of Health-System Pharmacists (ASHP), APhA, and the Joint Commission of Pharmacy Practitioners (JCPP) [2-7]. U.S. policies have advocated exploration and implementation of CPD concepts as well as development of CPD tools and resources to support self-directed lifelong learning (See Figure 1).

Current drivers

Revision of CE accreditation standards in 2009 place a stronger emphasis on identifying practice gaps, application of learning in practice, and evaluation of learning outcomes on patient care, which has facilitated a shift to a learner-driven, needs-based model. Additionally, the Institute of Medicine (IOM) has called for a new comprehensive vision of professional development based on the CPD approach to improve quality of learning [8].

The United States continues to mature in the implementation of the CPD framework. In 2006, a 5-state CPD pilot program was undertaken as the first prospective, broad-based study to evaluate the potential role of CPD for pharmacists in the United States [9]. The primary purpose was to stimulate a shift in the profession from exploration of CPD to implementation. In subsequent years, three states have established the CPD framework as a process for re-licensure in lieu of traditional hours-based CE: North Carolina [10], Iowa, and New Mexico.

The impact of CPD as compared to CE on pharmacy practice in a health system was examined in 2010 [11]. Results indicated that pharmacists who were enrolled in CPD more often reported improvement in their perceptions of pharmacy practice than pharmacists enrolled in CPE.

Challenges faced in the implementation

Whereas drivers for change in CPD implementation have existed from within the profession as well as regulatory mandates in other countries, much of the forward movement in CPD in the United States has been spearheaded by the educational accrediting body (ACPE), professional associations, pharmacy schools, and employers within the various states. Not all stakeholders feel the need for change and CPD implementation presents both challenges and opportunities.

CPD requires a different approach by pharmacists, CE providers, employers/institutions, and regulators. New skills and competencies, such as identifying individual learning needs, writing SMART learning objectives, and developing personal learning plans, are required, and not all pharmacists currently have this expertise [12,13].

Lessons learned

Evidence has shown that pharmacists who have adopted a CPD approach in the United States are more likely to identify strengths and weaknesses through self-assessment, development of SMART goals, and participation in activities selected to achieve a predetermined objective [13,14]. Study results have also indicated that increased time requirements for the CPD model may be a hindrance to model implementation [9, 11, 13].

Key tools that helped in each stage

ACPE has available on its website a compilation of CPD educational resources that address all four CPD stages for pharmacists, pharmacy technicians, student pharmacists, and CE providers. These resources were primarily developed from the 5-state CPD pilot program. The formats include audio-visual presentations with exercises, presentations and their associated documents, and a CPD Portfolio containing worksheets.

National strategies for health care services

ACPE has incorporated into its Professional Degree Programme Standards and Definition of Continuing Education for the Profession of Pharmacy the core competencies needed by all health care professionals as indicated by the Institute of Medicine, which noted needed changes in the healthcare system to improve medication safety and patient outcomes including: providing patient-centred care; working in interprofessional teams; employing evidence-based practice; applying quality improvement; and utilizing informatics [15].

Moreover, AACP's Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes (2013) [16], which are intended to be the target toward which the evolving pharmacy curriculum should be aimed; JCPP's Vision Statement for Pharmacy Practice (2013) [17], accepted by the governing boards of 10 pharmacy organizations; and Core Competencies for Interprofessional Collaborative Practice [18], which identify competencies of the healthcare team, will be incorporated into future Accreditation Standards. The intent is that learners will continue to enhance these competencies through the use of a CPD framework.

Plans for the future

Consistent with ACPE's mission to assure and advance excellence in education, an ACPE CPD Taskforce was established in 2010 to facilitate profession-wide adoption and implementation of CPD concepts and approaches. It was restructured in 2013 as the ACPE CPD Steering Committee to generate and prioritize recommendations, and develop strategic partnerships in advancing the concepts of CPD.

The overarching goals of the Committee are to facilitate implementation of profession wide self-directed lifelong learning (SDLLL) through education, awareness, and resources, and facilitate research and outcomes assessment for CPD/SDLLL. Specific objectives include providing CPD recommendations in accreditation standards for professional degree programs and CE providers, developing a repository of CPD/SDLLL tools, partnering with stakeholders to integrate CPD, and creating an inter-professional research community.

Figure 1: Adoption of CPE and CPD in the United States, 1965-2013.

1965	1972	1974-1975	1990S	2003-2005	2006	2009	2010	2011-2012	2012	2013
State-mandated CE in Florida		ACPE to accredit CE; CPE Standards adopted			CPD pilots occur in five states		ACPE establishes CPD Taskforce; North Carolina Board of Pharmacy establishes re-licensure process using CPD in lieu of CE		ACPE Board votes for permanent CPD Taskforce in order to strive for further advancement	
	NABP institutes CE for re-licensure*			Professional groups issue policies calling for CPD implementation						
			First countries introduce CPD in Pharmacy; first Lifelong Learning conference			ACPE implements revised CPE Standards; IOM issues Redesigning CE in the Health Professions: "CPD provides a promising approach to improve the quality of learning"		State-based CPD programs expand (3)		CPD Taskforce reestablished as CPD Steering Committee; CPD Conference to advance implementation

*1972-74 American Pharmaceutical Association-American Association of Collegues of Pharmacy Taskforce on Continuing Competence in Pharmacy: CE best mechanism for assuring pharmacist proficiency

NABP = National Association of Boards of Pharmacy
ACPE = Accreditation Council for Pharmacy Education
IOM = Institute of Medicine

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PART 5

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FIP Education Initiative

The International Pharmaceutical Federation (FIP) has a strategic focus on addressing pharmaceutical education. It is clear that better health for populations, through the advancement in medicines science, practice, innovation and in delivering healthcare reform requires a capable and competent workforce that continually address education and training. Consequently, transforming and scaling up pharmaceutical education is crucial to building a capable pharmaceutical workforce.

This section of the report provides a selection of the different groups that constitute the FIP Education Initiative (FIP*Ed*), although not exhaustive, and how it can support/guide continuing professional development/continuing education activities.

Academic Pharmacy Section

The Academic Pharmacy Section (AcPS) is committed to advancing the education of students and practitioners to assure all have the abilities to advance pharmacy practice and improve the health and wellbeing of everyone in our communities. To further this mission, the AcPS delivers programming sessions at the annual FIP World Congresses, often jointly with Education Development Team, Academic Institution Membership and other sections, to provide educators and practitioners with new ideas, knowledge, skills and resources to improve patient care services.

Examples of recent and upcoming programming directed at practitioners as well as those educating pharmacy students include: clinical pharmacy education and development of methods to best provide this education to practitioners; developing advanced competencies in contemporary science that directly impacts patient care; developing leadership skills in students and practitioners at various stages of their careers; preparing the workforce for advanced scope of practice; providing practical methods to educate and train students and practitioners to engage in enquiry based practice; and post-graduate education activities that add value to current practitioners by providing training and tools needed to enhance practice and document the value of pharmacy care services in improving health outcomes.

Competency-based Development

The competency based education domains within the FIP*Ed* Development Team exist to promote professional recognition processes for workforce development, to share examples of best practice and to encourage practitioner development in the years post registration. Key to these developments are the establishment of professional development frameworks as tools and mechanisms for leadership bodies to use as frameworks for developing national workforces. Significant advances in this area have already been made in many countries. Current activity in the domains is focused around capturing information on international experience with a view to developing a review of current practice to inform next steps, including international cross-over trials to compare practice frameworks in current use. The domains will continue to provide evidence and information about global practice frameworks, which will be of benefit to all FIP members.

The Global Competency Framework (GbCF v1) is in use in many international settings (at national and institutional levels – see 2013 FIP*Ed* Global Education Report for case studies, available from: www.fip.org/educationreports) to guide practitioner professional development. There is increasing recognition that some practitioners are practising at a level more advanced than that seen at initial registration and recognition of advanced pharmacy practice is continuing to gather momentum internationally.

Work in this Domain is synergistic with the CPD/CE Domain with advanced practice frameworks describing a practitioner development pathway, which is strongly reliant on lifelong learning and reflective practice.

Continuing Professional Development and Education

Following the annual domain forum of CPD/CE at the 2013 FIP Congress in Dublin, Ireland, representatives from different countries discussed a number of issues around barriers to CPD, gap analysis of CPD provisions, use of CPD frameworks for implementing national policy and better ways for publishing innovation.

One key challenge to emerge is that information is not published in indexed journals for the others to access and use for research or development purposes. There also seems to be general consensus around providing further details on how to implement the skills that comprise the CPD framework (reflect, plan, learn and evaluate). It was also proposed that further work on change management strategies and structured development needs to be progressed, and the domain activities will continue to engage stakeholders. Lastly, a "repository of resources" for worldwide member access was proposed as a "next-steps" future project.

Quality Assurance

Almost all countries have systems in place for the oversight, accreditation and quality assurance (QA) of pre-service education [1,2,3]. Most of these systems are governmental and they address quality at an institutional (university-wide) level. A relatively small number of countries have well-developed Quality Assurance systems specific to pharmacy education and, as is evident in this report, even fewer countries have formal systems to assure the quality of the continuing education (CE) activities that are offered by a variety of providers to support the continuing professional development (CPD) of pharmacists and other members of the pharmacy workforce.

Many of the best practices and important lessons that have been learned in pre-service pharmacy education and its quality assurance have yet to be successfully applied in CPD/CE on a global scale. This would appear to be an indication that the pharmacy profession world-wide has not afforded the needed level of attention to the development and implementation of new educational models to support the evolving and expanding practice of pharmacists that occurs during their "lifetime" of practice. New approaches – notably the CPD model – are now emerging and have been successfully adopted in a number of countries.

These more learner-centric models that cater to the diverse learning needs and professional goals of practitioners do, however, create additional challenges for both regulators and quality assurance bodies that have the mandate to assure the quality, rigor and appropriateness of self-directed lifelong learning and the on-going (and contemporary) competence of practitioners

This technical report describes the current state of affairs of CPD/CE in pharmacy globally. Future initiatives and reports of FIP*Ed* will address in more detail issues related to assuring the quality and validity of the CPD/CE-related activities undertaken by members of the pharmacy and pharmaceutical workforce.

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PART 6

SUMMARY

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This Continuing Professional Development/Continuing Education in Pharmacy: Global Report has presented the current trends and activities with regards to professional development and lifelong learning across 66 countries and territories globally.

From the data gathering (see Part 3 of this report) half of the countries and territories have used or implemented the recommendations of the 2002 FIP Statement on Continuing Professional Development to develop their own country's/territory's system.

The results show that the provision of CPD/CE activities is conducted by multiple providers, such as, pharmaceutical professional associations, the higher education sector, employers, commercial education providers, and national regulator bodies; on average, respondents reported three or more categories of education/CPD provider. Funding provision also shows plurality of provision, most notably 88% of respondents reported some form of self-funding in operation. Additionally, 77% of this survey report contributions by pharmaceutical companies for professional development activities. When comparing the wealth and income of countries and territories, the wealthier countries/territories tend to have a greater proportion of private (or commercial) provision as part of the national CPD/CE provider mix.

Professional development frameworks (competency based approaches) are being gradually implemented globally. The trends seem to indicate that the adoption or development of foundation level frameworks is increasing across countries and territories and that advanced practice, as a recognised activity that can be described by developmental frameworks, is a current item of interest for national associations.

The nine case studies (see Part 4 of this report) provided an overview of the different types of activities, structures, processes and programmes that currently exist globally. Notably the tendency is for Continuing Professional Development to become mandatory and activities to focus more on the learning needs of the practitioners.

Based on the case studies and literature review, it is clear that there is a wide variation in the definition of continuing professional development and continuing education implementation frameworks globally. Notwithstanding this, it is also clear that some key components can be agreed upon when striving towards competence and development as a professional:

1. An opportunity to reflect on ones learning;

2. A clear plan towards achieving specified learning goals or objectives;

3. Deliberate involvement in learning activities;

4. Evaluation of the outcomes of such learning activities to assess the success or progress toward achieving the goals.

For developing a functioning system:

1. Pharmacists should continue to pursue their development using the FIP structured framework of Continuing Professional Development, comprising of the following skillsets; *Reflect, Plan, Act/Learn, Evaluate*;

2. Countries beginning the CPD process should use this document for initial talking points for their respective governing bodies to determine which framework best suits their needs and available resources;

3. The profession should adopt guiding principles on continuing professional development as a whole and lifelong learning skills/habits;

4. Consider utilising the competency framework as a starting point for goal setting while planning.

FIP*Ed* is committed to further progress the global understanding of continuing education and continuing professional development and invites all readers to not just read this report, but to actively participate, share experiences and strategies in addressing continuing education challenges through the global FIP*Ed* platform and communities of practice. The FIP*Ed* Development Team aims to advocate and facilitate the design and support tools for pharmacy and pharmaceutical sciences education with the needs-based education model in their approach.

Annex 1. Data Table

Country/Territory	Implemented or used recommendations of the 2002 FIP Statement on CPD	Requirement for accredited degree programme for licensing	Ultimate regulatory authority for licensing pharmacists	Formal system for registration of pharmacists	National licensing or registration exam	Requirements to maintain registration	Competency framework for "foundation stage" practice	Competency framework for "advanced" practice	Competency framework for technicians
Afghanistan	No	Yes	Academia/HEI	No	No	No	In development	Yes	In development
Argentina	Yes	Yes	Government/Ministry	Yes	No	Yes	Yes	Yes	-
Australia	Yes	Yes	Council/Board	Yes	Yes	Yes	Yes	Yes	No
Austria	No	Yes	Academia/HEI	Yes	Yes	No	In development	In development	No
Belgium	No	Yes	Academia/HEI	Yes	No	No	No	No	No
Belize	Yes	Yes	Government/Ministry	Yes	Yes	No	In development	No	No
Bolivia	No	No	-	Yes	Yes	No	No	No	No
Brazil	Yes	Yes	Government/Ministry	Yes	No	No	Yes	In development	In development
Canada	Yes	Yes	Council/Board	Yes	Yes	Yes	Yes	No	Yes
Cayman Islands	Yes	Yes	Council/Board	Yes	No	Yes	Yes	No	Yes
Chile	No	Yes	Academia/HEI	Yes	No	No	Yes	No	No
China Taiwan	No	Yes	Government/Ministry	Yes	Yes	Yes	In development	In development	No
Colombia	No	Yes	Government/Ministry	Yes	No	No	Yes	No	Yes
Costa Rica	Yes	Yes	Government/Ministry	Yes	No	No	In development	No	In development
Croatia	No	No	Government/Ministry	Yes	Yes	Yes	In development	In development	No
Cuba	Yes	Yes	Government/Ministry	No	-	No	In development	In development	In development
Cyprus	No	Yes	Council/Board	Yes	Yes	No	No	No	No
Denmark	No	No	-	No	-	-	Yes	No	Yes
Egypt	No	No	-	Yes	No	-	No	No	No
El Salvador	Yes	Yes	Academia/HEI	No	No	No	In development	No	No
Ethiopia	No	Yes	Government/Ministry	Yes	No	Yes	In development	No	Yes
Finland	No	Yes	Government/Ministry	Yes	No	Yes	No	No	No

Annex 1. Data Table

Country/Territory	Implemented or used recommendations of the 2002 FIP Statement on CPD	Requirement for accredited degree programme for licensing	Ultimate regulatory authority for licensing pharmacists	Formal system for registration of pharmacists	National licensing or registration exam	Requirements to maintain registration	Competency framework for "foundation stage" practice	Competency framework for "advanced" practice	Competency framework for technicians
Germany	No	Yes	Government/Ministry	Yes	Yes	No	No	No	In development
Ghana	Yes	Yes	Council/Board	Yes	Yes	Yes	Yes	In development	In development
Great Britain	Yes	Yes	Council/Board	Yes	Yes	Yes	Yes	Yes	Yes
Guyana	No	Yes	Council/Board	Yes	No	Yes	No	In development	
Haiti	No	No	-	No	-	No	In development	No	No
Iceland	No	Yes	Government/Ministry	Yes	No	No	No	-	No
Iraq	No	Yes	Government/Ministry	Yes	No	No	No	In development	No
Ireland	Yes	Yes	Council/Board	Yes	Yes	Yes	Yes	No	No
Israel	No	No	-	Yes	Yes	No	No	Yes	No
Japan	Yes	Yes	Government/Ministry	Yes	Yes	No	Yes	No	No
Kosovo	No	Yes	Council/Board	Yes	Yes	Yes	No	No	No
Lithuania	-	Yes	Government/Ministry	Yes	No	Yes	Yes	No	Yes
Macedonia (Rep. of)	Yes	Yes	Government/Ministry	Yes	Yes	Yes	Yes	No	No
Malaysia	Yes	Yes	Council/Board	Yes	Yes	Yes	Yes	In development	No
Malta	No	No	-	Yes	No	No	No	No	No
Moldova	No	-	Council/Board	-	-	No	No	No	No
Namibia	No	Yes	Council/Board	Yes	Yes	Yes	Yes	In development	In development
Netherlands	Yes	Yes	Council/Board	Yes	Yes	Yes	Yes	Yes	Yes
New Zealand	Yes	Yes	Council/Board	Yes	Yes	Yes	Yes	Yes	-
Nigeria	Yes	Yes	Council/Board	Yes	No	Yes	Yes	Yes	Yes
Norway	No	Yes	-	Yes	No	No	Yes	No	Yes
Pakistan	Yes	Yes	Council/Board	Yes	No	Yes	Yes	In development	Yes

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Country/ Territory	Implemented or used recommendations of the 2002 FIP Statement on CPD	Requirement for accredited degree programme for licensing	Ultimate regulatory authority for licensing pharmacists	Formal system for registration of pharmacists	National licensing or registration exam	Requirements to maintain registration	Competency framework for "foundation stage" practice	Competency framework for "advanced" practice	Competency framework for technicians
Panama	Yes	Yes	Council/Board	Yes	Yes	Yes	No	No	No
Paraguay	No	No	-	No	No	-	No	No	No
Peru	Yes	Yes	Council/Board	Yes	No	Yes	In development	In development	In development
Philippines	Yes	Yes	Academia/HEI	Yes	Yes	No	In development	In development	In development
Portugal	Yes	Yes	Government/Ministry	Yes	No	Yes	No	No	No
Senegal	Yes	No	-	Yes	No	No	No	-	-
Serbia	No	Yes	Government/Ministry	Yes	No	Yes	Yes	No	No
Slovenia	No	Yes	Academia/HEI	No	No	No	Yes	Yes	Yes
South Africa	Yes	Yes	Council/Board	Yes	Yes	No	Yes	In development	In development
Spain	Yes	Yes	Government/Ministry	Yes	No	No	Yes	No	Yes
Sweden	No	Yes	Government/Ministry	Yes	No	No	No	No	No
Switzerland	Yes	Yes	Government/Ministry	Yes	Yes	Yes	Yes	Yes	Yes
Syrian Arab Republic	No	No	-	Yes	Yes	No	No	No	No
Tonga (Kingdom of)	Yes	Yes	Council/Board	Yes	No	No	No	No	In development
Trinidad and Tobago	No	Yes	Council/Board	Yes	No	No	Yes	No	No
Uganda	Yes	Yes	Government/Ministry	Yes	Yes	Yes	In development	In development	No
Ukraine	No	Yes	Government/Ministry	Yes	Yes	Yes	In development	No	No
United Arab Emirates	Yes	Yes	Government/Ministry	Yes	Yes	Yes	Yes	In development	Yes
United States of America	Yes	Yes	Council/Board	Yes	Yes	Yes	No	In development	No
Uruguay	Yes	Yes	Academia/HEI	No	-	No	Yes	No	Yes
Zambia	No	Yes	Council/Board	Yes	Yes	Yes	Yes	Yes	Yes
Zimbabwe	Yes	Yes	Council/Board	Yes	Yes	Yes	Yes	No	No

Note:
HEI: Higher Education Institutions

Annex 2. Acknowledgements

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