

Professional competences, credentialing and continuing professional development in the pharmacy profession

- Model Framework for Patient Centered Pharmaceutical Care -

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Abstract

The crucial changes have taken place in the role of pharmacy profession in the past decade. All these changes have been systematically evolved and adopted to support professional quality improvement aspect. In general, the worldwide professional and national authorities have been committed to develop the professional competencies, credentialing and continuing professional development; to emphasize the maintenance of high standards of professional development and in response to changes which occurred to pharmacy education and national health regulation policy. The constantly evolving health regulatory environment in each country will shape the progress of this process in the future.

This article provides a review of existing concepts for professional competences, credentialing and continuing professional development in pharmacy profession in an attempt to understand and clarify the complexity encountered in this comprehensive domain. It can also serve as a platform for the local interaction of a broad range of authorities in the health field.

Key words: pharmacy, competences, credentialing, continuing professional development, patient centered pharmaceutical care

Introduction

Drug therapy is the most frequently used form of treatment in any health practice setting. Namely, evidence-based practices confirm that drug therapy treatment has significantly increased due to the aging of world population, emerging of new infectious diseases, the prevalence of chronic diseases and increased number of patients who suffer from co-morbidities and require implementation of advanced multidrug therapy approach of complex nature (Kaplan and Laing, 2004). It must also be taken into account that community-based treatments for both acute and chronic illnesses that include newly developed therapies and act as the driving force towards outpatient surgeries have been related with the increased need of use of drugs. Moreover, with the development of the drug science and state-of-the art industrial technologies, the range of new efficient drugs has dramatically expanded. It is also

worth to mention that the adoption and implementation of new health technologies created real opportunities for increased access to drugs. On the other hand, health technologies also alter the way of receiving health services and ultimately revolutionize healthcare operations. Nowadays, modern health facilities apply computerized dispensing techniques and devices. Since recently, drugs can also be obtained by mail order and via Internet. As far as the drugs are concerned, the increased number of prescriptions, and the increased number of available over-the-counter drugs (Fenichel, 2004), as a consequence focused the patient interest on self-directed care. The complexity of these features, as noted above, combined with these new circumstances have placed the pharmacist in a more prominent position in terms of providing more information and sophisticated services to patients. The new role of pharmacists requires improved platform of knowledge, skills, eth-

ical attitude, and behavior that would contribute to the development of competently trained and adequately credentialed professionals.

The objective of this general overview is to present the first initiative of competency and categories of credentialing of pharmacy professionals, continual education of pharmacists and the best practices, with special focus on **patient centered pharmaceutical care** framework. This concept, developed and established in USA, due to its sophisticated characteristics has served as the model for Europe and other regions. The parallel concepts have also been developed for pharmacy technicians. However, they are not the subject of this overview. This overview, also presents the different aspects of the professional development and pharmacist's competencies that should be considered in our country, in the near future.

The process of achieving and maintaining the competency in the pharmacy profession and in the entire health care profession indeed, has been the subject of many support programs and initiatives which are to serve the public interest, healthcare professional oversight boards, pharmacy organizations, *regulatory agencies*, *credentialing* and *governing boards* (appendix A).

The basic principles underlying the roles and responsibilities of pharmacists are stated in the Code of Ethics for Pharmacists edited by American Pharmacists Association-APhA. (APhA, 2007). These principles, based on the moral obligations and qualities, are established in order to serve as a guidance for pharmacists in their relations with patients, health professionals, and society. Hence, defined basic principles include:

1. A pharmacist respects the covenantal relationship between the patient and pharmacist.
2. A pharmacist promotes the good of every patient in a caring, compassionate, and confidential manner.
3. A pharmacist respects the autonomy and dignity of each patient.
4. A pharmacist acts with honesty and integrity in professional relationships.
5. A pharmacist maintains professional competence.
6. A pharmacist respects the values and abilities of colleagues and other health professionals.
7. A pharmacist serves individual, community and societal needs.
8. A pharmacist seeks justice in the distribution of health resources

According to the fifth principle, it is obvious that professional competence is one of the key points in the pharmacy career.

The Institute of Medicine (IOM) identified five core competencies required for all health professionals (including pharmacists) aimed at optimizing patients' outcomes. They are the following: (I) deliver patient-centered care; (II) work as part of an interdisciplinary team; (III) practice

evidence-based medicine; (IV) apply quality improvement approaches; and (V) use information technology. These competencies are the base for developing relevant standards and competence statements concerning healthcare professionals. The recommendations targeting oversight organizations include integrating these core competencies into accreditation, and certification processes across the professions. IOM challenges health care oversight agencies (licensing boards and certifying agencies) to abandon reliance on continuing education in favor of a more systematic approach that require each practitioner's competence be assessed, that interventions be targeted to specific deficiencies, and that each care-giver be tested to ensure that the desired competencies have been acquired and incorporated into practice. The employees must demonstrate professional judgment, ethics, attitudes, and values (Greiner and Knebel, 2003).

Citizen Advocacy Center (CAC) urges to put the subject of continual competence on the agendas of theirs and related organizations' meetings and conferences to generate considerable interest and support. Thus, at CAC Conference held in June, 2000, the National Association of Boards of Pharmacy (NABP) representative stated that: "*there has been a philosophical change in the way consumers approach health care practitioners*". It appeared that in the past, professionals used to say: "*Trust me to be competent because I practice every day*". But, at present, patients are saying: "*Demonstrate to me that you are competent because my life and well being are in your hands*" (CAC, 2001). Moreover, CAC recommended a five-step framework for assessing and demonstrating continual professional competence: (i) routine periodic assessment, (ii) development of a personal improvement plan, (iii) implementation of the improvement plan documentation (steps for quality improvement) and (iv) demonstration of competence (*quality assurance* step). The critical first step is routine periodic assessment. It serves as the key to identify knowledge deficiencies requiring correction and to tailor lifelong learning¹ choices according to the needs of individual health care professionals. Assessment also reveals whether a practitioner *applies* his or her knowledge and skills competently in clinical situations.

In addition, Council on Credentialing in Pharmacy (CCP) adopted the following definition about competence in 2000, as follow: "*The ability to perform one's duties accurately, make correct judgments, and interact appropriately with patients and with colleagues. Professional competence is characterized by good problem-solving and decision-making abilities, a strong knowledge base, and the ability to apply knowledge and experience to diverse patient-care situations*" (CCP, 2006).

¹ Lifelong learning includes all learning activities undertaken throughout life, with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment-related perspective (ECD,2003).

It is more than clear that the pharmacists intend to take leadership roles in improving the use of medicines, which they cannot accomplish if working do in isolation from the many others professionals involved in the medicines use process (WHO, 2006).

Tasks and Functions of Pharmacists and Future Vision of Pharmacy Practice

Contemporary pharmacy practice reflects an evolving pattern: from having a primary role in medicine distribution and advising patients to a much broader and team-based clinical role which includes provision of patient centered medicine therapy management, health improvement, and disease prevention services. Thus, the pharmacy practice integrates fields that are directly related to the patient and performed in community pharmacy, ambulatory care clinics, hospitals, long-term care facilities, home-care institutions, and managed-care organizations.

However, other roles of pharmacists are practiced in the pharmaceutical industry, research and development, national agencies, academia, associations, and a number of unique healthcare practices such as drug and poison information centers that are not directly related to patient care.

The Model State Pharmacy Act and Model Rules of the NABP define the practice of pharmacy as follows: The "Practice of Pharmacy" means the interpretation, evaluation, and implementation of Medical Orders; the Dispensing of Prescription Drug Orders; participation in Drug and Device selection; Drug Administration; Drug Regimen Review; the Practice of Telepharmacy within and across state lines; Drug or Drug-related research; the provision of Patient Counseling; the provision of those acts or services necessary to provide Pharmacist Care in all areas of patient care, including Primary Care and Collaborative Pharmacy Practice; and the responsibility for Compounding and Labeling of Drugs and Devices (except Labeling by a Manufacturer, Re-packer, or Distributor of Non-Prescription Drugs and commercially packaged Legend Drugs and Devices), proper and safe storage of Drugs and Devices, and maintenance of required records.

The practice of pharmacy also includes continually optimizing patient safety and quality of services through effective use of emerging technologies and competency-based training (NABP, 2006).

Following the third Joint Commission of Pharmacy Practitioners (JCPP) – "Pharmacy in the 21st Century", at the Conference in 1994, a collaborative effort of ten national pharmacy organizations led to the development of the Pharmacist Practice Activity Classification (PPAC), a hierarchical categorization of pharmacist activities (Table 1). The PPAC is focused primarily on activities of licensed, practicing pharmacists across the continuum of health care settings. The PPAC also includes activities that are either delegated by pharmacists to technicians or are carried out by automated systems. The PPAC facilitates the compara-

ble data among studies, such as: building databases for statistical purposes about pharmacists'; patient-centered activities (to improve patient outcomes); the use of resources and provides a solid foundation to support systems for payment model that can be used for billing. The classification captures a range of activities from a traditional dispensing-based practice towards a higher level of patient care and direct patient care services.

This document classify pharmacy practice activities as follows: the highest level is the *Domain* or field of activity where four major domains of pharmacist activities have been identified. Within each domain there are more specific *Classes* of Activities. Within each Class there are *Activities* or *Interventions* - labels for sets of specific behaviors that, based on their professional knowledge and clinical judgment, pharmacists engage in as a part of their professional practice to enhance patient care and outcomes. Under many of the activities, one or more *Tasks* are specified. Some tasks are further divided into distinct *Steps*. Each entry has a unique alphanumeric identity. It is expected that this design will allow for easy and timely modification of the system (Maine,1998)-Table 1.

Table 1. Pharmacist Practice Activity Classification (PPAC); Domain and Classes related to practice activity

Domain	Class
A. Ensuring Appropriate Therapy and Outcomes	A.1. Ensuring appropriate pharmacotherapy
	A.2. Ensuring patient's understanding/adherence to his or her treatment plan
	A.3. Monitoring and reporting outcomes
B. Dispensing Medications and Devices	B.1. Processing the prescription or drug order
	B.2. Preparing the pharmaceutical product
	B.3. Delivering the medication or device
C. Health Promotion and Disease Prevention	C.1. Delivering clinical preventive services
	C.2. Surveillance and reporting of public health issues
	C.3. Promoting safe medication use in society
D. Health Systems Management	D.1. Managing the practice
	D.2. Managing medications throughout the health system
	D.3. Managing the use of medications within the health system
	D.4. Participating in research activities
	D.5. Engaging in interdisciplinary collaboration

According to the well known consensus document: "The Future Vision for Pharmacy Practice 2015" that has

been officially adopted by the JCPP: "Pharmacists will be the healthcare professionals responsible for providing patient care that ensures optimal medication therapy outcomes." The concept of "optimal medication therapy" implies that the use of medicines occurs within a system that assures the highest possibility of achieving desired clinical, humanistic, and economic outcomes. The "JCPP Vision" further states that: "Pharmacists will benefit society and be essential to the provision of effective health care by ensuring that: (a) medication therapy management is readily available to all patients; (b) desired patient outcomes are more frequently achieved; (c) overuse, underuse, and misuse of medications are minimized; (d) medication-related public health goals are more effectively achieved; and (e) cost effectiveness of medication therapy is optimized" (JCPP, 2004)

With the aim of achieving the mission of pharmacy profession and fulfilling these professional activities, a sound pharmacists' education and numerous post-graduate studies and training opportunities have been introduced and made available to pharmacists.

I. Professional competencies addressing pharmacy practice

1. Competency based education - credential needed to prepare for pharmacy practice

Miller, graded the competency-based education on four levels: the learner **knows** the facts (cognition), **knows how** to apply the facts, **shows how** (in a controlled environment) and **does** (behavior, in real situations) (Miller,

1990). At the beginning, the curricula lead the learner from dependent and directed towards independent, self-directed and lifelong learner. Pharmaceutical education needs to develop content and process of the educational curriculum that is required to prepare students to render pharmaceutical care at the entry points in the health care system.

As concerns the competency based education, accreditation standards and guidelines have been established for the Professional Program in Pharmacy leading to the Doctor of Pharmacy Degree by the Accreditation Council for Pharmacy Education-ACPE (ACPE, 2006). According to Standard No. 9, the Goal of the Curriculum is: "The college or school's professional degree curriculum must equip the graduates with professional competencies in order to enter the pharmacy practice in any setting and ensure optimal medication therapy outcomes and patient safety, satisfy the educational requirements for obtaining a license as a pharmacist, and meet the requirements for the university degree. The curriculum must provide the graduates with knowledge that meets the criteria of good science; professional skills, attitudes, and values; and the ability to integrate and apply learning to both the present practice of pharmacy and the advancement of the profession. Graduates must be able to identify and implement needed changes in pharmacy practice and health care delivery".

The AACP (American Association of Colleges of Pharmacy) proposed a series of initiatives under the Center for the Advancement of Pharmaceutical Education (CAPE) with the aim of supporting and facilitating the efforts of colleges and schools of pharmacy in the US for transforming their curricula and supporting the education of future practitioners to deliver pharmaceutical care. Important fea-

Table 2. Alignment of AACP CAPE educational outcomes and ACPE Standard No.12

AACP CAPE Educational outcomes 2004	Outcome 1: Pharmaceutical care	Outcome 2: System managements	Outcome 3: Public health
	*Provide patient-centered care	*Manage human, physical, medical, informational and technological resources	*Assure the availability of effective, quality health and disease prevention services
	*Provide population-based care	*Manage medication use systems	*Develop public health policy
Standard No.12 Professional Competencies and Outcome Expectations	Provide patient care in cooperation with: <ul style="list-style-type: none"> • patients, • prescribers, and • other members of an interprofessional health care team based upon sound therapeutic principles and evidence-based data, taking into account relevant legal, ethical, social, cultural, economic, and professional issues, emerging technologies, and evolving biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences that may impact therapeutic outcomes.	Manage and use resources of the health care system, in cooperation with: <ul style="list-style-type: none"> • patients, • prescribers, • other health care providers, administrative and supportive personnel, ➤ to promote health; ➤ to provide, assess, and coordinate safe, accurate, and time-sensitive medication distribution; and ➤ to improve therapeutic outcomes of medication use. 	Promote health improvement, wellness, and disease prevention in cooperation with: <ul style="list-style-type: none"> • patients, • communities, • at-risk populations, and • other members of an interprofessional team of health care providers.

tures of the design of the new curricula were the CAPE Educational Outcomes, which the evolving pharmacy curriculum should pursue. Upon request by 2001-02 AACP Academic Affairs and Professional Affairs Committees, the AACP Board of Directors committed to review and revise the CAPE Educational Outcomes during 2003-04. The result of this revision, CAPE Educational Outcomes 2004 provided a framework that integrated the professionalism, inter-professional practice, ethical attitudes and behaviors, and basic science across three expected educational outcomes: (i) *Pharmaceutical Care*, (ii) *Systems Management*, and (iii) *Public Health* in order to meet the mandate of this mission (AACP, 2004). Pursuant to this framework, ACPE adopted the CAPE Educational Outcomes with minor modifications. AACP CAPE educational outcomes and Standard No.12 are summarized in Table 2. It was noted that a periodic review and revision should be conducted in order to ensure the contemporary validity of the educational content and outcomes with emerging sciences and scientific developments and evolving roles of the pharmacists in serving patient and public health needs.

Problem-based curricula have been introduced at universities in a number of countries (Savery, 2006). These standards are used to assess health professionals' knowledge and skills during in reregistration examinations or during the continual professional development (CPD). In fact, CPD including research and reflecting the outcomes of actions contributes to maintaining the life-long competency to practice. CPD framework will be elaborated in the text below.

2. Credentials that needs to enter into practice and renew professional knowledge and skills.

NAPB, as an association of state boards of pharmacists, assists its member boards and jurisdictions in developing, implementing, and enforcing uniform standards for the purpose of protecting the public health. NAPB develops diversity of programs such as: examination, licensure, assessment, consumer protection, accreditation and CPE monitor.

One of the NABP examination programs is the North American Pharmacist Licensure Examination (NAPLEX®) (Newton, Boyle and Catizone, 2008). NAPLEX is the principal licensure examination that must be passed by all graduates from an accredited professional degree program in pharmacy in order to obtain licensure and practice as a pharmacist. **In this instance, candidates are licensed to practice after having: (I) a degree in pharmacy ap-**

proved by the board, (II) have completed the minimum number of hours in practice; and (III) have passed the licensing examination.

The NAPLEX assesses the ability of a prospective pharmacist to identify the practice standards for safe and effective pharmacotherapy; optimize therapeutic outcomes in patients; determine safe and accurate methods to prepare and dispense medications; and provide and apply health care information to promote optimal health care. In 1996, the NAPLEX introduced the computer adaptive testing (CAT) model to the professional pharmacy. The CAT NAPLEX is designed according to a set of specific knowledge areas and practice functions and skills, i.e. the Competency Statements or Competencies published in the Blueprint (NABP, 2006), Table 3. The ACPE Standards are some of the reference sources for determining the NAPLEX Blueprint. The Blueprint reflects the knowledge, judgment, and skills to be demonstrated by an entry-level pharmacist to protect the health and welfare of his or her patients.

There is no doubt that AACP CAPE Educational Outcomes 2004, ACPE Standard No.12 Professional Competencies and Outcome Expectations, NAPLEX® Blueprint and the PPAC are closely related to the five core competencies applicable to all healthcare professionals and recently identified by the IOM.

However, NAPLEX should not be considered as the final examination of the college's or school's curricula. Therefore, in 2005, NABP introduced the Pharmacists Self-Assessment Mechanism (PSAM) (NAPB, 2005). The PSAM is 100 questions assessment for pharmacists to evaluate their professional practice skills and knowledge. The PSAM Blueprint Competencies are similar to those of NAPLEX. Moreover, the MPJE (Multistate Pharmacy Jurisprudence Examination), combines federal and state-specific questions to test the pharmacy jurisprudence knowledge of prospective pharmacist. It serves as the pharmacy law examination in participating jurisdictions. Graduates from foreign colleges of pharmacy must document that they have education and experience equivalent to their US-trained colleagues. They must also pass the Foreign Pharmacy Graduate Equivalency Examination (FPGEE), the Test of English as a Foreign Language (TOEFL), and the Test of Spoken English (TSE). Once these requirements are met, they receive the Foreign Pharmacy Graduate Examination Committee's (FPGEC) certificate. In addition to the NAPLEX® and MPJE®, some US states require a laboratory examination or an oral examination before licensure is conferred.

Table 3. NABP NAPLEX® Blueprint-competency statements

Area 1	Assure Safe and Effective Pharmacotherapy and Optimize Therapeutic Outcomes
Area 2	Assure safe and Accurate Preparation and Dispensing of Medications
Area 3	Provide Health Care Information and Promote Public Health

All state boards also require that candidates complete an internship before being licensed. The internship may be completed during the candidate's academic training or after graduation, depending on the state requirements. An internship requirement traditionally requires a pharmacy student to work in a licensed pharmacy under the supervision of a board-registered pharmacist or to complete college-coordinated clerkships as equivalent to (or as a significant portion of) state-mandated internships: A license to practice Pharmacy as a Pharmacy Intern shall be granted only to those individuals who: (1) are enrolled in a professional degree program of a school or college of pharmacy that has been approved by the Board and satisfactorily progressing toward meeting the requirements for licensure as a Pharmacist; or (2) are graduates of an approved professional degree program of a school or college of Pharmacy or are graduates who have established educational equivalency by obtaining a Foreign Pharmacy Graduate Examination Committee™ (FPGEC®) Certificate, who are currently licensed by the Board of Pharmacy for the purpose of obtaining practical experience as a requirement for licensure as a Pharmacist; or (3) are qualified applicants awaiting examination for licensure or meeting Board requirements for re-licensure; or (4) are participating in a residency or fellowship program.

Licensure renewal: licensure renewal is mandatory for pharmacists who wish to continue to practice their profession. All member state boards of pharmacy require that registered pharmacists complete a minimum number of hours or continual education units (CEUs) before they can renew their licenses. Continual education is defined by CCP as: *Organized learning experiences and activities in which pharmacists engage after they have completed their entry-level academic education and training. These experiences are designed to promote the continuous development of the skills, attitudes, and knowledge needed to maintain proficiency, provide quality service products, respond to patient needs, and keep abreast of change* (CCP, 2001).

More recently (June 2003), ACPE adopted the following definition: Continuing education for the profession of pharmacy is a structured process of education designed or intended to support the continuous development of pharmacists to maintain and enhance their professional competence. Continuing education should promote problem-solving and critical thinking and be applicable to the practice of pharmacy (ACPE, 2003).

The candidate for licensure renewal may acquire a number of CEUs by attending educational seminars, teleconferences, meetings reading journal articles, completing home study courses or computer-based educational programs (CCP, 2006).

The hours or CEUs must be earned either through participation in a continuing education (CE) program whose provider has been accredited by the ACPE, or through a program or activity, which has been otherwise approved by the state board. Achievement of a satisfactory score on

an assessment that is created by and submitted to the CE provider is generally required as a documentation of completion of a CE program.

The ACPE has established accreditation standards for providers of continuing pharmacy education. The majority of ACPE-approved providers are professional pharmacy organizations, colleges of pharmacy, and pharmaceutical companies. Each program is reviewed every 6 years by the ACPE. ACPE re-evaluates the CE model in pharmacy through a process of identification of the CE requirements of other organizations, exploration of the CE processes and activities of other health professions, domestic and international, including the use of new models, such as CPD. Also, ACPE is exploring the re-engineering of the CE provider accreditation process to make it more efficient and effective, while fostering continuous quality improvement and encouraging innovation (ACPE, 2001).

II. Professional development and enhanced competency of pharmacist

While, academic degrees in the field of pharmacy, state licensure and re-licensure are obligated, mandatory, other credentials (postgraduate degrees, certificates and certification), pharmacists earn to document their specialized or advanced knowledge and skills on voluntary bases. Pharmacy practitioners who have completed programs of various types that are intended to develop and enhance their knowledge and skills or those who have successfully documented a specialized level of knowledge and skills through an assessment process are awarded appropriate qualification—Many different organizations (public and private) are directly involved in assessing pharmacists' knowledge and skills, granting credentials and certificates, and accrediting educational programs and institutions. Post-licensure training programs and credentials are competency-based, developed on the basis of a comprehensive practice analysis in the relevant areas, and offered or accredited by an organization that adhere to the accepted principles and practices to assure quality, integrity, and validity. A pharmacist's credentials are indicators that he or she holds the qualifications needed to practice the profession of pharmacy and is therefore worthy of the trust of patients, of other health care professionals and of the society as a whole (CCP, 2006; Scope of Contep. PP, 2009).

The three categories of pharmacist credentials and oversight bodies are illustrated in Figure 1.

1. Academic Postgraduate Education and Training

Postgraduate master's (M.S.) programs cover common fields of studies: business administration, clinical pharmacy and public health.

Postgraduate doctor of philosophy (Ph.D.) programs cover common fields of studies: pharmacology, pharmaceuticals, pharmaceutical and medicinal chemistry, pharma-

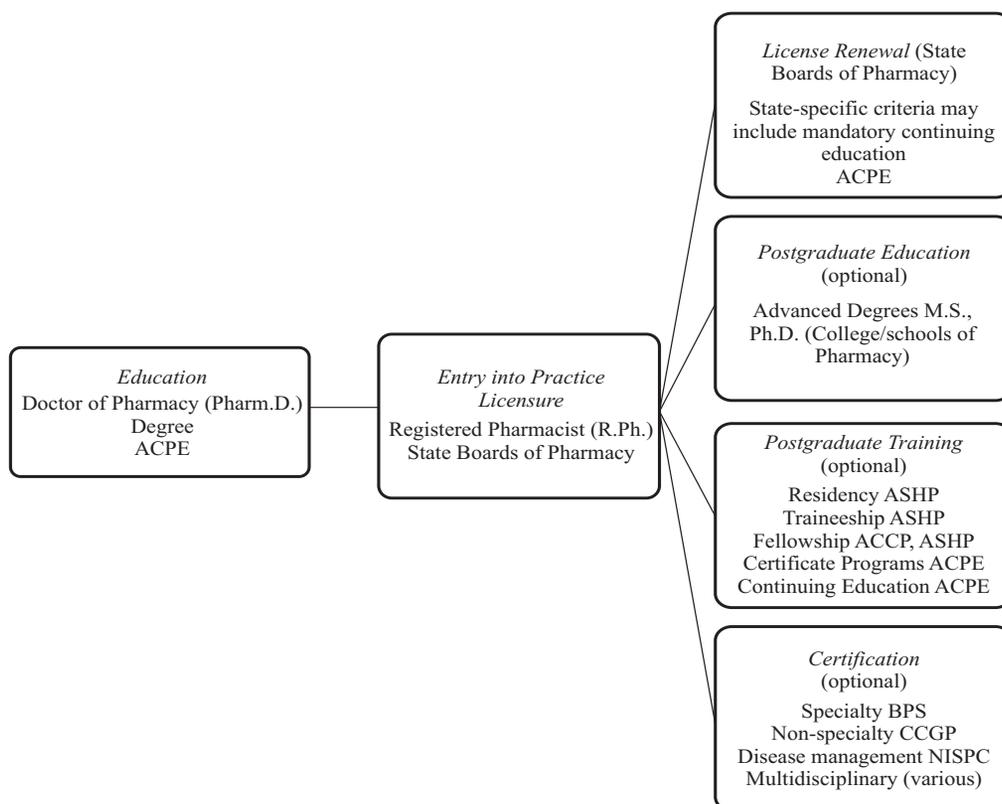


Figure 1. Pharmacy Credentials and Oversight Bodies for Pharmacists in U.S.

cotherapeutics, pharmacy practice and social and administrative sciences.

2. Residency Training program (*Credential acquired: Residency Certificate*)

A residency is an organized, directed postgraduate program, accredited by American Society of Health-System Pharmacists (ASHP) independently or in collaboration with other pharmacy organizations in a defined area of pharmacy practice. Residencies usually last 12 months, although certain specialized residencies require additional 12 (or continuous 24) months for completion - Table 4.

Pharmacy practice residencies - PGY1 (Post Graduate Year one)

Pharmacy practice residencies focus on the development of the resident of professional competence in the delivery of patient care (providing optimum medication therapy outcomes) and practice management activities (managing medication use process). This program provides an environment and structure for accelerating the growth and experience beyond entry-level professional competence through supervised practice under the guidance of model practitioners in "real-world" settings (hospital, community pharmacy, managed care organization, home or long term care practice). Residents are exposed to a

wide range of patients with multiple diseases, chronic or acute, and work with a variety of health professionals, thereby advancing their clinical, interpersonal, and leadership skills.

Specialized pharmacy practice residencies PGY2 (Post Graduate Year two)

Specialized pharmacy practice residencies focus on the knowledge, skills, attitudes and abilities to raise the resident's level of expertise needed to provide care in a specialized area of pharmacy practice (e.g., critical care, drug information, pharmacotherapy, or oncology). This specialized residency training is an organized, directed, accredited program that builds upon the competencies established in pharmacy practice residencies, after the first year of residency training. The second year of postgraduate residency training involves additional education and pharmacists obtain more in-depth training and experience. In partnership with the APhA for Community Pharmacy, and the Academy of Managed Care Pharmacy (AMCP) for Managed Care, the American Society of Health-System Pharmacists' Research and Foundation has established residency standards and reviews for programs that include community and managed care pharmacy residencies. The National Association of Chain Drug Stores (NACDS) and National Community Pharmacists Association (NCPA) sup-

Table 4. Residency Programs

Residency Programs Accredited by ASHP Commission on Credentialing	
Pharmacy practice	Specialized Residencies
➤ Pharmacy practice residency (traditionally conducted in health systems)	• Cardiology,
➤ Pharmacy practice with emphasis on community pharmacy	• Clinical pharmacokinetics,
➤ Pharmacy practice with an emphasis on managed care	• Critical care,
➤ Pharmacy practice with an emphasis on home care	• Drug information,
➤ Pharmacy practice with an emphasis on long-term	• Emergency medicine,
	• Geriatrics,
	• Infectious diseases,
	• Internal medicine,
	• Managed care pharmacy systems,
	• Nuclear pharmacy,
	• Nutrition support,
	• Oncology,
	• Pediatrics,
	• Pharmacotherapy,
	• pharmacy practice management,
	• Primary care ,
	• Psychiatric

ported community pharmacy residency programs, including development of the NACDS/NCPA community pharmacy residency guidelines. The Institute for the Advancement of Community Pharmacy, (an organization founded by the NACDS and NCPA), has provided grants to encourage schools of pharmacy and community pharmacies to develop additional community pharmacy residency programs nationwide (Sheaffer, 2004).

3. Fellowships (Credential acquired: Fellowship Certificate)

Fellowship is direct, highly individualized postgraduate program that prepares the participant to become an independent researcher in an area of pharmacy practice. Fellowship programs are developed by faculties of pharmacy, academic health centers, universities, pharmaceutical manufacturers and usually last one to two years. ACCP (American College of Clinical Pharmacy) has developed guidelines for organization of clinical fellowships. To improve the consistency in the quantity and quality of the research experience, the ACCP has implemented a process for peer review of pharmacy fellowship training programs. If the specialist qualifications and the training program meet the guidelines based on a review by the ACCP Fellowship Review Committee, they are recognized and the program and specialist are listed on the ACCP Web site (CCP, 2006). Otherwise, there is no formal accreditation process.

4. Certificate Programs (Credential earned: Certificate of Completion)

A certificate program is a structured and systematic

postgraduate continuing education experience for pharmacists that is smaller in magnitude and shorter in duration than degree programs. Certificate programs are offered by national and state pharmacy organizations and by schools and colleges of pharmacy and other educational groups (CCP, 2006). The design of certificate programs includes didactic instruction, practice experiences, simulations, and/or other opportunities for the demonstration of desired professional competencies. Attributes that differentiate certificate program from CE programs are practice experiences, simulations and other activities for demonstration of stated competencies. The length of any particular certificate program is determined by its stated goals, desired professional competencies and outcome measures. This generally requires a minimum of 15 contact hours (1.5 CEUs). Certificate programs are designed to instill, expand, or enhance practice competencies through the systematic acquisition of specified knowledge, skills, attitudes, and behaviors. For example, the APhA offers programs in such areas as asthma, diabetes, immunization delivery, and management of dyslipidemias. The value of these programs depends on individuals' goals or in instances when an employer or regulatory body recognizes the importance of the certificate. Examples are state boards of pharmacy that allow pharmacists to administer vaccines, after they have completed a certificate program in vaccine administration.

5. Traineeships

In contrast to certificate programs, traineeships allow practicing pharmacists abbreviated clinical training experience through intensive, individualized, structured postgraduate programs (combination of self-study and didac-

Table 5. Programs, Credentialing Agencies and credentials acquired

Anticoagulation	National Institute for Standards for Pharmacist Credentialing (NISPC)	Certified Disease Manager (CDM)
	National Certification Board for Anticoagulation Providers (NCBAP)	Certified Anticoagulation Care Provider (CACAP)
Asthma	National Institute for Standards for Pharmacist Credentialing (NISPC)	Certified Disease Manager (CDM)
	National Asthma Educator Certification Board (NAECB)	Certified Asthma Educator (AE-C)
Diabetes	National Institute for Standards for Pharmacist Credentialing (NISPC)	Certified Disease Manager (CDM)
	National Certification Board for Diabetes Educators (NCBDE)	Certified Diabetes Educator (CDE)
	American Nurses Credentialing Center (ANCC)	Board Certified-Advanced Diabetes Management (BC-ADM)
Dyslipidemia	National Institute for Standards for Pharmacists (NISPC)	Certified Disease Manager (CDM)
Geriatrics	Commission on Certification in Geriatric Pharmacy (CCGP)	Certified Geriatric Pharmacist (CGP)
Life Support	American Heart Association	Advanced Cardiovascular Life Support Certification (ACLS)
	American Heart association	Pediatric Cardiovascular Life Support Certification (PALS)
Lipids	National Institute for Standards for Pharmacist Credentialing (NISPC)	Certified Disease Manager (CDM)
	Accreditation Council for Clinical Lipidology	Clinical Lipid Specialist
Nuclear	Board of Pharmaceutical Specialties (BPS)	Board Certified Nuclear Pharmacist (BCNP)
Nutrition Support	Board of Pharmaceutical Specialties (BPS)	Board Certified Nutrition Support Pharmacist (BCNSP)
Oncology	Board of Pharmaceutical Specialties (BPS)	Board Certified Oncology Pharmacist (BCOP)
Pain Management	American Academy of Pain Management (AAPM)	Credentialed Pain Practitioner (CPP)
Pharmacotherapy	Board of Pharmaceutical Specialties (BPS)	Board Certified Pharmacotherapy Specialist (BCPS)
Pharmacotherapy with Additional Qualifications in Cardiology	Board of Pharmaceutical Specialties (BPS)	Board Certified Pharmacotherapy Specialist (BCPS)
Pharmacotherapy with Additional Qualifications in Infectious Diseases	Board of Pharmaceutical Specialties (BPS)	Board Certified Pharmacotherapy Specialist (BCPS)
Poison Information	American Association of poison Control Centers	Certified Specialist in Poison Information (CSPI)
Psychiatry	Board of Pharmaceutical Specialties (BPS)	Board Certified Psychiatric Pharmacists (BCPP)
Toxicology	American Board of Applied Toxicology	Diplomat of the American Board of Applied Toxicology (DABAT)

tic instruction) under supervision of a pharmacist practicing in a given specialty. These programs provide the participants with the knowledge and skills needed to give a high level of care to patients with various chronic diseases and conditions. Traineeships are generally of longer duration (about five days) and involve smaller groups of trainees than certificate programs. Examples of such programs are anticoagulation management, critical care pharmacy, and diabetes management. These programs are commonly offered through the foundations of professional organizations such as the American College of Apothecaries, (ACA), American Society of Consultant Pharmacists (ASCP), and ASHP and are often supported by grants from the pharmaceutical industry.

6. Certification

Certification is “voluntary process by which a non-governmental agency or an association grants recognition to an individual who has met certain predetermined qualifications specified by that organization”. The credentials are granted to pharmacists and other health professionals who

have demonstrated a level of competence in a well-defined, specific and relatively narrow area of practice. Certification is granted on the basis of successful completion of rigorously developed eligibility criteria that include a written examination and, in some cases, an experiential component. Also, certification usually requires initial assessment and periodic reassessments of the individual’s knowledge, skills and/or experience. The certification process is undertaken and overseen by the Board of Pharmaceutical Specialties (BPS), the Commission on Certification in Geriatric Pharmacy (CCGP), and the National Institute for Standards in Pharmacist Credentialing (NISPC).

1. Specialty certification (Credential acquired: Certification in area of practice).

Pharmacists are certificated in five specialties by the BPS: (1) nuclear pharmacy; (2) nutrition support pharmacy; (3) oncology pharmacy; (4) pharmacotherapy and (5) psychiatric pharmacy. Later on, in 1997, BPS introduced the designation of “**Added Qualifications**” to denote that an individual has demonstrated an enhanced level of training and experience in one segment of a BPS-recognized

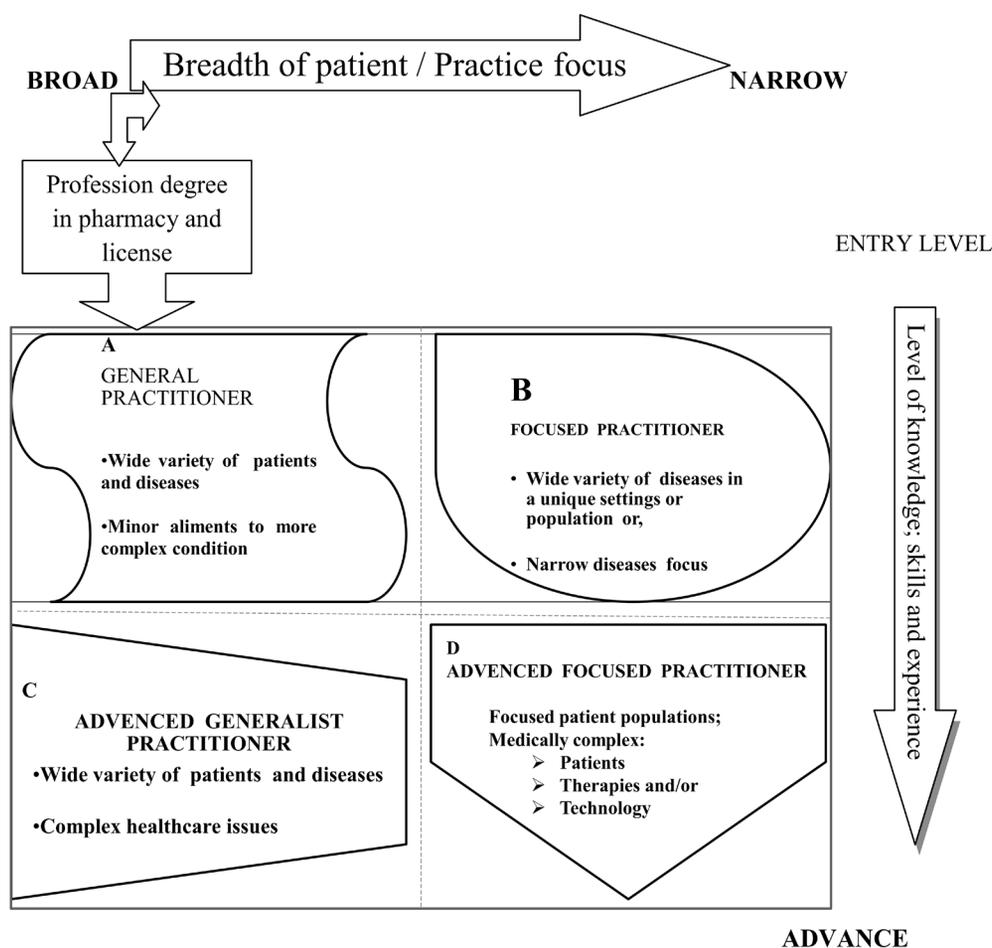


Figure 2. Practitioners in direct patient care.

specialty. Infectious Diseases and Cardiology are the two added qualifications for the pharmacotherapy specialty currently recognized by BPS. Pharmacists who wish to retain BPS certification must be recertified every seven years.

II. Non-specialty certification

For example, to become certified by CCGP, candidates are expected to be knowledgeable about principles of geriatric pharmacotherapy and the provision of pharmaceutical care to the elderly. Pharmacists who meet CCGP's requirements are entitled to use the designation Certified Geriatric Pharmacist, or CGP. Pharmacists who wish to retain their CGP credential must recertify every five years by successfully completing a written examination.

III. Disease management certification

NISPC offers certification in the management of diabetes, asthma, dyslipidemia, and anticoagulation therapy. To be certified by the NISPC, a pharmacist must pass an examination with questions that are specific to the specialty area, developed by experts, and designed to address four different areas of competency expected by all pharmacists who provide disease state management services to patients. There are no practice experiences or clinical training requirements in the specialty area. After passing the exam,

pharmacists may use the designation of certified disease manager (CDM). Recertification is required every 3 years and is based on completion of 30 hours of CE in the specific disease state.

Also, multidisciplinary certification programs are available to professionals from many health disciplines, including pharmacists. Areas in which such certification is available include diabetes education, anticoagulation therapy, pain management, and asthma education. Table 5 shows post-licensure certifications and where they typically apply to pharmacists in narrowly focused and/or advanced areas of practice.

Relationship between the scope of a pharmacist's practice and credentials and post-licensure education and training

Figures below (Figures 2, 3 and 4) present a framework for credentialing in pharmacy and summarize the elements (CCP, 2009). The framework attempts to illustrate: (1) how a pharmacist's career may evolve or progress after completion of initial professional education, licensure, and entry to practice; (2) the post-graduate education and training activities and certifications undertaken by pharmacists; and (3) the correlations between credentialing, broad competency areas, scope of practice, and patient populations served. Figures 2, 3 and 4 deal only with the patient care domain, corresponding with AACP CAPE Education-

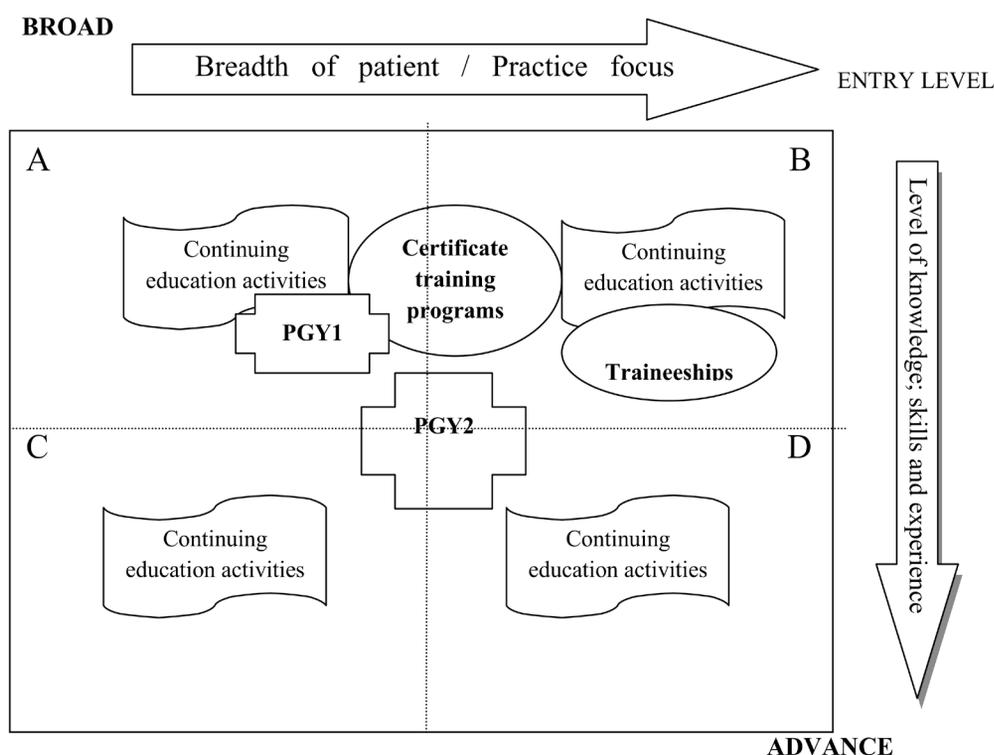


Figure 3. Post-licensure education and training relative to pharmacy practice.

al Outcome #1. However, Outcomes #2 and #3 are not included in the schematic presentations (CCP, 2009).

The surface A describes the practice of the community and hospital pharmacists. Surfaces B, C, or D reflects pharmacists professional development in a specific way. For example, pharmacists who choose to narrow their patient or practice focus (e.g. in diabetes or geriatrics) will move to surface B; pharmacists who elect choose to work with a broad base of patients and diseases, but also wish to substantially advance their level of knowledge, skills, and experience will move to surface C. An example of a pharmacist in this quadrant would be a pharmacotherapy specialist. Pharmacists in surface D have both narrowed their patient/practice focus and substantially advanced their knowledge and skills. An example of an Advanced Focused Practitioner would be a Board Certified Oncology Pharmacist (BCOP), one of the recognized specialty credentials in the pharmacy profession.

Figure 3 illustrates the range of post-licensure education and training activities pharmacists engage in to maintain their professional competencies and to support their continuing professional development.

Pharmacy practice residencies (-PGY1) provide training for generalists in hospitals, health systems, managed care, or community settings; hence their illustration is in Quadrant A in Figure 3. Specialized pharmacy practice res-

idencies (-PGY2) residencies provide advanced training in a focused area of patient care. Traineeships, on the other hand, are more focused and would typically be undertaken by pharmacists with a narrower patient/practice focus (Quadrant B). Certificate Programs, which focus on the development of professional skills and their application in practice, would typically be undertaken by pharmacists in Quadrants A and B.

III. Continuing Professional Development (CPD)

The Institute of Personnel and Development (IPD, UK) launched an early definition of CPD in October 1997: CPD is systematic, ongoing, self-directed learning. It is an approach or process, which should be a normal part of how you plan and manage your whole working life. Of note, the definition of CPD adopted by the National Health Service (NHS) in Great Britain, in 1999, makes reference to patients and healthcare outcomes:

CPD is a process of lifelong learning for all individuals and teams of individuals which meets the needs of patients and delivers the health outcomes and healthcare priorities of the NHS and which enables professionals to expand to fulfill their potentia .

In 2002, the *concept* of CPD was described by FIP as: *The responsibility of individual pharmacists for systematic*

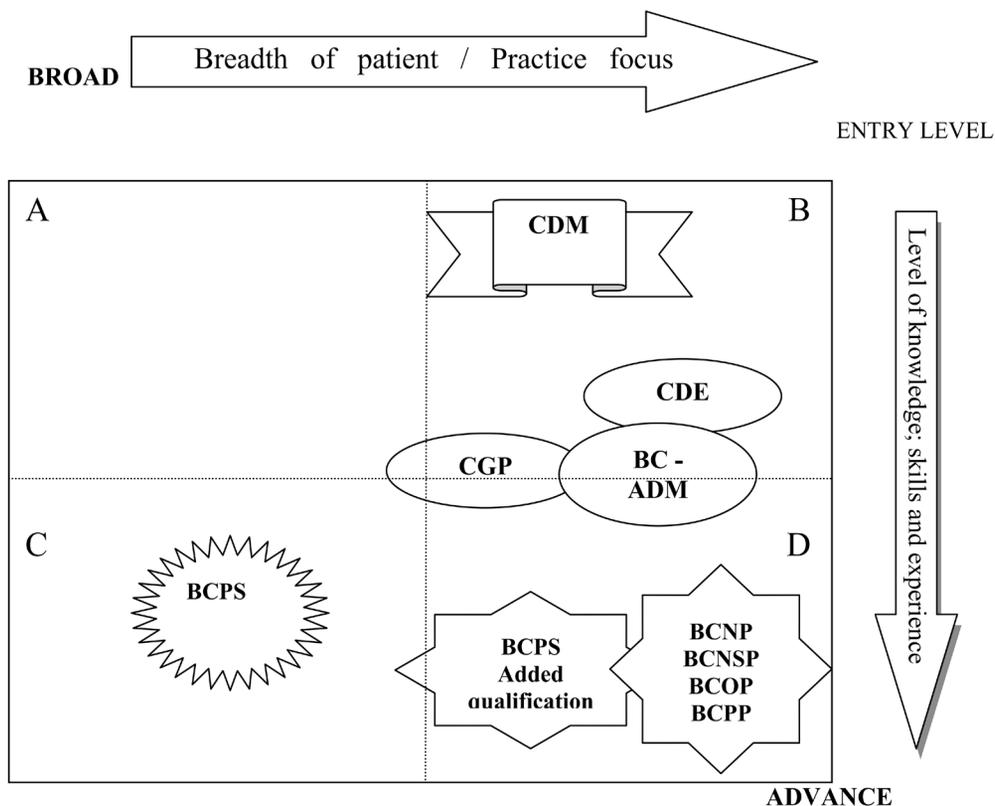


Figure 4. Post-licensure certifications and where they typically apply to pharmacists in narrowly focused and/or advanced areas of practice.

maintenance, development and broadening of knowledge, skills and attitudes, to ensure continuing competence as a professional, throughout their careers (FIP, 2002).

The same year, at a conference on lifelong learning, the following definition was offered:

Postgraduate professional education involving a cycle by which individual practitioners assess their learning needs, create a personal learning plan, implement the plan, and evaluate the effectiveness of the education intervention as it applies to their pharmacy practice (Hanson, 2002).

ACPE recent statement regarding CPD is that the CPD model provides the opportunity for *quality improvement* of the current system of continuing education, by building on the existing strong foundation of quality-assured, accredited continuing education for pharmacists (ACPE, 2003). The JCPP supports the concept of **strong commitment to develop and maintain standards and programs to assure the public, governmental agencies, major employers and other influential organizations that pharmacists would maintain appropriate competencies throughout their careers.**

The NAPB in NABP RESOLUTION NO.99-7-03 TITLE (NABP, 2003): Continuing Pharmacy Practice Competency resolved that NABP endorse and encourage structured programs of continuing professional development. Hence, NABP encourage colleges, faculties, and schools of pharmacy and boards to collaborate on providing seminars to further pharmacist continuing professional development; the boards of pharmacy encourage, endorse, and support the efforts of NABP, the ACPE, and the AACP to instill and perpetuate the concepts of continuing professional development in students and pharmacists.

The AACP supports the concept of CPD, so AACP work actively with ACPE and other pharmacy organizations in exploring methods for facilitating its use within pharmacy (AACP, 2003).

All these definitions and statements clearly indicate that pharmacists have an ethical obligation and responsibility for their own lifelong learning, and the maintenance of the knowledge, skills, attitudes and abilities necessary to deliver professional services in line with accepted, contemporary professional standards and public expectations. Since the system of mandatory CE has shown that it does not provide a *satisfactory* degree of assurance that pharmacists are maintaining the level of competence adequate to meet public needs and expectations, the framework of CPD has been evolved as an agenda for lifelong learning.

However, CPD does not replace CE, but quality-assured CE is an essential component of CPD.

The need for *CPD* can be shortly summarized as follows:

- To ensure that pharmacists **maintain** (at an appropriate level) their knowledge, skills and competence to practice throughout their careers in their own specific (or current) area of practice;
- To **improve** the pharmacist's personal perfor-

mance (i.e., develop knowledge and skills);

- To **enhance** the pharmacist's career progression

Besides, CPD is based on principles as follows (Picton and Brackley, 1999)-

- CPD is a systematic, ongoing cyclical process of self-directed learning;
- It includes everything that practitioners learn, which enables them to be more effective as professionals;
- CPD includes the entire scope of the practitioner's practice, and may include activities both within and outside the usual work setting;
- CPD is a partnership between the practitioner and his or her organization, meeting the needs of both;
- The practitioner is responsible for his/her own professional development. The organization has a responsibility to help the practitioner meet the development needs that relate to performance in his/her current job

When considered together with the NHS definition given earlier, three important features of CPD are clear: CPD is **practitioner-centered** and **self-directed**; CPD is designed to be **practice-related**; CPD is **outcomes-oriented** in terms of maintaining competence, the professional development of the practitioner, meeting individual and organizational goals, and achieving improved patient outcomes. CPD has been described using four-stage and five-stage cycles (Figure 5).

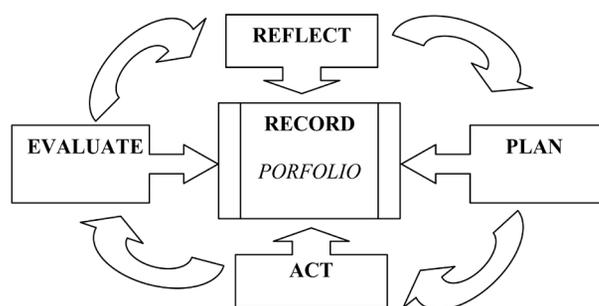


Figure 5. CPD process source CPP 2004.

Reflect: referred to as “self-appraisal” or “assessment,” this stage entails the pharmacist reflecting on personal and organization needs and goals for professional development, and self-assessing his/her knowledge, skills and competence. Reflection is important to learning; it has been defined as *the complex and deliberate process of thinking about and interpreting an experience in order to learn from it.* (Boud, Keogh and Walker, 1985).

Plan: involves the design of a *personal development plan* (PDP). The plan includes all the activities that will address the identified learning and development needs and goals. The outcomes should be linked to one or more spe-

cific professional competencies (ACPE, 2003). The plan could include structured programs (such as accredited CE), as well as a diverse range of informal learning activities, many of which will be work-based or work related (Figure 6).

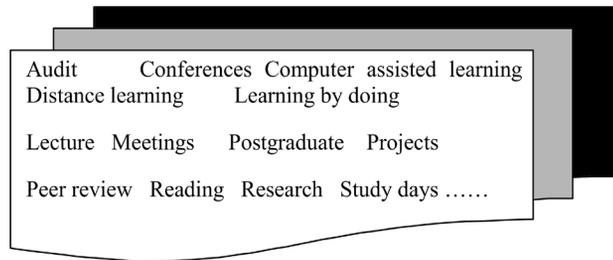


Figure 6. The PDP is recorded in the personal portfolio. Each pharmacist's situation is unique, so no two sets of learning needs and personal plans will be the same.

Act: putting the plan into action is the next well known stage.

Evaluation: can be carried out by the individual practitioner, by the practitioner's peers, or by the practitioner's supervisor or manager. In some CPD models (for example, in the UK), the portfolio is subject to review by the regulatory body. For example, in Ontario, Canada there is the opportunity for small-group peer review of the learning portfolio, and also for direct assessment of knowledge and skills. Some form of third-party review or evaluation of the portfolio would appear to be valuable, not only to provide feedback to the pharmacist, but also as a means to identify those that may be experiencing difficulty in one or more aspects of CPD, and in need of assistance or remediation, and to protect society from the few practitioners who otherwise would not self-assess and correct deficiencies. Feedback from third parties should be given in a constructive and non-threatening way, with the primary objective being to help the individual move forward in his/her professional development.

Record: central to the CPD cycle is the practitioner's *personal portfolio*, which becomes a comprehensive record, like a professional diary or transcript covering all the stages. The portfolio, which can be electronic or paper-based, should be readily accessible, and simple to use. Ideally, a standardized format should be adopted to facilitate training, data entry and, where applicable, portfolio evaluation. In CPD portfolios, pharmacists record all relevant learning experiences (accredited-CE or informal work-based) or work related activities. In time, the pharmacist's portfolio will develop into a comprehensive record of education and practice with multiple possible applications.

CPD is based on the above mentioned principles and adopts educational strategies that have proven to be effective. It potentially offers a quality improvement to the current systems for pharmacist CE. While an appropriate, competency-based education can prepare a pharmacist

to enter practice, no professional program can provide or develop *all the aspects* of the knowledge, skills, attitudes and abilities that a pharmacist will ever need. These require a combination of an appropriate pre-service educational foundation, in-service training, hands-on work experience, and lifelong learning. For professionals, there is no doubt that education is a *continuum*. As acknowledged, the educational strategies, and the competency and outcomes based approach that are successfully utilized for pre-service training must be maintained throughout the practitioner's career. For all above mentioned, the state boards of pharmacy are requested, and expected, to protect the public by ensuring, through regulation, that licensed pharmacists are competent to deliver pharmacy services, as professionals.

Conclusion

As anticipated, due to the dynamic and intensely developing healthcare environment in the past several years, the pharmacist's role has dramatically changed from that of conventional compounder and dispenser to one of "drug therapy manager". The latter comprehensive role of the pharmacist involves spectrum of new responsibilities and best practice services to ensure that wherever the drug therapy is concerned, the best quality products to be selected, procured, stored, distributed, dispensed and properly administered in a manner so as to contribute to the health of patients with the risk reduced to the minimum for the patient. Now, the scope of pharmacy practice is more focused on patient-centered care, with all the cognitive functions of counseling, providing drug information and specific issues related to the managing and monitoring drug therapy. Pharmacists need to maintain their professional competence throughout their careers in order to provide safe, effective and quality professional services to patients and achieve the most positive patient outcomes possible. Schools of pharmacy prepare their graduates to acquire the necessary and rational competencies to enter practice, but the ongoing professional program can also provide or develop knowledge, skills, attitudes and abilities that a pharmacist will need in practice. Only a combination of an appropriate educational foundation, in-service training, hands-on work experience, lifelong learning, training and ongoing licensure, certification and evaluation of competencies will assure professional competence. Particularly noteworthy aspect about continuing professional development is that it can further engage pharmacists as adult learners, and enhance the overall effectiveness and outcomes of continuing education. Creating models for professional development provides the opportunity for *quality improvement* of the current system of continuing education, building on the existing strong foundation of quality-assured, accredited continuing education for pharmacists.

Health care systems, more stringent regulations and the existing oversight programs of licensure and certification agencies have the obligation to assure the public of the

safety and quality of health care, including the pharmaceutical care. It is of paramount importance and great responsibility of each individual pharmacist to determine whether a higher standard is required in any area relating to their individual professional practice. And, finally, pharmacists as health care professionals have to commit themselves to lifelong learning, in order to remain current and proficient as the science base for medicine continues to evolve and become more complex.

There is no doubt, that the models of professional competences, credentialing and continuing professional development in pharmacy exist in many worldwide countries intending to promote consistency and uniformity in the delivery of professional services. However, the US model deserves special attention owing to its comprehensive approach and advanced practical solutions.

Appendix

AACP American Association of Colleges of Pharmacy

AACP is a national organization representing pharmaceutical education in the United States. Their mission is to represent and advocate all segments of the pharmaceutical academic community.

www.aacp.org

AAPT American Association of Pharmacy Technicians

AAPT provides continuing education and services to help technicians update skills. They also represent member's interests to the public as well as health care organization.

www.pharmacytechnician.com

ACA American College of Apothecaries

ACA is a research and education resource center that provides pharmacist with therapeutic information and other issues affecting the pharmacy profession. They also provide an inquiry support line, specialty practice education program, pharmacy-related publications, and current events in health care.

www.acainfo.org

ACCP American College of Clinical Pharmacy

ACCP it provides pharmacists the leadership, education, and other resources needed in clinical practice and research. They support and promote research training and educational programs in pharmacotherapy.

www.accp.com

AFPE American Foundation of Pharmaceutical Education

This foundation supports pharmacists to further their studies in advanced pharmaceutical science in industry, association work, academia, and other areas of professional practice. This foundation also provides high standards in education in colleges of pharmacy and American pharmacy through the support of ACPE, special programs of the

AACP, and other key projects.

www.afpenet.org

AMCP Academy of Managed Care Pharmacy

AMCP is a professional society, dedicated to promote the development and application of pharmaceutical care, to ensure appropriate health care outcomes for all patients. This association also provides for its members the leadership, and support in managed care.

www.amcp.org

APhA American Pharmacists Association

This association provides professional information and education for pharmacists. It also advocates a pharmacist to improve healthcare of patients through the provision of comprehensive pharmaceutical care.

www.aphanet.org

ASAP American Society for Automation in Pharmacy

This organization aids its members in applying computer technology into pharmacy. Members include independent pharmacies, hospital pharmacies, colleges of pharmacy, state boards of pharmacy, state and national associations and government agencies.

www.asapnet.org

ASCP American Society of Consultant Pharmacists

ASCP is an international pharmacy association for consultant pharmacists specializing in senior care. The association provides for its members leadership, education and resources needed for the practice of pharmacy in senior care.

www.ascp.com

ASHP American Society of Health-System Pharmacists

ASHP is a professional association that represents pharmacists who practice in hospitals, health maintenance organizations, long-term care facilities, home care, and other components of health care systems. Their main goal is to assist pharmacists to make the best use of medicine.

www.ashp.org

ASP Academy of Students of Pharmacy

ASP is the student section of APhA and it represents pharmacy and pre-pharmacy students in the United States and Puerto Rico. Its mission is to be the voice of pharmacy students and to prepare them to be professionals who provide and promote pharmaceutical care.

www.aphanet.org (Student page)

ASPEN American Society for Parenteral and Enteral Nutrition

ASPEN is a professional organization whose members are involved in the provision of clinical nutrition therapies, including parenteral and enteral nutrition. It prepares standards and guidelines for the use of nutrition support and

professional practice. This agency also works with other nutrition, health care organizations, government agencies and insurance providers to offer patients the optimal use of nutrition therapies.

www.nutritioncare.org

ASPL American Society for Pharmacy Law

The purpose of this organization is to further the legal knowledge of pharmacists, students of pharmacy, students of law, attorneys, government, and other professions interested in legal issues affecting pharmacy and medication related issues. The agency also communicates accurate legal information to attorneys and pharmacists, educates pharmacists to their rights, distributes information, and provides forums.

www.aspl.org

BPS Board of Pharmaceutical Specialties

This organization trains and certifies pharmacists in a specialized field. Fields such as nuclear pharmacy, nutrition support pharmacy, oncology pharmacy, pharmacotherapy, and psychiatric pharmacy.

www.bpsweb.org

CCCP Canadian College of Clinical Pharmacy

<http://www.cccp.ca/>

CCGP Commission for Certification in Geriatric Pharmacy

CCGP is a national certification program for pharmacists who want to specialize in geriatric pharmacy practice. They are also responsible for establishing eligibility criteria to take the Certification Examination in Geriatric Pharmacy and establishing program policies.

www.ccgp.org

CCP Council of Credentialing in Pharmacy

This organization provides leadership, standards, public information, and coordination for the profession's voluntary credentialing programs. Their goal is to provide credentialing programs in pharmacy that meet the established standards and quality.

www.pharmacycredentialing.org/default.htm

CPF Community Pharmacy Foundation

CPF is an organization with a primary purpose to assist community pharmacists by encouraging and fostering improvements in patient care. They also support efforts of pharmacist intervention in achieving targeted therapeutic goals.

www.tcpf.org

CPNP College of Psychiatric and Neurologic Pharmacists

CPNP is a professional membership association that represents pharmacists involved in the pharmaceutical care of psychiatric and neurologic patients. CPNP's main goal

is to assist pharmacists as they work to apply evidence-based, cost efficient best practices in achieving patient recovery and improved quality of life. www.cpn.org

FIP International Pharmaceutical Federation

This organization represents both pharmacists and pharmaceutical scientists worldwide. Its main purpose is to educate and the development of the practice and science of pharmacy.

www.fip.org

IACP Institute for the Advancement of Community Pharmacy

This institute supports educational initiatives, research projects and programs to enhance community pharmacy practice in the United States. IACP also promotes the value of community pharmacists and pharmacies

www.advancepharmacy.org

JCPP Joint Commission of Pharmacy Practitioners

JCPP was established to serve as a discussion forum for the CEOs and elected presidents of all major national pharmacy practitioner organizations. There are full members (AMCP, ACA, ACCP, APhA, ASCP, ASHP, and NCPA) and liaison members (AACP, ACPE, NABP, and NCSPA). JCPP meets four times per annum.

NABP National Association of Boards of Pharmacy

NABP is an association that is committed in enforcing uniform standards, jurisdictions and assisting board members nationally and internationally. This association spans from the United States, Guam, Puerto Rico, New Zealand, eight Canadian Provinces and four Australian states.

www.nabp.net

NACDS National Association of Chain Drug Stores

The chief purpose of this association is to represent the views and policy positions of member chain drug companies. This is accomplished by various programs, services, and issues that the association is involved in.

www.nacds.org

NCPA National Community Pharmacists Association

This association represents pharmacist owners, managers, and employees of nearly 250,000 independent community pharmacies across the United States. Their goal is to represent the professional and proprietary interests of independent community pharmacists.

www.ncpanet.org

NCPDP National Council for Prescription Drug Programs

This organization's goal is to create and promote data interchange standards in pharmacy industry, provide information and resources to educate industry, and support the needs of their members. NCPDP brings together diverse leaders of industry and decision-makers to their annual

conferences.

www.ncdp.org

NCSPA National Council of State Pharmacy Association Executives

This association represents each state's organization in providing business and professional development material, continuing education for pharmacists, pharmacy students, and pharmacy technicians and various other membership services.

www.ncspae.org

NIPCO National Institute for Pharmacist Care Outcomes

The national accrediting organization for pharmacist care education and training programs leading to the pharmacist care Diplomate credential.

www.nipco.org

NPhA National Pharmaceutical Association

The purpose of this organization is to represent the interests and needs of minority pharmacists in all practice settings. NPhA is also interested in advancing the standards of pharmaceutical care among all pharmacists.

www.npha.net

NPRT National Pharmacists Response Team

This organization purpose is to prepare pharmacists, pharmacy students, and pharmacy technicians that are interested in counteracting any possible terrorist attacks. Individuals trained will be called upon to assist in a mass vaccination or chemoprophylaxis campaign.

www.aphanet.org/pharmcare/NPRTPage.htm

NPTA National Pharmacy Technician Association

NPTA is an organization for pharmacy technicians. Its stated mission is to help enhance, promote, and enrich the lives and careers of every pharmacy technician. Its vision is to provide unmatched education and support for pharmacy technicians around the world.

www.pharmacytechnician.org

PhRMA Pharmaceutical Research and Manufacturers of America

This organization represents the country's leading research-based pharmaceutical and biotechnology companies. It also supports young scientists in the pharmaceutical industry by awarding them with fellowships and grants at critical decision points of their career.

www.phrma.org

PTCB Pharmacy Technician Certification Board

PTCB is a nonprofit organization that oversees the certification program of pharmacy technicians in all practice settings. This organization develops the education and the exams for certification.

www.ptcb.org

PTEC Pharmacy Technician Educators Council

PTEC is an association representing pharmacy technician educators. Its primary mission is to assist the profession of pharmacy in preparing high quality well-trained technical personnel through education and practical training.

www.rxpotec.org

SNPhA Student National Pharmaceutical Association

SNPhA was founded in 1972 as an extension of NPhA to pharmacy students. This association educates and services students concerned about pharmacy services, professional development, and the lack of minority representation in pharmacy and other health related professions.

www.snpha.com

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Резиме

Професионални компетенции, квалификации и континуиран професионален развој во фармацевтската професија - Модел рамка за фармацевтска грижа насочена кон пациент -

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2 Јавна Институција во Здравствен сектор, за потребите на ПХИ Универзитетски Клиники, Институт и Ургентен Центар, Скопје

Клучни зборови: фармацевтска професија, компетенции, квалификации, континуиран професионален развој, фармацевтска грижа насочена кон пациент

Во текот на изминатата декада, улогата на фармацевтската професија претрпува суштински промени. Сите промени се развивани и усвојувани на еден систематичен начин од аспект на унапредување на квалитетот на професијата. Воопшто, професионалните и националните авторитети, широм светот, се посветени на развојот на професионалните компетенции, квалификации и континуираниот професионален развој за да се нагласи одржување на високи стандарди за професионален развој и како одговор на промените што се случуваат во фармацевтската едукација и националните здравствени политики. Постојаното унапредување во контекст на здравствената регулатива за секоја земја, во иднина, ќе го обликува прогресот на овој процес.

Овој труд дава преглед на постоечките концепти за професионалните компетенции, квалификации и континуиран професионален развој во фармацевтската професија со цел да се воочи и објасни комплексноста присутна во овој опсежен домен. Исто така, може да послужи како платформа за соработка на локално ниво за бројни авторитети од здравствениот домен.