

# ACCP WHITE PAPER

## Proposed Revision to the Existing Specialty and Specialist Certification Framework for Pharmacy Practitioners

American College of Clinical Pharmacy

Melissa M. Blair, Pharm.D., FCCP, Renee T. Freitag, Pharm.D., Darcie L. Keller, Pharm.D., Tyree H. Kiser, Pharm.D., Joel C. Marrs, Pharm.D., Melissa Somma McGivney, Pharm.D., Rima A. Mohammad Pharm.D., and Elaine L. Twedt, Pharm.D.

Consistent with the American College of Clinical Pharmacy's vision that future clinical pharmacy practitioners who provide direct patient care should be board-certified specialists, a new framework for pharmacist specialty board certification is proposed. This White Paper describes the current and projected needs of the pharmacy profession regarding board certification, provides a rationale for the new framework, and discusses the potential ramifications of changes in the current board certification process.

**Key Words:** board certification, Board of Pharmaceutical Specialties, clinical pharmacist, clinical pharmacy specialty, credentialing, pharmacy residency, pharmacy specialist, specialization.

(*Pharmacotherapy* 2009;29(2):3e–13e)

The pharmacy profession is undergoing substantial change with respect to its primary mission and the practice models necessary to achieve that mission. In the next 10–15 years, an increased need for advanced pharmacy services and pharmacist specialists is anticipated.<sup>1,2</sup> The Joint Commission of Pharmacy Practitioners, composed of 11 national pharmacy organizations, has published a consensus document stating that pharmacists will be “the health care providers responsible for providing patient care that ensures optimal medication therapy outcomes.”<sup>3</sup> With these broadened responsibilities, it is anticipated that pharmacists

providing direct patient care will need—and seek—additional training and enhanced clinical skills, including completion of postgraduate training.<sup>4,5</sup> Because the provision of direct patient care “involves the pharmacist’s observation of the patient and contributions to the selection, modification, and monitoring of patient-specific drug therapy,”<sup>4</sup> pharmacists in a wide variety of settings will seek such additional training and skills.<sup>6</sup> As practice expectations grow and most practicing pharmacists become engaged in providing direct patient care, there will be an increased need to expand the process of how specialized knowledge and skills are recognized.<sup>7</sup> Current doctor of pharmacy degree requirements and state licensure procedures ensure the appropriate entry-level competence needed for safe and effective drug distribution as well as a scope of basic patient care services, such as patient education. However, organizations both inside and outside the profession believe that degree and licensure credentials alone are not sufficient measures of the abilities required to provide advanced or specialized pharmacy and pharmacotherapy services.<sup>1,8</sup>

Presently, some pharmacists use a range of

---

This white paper was prepared by the 2008 ACCP Certification Affairs Committee: Melissa Blair, Pharm.D., FCCP, BCPS, Chair; Dianne Brundage, Pharm.D., FCCP, BCPS; Alicia Brand, Pharm.D.; Renee Freitag, Pharm.D.; Darcie Keller, Pharm.D., BCPS; Ty Kiser, Pharm.D., BCPS; Donald Kishi, Pharm.D.; Joel Marrs, Pharm.D., BCPS; Melissa Somma McGivney, Pharm.D., CDE; Rima Mohammad, Pharm.D., BCPS; and Elaine Twedt, Pharm.D., BCPS. Approved by the ACCP Board of Regents on June 5, 2008.

Address reprint requests to the American College of Clinical Pharmacy, 13000 W. 87th Street Parkway, Lenexa, KS 66215; e-mail: [accp@accp.com](mailto:accp@accp.com); or download from <http://www.accp.com>.

voluntary credentials and certification procedures as mechanisms to document advanced knowledge and skills. Certification is defined as “the process by which a non-governmental agency, such as a professional association, grants recognition, after assessment, to an individual who has met certain predetermined qualifications specified by that organization.”<sup>1</sup> Certification provides individual practitioners public recognition. There are, at present, several ways pharmacists can voluntarily obtain credentials to document advanced or specialized skills and knowledge.<sup>9</sup> Since the late 1970s, pharmacists have been certified as specialists through examination processes developed and administered by the Board of Pharmaceutical Specialties (BPS). BPS oversees five specialty examinations (nuclear pharmacy, nutrition support, oncology, pharmacotherapy, and psychiatric pharmacy) as well as a portfolio process for documenting “Added Qualifications” (AQ) in two areas (cardiology and infectious diseases [ID]) for pharmacists certified in pharmacotherapy.<sup>10</sup> Almost 7000 pharmacists have become board-certified specialists by this method. Most are board-certified pharmacotherapy specialists (BCPS). Other organizations also provide certification programs for pharmacists to pursue. These programs are either disease-specific (e.g., anticoagulation, dyslipidemia, asthma) or specific to a patient population (Certified Geriatric Pharmacist [CGP]).

### **Future Needs of the Pharmacy Profession Regarding Board Certification**

#### **Current and Future Issues in Pharmacy Practice**

Pharmacists are increasingly being recognized and used to provide direct patient care pharmacotherapy services. These direct patient care activities are becoming more common in health care organizations, especially through various hospital and ambulatory practice settings and programs such as medication therapy management (MTM). In many cases, the pharmacist is considered the “drug expert” within an interprofessional team. The provision of pharmacy services has had a positive impact on the quality and outcomes of patient care in many settings. For example, including a pharmacist in the medication selection stage of prescribing on a general medical unit led to a 78% relative reduction in the rate of preventable

adverse drug events.<sup>11</sup> There is also evidence that pharmacist-provided drug histories result in a large reduction of medication errors in hospitals.<sup>12</sup> Pharmacists providing services as part of multidisciplinary teams results in substantial improvements in patient outcomes, such as reductions in adverse drug event rates caused by medication and prescribing errors.<sup>13–17</sup>

Another trend in pharmacy practice has been an increase in the provision of MTM services and programs. This has occurred largely because these programs are a required component of the benefit structure of Medicare Part D outpatient prescription drug programs. Pharmacists providing MTM programs have demonstrated improved health outcomes, improved quality of life, and reduced overall costs for patients and payers.<sup>18</sup> Pharmacies partnering with managed care organizations and pharmacy benefit managers may provide new resources for MTM programs.<sup>19</sup> As these programs expand and payers consider reimbursement for these services, uncertainty and questions regarding appropriate credentials for the pharmacists providing such services will, in turn, become more frequent.

Although pharmacists are increasingly relied on to provide patient care, to date, there is no universal payment mechanism for these services. As the pharmacy profession moves from “product-centered” care to “patient-centered” care, it will be imperative that appropriate methods and models for payment are established. Payers will require validation that practitioners are qualified to provide services. Establishing benchmarks for pharmacy training and credentialing will be a necessary component in the future of pharmacist-provided direct patient care services. A sound and progressive specialty board certification process could help fulfill this credentialing need and might provide further support for pharmacists to be recognized by payers as direct patient care providers.

Additional factors within the pharmacy profession itself are driving an increased demand for specialty board certification. American Society of Health-System Pharmacists (ASHP) accreditation standards for residency programs now require program directors of postgraduate year 2 (PGY2) residency programs to obtain board certification in their area of practice, when available. At present, this includes the specialties of nutrition support, oncology, pharmacotherapy, and psychiatry. However, ASHP-approved residencies such as pediatrics, critical care, and transplantation do not have a corresponding

specialty certification process, nor is there currently such a stipulation for PGY1 residency program directors. In 2005, a survey of 327 residency program directors revealed that only 37% were board-certified specialists.<sup>20</sup> A certification framework that could efficiently increase this number would help meet residency accreditation standards.

Similar to the training and certification requirements established for ID physicians, the Society of Infectious Diseases Pharmacists and the ACCP Infectious Diseases Practice and Research Network (PRN) have recommended experiential training and competencies be required for individuals designated ID-trained clinical pharmacists.<sup>21</sup> These groups recommend that ID pharmacists demonstrate a broad understanding of fundamental medicine competencies through the BCPS credential. They also recommend that pharmacists pursue AQ (added qualifications) in ID in lieu of additional credentialing because a certification examination for ID does not currently exist.

An effective board certification process for the future will need to ensure that individual practitioners possess appropriate knowledge and skills in a particular specialty and that the certification provides an acceptable method of qualifying pharmacists to provide direct patient care. As with other professions, the value of board certification as a measure of competence will need to be evaluated to assess its effect on the quality of patient care.<sup>22</sup>

#### Lack of a Standardized Credential

The Council on Credentialing in Pharmacy, a coalition of 14 national pharmacy organizations, was formed in 1999 to provide a forum to promote and ensure quality of the broad range of certification and accreditation programs currently available within the profession's professional and technical workforce. To date, numerous certificate programs and certifications have been developed; however, most of these programs have demonstrated limited sustainability and/or an inability to attract broad interest within the pharmacist community. For example, more than 1500 pharmacists have earned the Certified Disease Manager (CDM) designation from the National Institute for Standards in Pharmacist Credentialing. However, it was announced that the CDM program would expire December 31, 2008. Since that date, CDM pharmacists are no longer able to renew, recertify, or maintain

certification.<sup>23</sup>

Several other credentials are available to pharmacists—some more widely recognized than others. Several pharmacists have pursued credentials from multidisciplinary organizations in disease-specific areas such as anticoagulation (CACP), asthma (AE-C), diabetes (CDE or BC-ADM), lipidology (CLS), pain management (CPP), and toxicology (DABAT).<sup>24–30</sup> Others obtain pharmacy-specific credentials in a specialized patient population, such as the CGP certification of the Commission for Certification in Geriatric Pharmacy.<sup>31</sup> These credentials are generally conferred on pharmacists who pass an examination or submit a portfolio; they are not based solely on receiving continuing education credit. Because no single credential has been accepted by the entire profession as reflective of a “pharmacist specialist,” confusion can occur both inside and outside the profession. Health care providers, payers, and the public find it difficult to know what each credential actually means and its value relative to the other available credentials and, more importantly, to the provision of direct patient care.

Pharmacist-related patient care activities are evolving, and clear expectations and accountabilities should be established to ensure recognition by national health care organizations, the government, and other health care professionals.<sup>32</sup> Although many states have adopted legislation and/or regulations to allow pharmacists to participate in collaborative practice agreements with physicians, the credentials needed to practice under these agreements vary widely. One example is the Clinical Pharmacist Practitioner (CPP) designation for licensed pharmacists in North Carolina. Under collaborative practice agreements with physicians, pharmacists with the CPP designation are afforded privileges above that delineated in the state pharmacy practice act. To obtain CPP status, a pharmacist must meet certain qualifications established by state boards of pharmacy and medicine. In addition to required years of experience or residency training, a pharmacist must be board certified through BPS or have completed a certain number of required certificate programs.<sup>33</sup>

The Texas State Board of Pharmacy (TSBP) is now required by law to solicit information regarding credentials from pharmacists on their license renewal applications. The purpose of this legislation is to make credentialing information available to the public. A pharmacist is

recognized as “certified” if he or she has successfully completed a program offered by several approved providers of pharmacist credentialing programs. These could include the Disease State Management Examination offered by the National Association of Boards of Pharmacy, specialty board certification through BPS, or a certificate program offered by the American Society of Consultant Pharmacists, American Board of Clinical Pharmacology, American Board of Applied Toxicology, or American Academy of Pain Management. Additional certifications may be approved by the TSBP.<sup>34</sup> As more states and health care organizations recognize pharmacists’ voluntary credentials, there is a growing need for greater standardization and unification of the profession under a more coherent certification framework.

#### Issues with the Current BPS Certification Model

The principal organization within pharmacy for certifying specialists (and recognizing specialties within pharmacy) is BPS, which, as previously noted, currently recognizes five distinct specialties through examination, along with two areas of added qualifications within the specialty of pharmacotherapy, through a process of portfolio submission and review. BPS is recognized by a range of entities within health care for its ability to demonstrate advanced knowledge and skills in certain areas of pharmacy practice.<sup>35, 36</sup> Pharmacotherapy is the most broad-based specialist certification offered by BPS, although its effectiveness in meeting the needs of practitioners has not gone without question. With expanding roles, pharmacists are now providing specialized patient care in collaboration with physicians who are board certified in various medical subspecialties. In general, the process of board certification for health care providers is a widely recognized process used to document knowledge and skills beyond the minimum requirements set forth for licensure. Unfortunately, the current board certification process for pharmacists leaves significant gaps in many areas where pharmacists are providing specialized patient care. This may result in a perception among some pharmacists that board certification is neither applicable to nor appropriate for them. These may include pharmacists practicing in the ambulatory care clinic setting and in community practice, in addition to areas of specialty or subspecialty practice such as pediatrics, ID, geriatrics,

transplantation, critical care, and emergency medicine.

Assessing pharmacists’ perceptions of board certification is important when evaluating the adequacy of the current and future framework of specialist certification. In a survey of 1300 pharmacists conducted by ACCP in 2006 (unpublished data provided by ACCP), about half of the respondents were board certified in at least one BPS specialty. Eighty-one percent of respondents believed new specialty certifications should be developed. These included ambulatory care, cardiology, critical care, ID, and pediatrics. These findings highlight the desire of many practicing pharmacists to have a process for voluntary certification that will enable them to document a defined level of expertise in areas that require a unique knowledge and skill set. However, this survey was conducted by ACCP and was only given to ACCP members, thus representing only a portion of practicing pharmacists. It is likely that pharmacists in community practice and perhaps other practice settings were underrepresented in the survey sample.

A process for assessing AQ for those with BCPS exists for the areas of ID and cardiology. To date, few pharmacists have sought this recognition, and many seem unsure of the value of this designation. A survey of 146 critical care pharmacists demonstrated that 62% of the respondents agreed that pursuing an AQ portfolio review was an important undertaking for pharmacists practicing in critical care (data provided by the ACCP Critical Care PRN). Those opposed to the AQ approach were concerned about the required link to the pharmacotherapy examination, a perceived lack of tangible benefit, and a lack of understanding and recognition of the AQ credential from other health care professionals and payers. To increase the pool of qualified applicants pursuing this recognition and to ensure sustainability, these and similar issues must be addressed.

Another element of concern in the present specialist certification system is the variability in eligibility qualifications for the various specialty examinations. All specialties require an entry-level pharmacy degree and active pharmacist license to qualify for the examination process, but additional and different eligibility criteria have been established by the various BPS specialty councils overseeing the respective examinations. For example, to qualify for the nuclear pharmacy board specialty, pharmacists

are required to document 4000 hours of training or experience in nuclear pharmacy. The nutrition support and oncology specialties require 3 years of experience, whereas psychiatric pharmacy requires 4 years of experience. The experience needed to qualify for the pharmacotherapy examination varies by the candidate's type of pharmacy degree. Pharmacists with a Pharm.D. degree must have at least 3 years' experience, whereas those with a B.S. degree need to demonstrate at least 5 years' experience. Quantifying one's experience can be difficult, especially for individuals who currently devote only a portion of their time in a specialty area. However, this difficulty can be resolved for those who have completed residency and/or fellowship training, as postgraduate training can meet most or all of the professional practice requirements needed to be eligible for a particular specialty certification.<sup>10</sup>

The absolute number of pharmacists who sit for BPS-sponsored board certification examinations is low relative to the entire pharmacist population. Although BPS has provided specialty board certification examinations since 1978, as of 2006, only about 2.4% of the overall pharmacist population hold a

specialty board certification credential.<sup>37, 38</sup> The number of those with BCPS has steadily increased (Figure 1). In 2007, there were 4523 pharmacists certified in the Pharmacotherapy specialty, whereas in 1998, there were only 1843.<sup>9</sup> Although their absolute numbers are smaller, specialists in oncology and psychiatry have also increased. However, other specialties have experienced inconsistent growth. In 2000, there were more board-certified nutrition support pharmacists than in 2008 (466 vs. 419). A survey of nutrition support pharmacists indicated that their professional time devoted to nutrition had significantly decreased, and examination cost and lack of reimbursement by employers were barriers to board certification.<sup>39</sup>

Financial constraints can also limit the types of specialty examinations available. Although pharmacists have often expressed interest in expanding the number of specialty certification examinations offered, the cost of providing the infrastructure needed to sustain several additional specialty examinations may be prohibitive. This is especially true when the total number of pharmacists eligible for or interested in a particular specialty certification process is low. A new framework for specialty certification

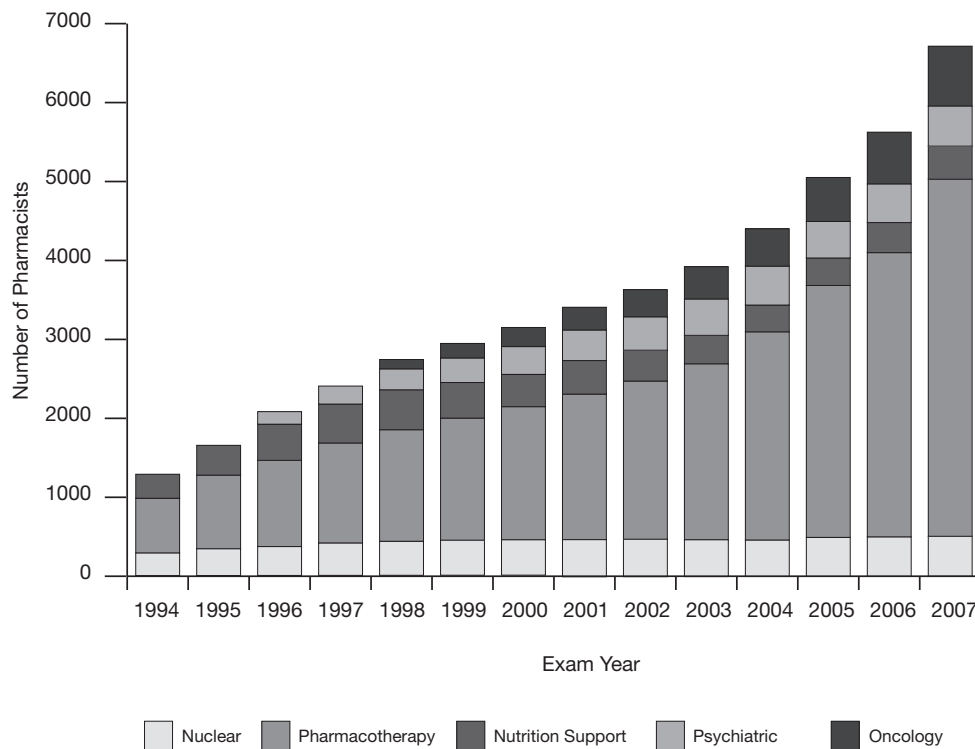


Figure 1. Number of BPS-credentialed pharmacists per year.

in pharmacy that supports examinations for a wider variety of specialty (and potential “subspecialty”) areas must be able to provide both financial sustainability and administrative efficiency.

### Proposed Framework for Future Specialty Board Certification

The ACCP Certification Affairs committee explored various options to promote the evolution of pharmacist specialty certification within the existing BPS framework; these included increasing the number of specialty examinations, expanding the use of AQ, using the pharmacotherapy examination as a prerequisite or foundational examination for other specialty examinations, and creating a new model with a fundamental component combined with a range of subspecialty areas. Emphasis was placed on proposing a model that would accommodate the changing responsibilities of direct patient care pharmacists and that could help unite the profession under a widely recognized and embraced primary certification. The committee believes strongly that any new model should be conferred through BPS, which is recognized as the profession’s designated body for overseeing the process of certification of pharmacist specialists. In addition, it is important to keep in mind that specialist certification of pharmacists remains a completely voluntary activity within the profession’s current credentialing system.

After carefully considering numerous options, ACCP proposes that BPS restructure the pharmacy board certification examination model to include a voluntary, initial “fundamental” certification, followed by the possibility of subspecialty certification. This proposed model could consist of a one- or two-part specialty examination process. Pharmacists desiring board certification would be required to pass a fundamental specialty certification examination. This framework would apply to all pharmacists with direct patient care responsibilities, independent of practice setting or subspecialization interest; it would be offered as the initial component of the examination process. Pharmacists practicing in specific subspecialty areas that are or might subsequently be recognized by BPS would then have the opportunity to obtain certification in the subspecialty area(s) by passing additional targeted examination(s), offered during a second

phase of the examination process, provided that the applicants met the defined eligibility requirements for the respective subspecialty. The time during which such an examination process would occur would depend on the subspecialty certification(s) that the candidate chose to pursue, but it would likely encompass a period of 1–2 days.

### Fundamental Specialty Examination

The first part of the proposed specialty certification examination would include a fundamental set of knowledge and skills that is common to all practicing pharmacists providing direct patient care. The precise domains for the fundamental examination would be based on an appropriate role delineation survey. It is anticipated that these areas would include domains that are already incorporated in current specialty examinations. These areas could be expanded or contracted based on the role delineation survey. The following areas would likely be considered potential domains of the fundamental examination content:

- Patient-specific pharmacotherapy (evidence-based patient care including disease treatment and prevention)
- Retrieval, generation, interpretation, and dissemination of pharmacotherapy knowledge (literature evaluation, communication skills)
- Practice management (documentation, informatics, billing/reimbursement, federal and organizational regulations, medication use process, systems-based care)

It is envisioned that all pharmacists with direct patient care responsibilities would be candidates for the fundamental certification examination. This would ensure that a specialty certification, consistent with the current BPS model of only issuing specialty certifications, would be the entry credential in this model. Such a credential would help fulfill ACCP’s vision that pharmacy practitioners providing direct patient care will be board-certified specialists.

### Subspecialty Examinations

The subspecialty component of the proposed framework would be available for subspecialty areas of pharmacy practice currently or eventually recognized by BPS. These subspecialty areas would be identified based on formal role delineation surveys designed to

identify additional knowledge domains used by subspecialty pharmacists within unique practice areas. Subspecialty areas would require the existence of a critical mass of pharmacists to ensure feasibility and sustainability and would logically include areas already recognized by BPS through specialty certifications or AQ (oncology, psychiatry, cardiology, ID, and nutrition support). Additional subspecialty areas should also be considered. Based on the previously referenced ACCP survey, other areas could include transplantation, critical care, and pediatrics.

Recertification of both types of credentials could be based on reexamination, continuing education, portfolio review, or a combination of these procedures as determined at the time the certification process is created. Present “best practices” and consistency between examinations should be carefully considered and incorporated into this decision-making process.

### Reasoning for Proposed Examination Structure

#### Supporting the Credentialing Needs of the Pharmacy Profession

The proposed voluntary specialist certification process explained above is consistent with the vision of pharmacy practice as outlined by the Joint Commission of Pharmacy Practitioners.<sup>3</sup> Assuring the public that pharmacists are capable of optimizing patients’ medication therapy outcomes is an important aspect of any credentialing framework. This new proposed specialist board certification framework promotes the vision of pharmacists as the drug therapy experts. The fundamental credential would lend credence to the direct patient care role of pharmacists responsible for the overall medication-related needs of patients. The need for such a credential has become increasingly important because of the growth and development of MTM services.<sup>40</sup> The credential would provide an easily identifiable credential to the public in a manner to which both health care institutions and third-party payers are accustomed from both quality assurance and privileging standpoints.

Within the profession, the development of a fundamental credential would also provide the foundation for developing a coherent credentialing framework. It could impart greater clarity concerning the essential knowledge and skills necessary to provide direct patient care in any setting. This fundamental credential, with

the option for subspecialization, could also reduce the need for obtaining other credentials, thus reducing divisions within the pharmacy profession.

This credentialing framework would also allow harmonization with the existing PGY1 and PGY2 training models for pharmacy residency and thereby provide a straightforward process for gaining formal validation of the specific knowledge and skills gained through accredited postgraduate residency training. Furthermore, it would provide a more efficient mechanism for pharmacists to pursue certification in more than one specialty area while providing opportunities for the development of new subspecialties as those practice models emerge.

#### Similarities to the Established Medical Board Certification Model

In contrast to the profession of pharmacy, where the development of its credentialing framework is a relatively recent exercise, the profession of medicine has a long-standing history of board-based specialty certification. In the medical profession, board certification provides a mechanism of quality assurance within the profession and for health insurers and employers. In some instances, board certification also qualifies physicians for specific medical privileges within a health system and can facilitate specific recognition by health insurers. The proposed framework for the pharmacist board certification model would more closely mirror the model used—and understood—by physicians, insurers, and others familiar with health care professional certification.

The American Board of Medical Specialties (ABMS) oversees 24 medical specialty boards in the United States for the ongoing evaluation and certification of physicians.<sup>41</sup> Areas of medical specialty are numerous. To become board certified, many physicians first take a general board examination; then, after further training, they progress to a subspecialty examination in their area of practice. This is similar to the framework for pharmacist certification proposed in this paper.

In 2006, ABMS approved a new standard for recertification of all specialty areas of physicians called the Maintenance of Certification (MOC) program. The change was instituted to embrace best practices and evidence-based medicine with continuing education customized to the physician’s area of practice. The MOC has four

key components: physician licensure and positive standing within the profession, lifelong learning and self-assessment, growth and maintenance of cognitive expertise, and practice performance assessment. To meet these components, physicians must maintain an unrestricted, active license; complete a required number of continuing education hours; sit for an examination; and compare their practice with national standards and their peers. All or parts of this recertification process could be considered possible recertification mechanisms within the proposed pharmacist certification framework.

#### Rationale for a Fundamental Credential

Pharmacist credentials should be used to indicate and ensure the skills and knowledge a practitioner possesses. After passing the initial proposed BPS examination, practitioners should be capable of using a broad array of skills and knowledge to provide high-quality patient care.<sup>1</sup> Integral to this thought is the supposition that there is a fundamental set of skills and knowledge every pharmacist should possess to provide direct patient care in a wide variety of clinical settings. Because pharmacy practitioners would be required to attain the fundamental credential before pursuing subspecialty examinations, an emphasis would be placed on this fundamental skill set. In addition, this examination would help assure the public that all board-certified pharmacists possess a fundamental set of skills and a consistent, specialized patient care knowledge base.

In health care organizations, practitioners must undergo a process that grants privileges to perform specific patient care services. Historically, the privileging process has not commonly included pharmacists. Currently, with the growing recognition that pharmacist involvement promotes patient safety and improved outcomes, health care systems are reconsidering pharmacists in the privileging process. Although certain activities such as patient education are typically permitted within the scope of pharmacy practice, health care organizations may decide that other activities, such as anticoagulation management, require additional credentials.<sup>36</sup> The fundamental examination/certification could provide board-certified pharmacy practitioners greater authority to perform important, more specialized patient care services, such as drug dosing and monitoring.

#### Implications and Needs for Subspecialty Certification in Different Areas

It is also important to promote the fact that some pharmacists practice in highly specialized areas. This is evidenced by the observations that having a pharmacist involved in patient care has improved outcomes in subspecialty settings such as emergency departments, surgical and medical intensive care units, and pediatric wards.<sup>12, 42-48</sup> Pharmaceutical care has been linked to significant cost-savings in certain subspecialty areas of health systems, specifically in antibiotic use, HIV disease, and renal transplant services.<sup>49-51</sup> National organizations also recognize the impact of pharmacist specialist participation on multidisciplinary teams involving antimicrobial stewardship, rapid response, and anticoagulation.<sup>52-54</sup>

Although the current board certification model promotes specialties in nuclear medicine, nutrition support, oncology, pharmacotherapy, and psychiatry, as well as advanced qualifications in cardiology and ID, many other "specialized" pharmacy services and practices remain unrecognized. As noted previously, clinical pharmacists have expressed interest in creating board certification options in ambulatory care, critical care, pediatrics, and others. Developing subspecialty board certification in a variety of other areas will better align pharmacists with their medical and nursing colleagues and will provide mechanisms for pharmacists to become recognized as experts in subspecialty practice.<sup>29,41</sup>

#### Ramifications of the Proposed Changes

##### Revamping an Established System

There are concerns about modifying a system that has been in place for 30 years. Although the present BPS board certification model has provided the profession with a legally defensible credential, it is insufficiently understood and used both inside and outside the profession. However, an evolution of this model would come with its own set of challenges.

Clear and specific candidacy requirements would first need to be determined. Referring to various pharmacy organizations' visions of the future of the profession could help establish these requirements.<sup>3</sup> Because an increase in the need for postgraduate training of pharmacists involved in direct patient care is anticipated, it seems logical that pharmacists would be eligible to sit for the fundamental examination after

completing a PGY1 residency or equivalent training.<sup>4</sup> Requirements would also need to be developed to identify those eligible for subspecialty credentialing. Possible requirements could be completion of a PGY2 residency in the specific subspecialty area or a documented level of experience within the specific subspecialty.

These proposed changes also require addressing what should be done for individuals who are presently board certified through BPS. Consensus would need to be reached regarding whether to “grandfather in” these practitioners or whether they would need to successfully complete the new examination process. We anticipate this consensus would largely be based on the results of new role delineation surveys. For instance, if the domains of subspecialty examinations such as oncology or nutrition support do not substantially change based on role delineation surveys, it seems possible to consider grandfathering in the previously board-certified practitioners.

#### Unifying the Profession Under One Credentialing Process

The number of credentials pharmacists can obtain has contributed to a fractionation of the profession and resulted in a lack of understanding of the pharmacy credentialing process. On the one hand, to be successful, the development of a voluntary, fundamental credential with subspecialization options, no matter how desirable, will need to be broadly endorsed by the pharmacy profession. On the other hand, identifying a fundamental set of knowledge and skills will lead to a clarification of what it means to be a board-certified pharmacist.

The suggested changes to the framework of board certification will help remove some of the barriers that currently exist for pharmacists. Changing the examination content to cover a fundamental set of knowledge and skills will make the examination applicable to any pharmacist practicing in a direct patient care role. This change should further result in a clearer understanding of the examination content. A larger number of pharmacists may view these changes as applicable to their practice focus.

It is anticipated that the provision of direct patient care will be a standard of pharmacy practice in all patient care settings by 2020.<sup>4</sup> It has been estimated that this will require 320,250 pharmacists in the United States to practice in direct patient care roles.<sup>2</sup> Based on the dramatic

change in direct patient care activities by pharmacists, a subsequent increase in qualified candidates is expected, resulting in greater acceptance of the standardization involved in the board certification process. Standardizing the credentialing process to require a fundamental credential is likely to help unite the profession, instead of further splintering it.

The continued expansion of pharmacy services has permitted the recognition of pharmacists as providers of direct patient care in many health care systems across the nation. We believe the important message to stress is that fundamental board certification should be the minimum requirement needed to practice in a direct patient care role in any practice setting. Educating other health care providers will promote increased awareness about the importance of board certification within the health care system as a whole. In the medical model, board certification provides evidence that a physician has completed adequate training and possesses specialty knowledge as evidenced by successfully passing a standardized national examination.<sup>55</sup> The pharmacy profession can unite by using similar criteria to credential pharmacists after specific training requirements and certification through BPS have been met.

There is a continuing need to provide incentives to pharmacists to pursue board certification.<sup>20</sup> Incentives should include tangible benefits, recognition, and an expected standard of excellence and advancement within the profession of pharmacy and among all health care providers. The current internal perception is that board-certified pharmacists have demonstrated they are proactive, ambitious, and determined to advance the profession of pharmacy through the provision of high-level patient care. Employers have acknowledged board-certified pharmacists by providing incentives such as higher salaries, prescribing privileges, collaborative practice options, job competitiveness, and promotion opportunities. Some health care institutions have a pharmacist tier system that uses board certification to help differentiate the types of services pharmacists provide.<sup>32, 56</sup> Although promoting these currently perceived benefits may be effective in luring a percentage of pharmacists to become board certified, the pharmacy profession will require a new global vision and expectation of future pharmacy roles and responsibilities for board certification to become the standard for all direct patient care pharmacists.<sup>1</sup>

## Financial Issues

The need for financial compensation is identified as a current barrier to board certification. This includes both personal and institutional compensation. Standardization through a fundamental credential should decrease the impact of this barrier. Although most payers do not presently require a credential for pharmacists, payers should understand the proposed changes to the BPS framework. This is likely to promote more consistent payment for pharmacists' direct patient care services. If payers begin to recognize this fundamental credential as a requirement for payment for patient care services, employers will seek board-certified pharmacists to deliver these services and will have an incentive to support the board certification process.

## Lack of Outcomes Data Regarding Board Certification

The demonstrated patient care value of the pharmacist specialist is limited. Thus, the lack of published evidence to support board certification remains a barrier for some pharmacists to seek certification. The economic benefit of pharmacy services with respect to improved patient care and reduced health care costs has been demonstrated; however, these outcomes have not been explicitly tied to board-certified pharmacists.<sup>57-60</sup> Tracking and reporting the impact of board-certified pharmacist specialists on patient care and health care-associated costs is needed. This will further validate board certification as a requirement, rather than an option, for pharmacists involved in direct patient care.

## Conclusion

In summary, ACCP proposes the consideration of a new framework for BPS specialty board certification. A fundamental, initial specialty credential with a subspecialization option could create a framework more broadly supported by the profession as a whole. It would also substantially help reduce confusion regarding pharmacy's current credentialing system and provide a model to enhance the quality of pharmacists' direct patient care activities. This proposed framework represents an evolutionary step in the profession's board certification processes; it would provide a coherent and flexible system to facilitate growth in the board

certification of pharmacist specialists. Indeed, we believe that such an evolutionary change is necessary if we are to achieve our vision that, in 20–30 years, most pharmacy practitioners will be board-certified specialists.

## Acknowledgments

The authors wish to acknowledge Joseph Saseen, Pharm.D., FCCP, BCPS; Ila Harris, Pharm.D., FCCP, BCPS; K. Alicia Brand, Pharm.D.; Diane Brundage, Pharm.D., FCCP, BCPS; and Donald Kishi, Pharm.D. for their assistance with this white paper.

## References

1. Saseen JJ, Grady SE, Hansen LB, et al. Future clinical pharmacy practitioners should be board certified specialists. *Pharmacotherapy* 2006;26:1816–25.
2. Knapp KK, Livesey JC. The aggregate demand index: measuring the balance between pharmacist supply and demand, 1999–2001. *Am J Pharm Educ* 2002;42:391–98.
3. American Association of Colleges of Pharmacy. JCPP future vision of pharmacy practice. Available from [http://www.aacp.org/Docs/MainNavigation/Resouces/6725\\_JCPPFutureVisionofPharmacyPracticeFINAL.pdf](http://www.aacp.org/Docs/MainNavigation/Resouces/6725_JCPPFutureVisionofPharmacyPracticeFINAL.pdf). Accessed March 13, 2008.
4. Murphy JE, Nappi JM, Bosso JA, et al. American College of Clinical Pharmacy's vision of the future: postgraduate pharmacy residency training as a prerequisite for direct patient care practice. *Pharmacotherapy* 2006;26:722–33.
5. American Society of Health-System Pharmacists. Residency training for pharmacists who provide direct patient care. Policy position 0005. Available from [http://www.ashp.org/s\\_ashp/bin.asp?CID=6&DID=4010&DOC=FILE.PDF](http://www.ashp.org/s_ashp/bin.asp?CID=6&DID=4010&DOC=FILE.PDF). Accessed March 15, 2008.
6. American Pharmacists Association. Final report of the 2008 APhA House of Delegates. Available from [www.pharmacist.com/hod](http://www.pharmacist.com/hod). Accessed March 29, 2008.
7. American College of Clinical Pharmacy. The definition of clinical pharmacy. Available from <http://www.accp.com/docs/positions/commentaries/Clinpharmdefnfinal.pdf>. Accessed January 16, 2009.
8. Keely JL. Pharmacist scope of practice. *Ann Intern Med* 2002;136:79–85.
9. Bertin RJ. Credentialing in pharmacy. *J Manag Care Pharm* 2001;7:22–7, 30–1.
10. Board of Pharmaceutical Specialties. Available from [www.bpsweb.org](http://www.bpsweb.org). Accessed March 13, 2008.
11. Kucukarslan SN, Peters M, Mlynarek M, Nafziger DA. Pharmacists on rounding teams reduce preventable adverse drug events in hospital general medicine units. *Arch Intern Med* 2003;163:2014–8.
12. Bond CA, Raehl CL, Franke T. Clinical pharmacy services, hospital pharmacy staffing, and medication errors in United States hospitals. *Pharmacotherapy* 2002;22:134–7.
13. Leape LL, Cullen DJ, Clapp MD, et al. Pharmacist participation on physician rounds and adverse drug events in the intensive care unit. *JAMA* 1999;282:267–70.
14. McMullin ST, Hennefert JA, Ritchie DJ, et al. A prospective, randomized trial to assess the cost impact of pharmacist-initiated interventions. *Arch Intern Med* 1999;159:2306–9.
15. Gattis WA, Hasselblad V, Whellan DJ, et al. Reduction in heart failure events by the addition of a clinical pharmacist to the heart failure management team. *Arch Intern Med* 1999;159:1939–45.
16. Bond CA, Raehl CL, Franke T. Clinical pharmacy services and hospital mortality rates. *Pharmacotherapy* 1999;19:556–64.
17. Powell MF, Solomon DK, McEachen RA. Twenty-four hour

- emergency pharmaceutical services. *Am J Hosp Pharm* 1985;42:831-5.
18. Bunting BA, Smith BH, Sutherland SE. The Asheville Project: clinical and economic outcomes of a community-based long-term medication therapy management program for hypertension and dyslipidemia. *J Am Pharm Assoc* 2008;48:23-31.
  19. Shepherd M. Unprecedented opportunities for managed care organizations and community pharmacies to work together. *J Manag Care Pharm* 2007;13:426-8.
  20. Daugherty NE, Ryan M, Romanelli F, Smith KM. Board certification of pharmacy residency program directors. *Am J Health Syst Pharm* 2007;64:1415-21.
  21. Ernst EJ, Klepser ME, Bosso JA, Rybak MJ, Hermsen ED, Segarra-Newnham M, Drew RH. Recommendations for training and certification for pharmacists practicing, mentoring, and educating infectious diseases pharmacotherapy: an opinion of the Society of Infectious Diseases Pharmacists and the Infectious Diseases Practice and Research Network of the American College of Clinical Pharmacy. Available from <http://www.accp.com/docs/positions/opinionPapers/IDTrainedPharmSIDPrnFinal.pdf>. Accessed December 5, 2008.
  22. Holmboe ES, Lipner R, Greiner A. Assessing quality of care: knowledge matters. *JAMA* 2008;299:338-40.
  23. National Institute for Standards in Pharmacist Credentialing. Available from [www.nispncet.org](http://www.nispncet.org). Accessed February 12, 2008.
  24. Accreditation Council for Clinical Lipidology Credentialing Guide, 2007. Available from [www.lipidspecialist.org](http://www.lipidspecialist.org). Accessed February 12, 2008.
  25. Candidate Handbook for Certified Anticoagulation Care Provider (CACP). Available from [www.ncbap.org](http://www.ncbap.org). Accessed February 12, 2008.
  26. Certified Asthma Educator (AE-C) Candidate Handbook. Available from [www.naecb.org](http://www.naecb.org). Accessed February 12, 2008.
  27. American Board of Applied Toxicology. Available from <http://www.abatox.org/>. Accessed January 16, 2009.
  28. National Certification Board for Diabetes Educators. Certification Handbook for Diabetes Educators. Available from <http://www.ncbde.org/documents/HB2009Final011409.pdf>. Accessed January 16, 2009.
  29. American Nurses Credentialing Center. Available from [www.nursecredentialing.org](http://www.nursecredentialing.org). Accessed February 12, 2008.
  30. American Academy of Pain Management Credentialing Information. Available from [www.aapainmanage.org](http://www.aapainmanage.org). Accessed February 12, 2008.
  31. Commission for Certification in Geriatric Pharmacy. Available from [www.ccgp.org](http://www.ccgp.org). Accessed March 13, 2008.
  32. Gourley DR, Fitzgerald WL Jr, Davis RL. Competency, board certification, credentialing, and specialization: who benefits? *Am J Manag Care* 1997;3:795-801.
  33. North Carolina Board of Pharmacy. Clinical Pharmacist Practitioner. Available from [http://www.ncbop.org/pharmacists\\_cpp.htm](http://www.ncbop.org/pharmacists_cpp.htm). Accessed February 1, 2008.
  34. Texas State Board of Pharmacy. Available from [www.tsbp.state.tx.us](http://www.tsbp.state.tx.us). Accessed February 12, 2008.
  35. Credentialing in pharmacy. The Council on Credentialing in Pharmacy. *Am J Health Syst Pharm* 2001;58:69-76.
  36. Galt KA. Credentialing and privileging for pharmacists. *Am J Health Syst Pharm* 2004;61:661-70.
  37. U.S. Department of Labor. Pharmacists. Available from <http://www.bls.gov/oco/ocos079.htm>. Accessed March 28, 2008.
  38. Board of Pharmaceutical Specialties. 2006 Annual Report. <http://www.bpsweb.org/pdfs/newsletter/Aug07.pdf>. Accessed March 28, 2008.
  39. Ebiasah RP, Schneider PJ, Pedersen CA, Mirtallo JM. Evaluation of board certification in nutrition support pharmacy. *JPEN* 2002;26:239-47.
  40. Centers for Medicaid & Medicare Services. Higher quality care through Medicare's modernization benefits. Available from [http://www.cms.hhs.gov/PrescriptionDrugCovContra/082\\_MTM.asp](http://www.cms.hhs.gov/PrescriptionDrugCovContra/082_MTM.asp). Accessed March 13, 2008.
  41. American Board of Medical Specialties. Available from <http://www.abms.org>. Accessed March 13, 2008.
  42. Brown JN, Barnes CL, Beasley B, et al. Effect of pharmacists on medication errors in the emergency department. *Am J Health Syst Pharm* 2008;65:330-3.
  43. Weiner BK, Venarske J, Yu M, Mathis K. Towards the reduction of medication errors in orthopedics and spinal surgery: outcomes using a pharmacist-led approach. *Spine* 2008;33:104-7.
  44. Kwan Y, Fernandes OA, Nagge JJ, et al. Pharmacist medication assessments in a surgical preadmission clinic. *Arch Intern Med* 2007;167:1034-40.
  45. Kopp BJ, Mrgan M, Erstad BL, DUBY JJ. Cost implications of and potential adverse events prevented by interventions of a critical care pharmacist. *Am J Health Syst Pharm* 2007;64:2483-7.
  46. Costello JL, Torowicz DL, Yeh TS. Effects of a pharmacist-led pediatrics medication safety team on medication-error reporting. *Am J Health Syst Pharm* 2007;64:1422-6.
  47. Bond CA, Raehl CL, Franke T. Clinical pharmacy services, pharmacy staffing, and total cost of care in the United States. *Pharmacotherapy* 2000;20:609-21.
  48. Chuang LC, Sutton JD, Henderson GT. Impact of a clinical pharmacist on cost saving and cost avoidance in drug therapy in an intensive care unit. *Hosp Pharm* 1994;29:215-8.
  49. Milkovich G. The role of the hospital pharmacist in cost control and antibiotic policy. *Int J Antimicrob Agents* 2000;16:291-4.
  50. Bozek PS, Perdue BE, Bar-Din M, Weidle PJ. Effect of pharmacist interventions on medication use and cost in hospitalized patients with or without HIV infection. *Am J Health Syst Pharm* 1998;55:1151-5.
  51. Chisholm MA, Vollenweider LJ, Mulloy LL, Wynn JJ, Wade WE, DiPiro JT. Cost-benefit analysis of a clinical pharmacist-managed medication assistance program in a renal transplant clinic. *Clin Transplant* 2000;14:304-7.
  52. Dellit TH, Owens RC, McGowan JE, et al. Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America guidelines for developing an institutional program to enhance antimicrobial stewardship. *Clin Infect Dis* 2007;44:159-77.
  53. Institute for Healthcare Improvement. 5 Million Lives Campaign. Available from <http://www.ihl.org/IHI/Programs/Campaign/>. Accessed March 13, 2008.
  54. The Joint Commission. 2008 National Patient Safety Goals for Hospitals Goal 3E. Available from [http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08\\_hap\\_npsgs.htm](http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08_hap_npsgs.htm). Accessed March 13, 2008.
  55. Quan MA. Maintenance of certification: everything you ever wanted to know. *J Am Board Fam Med* 2005;27:30-2, 35-6, 39-40.
  56. Pradel FG, Palumbo FB, Flowers L, Mullins CD, Haines ST, Roffman DS. White paper: value of specialty certification in pharmacy. *J Am Pharm Assoc* 2004;44:612-20.
  57. Willett MS, Bertch KE, Rich DS, Ereshefsky L. Prospectus on the economic value of clinical pharmacy services: a position statement of the American College of Clinical Pharmacy. *Pharmacotherapy* 1989;9:45-56.
  58. Schumock GT, Meek PD, Ploetz PA, Vermeulen LC. Economic evaluations of clinical pharmacy services - 1988-1995. The publications committee of the American College of Clinical Pharmacy. *Pharmacotherapy* 1996;16:1188-208.
  59. Schumock GT, Butler MG, Meek PD, Vermeulen LC, Arondekar BV, Bauman JL. Evidence of the economic benefit of clinical pharmacy services: 1996-2000. *Pharmacotherapy* 2003;23:113-32.
  60. Perez A, Doloresco F, Hoffman JM, et al. Economic evaluations of clinical pharmacy services: 2001-2005. *Pharmacotherapy* 2008;28:285e-323e.