

ACCP WHITE PAPER

Future Clinical Pharmacy Practitioners Should Be Board-Certified Specialists

American College of Clinical Pharmacy

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The vision of the American College of Clinical Pharmacy (ACCP) is that, in 20–30 years, most clinical pharmacy practitioners will be board-certified specialists.^{1, 2} This White Paper develops a rationale for this position, describes specialty board certification in pharmacy,³ and articulates recommendations for attaining the vision. The justification of the need for board certification as a part of future quality assurance and professional privileging processes, the rationale for the argument that most future clinical faculty and residency preceptors should be board certified, and the identification of obstacles that hinder achieving this vision are also discussed.

Background

The Future of Pharmacy Practice

The Joint Commission of Pharmacy Practitioners

This document was prepared by the 2005–2006 ACCP Certification Affairs Committee: Joseph Saseen, Pharm.D., FCCP, BCPS, Chair; Sarah Grady, Pharm.D., BCPS, BCPP; Laura Hansen, Pharm.D., FCCP, BCPS; Brian Hodges, Pharm.D., BCPS, BCPS; Steven Kovacs, Pharm.D.; Larry Martinez, Ph.D., BCPP; John Murphy, Pharm.D., FASHP, FCCP; Robert Page, Pharm.D., BCPS; Marc Reichert, Pharm.D., BCPS; John Smith, Pharm.D., BCPS; and Charles Taylor, Pharm.D., BCPS. Approved by the ACCP Board of Regents on January 25, 2006.

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(JCPP)—the members of which include the Academy of Managed Care Pharmacy, the American College of Apothecaries, the ACCP, the American Pharmacists Association, the American Society of Consultant Pharmacists, the American Society of Health-System Pharmacists (ASHP), and the National Community Pharmacists Association—developed a consensus position on the future of pharmacy practice for 2015.⁴ This consensus document represents the opinion of multiple pharmacy organizations with the shared vision that “pharmacists will be the health care professionals responsible for providing patient care that ensures optimal medication therapy outcomes.” The document describes the foundations of pharmacy, how pharmacists will practice, and how pharmacy will benefit society. The JCPP document encompasses all pharmacy practice settings. Of importance, this vision statement includes the need for implementing effective change within community pharmacy and health system pharmacy settings.^{5, 6} It is clear from this vision that most pharmacists of the future are expected to be clinical pharmacy practitioners who provide advanced patient care services. This JCPP vision is consistent with ACCP’s vision that in 20–30 years most clinical pharmacy practitioners will be board-certified specialists.

Definition of Clinical Pharmacy Practitioner

In 2005, ACCP defined clinical pharmacy as the “area of pharmacy concerned with the science

and practice of rational medication use.”⁷ Within this definition, it is stated that the discipline of clinical pharmacy relies on caring, values, specialized knowledge, experience, and judgment. Clinical pharmacists are individuals who practice within this discipline. For the purposes of this article, the term “clinical pharmacy practitioner” refers to clinical pharmacists working within the health care system as experts in the therapeutic use of drugs, who are primary sources of scientifically valid information and advice and who generate, disseminate, and apply new knowledge that contributes to improved health and quality of life.

Credentialing in Pharmacy

Considerable effort and activities surround the numerous approaches to ensuring or documenting the knowledge and skills of health care professionals. There is also debate in the profession of pharmacy regarding who should be required to receive specific credentials.⁸ Part of that debate “reflects fundamental questions about who determines which providers and therapies will be accepted as safe, effective, appropriate, and reimbursable.”⁸ In the pharmacy profession, credentialing, privileging, specialty certification, and the provision of certificates are among the approaches used to document skills and knowledge. Unfortunately, the requirements and meaning of these vary widely.

In a comprehensive article outlining the definitions and issues related to credentialing in pharmacy, three types of credentials available to pharmacists are identified⁹:

- Credentials needed to prepare for practice (e.g., academic degrees)
- Credentials needed to enter practice (i.e., licensure) and to update professional knowledge and skills (e.g., relicensure) under state law
- Credentials that pharmacists voluntarily earn to document their specialized or advanced knowledge and skills (e.g., postgraduate degrees, certificates, certification)

That article further explained the difference between credentialing, which is a process “by which an organization or institution obtains, verifies, and assesses” qualifications, and a credential, which is a title indicating documented evidence of qualifications (e.g., doctor of pharmacy [Pharm.D.], registered pharmacist, and board-certified pharmacotherapy specialist

[BCPS]).⁹

Several types of credentials are voluntarily sought by pharmacists to demonstrate specialized skills and knowledge. In a recent review of the issues surrounding credentialing and privileging, credentialing was defined as the “process used by health care organizations to validate professional licensure, clinical experience, and preparations for specialty practice.”¹⁰ Moreover, the author stated that credentialing is what is required for health care professionals to be hired in a health system and awarded specific patient care privileges. In that same review, privileging was defined as “the process used by health care organizations to grant to a specific practitioner the authorization to provide specific patient care services.”¹⁰

Credentials in the pharmacy profession can be obtained through a variety of ways. For example, they can be acquired through receipt of a certificate at the completion of a lengthy and targeted disease state–specific continuing education program, or through the rigorous examination process required to become board certified by the Board of Pharmaceutical Specialties (BPS).

Certificate programs are distinct from certification and licensure, which have different purposes and meanings. Certificate programs (e.g., smoking cessation, anticoagulation) are a mechanism for pharmacists to receive credentials. The Accreditation Council on Pharmaceutical Education defines certificate programs in pharmacy as “structured and systematic postgraduate continuing education experiences for pharmacists that are generally smaller in magnitude and shorter in time than degree programs, and that impart knowledge, skills, attitudes, and performance behaviors designed to meet specific pharmacy practice objectives.”¹¹ Compared with other forms of continuing pharmaceutical education, certificate programs in pharmacy are designed to instill, expand, or enhance practice competencies through the systematic acquisition of specified knowledge, skills, attitudes, and performance behaviors. Certificate programs are educational activities undertaken by individuals.

Certification is the process by which a nongovernmental agency, such as a professional association, grants recognition, after assessment, to an individual who has met certain predetermined qualifications specified by that organization. The formal recognition of certification is granted to an individual to

designate to the public that this person is competent to practice in the designated area of certification.

As with certification, licensure refers to the recognition of an individual and involves predetermined qualifications, but the granting agency is governmental, and licensure provides a legal basis for practice.

Board Certification in Pharmacy

The history and evolution of specialists in pharmacy are much shorter than those in medicine and other health care disciplines.¹² Only since the late 1960s and early 1970s have various pharmacy visionaries and organizations encouraged and proposed the development of specialty practitioners to benefit patient care and the profession. In 1976, the American Pharmaceutical Association established the BPS to grant specialty certification to qualified pharmacists.¹³ Subsequently, five specialty practice areas have been established; they are nuclear pharmacy (since 1978), nutrition support pharmacy (since 1988), pharmacotherapy (since 1988), psychiatric pharmacy (since 1992), and oncology pharmacy (since 1996).³ Each specialty has its own mission, which is described elsewhere in detail.³ However, the specialties share the BPS core mission, namely, to improve health through recognition and promotion of specialized training, knowledge, and skills in pharmacy.³ As of December 2005, more than 5000 pharmacists were BPS certified. Figure 1 depicts the growing number of pharmacists certified by specialty from

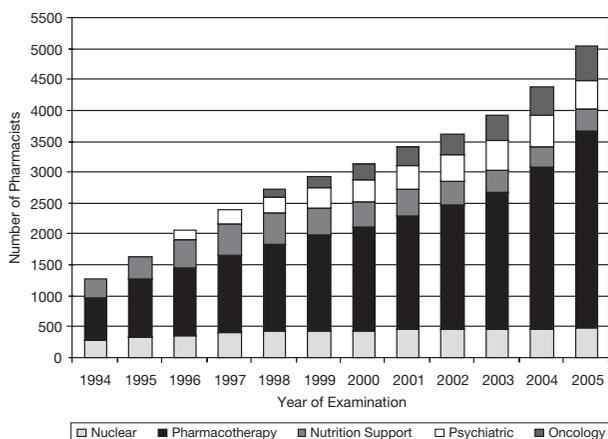


Figure 1. Number of pharmacists with Board of Pharmaceutical Specialties certification. (Adapted from reference 3 with permission).

1994–2005.³

The value of BPS certification is evident on many levels. Although the fundamental intent of certification has been to enhance patient care, current board-certified pharmacists have experienced a number of other personal and professional benefits. Board-certified pharmacists believe that certification increases their marketability and acceptance by other health care professionals, improves feelings of self-worth, and differentiates them from general practice pharmacists.^{14,15} Some board-certified pharmacists have received financial rewards including salary increases, job promotion, bonus pay, and direct compensation for services.^{14,15} In some states, BPS certification enables pharmacists to participate in collaborative drug therapy management.¹⁶

Assumptions Regarding Pharmacy Practice in 20–30 Years

Significant changes within the profession of pharmacy will be needed to realize the vision that, in 20–30 years, most clinical pharmacy practitioners will be board-certified specialists. Evidence supporting an expanded scope of practice and bona fide responsibility for patient care outcomes has existed for many years.¹⁷ In 20–30 years, pharmacy technicians will have assumed the primary responsibility for drug inventory management, distribution, and prescription order fulfillment, whereas pharmacists will be responsible for providing direct patient care. Pharmacists will be formally recognized and reimbursed as health care providers who ensure optimal drug therapy outcomes.^{18–20} Patients will begin to demand and expect such clinical services from their pharmacists. Indeed, we believe that today's pharmacotherapy specialist will be tomorrow's generalist pharmacy practitioner.

Although the approach to pharmacy education has been debated,^{21–25} the current system will continue to evolve. In 20–30 years, there will be a critical mass of graduating pharmacists who have the foundational knowledge and skill needed to provide direct patient care. The professional degree program will be designed to prepare its graduates for entry into residency training, if they choose to pursue a career as a patient care provider. In fact, residency training will be required of graduating pharmacists who provide direct patient care and shall universally consist of professional experiences with real accountability for the provision of this care.²⁶

Hence, graduate pharmacists will be educated and trained within a burgeoning health care culture that more fully recognizes and understands clinical pharmacy. Board certification will be incorporated into the vision, commitment, and fortitude of the profession. Key public policy decisions and legislative actions in health care will more roundly adopt, endorse, and support the clinical practice model for pharmacy. During this time, the proportion of pharmacists engaged in direct patient care, relative to all licensed pharmacists, will increase. Eventually a critical mass of pharmacist clinicians will be realized, thereby making permanent a model of pharmacy practice that ensures optimal patient care.

The Need for Board Certification in Pharmacy

Structure, process, and outcomes are components of quality in the health care delivery model.²⁷ Structure primarily refers to health care providers and their level of expertise and clinical experience, which includes levels of advanced training and/or board certification. Process refers to the manner in which care is provided, such as compliance with therapeutic guidelines. In a high-quality health care system, structure and process are optimized to achieve desired patient outcomes.²⁷ Because pharmacy is an essential component of a high-quality health care delivery model, the level at which pharmacists are trained and the credentials they acquire are important benchmarks. Compared with credentialing in medicine, credentialing in pharmacy is relatively new. However, the BPS certification process is well established and could serve as the primary credentialing mechanism for the profession. At present, BPS certification serves as a meaningful quality indicator of advanced knowledge and is used at many institutions for the determination of professional privileges and clinical practice roles for pharmacists. In addition, the BPS process parallels credentialing in medicine, where board certification is an indicator for quality assurance.

Pharmacy and Medicine as Parallel Credentialing Models

Board certification and recertification for physicians provide evidence that a practitioner has completed adequate training and retains requisite knowledge as indicated by successfully passing an examination.²⁸ These board examinations assess specialized knowledge in a particular medical specialty. Board certification is

not required for reimbursement by all third-party payers; however, various medical specialties believe that board certification and recertification will be universally required in the future. Like the medical profession, the pharmacy profession considers board certification a means of assessing the specialized knowledge needed for clinical pharmacy practitioners who enter advanced practice roles.

The role of the pharmacist has been evolving from a strictly dispensing function to one with increased direct patient care responsibilities. The benefit of pharmacist involvement in inpatient and outpatient clinical activities has been well documented in the literature.²⁹⁻³⁸ Involvement of a clinical pharmacist in inpatient care has been shown to reduce morbidity, mortality, and health care expenditures.²⁹⁻³² For example, pharmacist-managed anticoagulation services for ambulatory patients have been shown to reduce the risk of complications compared with usual care, supporting widespread implementation of pharmacist-managed clinical services for patients requiring anticoagulation therapy.^{33, 37, 38} Despite these data, however, most clinical services provided by pharmacists are not compensated by third-party payers. The current trend of declining dispensing fees and the provision of significant cognitive services without compensation is financially untenable for most pharmacists and institutions.³⁹

Approaches to compensation in the community pharmacy, clinic, or office setting have been published.⁴⁰ However, the ideal compensation mechanism is still not defined, especially in the inpatient setting. The profession of pharmacy could develop a credentialing model, similar to that used by the medical profession, that may help facilitate compensation by third-party payers. Acquisition of BPS certification is an approach that can be used to establish one's qualifications and justify compensation.

Quality Assurance

Quality assurance in health care encompasses activities that contribute to defining, assessing, monitoring, and improving the quality of patient care.⁴¹ Measurements of quality in health care include a broad range of indicators that range from metrics of therapeutic appropriateness to licensure of staff to compliance with state and federal laws. However, the credentials of providers are essential elements of quality health care. Credentials are used by health care quality

assurance organizations (e.g., National Committee for Quality Assurance) as quality indicators.⁴² Health systems use credentials as indicators of a practitioner's competence and qualifications, markers of excellence in patient care that can be marketed to the public, key components in setting practice standards, and criteria for the awarding of specific privileges.^{10, 43}

Board certification of clinical pharmacy practitioners should be used as a marker of quality because it is an indicator of an individual's knowledge at a predefined level that has been rigorously validated. This supports the rationale for using the established BPS mechanism as a quality indicator for pharmaceutical care. This rationale is further supported by the premise that individuals who pass a BPS examination have, and should be able to apply, a broad range of knowledge that includes patient-specific pharmacotherapy, mechanisms for the interpretation and dissemination of knowledge, and health system-related information.^{44, 45} For all BPS examinations, individuals who are considered experts in their respective fields write and validate individual examination questions, and the examination in its entirety is validated by a rigorous psychometric process.⁴⁶

After initial certification, BPS requires recertification at a predefined, regular interval that covers a broad array of topics and serves as a continuum that addresses new knowledge and changes in the scope of practice. Thus, the BPS certification process serves as a benchmark quality indicator for the profession of pharmacy because it represents a validated certification process that is consistent with those used in other health professions. Furthermore, the principle of quality is based on the right of the public to safe and effective health care that is provided by educated, well-trained, and certified practitioners.

Professional Privileges and Clinical Practice Roles of Pharmacists

Health care systems continue to promote judicious use of health care dollars. Pharmacists are in an excellent position to expand their professional role by providing cost-effective clinical services. In fact, in several Veterans Administration medical centers, pharmacists have prescribing privileges, manage specialty clinics (e.g., anticoagulation, hypertension, dyslipidemia, diabetes), and contribute to treatment teams in various disciplines. Other systems also employ pharmacists that function in

the aforementioned capacities. However, to ensure that pharmacists remain abreast of these specialized skills, some form of quality assessment is needed.⁴⁷

In a position statement published by the American College of Physicians–American Society of Internal Medicine regarding the pharmacist scope of practice, physicians appear open to the concept of working collaboratively with pharmacists.⁴⁸ This document outlines the benefit of working with pharmacists in order to educate and improve the quality of life of patients and reduce drug-related adverse effects. However, the authors expressed concern about the advanced skills potentially lacking for pharmacists to appropriately assess patients and to make correct pharmacotherapy decisions. Specifically, the authors believed that the level of training in Pharm.D. curricula alone is not sufficient to provide clinical pharmacists with the skills needed to work in collaborative practices.⁴⁸ However, many clinical pharmacists who are involved in collaborative practices have advanced training beyond the Pharm.D. degree.

Laws or regulations enabling collaborative prescriptive authority exist in more than 40 states.^{16, 43, 49} The ACCP Task Force on Collaborative Drug Therapy Management (CDTM) concluded that pharmacists in collaborative practice environments improve the effectiveness, efficiency, and safety of drug therapy management.¹⁶ Furthermore, the task force advocated incorporating these services as a core component of contemporary pharmacy practice and recommended board certification under one of the BPS-recognized specialties as demonstrating ability to provide CDTM services. Pharmacists in advanced clinical roles are increasingly perceived as patient care providers. The pharmacy profession must be diligent in continuing to ensure optimal drug therapy outcomes, while also exploring mechanisms to facilitate compensation for these activities.⁵⁰

Several factors need to be considered as pharmacists move into roles as providers of clinical pharmacy services. First, most other health care professionals who are considered providers of direct patient care are required to be board certified and are expected to maintain their credentials. Second, recognition of the pharmacist as a provider may influence reimbursement for cognitive services.⁴³ Third, pharmacists in advanced practice roles have increased professional liability as a consequence of providing clinical services. A standardized system of

credentialing, such as certification by the BPS, may provide a mechanism to address these concerns.

Clinical Faculty and Residency Preceptors Should Be Board-Certified Specialists

Position of the American Association of Colleges of Pharmacy

The position that all clinical faculty should be board certified is supported by the American Association of Colleges of Pharmacy (AACCP). In 1997, the AACCP appointed the Janus Commission to evaluate the health care environment and predict changes that would likely influence pharmacy practice.⁵¹ The most important factor noted was the influence of a rapidly changing health care system on pharmacy practice. The commission stated that clinical faculty should become activists in the development of health care policy, services delivery, and research. This philosophy would require faculty to integrate themselves into health systems to better influence the provision of quality care and to facilitate change. To accomplish this, faculty need advanced abilities to apply the principles of evidence-based medicine within health systems while serving as mentors for students, residents, and other health care professionals.

The position of AACCP on board certification is further developed by the recommendation of the 1997 Task Force Concerning Board Certification Requirements for Pharmacy Practice Faculty.⁵² These recommendations urge pharmacy practice faculty to pursue board certification and suggest that faculty with patient care responsibilities be board certified. The committee cited a number of benefits associated with board certification in one of the BPS-recognized specialties, including increased knowledge in pharmacotherapeutics and pathophysiology, distinction in the profession, increased professional and clinical opportunities, and job promotions or salary increases.⁵² One group of authors also noted that the most common incentive for faculty to be board certified was the inclusion of certification as a criterion for promotion and tenure.⁵³ Specifically, board certification was considered in the promotion and tenure process of 66% of schools of pharmacy in 2003 (increased from 31% in 1993).

Roles of Faculty and Preceptors in Residency Training Programs

Board certification of clinical faculty members

is also necessitated by the roles that many play as mentors, preceptors, and directors of postgraduate residency training programs. The 2002 AACCP Task Force on the Role of Colleges and Schools in Residency Training recommended that colleges and schools become more actively involved in the development of postgraduate pharmacy education to advance the profession and produce more pharmacists capable of succeeding in faculty positions.⁵⁴ In its report, the task force recommended that minimum hiring qualifications for clinical faculty should include 2 years of residency training, 3 years' experience in a progressive clinical practice, or board certification. This is consistent with the ASHP Accreditation Standard for Postgraduate Year Two (PGY2) Pharmacy Residency Programs, which requires that PGY2 residency program directors be board-certified specialists when certification is offered in that specialty practice area.⁵⁵ In our opinion, postgraduate year one (PGY1) and PGY2 preceptors should be board certified in the pharmacotherapy specialty and/or in that BPS specialty most applicable to their practice area(s). We urge the ASHP Commission on Credentialing to consider incorporation of this principle into future supplemental preceptor criteria for the PGY1 and PGY2 accreditation standards.

Barriers for Achieving ACCP's Vision for the Future

Lack of Financial Incentives

A significant barrier for achieving this vision is the lack of dependence of compensation for clinical pharmacy services on BPS certification. Payers have not yet used board certification as a criterion for compensation. Although board certification may not be the sole criterion for compensation eligibility, it certainly should be used as a defensible means of demonstrating advanced knowledge in pharmacotherapy. Employers, with the exception of the Department of Veterans Administration and some academic institutions, have not universally required clinical pharmacy practitioners to be board certified. However, if employee compensation is affected by a practitioner's board certification status, these barriers would be diminished. Finally, if payers (e.g., managed care organizations, Medicare) would use BPS certification as a criterion for payment, employers would be motivated to require this type of credentialing and appropriately reward those practitioners who attain certification.

The pharmacy profession has made great strides toward securing compensation for cognitive services provided to patients in community and inpatient settings. In traditional community pharmacy sites, cognitive services can include functions ranging from reviewing drug profiles and providing drug counseling for new prescriptions, to pharmacist-managed services such as emergency contraception and immunizations. Most pharmacists agree that brief counseling "at the window" for a new prescription is a fundamental component of community pharmacy practice for which additional compensation beyond a dispensing fee is not warranted. However, the feasibility of providing advanced cognitive services (e.g., disease state management) is limited by a lack of mechanisms to compensate pharmacists; board certification currently does not provide this mechanism.

Because securing compensation for the time spent providing patient care services is independent of practice setting, pharmacy advocacy groups and organizations continue to work with Congress and state legislators to support legislation that will allow pharmacists to bill Medicaid and Medicare for these services. The Medicare Prescription Drug Modernization Act provides only minimal wording concerning pharmacist cognitive services and compensation.⁵⁶ However, pharmacists are recognized as potential providers of Medication Therapy Management Services (MTMS) under this new legislation. Board certification should serve as a recognized requirement (i.e., credential) for pharmacists to receive compensation for the provision of MTMS and other clinical pharmacy services. The fact that board certification is not acknowledged by third-party payers as such a credential serves as a disincentive for the advancement and acceptance of board certification in pharmacy practice.

Misperception of BPS-Recognized Certifications

A goal of board certification is to demonstrate specialized clinical knowledge that exceeds minimum licensing standards. For example, a pharmacist with a BCPS demonstrates specialized knowledge in the area of pharmacotherapy. This certification indicates that pharmacists have the knowledge and critical thinking skills consistent with that of a pharmacotherapy specialist. There are many misperceptions about the scope of BPS-recognized specialties. One misperception is that

passing the certification examination ensures competency. These examinations measure a broad range of knowledge but do not ensure competency in a particular area of pharmacy practice. Currently, the desired level of competency is often best achieved by completing a residency in the appropriate area of pharmacy practice.

Another misperception is that specialty certifications are similar to other available certificate programs. Certificate programs are designed to improve knowledge in a very limited focus of practice. The BPS-recognized specialties are much broader in scope. For example, the BCPS examination covers a broad range of pharmacotherapy topics and is designed to demonstrate the level of knowledge consistent with that of a pharmacotherapy specialist. Similarly, the board-certified oncology pharmacist examination is designed to demonstrate expert knowledge over a broad range of oncology and supportive care topics.

Many pharmacists are not cognizant of the structured process that BPS uses when constructing certification examinations. Furthermore, the relevance and broad scope of knowledge that these examinations test is often questioned. This reflects a lack of understating by many in the profession regarding both the intent and the process of certification. The BPS certification examinations are developed based on comprehensive analyses of the specialty areas of practice and target a specialist's level of knowledge and skills. Role delineation studies are conducted to analyze these specialty practice areas, which results in a comprehensive list of knowledge, skills, and functions for each specialty examination. Moreover, these examinations are updated every 5–7 years by repeating role delineation studies so that the certification examinations reflect current practice of the population that is board certified. For example, a role delineation study was conducted in 2003 for the BCPS examination, which resulted in a new examination blueprint in 2004. Examination test banks are updated annually to reflect the current best evidence related to the particular area of practice and to maintain accuracy. The BPS also contracts with Professional Examination Service (<http://www.proexam.org/>) to assist with examination development and to perform psychometric analyses to ensure validity. Therefore, the BPS-recognized specialties represent current practice and are legally defensible and validated certifications.

Improving the profession's understanding of the certification process will reduce misperceptions.

Coupled with these misperceptions of the certification process is a perceived lack of value of specialty certification. Specialty certification in pharmacy was initially viewed by many as a distinguishing factor that differentiated pharmacists with advanced training and skills. Arguably, the impetus was the inception of the entry level Pharm.D. degree. As clinical pharmacy progresses toward the provision of patient care, the culture of the profession should view board certification as an expectation and not as a means of professional differentiation. If viewed as an expectation, board certification can be considered a mandatory credential for providing direct patient care. This is in contrast to licensure, which assures minimum competency in the foundational functions needed to enter pharmacy practice.

Advocating the Vision

If the vision of ACCP is to be achieved, then the benefits of board certification for clinical pharmacy practitioners need to be clearly summarized, articulated, and broadly disseminated. Efforts should not be limited to only the pharmacy profession, but must be directed globally to the other health care professions and to the public. Future advocacy for board certification must capitalize on the momentum gained from other established efforts that have promoted the advancement of clinical pharmacy practice (e.g., CDTM) in order to secure support from other pharmacy organizations and health care disciplines and thereby expand adoption of board certification.

Board certification in pharmacy, similar to other health care practitioner models (e.g., medicine, nursing), should be advocated as an essential measure that increases quality. In 2003, *Medical Economics*, a journal that targets health care administrators, published an article titled "Hire a Pharmacist?"⁵⁷ The authors stated that having a clinical pharmacist on staff can enhance patient care, prevent medication errors, and make clinical workflow more manageable. Model practices were showcased, and selecting a board-certified pharmacist was identified as an essential component of these successful models. Similar promotional efforts that showcase clinical pharmacy practitioners should be made to health care decision makers on a larger scale, with board certification included as a prerequisite for hiring

such pharmacists.

Some managed care organizations (e.g., Kaiser Permanente) have adopted board certification as an expectation of their clinical pharmacy specialists. It is no coincidence that such organizations have been able to demonstrate both improved patient care and decreased costs.³⁴⁻³⁸ The ACCP has led the way in providing evidence of the economic benefit of clinical pharmacy services through publication of economic prospectus articles.^{32, 58, 59} Showcasing successful health care models that include board-certified pharmacy specialists will lend further support to ACCP's position that most clinical pharmacy practitioners will be board-certified specialists in 20-30 years.

In recent years, the pharmaceutical industry has successfully used direct-to-consumer marketing and disease awareness campaigns to inform the public about newer and usually more costly drugs. This has resulted in increased utilization of these drugs and heightened demand for ensuring optimal pharmacotherapeutic outcomes. Clinical services provided by properly trained and board-certified pharmacists could best meet demand, ensure the optimal pharmacotherapeutic outcomes, and reduce the improper clinical use of these newer, more expensive drugs.¹⁸⁻²⁰ Efforts should be undertaken to highlight and promote the benefits of receiving advanced clinical pharmacy services by a board-certified pharmacy specialist. Certainly, such efforts would ideally involve a collaborative effort of numerous professional pharmacy organizations to ensure adequate financial support. This investment might eventually result in consumer-driven activities to promote increased board certification among clinical pharmacy practitioners.

Conclusion

The vision of ACCP is that, in 20-30 years, most clinical pharmacy practitioners will be board-certified specialists. Board certification for health care practitioners is well established as an essential element of quality assurance and professional privileging. The profession of pharmacy must continue to adopt this as an expectation of clinical pharmacy practitioners if it is truly to evolve into a patient-centered clinical discipline as described in the JCPP Future Vision of Pharmacy Practice. Academia influences the culture of pharmacy by educating and training future professionals. Requiring most clinical faculty and preceptors to be board-

certified specialists is both logical and prudent as pharmacists continue to progress in clinical pharmacy practitioner roles. Currently, the discord between this vision and board certification among clinical pharmacy practitioners has been influenced by a number of barriers. These obstacles can be remedied through a collaborative, concerted effort by the profession to gather evidence to justify the value of board certification. Demonstrating, summarizing, and disseminating the benefits of board certification to patient care and health care delivery are needed. Moreover, board certification should be a criterion for compensation for clinical pharmacy services. A concerted effort to unite those within the pharmacy profession to adopt this as a joint mission is essential.

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References

1. American College of Clinical Pharmacy. A vision of pharmacy's future roles, responsibilities, and manpower needs in the United States. *Pharmacotherapy* 2000;20:991-1020.
2. American College of Clinical Pharmacy. The strategic plan of the American College of Clinical Pharmacy. *ACCP Rep* 2002;21(10):S1-7.
3. Board of Pharmaceutical Specialties. Home page. Available from www.bpsweb.org. Accessed May 30, 2005.
4. American Association of Colleges of Pharmacy. JCPP future vision of pharmacy practice. Available from http://www.aacp.org/Docs/MainNavigation/Resources/6725_JCPPFutureVisionofPharmacyPracticeFINAL.pdf. Accessed May 30, 2005.
5. National Association of Chain Drug Stores, American Pharmacists Association, National Community Pharmacists Association. Implementing effective change in meeting the demands of community pharmacy practice in the United States. August 1999. Available from www.alpharmauspd.com/notes/pdf/white_paper_pharmacy.pdf. Accessed April 1, 2005.
6. American Society of Health-System Pharmacists. The ASHP health system pharmacy 2015 initiative. Available from <http://www.ashp.org/2015/2015Word.doc>. Accessed April 1, 2005.
7. American College of Clinical Pharmacy. ACCP defines clinical pharmacy. *ACCP Rep* 2005;24(8):1-2.
8. Eisenberg DM, Cohen MH, Hrbek A, Grayzel J, Van Rompay MI, Cooper RA. Credentialing complementary and alternative medical providers. *Ann Intern Med* 2002;137:965-73.
9. Bertin RJ. Credentialing in pharmacy. *J Manag Care Pharm* 2001;7:22-7, 30-1.
10. Galt KA. Credentialing and privileging for pharmacists. *Am J Health Syst Pharm* 2004;61:661-70.
11. Accreditation Council on Pharmaceutical Education. Standards and quality assurance procedure for ACPE-approved providers of continuing pharmaceutical education offering certificate programs in pharmacy. Chicago: ACPE, 2002.
12. Anonymous. Directions for specialization in pharmacy practice, part I. *Am J Hosp Pharm* 1991;48:469-500.
13. Board of Pharmaceutical Specialties. 2004 candidate's guide. Washington, DC: American Pharmaceutical Association, 2004.
14. McArtor JR, Rascati KL. Benefits of certification for pharmacy specialists. *J Am Pharm Assoc (Wash)* 1996;NS36:128-34.
15. Pradel FG, Palumbo FB, Flowers L, Mullins CD, Haines ST, Roffman DS. White paper: value of specialty certification in pharmacy. *J Am Pharm Assoc (Wash)* 2004;44:612-20.
16. Hammond RW, Schwartz AH, Campbell MJ, et al, for the American College of Clinical Pharmacy. Collaborative drug therapy management by pharmacists—2003. *Pharmacotherapy* 2003;23:1210-25.
17. Bussey HI. Blood, sweat, and tears: wasted by Medicare's missed opportunity. *Pharmacotherapy* 2004;24:1655-8.
18. Kohn LT, Corrigan JM, Donaldson MS, eds. To err is human: building a safer health system. Washington, DC: Institute of Medicine, 1999.
19. Lazarou J, Pomeranz BH, Corey PN. Incidence of adverse drug reactions in hospitalized patients: a meta-analysis of prospective studies. *JAMA* 1998;279:1200-5.
20. Gandhi TK, Burstin HR, Cook EF, et al. Drug complications in outpatients. *J Gen Intern Med* 2000;15:149-54.
21. Figg WD, Cox MC. Pharmacy education: back to the basics? *Pharmacotherapy* 2003;23:1381-90.
22. Kovacs SJ. An individual perspective on the pharmacy education scope of practice disconnect. *Pharmacotherapy* 2004;24:677-81; discussion 691-3.
23. Hepler CD. Clinical pharmacy, pharmaceutical care, and the quality of drug therapy. *Pharmacotherapy* 2004;24:1491-8.
24. Bosso JA. Clinical pharmacy and pharmaceutical care. *Pharmacotherapy* 2004;24:1499-500.
25. Foote EF, Lin AYF. Pharmacy education: back to the basics? An alternative viewpoint. *Pharmacotherapy* 2004;24:685-7; discussion 691-3.
26. Murphy JE, Nappi JM, Bosso JA, et al, for the American College of Clinical Pharmacy. 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.
27. Donabedian A. The quality of care: how can it be assessed? *JAMA* 1988;260:1743-8.
28. Quan MA. Maintenance of certification: everything you ever wanted to know. *J Am Board Fam Med* 2005;27:30-2, 35-6, 39-40.
29. Bond CA, Raehl CL, Franke T. Clinical pharmacy services and hospital mortality rates. *Pharmacotherapy* 1999;19:556-64.
30. Boyko WL Jr, Yurkowski PJ, Ivey MF, Armitstead JA, Roberts BL. Pharmacist influence on economic and morbidity outcomes in a tertiary care teaching hospital. *Am J Health Syst Pharm* 1997;54:1591-5.
31. 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.
32. Schumock GT, Butler MG, Meek PD, Vermeulen LC, Arondekar BV, Bauman JL, for the American College of Clinical Pharmacy. Evidence of the economic benefit of clinical pharmacy services: 1996-2000. *Pharmacotherapy* 2003;23:113-32.
33. Witt DM, Sadler MA, Shanahan RL, Mazzoli G, Tillman DJ. Effect of a centralized clinical pharmacy anticoagulation service on the outcomes of anticoagulation therapy. *Chest* 2005;127:1515-22.
34. Helling DK, Nelson KM. How to develop and implement a program to continuously demonstrate the value of clinical pharmacy services. *Pharmacotherapy* 2000;20(10 pt 2):S340-3.
35. Jackson AB, Humphries TL, Nelson KM, Helling DK. Clinical pharmacy travel medicine services: a new frontier. *Ann Pharmacother* 2004;38:2160-5.
36. Stubbings T, Miller C, Humphries TL, Nelson KM, Helling DK. Telepharmacy in a health maintenance organization. *Am J Health Syst Pharm* 2005;62:406-10.
37. Tillman DJ, Charland SL, Witt DM. Effectiveness and economic impact associated with a program for outpatient management of acute deep vein thrombosis in a group model health maintenance organization. *Arch Intern Med* 2000;160:2926-32.
38. Witt DM, Humphries TL. A retrospective evaluation of the

- management of excessive anticoagulation in an established clinical pharmacy anticoagulation service compared to traditional care. *J Thromb Thrombolysis* 2003;15:113–18.
39. Farris KB, Kumbera P, Halterman T, Fang G. Outcomes-based pharmacist reimbursement: reimbursing pharmacists for cognitive services, part 1. *J Manag Care Pharm* 2002;8:383–93.
 40. Snella KA, Trewyn RR, Hansen LB, Bradberry JC. Pharmacist compensation for cognitive services: focus on the physician office and community pharmacy. *Pharmacotherapy* 2004;24:372–88.
 41. The Quality Assurance Project. Home page. Available from <http://www.qaproject.org>. Accessed March 21, 2005.
 42. National Committee for Quality Assurance. Home page. Available from <http://www.ncqa.org>. Accessed March 21, 2005.
 43. Merrigan D. Internal approach to competency-based credentialing for hospital clinical pharmacists. *Am J Health Syst Pharm* 2002;59:552–8.
 44. Dukes GE, Gal P, Miller WA, et al. Pharmacotherapy specialty certification process. I. Role delineation study. The Board of Pharmaceutical Specialties' Specialty Council on Pharmacotherapy. *Pharmacotherapy* 1992;12:477–83.
 45. Talbert RL, Gal P, Dukes GE, et al. Pharmacotherapy specialty certification examination. II. Blueprint to examination. The Board of Pharmaceutical Specialties' Specialty Council on Pharmacotherapy. *Pharmacotherapy* 1992;12:484–90.
 46. Bosso JA, Stringer KA, Hammond RW. Pharmacotherapy specialty certification examination. V. Further experience and refinement. The 1996 Specialty Council on Pharmacotherapy, Board of Pharmaceutical Specialties. *Pharmacotherapy* 1997;17:399–406.
 47. Carmichael JM. Do pharmacists need prescribing privileges to implement pharmaceutical care? *Am J Health Syst Pharm* 1995;52:1699–701.
 48. Keely JL. Pharmacist scope of practice. *Ann Intern Med* 2002;136:79–85.
 49. Anonymous. Status of collaborative drug therapy management in the United States, March 2004. *Am J Health Syst Pharm* 2004;61:1609–10.
 50. Kuo GM, Buckley TE, Fitzsimmons DS, Steinbauer JR. Collaborative drug therapy management services and reimbursement in a family medicine clinic. *Am J Health Syst Pharm* 2004;61:343–54.
 51. American Association of Colleges of Pharmacy. Approaching the millenium: the report of the AACP Janus Commission. October 1997. Available from <http://www.aacp.org/site/tertiary.asp?TRACKID=&VID=2&CID=360&DID=5355>. Accessed April 15, 2005.
 52. Spinler SA, Bosso J, Hak L, et al. Report of the task force concerning board certification requirements for pharmacy practice faculty. *Am J Pharm Ed* 1997;61:213–16.
 53. Romanelli F, Ryan M, Smith KM. Board of Pharmaceutical Specialties—certified faculty: a survey of United States colleges of pharmacy. *Pharmacotherapy* 2004;24:395–400.
 54. Lee ML, Bennett M, Chase P, et al. Final report and recommendations of the 2002 AACP task force on the role of colleges and schools in residency training. *Am J Pharm Educ* 2004;68:article S2.
 55. American Society of Health-System Pharmacists. ASHP accreditation standard for postgraduate year two (PGY2) pharmacy residency programs. Available from [http://www.ashp.org/rtp/PDF/Postgraduate%20Year%20Two%20\(PGY2\).pdf](http://www.ashp.org/rtp/PDF/Postgraduate%20Year%20Two%20(PGY2).pdf). Accessed April 14, 2006.
 56. Medicare Prescription Drug, Modernization and Improvement Act of 2003, Pub L No. 108–173 (2003). Available from [frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi? dbname=108_cong_bills&docid=f:h1enr.txt.pdf](http://www.fwebgate.access.gpo.gov/cgi-bin/getdoc.cgi? dbname=108_cong_bills&docid=f:h1enr.txt.pdf). Accessed November 15, 2005.
 57. Weiss GG. Hire a pharmacist? *Med Econ* 2003;80:23–6.
 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. Willett MS, Bertch KE, Rich DS, Ereshesfsky 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.