Education and Training

Pharmacy Technician Training and Certification (1609)
Source: Council on Education and Workforce Development
To advocate that Pharmacy Technician Certification Board (PTCB) certification be required for all pharmacy technicians; further,

To advocate that all pharmacy technicians maintain PTCB certification; further,

To support the position that by the year 2020, the completion of a pharmacy technician training program accredited by ASHP and the Accreditation Council for Pharmacy Education (ACPE) be required to obtain PTCB certification for all new pharmacy technicians; further,

To foster expansion of ASHP-ACPE accredited pharmacy technician training programs.

This policy supersedes ASHP policy 1519.

Developing Leadership Competencies (1611)
Source: Council on Education and Workforce Development
To work with healthcare organization leadership to foster opportunities, allocate time, and provide resources for pharmacy practitioners to move into leadership roles; further,

To encourage leaders to seek out and mentor pharmacy practitioners in developing administrative, managerial, and leadership skills; further,

To encourage pharmacy practitioners to obtain the skills necessary to pursue administrative, managerial, and leadership roles; further,

To encourage colleges of pharmacy and ASHP state affiliates to collaborate in fostering student leadership skills through development of co-curricular leadership opportunities, leadership conferences, and other leadership promotion programs; further,

To reaffirm that residency programs should develop leadership skills through mentoring, training, and leadership opportunities; further,

To foster leadership skills for pharmacists to use on a daily basis in their roles as leaders in patient care.

This policy supersedes ASHP policy 1518.

Interprofessional Education and Training (1612)
Source: Council on Education and Workforce Development
To support interprofessional education as a component of didactic and experiential education in Doctor of Pharmacy degree programs; further,

To support interprofessional education, mentorship, and professional development for student pharmacists, residents, and pharmacists; further,

To encourage and support pharmacists' collaboration with other health professionals and healthcare executives in the development of interprofessional, team-based, patient-centered care models; further,

To foster documentation and dissemination of outcomes achieved as a result of interprofessional education of healthcare professionals.

This policy supersedes ASHP policy 1014.

Cultural Competency (1613)
Source: Council on Education and Workforce Development
To foster the ongoing development of cultural competency within the pharmacy workforce; further,

To educate healthcare providers on the importance of providing culturally congruent care to achieve quality care and patient engagement.

This policy supersedes ASHP policy 1414.

Pharmacy Resident and Student Roles in New Practice Models (1316)
Source: Council on Education and Workforce Development
To promote pharmacy practice and training models that: (1) provide experiential and residency training in team-based patient care; (2) recognize and utilize the skills and knowledge of student pharmacists and residents in providing direct patient care services; (3) augment the patient care services of pharmacists through expanded roles for residents as practitioner learners; and (4) where appropriate, utilize an approach to learning and service in which a supervising pharmacist oversees the services of students, residents, and other pharmacists providing direct patient care; further,

To support the assessment of the impact of these pharmacy practice and training models on the quality of learner experiences and patient care outcomes.

This policy supersedes ASHP policy 1204.

Education and Training in Health Care Informatics (1317)
Source: Council on Education and Workforce Development
To recognize the significant and vast impacts of health-system information systems, automation, and technology changes on safe and effective use of medications; further,

To foster, promote, and lead the development of and participation in formal health care informatics educational programs for pharmacists, pharmacy technicians, and student pharmacists.

Preceptor Skills and Abilities (1201)
Source: Council on Education and Workforce Development
To collaborate with pharmacy organizations on the development of standards to enhance the quality of experiential education and pharmacy residency precepting; further,

To provide tools, education, and other resources to develop preceptor skills.

Qualifications of Pharmacy Technicians in Advanced Roles (1203)
Source: Council on Education and Workforce Development
To recognize that highly trained and skilled pharmacy technicians working in advanced roles regularly perform complex and critical medication-use procedures, and that a safe and effective medication-use process depends significantly on the skills, knowledge, and competency of those pharmacy technicians to perform those tasks; further,

To reaffirm that all pharmacy technicians should complete an ASHP-accredited training program, be certified by the Pharmacy Technician Certification Board, and be licensed by state boards of pharmacy; further,

To advocate that beyond those requirements pharmacy technicians working in advanced roles should have additional training and should demonstrate ongoing competencies specific to the tasks to be performed; further,

To advocate that expansion of pharmacy technician duties into expanded, advanced roles should include consideration of potential risk to patients and that ongoing quality assurance metrics should be established to assure patient safety.

Quality of Pharmacy Education and Expansion of Colleges of Pharmacy (1108)
Source: Council on Education and Workforce Development
To support the Accreditation Council for Pharmacy Education's continuing role of promulgating accreditation standards and guidelines and engaging in sound accreditation processes to ensure quality in the education provided by colleges of pharmacy; further,

To acknowledge that, in addition to a robust curriculum, access to quality experiential educational sites and the availability of qualified faculty (including preceptors and specialty-trained clinical faculty) are essential determinants of the ability to expand enrollment in existing or additional colleges of pharmacy; further,

To oppose expansion of enrollment in existing or new colleges of pharmacy unless well-designed projections demonstrate that such enrollment increases are necessary to maintain a viable pharmacist workforce.

This policy was reviewed in 2015 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Residency Equivalency (1109)
Source: Council on Education and Workforce Development
To acknowledge the distinct role of ASHP-accredited residency training in preparing pharmacists to be direct patient-care providers; further,

To recognize the importance of clinical experience in developing practitioner expertise; further,

To affirm that there are no objective means to convert or express clinical experience as equivalent to or a substitute for the successful completion of an ASHP-accredited residency.

This policy was reviewed in 2015 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Pharmacy Internships (1110)
Source: Council on Education and Workforce Development
To encourage the National Association of Boards of Pharmacy to develop standardized pharmacy internship hour requirements that would be used uniformly by all state boards of pharmacy; further,

To support structured requirements, goals, and objectives for pharmacy internship experiences, in alignment with requirements for introductory and advanced pharmacy practice experiences; further,

To promote and expand new staffing models that foster expanded roles for pharmacy interns, providing work experiences that build upon their knowledge and help them develop as future pharmacists.

This policy was reviewed in 2015 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

State-Specific Requirements for Pharmacist Continuing Education (1111)
Source: Council on Education and Workforce Development
To support the standardization of state pharmacist continuing education requirements; further,

To advocate that state boards of pharmacy adopt continuing professional development (CPD) as the preferred model for maintaining pharmacist competence and structure continuing education requirements as a component of CPD.

This policy was reviewed in 2015 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Innovative Residency Models (1112)
Source: Council on Education and Workforce Development
To support the development of innovative residency models that meet ASHP accreditation requirements.

This policy was reviewed in 2015 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Employment Classification and Duty Hours of Pharmacy Residents (1008)
Source: Council on Public Policy
To advocate that pharmacy residents should be classified as exempt employees; further,

To advocate that pharmacy residents be subject to duty hour limits (similar to resident physicians) with respect to all clinical and academic activities during their training program in accordance with the Accreditation Council on Graduate Medical Education (ACGME) standards and ASHP accreditation standards for pharmacy residency programs.

This policy was reviewed in 2014 by the Council on Public Policy and by the Board of Directors and was found to still be appropriate.

Pharmacy Student Experiences in Medically Underserved Areas (0913)
Source: Council on Education and Workforce Development
To encourage colleges of pharmacy to require student learning experiences in traditionally medically underserved areas and with diverse patient populations.

This policy was reviewed in 2013 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Pharmacy Expertise in the Preparation and Handling of Injectable Medications (0915)
Source: Council on Education and Workforce Development
To encourage colleges of pharmacy to include sterile compounding and aseptic technique instruction in the didactic curriculum and during experiential education; further,

To support the development of postgraduate, curriculum-based sterile compounding training programs to foster an increase in the number of pharmacists with sterile compounding expertise.

This policy was reviewed in 2013 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Continuing Professional Development (0916)
Source: Council on Education and Workforce Development
To endorse and promote the concept of continuing professional development (CPD), which involves personal self-appraisal, educational plan development, plan implementation, documentation, and evaluation; further,

To continue the development of a variety of mechanisms and tools that pharmacists can use to assess their CPD needs; further,

To encourage individual pharmacists to embrace CPD as a means of maintaining their own professional competence; further,

To encourage pharmacy managers to promote CPD as the model for ensuring the competence of their staff; further,

To collaborate with other pharmacy organizations, state boards of pharmacy, accrediting bodies, and regulatory bodies in the development of effective methods for implementing CPD; further,

To strongly support objective assessment of the impact of CPD on pharmacist competence; further,

To endorse the efforts of colleges of pharmacy and ASHP-accredited pharmacy residency programs to teach the principles, concepts, and skills of CPD.

This policy was reviewed in 2013 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Pharmacy Residency Training (0917)
Source: Council on Education and Workforce Development
To continue efforts to increase the number of ASHP-accredited pharmacy residency training programs and positions available.

This policy was reviewed in 2013 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Collaboration Regarding Experiential Education (0804)
Source: Council on Education and Workforce Development
To promote collaboration of health-system teaching sites with the colleges of pharmacy (nationally or regionally), for the purpose of fostering preceptor development, standardization of experiential rotation schedule dates and evaluation tools, and other related matters.

This policy was reviewed in 2012 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Requirement for Residency (0701)
Source: House of Delegates Resolution
To support the position that by the year 2020, the completion of an ASHP-accredited postgraduate-year-one residency should be a requirement for all new college of pharmacy graduates who will be providing direct patient care.

This policy was reviewed in 2011 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Residency Programs (0704)
Source: Council on Education and Workforce Development
To strongly advocate that all pharmacy residency programs become ASHP-accredited as a means of ensuring and conveying program quality.

This policy was reviewed in 2012 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

ASHP Guidelines, Statements, and Professional Policies as an Integral Part of the Educational Process (0705)
Source: Council on Education and Workforce Development
To encourage faculties in colleges of pharmacy and preceptors of ASHP-accredited residency training programs to use ASHP statements, guidelines, and professional policies as an integral part of training programs and courses.

This policy was reviewed in 2011 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Communication Among Health-System Pharmacy Practitioners, Patients, and Other Health Care Providers (0510)
Source: Council on Educational Affairs
To foster effective communication (with appropriate attention to patients' levels of general and health literacy) among health-system pharmacy practitioners, patients, and other health care providers; further,

To develop programs to enable pharmacy students, residents, and health-system pharmacy practitioners to self-assess their levels of health literacy and general communication skills; further,

To develop methods with which pharmacy students, residents, and health-system pharmacy practitioners can assess the level of general and health literacy of patients; further,

To disseminate information about resources for students, residents, and health-system pharmacy practitioners to use in working with patients and others having specific communication needs.

This policy was reviewed in 2014 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Practice Sites for Colleges of Pharmacy (0315)
Source: Council on Educational Affairs
To encourage practitioner input in pharmacy education; further,

To encourage that institutional and health-system environments be used as sites for experiential training of pharmacy students: further,

To encourage colleges of pharmacy and health systems to define and develop appropriate organizational relationships that permit a balance of patient care and service, as well as educational and research objectives, in a mutually beneficial manner: further,

To include the administrative interests of both the health system and the college of pharmacy in defining these organizational relationships to ensure compatibility of institutional (i.e., health system or university) and departmental (i.e., pharmacy department and department in the college) objectives; further,

To encourage pharmacists and pharmacy leaders to recognize that part of their professional responsibility is the development of new pharmacy practitioners.

This policy was reviewed in 2012 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Licensure for Pharmacy Graduates of Foreign Schools (0323)

Source: Council on Legal and Public Affairs

To support state licensure eligibility of a pharmacist who has graduated from a pharmacy program accredited by the Accreditation Council for Pharmacy Education (ACPE) or accredited by an ACPE-recognized accreditation program.

This policy was reviewed in 2012 by the Council on Public Policy and by the Board of Directors and was found to still be appropriate.

Public Funding for Pharmacy Residency Training (0325)

Source: Council on Legal and Public Affairs

To support legislation and regulation that ensures public funding for accredited pharmacy residency programs consistent with the needs of the public and the profession; further,

To oppose legislation or regulation involving reimbursement levels for graduate medical education that adversely affects pharmacy residencies at a rate disproportionate to other residency programs.

This policy was reviewed in 2012 by the Council on Public Policy and by the Board of Directors and was found to still be appropriate.

Residency Training for Pharmacists Who Provide Direct Patient Care (0005)

Source: Council on Educational Affairs

To recognize that optimal direct patient care by a pharmacist requires the development of clinical judgment, which can be acquired only through experience and reflection on that experience; further,

To establish as a goal that pharmacists who provide direct patient care should have completed an ASHP-accredited residency or have attained comparable skills through practice experience.

This policy was reviewed in 2014 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Career Counseling (8507)

Source: Council on Educational Affairs

To urge colleges of pharmacy to develop career counseling programs to make students aware of postgraduate career options, including residency training and career paths in various types of practice; further,

To urge that career counseling occur in a structured manner early in the curriculum and be continued throughout the curriculum; further,

To urge practitioners in various organized health care settings to make themselves available to colleges of pharmacy for participation in both structured and unstructured career counseling.

This policy was reviewed in 2011 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

ASHP Policy Positions 2009–2016 (with Rationales): Education and Training

1609

Pharmacy Technician Training and Certification

Source: Council on Education and Workforce Development

To advocate that Pharmacy Technician Certification Board (PTCB) certification be required for all pharmacy technicians; further,

To advocate that all pharmacy technicians maintain PTCB certification; further,

To support the position that by the year 2020, the completion of a pharmacy technician training program accredited by ASHP and the Accreditation Council for Pharmacy Education (ACPE) be required to obtain PTCB certification for all new pharmacy technicians; further,

To foster expansion of ASHP-ACPE accredited pharmacy technician training programs.

This policy supersedes ASHP policy 1519.

Rationale

The partnership between ASHP and the Accreditation Council for Pharmacy Education (ACPE) to accredit pharmacy technician training programs could be an important inflection point leading to profession-wide support for uniform education, training, and credentialing of pharmacy technicians. Such broad support may stimulate more uniform state statutes and regulations regarding pharmacy technicians. The requirement that pharmacy technicians be graduates of ASHP-ACPE accredited training programs to be certified by the Pharmacy Technician Certification Board (PTCB) mirrors the profession's approach to the education (first) and licensure (second) of pharmacists. Consistent with this model, PTCB will, in 2020, require that an individual sitting for the pharmacy technician certification examination be a graduate of an ASHP-ACPE accredited training program. Although programs currently accredited by ASHP will be granted the joint accreditation, the anticipated increase in demand for enrollment in ASHP-ACPE accredited training programs will require an expansion of the number and distribution of such programs.

1611

Developing Leadership Competencies

Source: Council on Education and Workforce Development

To work with healthcare organization leadership to foster opportunities, allocate time, and provide resources for pharmacy practitioners to move into leadership roles; further,

To encourage leaders to seek out and mentor pharmacy practitioners in developing administrative, managerial, and leadership skills; further,

To encourage pharmacy practitioners to obtain the skills necessary to pursue administrative, managerial, and leadership roles; further,

To encourage colleges of pharmacy and ASHP state affiliates to collaborate in fostering student leadership skills through development of co-curricular leadership opportunities, leadership conferences, and other leadership promotion programs; further,

To reaffirm that residency programs should develop leadership skills through mentoring, training, and leadership opportunities; further,

To foster leadership skills for pharmacists to use on a daily basis in their roles as leaders in patient care.

This policy supersedes ASHP policy 1518.

Rationale

In their 2013 report, White and Enright anticipated a high rate in turnover of pharmacy directors and middle managers over the coming decade. Healthcare organizations must address this ongoing challenge if there are to be a sufficient number of new directors and managers to fill those positions. Factors that may contribute to a shortage of potential new leaders and managers include:

- New graduates frequently accept clinical positions or positions in drug distribution. After a few years, they may have a desire to assume managerial positions in health-system pharmacies, but training programs may not be convenient for them, and they may not have the resources to obtain training.
- Health-system pharmacy management positions do not turnover often. Prospective managers view those positions as unavailable for the near future, so there is little incentive to obtain training to be ready to move into those positions.
- Job satisfaction among pharmacy managers appears low to prospective managers.
- Frequent turnover in organizational administrative positions (above pharmacy) is frustrating to pharmacy directors, because they continually need to inform new administrators about the organization's medication-use strengths and weaknesses and the pharmacy department's roles, strategic plans, and priorities for sustaining quality and making improvements. In those turnover circumstances, diligently achieved pharmacy service improvements can sometimes be eroded and reversed. The ensuing frustration can induce pharmacy directors to depart voluntarily from management positions and make those positions unattractive to others.
- Flattening of organizational structures in healthcare organizations has eliminated numerous managerial positions in pharmacies, leaving fewer pharmacists to serve as mentors for prospective managers. Without positive role models, it is difficult for pharmacists to gain good management experience.
- Pharmacy management positions that combine clinical and management responsibilities sometimes allow little time for clinical work.

- Many pharmacists, even those in managerial positions, have no training in personnel administration. Skills such as conflict resolution and negotiation are rarely taught in pharmacy curricula but are very important in leadership positions.
- In some healthcare organizations, managers receive raises predicated on overall organizational or departmental performance. However, the compensation of some staff may be based on individual performance. These differing bases can lead to instances in which the compensation of those supervised is higher than that of their managers. When that occurs, it can be a disincentive to individuals considering management positions.

Leadership and managerial potential in today's student pharmacists and new graduates is as high as it has ever been, but more effort is needed to nurture that potential and develop leadership and management skills in practice. Colleges of pharmacy, state associations, residency programs, and practitioners themselves need to foster the development of leadership and management skills. ASHP can help foster leadership competencies at all levels of practice through actions such as providing education about leadership and management roles, developing Web-based resources, and facilitating networking among leaders, managers, and those aspiring to such roles.

Leadership continues to be a critical area for development, as leadership is a necessary competency in the provision of patient care. There are multiple avenues available to pharmacists for leadership development and ASHP should take the lead in fostering this effort.

1612

Interprofessional Education and Training

Source: Council on Education and Workforce Development

To support interprofessional education as a component of didactic and experiential education in Doctor of Pharmacy degree programs; further,

To support interprofessional education, mentorship, and professional development for student pharmacists, residents, and pharmacists; further,

To encourage and support pharmacists' collaboration with other health professionals and healthcare executives in the development of interprofessional, team-based, patient-centered care models; further,

To foster documentation and dissemination of outcomes achieved as a result of interprofessional education of healthcare professionals.

This policy supersedes ASHP policy 1014.

Rationale

Pharmacist involvement in team-based patient care improves medication-use safety and quality and reduces healthcare costs. For patient-care teams to be effective, they must possess unique skills that facilitate effective team-based interactions. Some pharmacists are exposed to team-

based care models through interprofessional education and interaction with students of other disciplines when they are student pharmacists. Some colleges of pharmacy have very effective interprofessional didactic courses that include medical, pharmacy, nursing, and other health professional students. Additionally, most experiential rotations involve interaction with other members of the healthcare team and help students of all disciplines learn about the expertise of other team members. However, not all colleges and schools are effective in providing interprofessional education that facilitates team-based patient care. The reasons vary, but may include differences in teaching philosophies or a lack of access to other health professional schools at the university or campus.

The Hospital Care Collaborative (HCC) has described common principles for team-based care. The HCC principles recognize the knowledge, talent, and professionalism of all team members and support role delineation, collaboration, communication, and the accountability of individual team members and the entire team. The HCC principles note that collaboration of the healthcare team can lead to improved systems and processes that provide care more efficiently and result in better patient outcomes. The HCC states that current undergraduate and postgraduate professional education of team members is inadequate to promote true team functions.

ASHP believes that interprofessional education is important not only for student pharmacists but also throughout one's professional career. Similarly, it is important for other professionals on the team so that collaboration and synergistic relationships can develop. Failure to establish these collaborative working relationships early in one's career can result in poor interactions in years to come. A positive working relationship, including interprofessional mentorship, with physicians and nurses is productive, while a bad working relationship can be counterproductive and devastating to all parties, including patients.

1613

Cultural Competency

Source: Council on Education and Workforce Development

To foster the ongoing development of cultural competency within the pharmacy workforce; further,

To educate healthcare providers on the importance of providing culturally congruent care to achieve quality care and patient engagement.

This policy supersedes ASHP policy 1414.

Rationale

The United States is rapidly becoming a more diverse nation. Culture influences a patient's belief and behavior toward health and illness. Cultural competence can significantly affect clinical outcomes. Research has shown that overlooking cultural beliefs may lead to negative

health consequences.[1] According to the National Center for Cultural Competency, there are numerous examples of benefits derived from the impact of cultural competence on quality and effectiveness of care in relation to health outcomes and well-being.[2] Further, pharmacists can contribute to providing "culturally congruent care," which can be described as "a process of effective interaction between the provider and client levels" of healthcare that encourages provider cultural competence while recognizing that "[p]atients and families bring their own values, perceptions, and expectations to healthcare encounters which also influence the creation or destruction of cultural congruence."[3] The Report of the ASHP Ad Hoc Committee on Ethnic Diversity and Cultural Competence[4] and the ASHP Statement on Racial and Ethnic Disparities in Health Care[5] support ways to raise awareness of the importance of cultural competence in the provision of patient care so that optimal therapeutic outcomes are achieved in diverse populations.

1316

PHARMACY RESIDENT AND STUDENT ROLES IN NEW PRACTICE MODELS

Source: Council on Education and Workforce Development

To promote pharmacy practice and training models that: (1) provide experiential and residency training in team-based patient care; (2) recognize and utilize the skills and knowledge of student pharmacists and residents in providing direct patient care services; (3) augment the patient care services of pharmacists through expanded roles for residents as practitioner learners; and (4) where appropriate, utilize an approach to learning and service in which a supervising pharmacist oversees the services of students, residents, and other pharmacists providing direct patient care; further,

To support the assessment of the impact of these pharmacy practice and training models on the quality of learner experiences and patient care outcomes.

This policy supersedes ASHP policy 1204.

Rationale

Hospitals and health systems are currently dealing with the issue of how to best integrate residents and students into new or evolving practice models. Distinguishing the resident as a licensed practitioner learner rather than as an observer learner has been challenging, but it

1Administration on Aging. Achieving cultural competence. A guidebook for providers of services to older Americans and their families. Available at: http://archive.org/details/achievingcultura00admi (accessed October 17, 2013)

2Goode TD, Dunne MC, Bronheim SM. The evidence base for cultural and linguistic competency in health care. The Commonwealth Fund; 2006. Available http://www.commonwealthfund.org/usr_doc/Goode_evidencebasecultlinguisticcomp_962.pdf (accessed October 17, 2013)

3Schim SM, Doorenbos AZ. A Three-dimensional Model of Cultural Congruence: Framework for Intervention. *J Soc Work End Life Palliat Care*. 2010; 6:256–70.

4Report of the ASHP Ad hoc committee on ethnic diversity and cultural competence. *Am J Health-Syst Pharm.* 2005; 1924-30.

5 ASHP Statement on Racial and Ethnic Disparities in Health Care. Am J Health-Syst Pharm. 2008; 65:728–33.

lends itself to team-based care. As practice sites consider how to change their practice models, the role of residents must be integral to the changes and not added on as an afterthought. The role of students, how they interface with residents, and with the rest of the patient care team is also important. These changes also require consideration of who should be preceptors and what their qualifications should be.

Some health systems are employing an "attending pharmacist" model or a "layered learning" approach to residency training, both of which designate a pharmacist who oversees multiple residents, students, and sometimes generalist pharmacists. Each member of this pharmacy team is integrated into a patient-care team, with specific roles and responsibilities, but each also has accountability to the supervising pharmacist (referred to as an "attending" pharmacist in some organizations). Sites that have implemented such a model have reported positive results, including improved satisfaction by all participants in the model as well as opportunities to expand pharmacy services with existing resources. The need to ensure patient outcomes are improved by this model is noted, as well as the imperative to not compromise patient safety.

The number of pharmacists, residents, and students the lead pharmacist might reasonably oversee is determined by the type of patients being treated. When the patient care demanded is highly complex, acute, or otherwise unique, the number is much lower. Other services, such as internal medicine, allow the lead pharmacist to oversee more trainees. When the pharmacy resident is the point of contact for the service for the month, such a model also results in a better use of time for the attending pharmacist. In addition, when the resident is supervising students, the resident's development is enhanced as well, since their knowledge will be tested as students ask questions. The attending pharmacists and residents also provide role models for students, which may spark an interest in completing a residency.

The "attending pharmacist" or "layered learning" model might be more practical in larger institutions, which have more staff, residents, and students than smaller hospitals. It is important to individualize the training program to the practice site and its corresponding practice model. Some rotations may utilize this type of a team-based model, others may not. Utilizing residents in this way presents new challenges with schedules, especially in months in which residents are new or when there are few students available. These and other issues will require creative solutions. Quicker orientation for new residents, different scheduling schemes for students, staggered start dates, and simulation may be strategies that could make these new roles successful.

By structuring resident activities within new and evolving practice models as more independent practitioner learners, resident training can be improved and a greater level of pharmacist patient care services can be achieved. The roles of students and the structure of their participation are also critical to the success of these models in training and in providing patient care services.

1317

EDUCATION AND TRAINING IN HEALTH CARE INFORMATICS PHARMACY

Source: Council on Education and Workforce Development

To recognize the significant and vast impacts of health-system information systems, automation, and technology changes on safe and effective use of medications; further,

To foster, promote, and lead the development of and participation in formal health care informatics educational programs for pharmacists, pharmacy technicians, and student pharmacists.

Rationale

With growing use of automation and technology, there is a growing need for informatics-trained pharmacists and pharmacy technicians, yet there are few training programs or residencies. This shortage of trained individuals has led to on-the-job training and potentially less-than-optimal implementation of new information systems and technology. New educational programs, or adaptation of existing ones, would help ease this lack of trained individuals and lead to better technology outcomes. To most effectively accomplish this goal, ASHP must lead the development of such programs and encourage participation by pharmacists, pharmacy students, and pharmacy technicians.

1201

PRECEPTOR SKILLS AND ABILITIES

Source: Council on Education and Workforce Development

To collaborate with pharmacy organizations on the development of standards to enhance the quality of experiential education and pharmacy residency precepting; further,

To provide tools, education, and other resources to develop preceptor skills.

Rationale

The quality of pharmacy education is directly tied to the quality and effectiveness of its preceptors. Growth in the number and size of colleges of pharmacy has increased demand for teaching sites and for qualified preceptors to provide experiential training and residency rotations at those sites. As a result, teaching sites are often selected with little proof of the quality of the site or the ability of its preceptors, and many of those preceptors lack experience or training in teaching and precepting students and residents. Although nearly all colleges of pharmacy try to provide preceptor training, their efforts to develop preceptors are often inconsistent and ineffective due to resource constraints. In addition to improved training of preceptors, the profession needs a mechanism for evaluating the skills of preceptors and teachers.

There has been little coordination of preceptor development at the national level. The quality and effectiveness of preceptors is important to the entire profession and deserves a national platform and dedicated resources.

1203

QUALIFICATIONS OF PHARMACY TECHNICIANS IN ADVANCED ROLES

Source: Council on Education and Workforce Development

To recognize that highly trained and skilled pharmacy technicians working in advanced roles regularly perform complex and critical medication-use procedures, and that a safe and effective medication-use process depends significantly on the skills, knowledge, and competency of those pharmacy technicians to perform those tasks; further,

To reaffirm that all pharmacy technicians should complete an ASHP-accredited training program, be certified by the Pharmacy Technician Certification Board, and be licensed by state boards of pharmacy; further,

To advocate that beyond those requirements pharmacy technicians working in advanced roles should have additional training and should demonstrate ongoing competencies specific to the tasks to be performed; further,

To advocate that expansion of pharmacy technician duties into expanded, advanced roles should include consideration of potential risk to patients and that ongoing quality assurance metrics should be established to assure patient safety.

Rationale

A growing number of hospitals utilize pharmacy technicians in advanced or specialized roles beyond those traditionally filled by technicians: medication preparation, distribution, and purchasing. These advanced or specialized roles include performing medication reconciliation, collecting laboratory data, and managing automation and technology, among others. While there has been a good deal of discussion about minimum standards for education and training of pharmacy technicians in general, there has been little discussion about technicians in these specialized roles. These advanced roles will require different skills and competencies, and pharmacy technicians will require additional, task-specific training and should demonstrate competency before being allowed to perform such tasks. Hospitals and health systems will need to consider the potential risk to patients of expanding the roles of pharmacy technicians and establish quality assurance metrics to assure patient safety.

1108

QUALITY OF PHARMACY EDUCATION AND EXPANSION OF COLLEGES OF PHARMACY

Source: Council on Education and Workforce Development

To support the Accreditation Council for Pharmacy Education's continuing role of promulgating accreditation standards and guidelines and engaging in sound accreditation processes to ensure quality in the education provided by colleges of pharmacy; further,

To acknowledge that, in addition to a robust curriculum, access to quality experiential educational sites and the availability of qualified faculty (including preceptors and specialty-trained clinical faculty) are essential determinants of the ability to expand enrollment in existing or additional colleges of pharmacy; further,

To oppose expansion of enrollment in existing or new colleges of pharmacy unless well-designed projections demonstrate that such enrollment increases are necessary to maintain a viable pharmacist workforce.

This policy supersedes ASHP policy 0607.

Rationale

The growth in the number and capacity of colleges of pharmacy in recent years has been remarkable. Ten years ago, when there was a severe pharmacist shortage, new colleges were welcomed to help meet the anticipated needs of the pharmacy workforce. The pharmacist shortage has now abated, but new colleges continue to be established and capacity of existing colleges expanded. This growth, along with other factors, has led to considerable difficulty for colleges of pharmacy in locating experienced faculty. There are also growing concerns about the limited number of quality experiential education sites and how future demands for training will be met. These two factors alone have raised worries about the quality of education and the readiness of new pharmacy graduates. High quality can be ensured through the existing mechanism of Accreditation Council for Pharmacy Education (ACPE) accreditation, regardless of the number of colleges and the number of students. However, this assumes rigid enforcement

of ACPE's accreditation standards and guidelines, the availability of qualified faculty and preceptors, and an adequate capacity in practice to provide the necessary experiential education.

The Council discussed the mismatch between pharmacy workforce supply and demand. Demand far exceeded supply in 2000, but growth in colleges and other factors now have supply exceeding demand. The Council discussed how there could be better planning to avoid these situations, both of which are costly to the health care system and present risks to quality and patient care. It was suggested that well-designed workforce projections might be useful in determining the need for new or expanded educational capacity.

1109

RESIDENCY EQUIVALENCY

Source: Council on Education and Workforce Development

To acknowledge the distinct role of ASHP-accredited residency training in preparing pharmacists to be direct patient-care providers; further,

To recognize the importance of clinical experience in developing practitioner expertise; further,

To affirm that there are no objective means to convert or express clinical experience as equivalent to or a substitute for the successful completion of an ASHP-accredited residency.

Rationale

ASHP's position on the need for residency-trained pharmacists is well established and described in the *ASHP Long-Range Vision for the Pharmacy Workforce in Hospitals and Health Systems*. It has been suggested that a way to achieve the goal of having all pharmacists in direct patient-care roles be residency trained would be to establish a process for reviewing a "portfolio" against pre-established criteria to grant a "residency equivalency." The Council, Board, and House concluded that both residency training and experience are important and valuable, but different, and that it would not be appropriate to create a process that attempts to convert one into the other. The intent of the goal of having all new college of pharmacy graduates who

provide direct patient care residency trained by 2020 is to enhance the skills of those practitioners, and the creation of a residency equivalency process might dilute the value of that residency training and undermine achievement of the goal.

The Council, Board, and House also discussed the process used by ASHP to waive the requirement for a postgraduate year one (PGY1) residency for experienced practitioners who wish to enter a postgraduate year two (PGY2) residency directly. While this process does consider total experience in granting the waiver, and may seem to contradict the recommended policy, the applicant still completes a residency, ultimately gaining those experiences unique to residency training.

1110
PHARMACY INTERNSHIPS
Source: Council on Education and Workforce Development

To encourage the National Association of Boards of Pharmacy to develop standardized pharmacy internship hour requirements that would be used uniformly by all state boards of pharmacy; further,

To support structured requirements, goals, and objectives for pharmacy internship experiences, in alignment with requirements for introductory and advanced pharmacy practice experiences; further,

To promote and expand new staffing models that foster expanded roles for pharmacy interns, providing work experiences that build upon their knowledge and help them develop as future pharmacists.

Rationale

The pharmacy internship requirement established by state boards of pharmacy has changed little in many states, even with the change to a six-year doctor of pharmacy curriculum. Many states allow some or all internship hour requirements to be completed as part of a student's introductory pharmacy practice experience (IPPE) or advanced pharmacy practice experience (APPE) rotations; others require students to complete internship hours separately.

Inconsistencies in internship requirements between states have had significant implications for pharmacy residents. Pharmacy graduates from a state with minimal internship requirements might match with a residency program in a state with stringent internship requirements, sometimes delaying their eligibility for licensure until they can complete internship requirements in their residency state. Greater standardization would prevent these issues as residents move to other states to start their programs.

Since most states do not specify the roles and duties of pharmacy interns, many work as pharmacy technicians, which may result in a good learning experience but in some cases leaves a negative impression on the student. The lack of standardized goals and objectives for internships has resulted in experiences that are highly variable. Some hospitals have chosen to enhance their internship experience by adding structure and specific goals to be achieved. While these programs are few in number, they are viewed as highly valued learning experiences for those who participate.

The requirements for IPPEs and APPEs should be considered as internship requirements are established. Each experience has a distinct role in the development and education of pharmacy students, and care should be taken to make sure that each experience is maximized and that core elements are not left out.

This policy supersedes ASHP policy 0802.

1111

STATE-SPECIFIC REQUIREMENTS FOR PHARMACIST CONTINUING EDUCATION

Source: Council on Education and Workforce Development

To support the standardization of state pharmacist continuing education requirements; further,

To advocate that state boards of pharmacy adopt continuing professional development (CPD) as the preferred model for maintaining pharmacist competence and structure continuing education requirements as a component of CPD.

Rationale

All 50 states require continuing education for pharmacists as a means of maintaining their competence. State requirements for continuing education differ, in numbers of hours and the time frame within which they must be collected and reported, for example. Some state boards of pharmacy have established specific educational requirements for individual topic areas they concluded should be mandatory. These initially included topics such as state-specific pharmacy law and human immunodeficiency virus and acquired immune deficiency syndrome (HIV/AIDS), but more recently states have included requirements for education on medication safety, pain and palliative care, and patient management. Some states also specify the number of hours that must be obtained by "live" presentation rather than home study courses. As more states develop unique requirements, many pharmacists who are licensed in multiple states are finding it difficult to meet the unique requirements of each individual state.

In addition to continuing education required by state boards, many new Risk Evaluation and Mitigation Strategies (REMS) programs will require drug-specific education for pharmacists before they are permitted to handle or dispense the medications.

The Council also discussed the limited use of CPD by pharmacists and the few states that allow CPD as part of their continuing education requirements.

1112

INNOVATIVE RESIDENCY MODELS

Source: Council on Education and Workforce Development

To support the development of innovative residency models that meet ASHP accreditation requirements.

Rationale

A growing number of residency programs have developed residency positions that are "nontraditional," in that they do not occur in a contiguous 12-month period beginning in July

and finishing the following June. Some of these innovative programs schedule the participant for one month as a resident, followed by two months as staff, with this cycle repeated over a three-year period. This allows some individuals, usually experienced individuals already on staff at the institution, to complete a residency while maintaining a more consistent work schedule and lifestyle. Some other settings have adopted a model geared toward new graduates, alternating months between residency rotation and staffing.

The concept of innovative, nontraditional residencies allows another way for established pharmacists to obtain a pharmacy residency when a conventional 12-month contiguous program is not possible. The Council, Board, and House expressed support for this model as long as ASHP accreditation standards and residency goals and objectives are utilized as they would be in a conventional program.

1008

EMPLOYMENT CLASSIFICATION AND DUTY HOURS OF PHARMACY RESIDENTS

Source: Council on Public Policy

To advocate that pharmacy residents should be classified as exempt employees; further,

To advocate that pharmacy residents be subject to duty hour limits (similar to resident physicians) with respect to all clinical and academic activities during their training program in accordance with the Accreditation Council on Graduate Medical Education (ACGME) standards and ASHP accreditation standards for pharmacy residency programs.

Rationale

In some states, pharmacy residents are classified as non-exempt employees (eligible for overtime pay) in accordance with guidance from state employment offices. ASHP believes that there is an important job classification distinction between pharmacists employed by a hospital or health system and pharmacy residents who are part of an organization's residency program. Specifically, pharmacy residents are in an organized, directed, and accredited postgraduate training program that builds upon knowledge, skills, attitudes, and abilities gained from an accredited professional pharmacy-degree program. Pharmacy residents receive a salary and are subject to the same duty hours as physicians. Classifying pharmacy residents as non-exempt employees is overly burdensome and counterproductive to the residency experience and the objectives of the training program. Moreover, such misclassification could inhibit the development of an important component of the pharmacy workforce at a time of increased demand for pharmacist services as health care reform is implemented.

0913

PHARMACY STUDENT EXPERIENCES IN MEDICALLY UNDERSERVED AREAS

Source: Council on Education and Workforce Development

To encourage colleges of pharmacy to require student learning experiences in traditionally medically underserved areas and with diverse patient populations.

Rationale

Numerous reports demonstrate how pharmacy students and practice sites benefit from experiential rotations in rural and urban settings, especially in settings or areas classified as medically underserved. Students learn about the cultural, financial, language, and other challenges encountered in these settings, and these skills are often invaluable when they enter practice. In addition, a student's exposure to a new practice area may result in more interest in such sites and provide career choices that might otherwise not have been considered.

ASHP does not support mandating rotations in these settings, since there are many ways to provide the interaction, and there are concerns about how colleges could develop an infrastructure for providing these experiences. The challenges of finding good teaching sites in these settings are formidable and include a limited number of sites, a lack of qualified preceptors, and geographic distances from the college that result in housing needs.

The Accreditation Council for Pharmacy Education currently requires colleges of pharmacy to ensure that graduates can provide patient-centered care that addresses cultural diversity. Although experiential rotations may be the most common way for students to be exposed to diverse patient populations, there are many other creative ways in which this goal is being accomplished. Some colleges, for example, require students to perform service learning projects with a focus on underserved populations.

0915

PHARMACY EXPERTISE IN THE PREPARATION AND HANDLING OF INJECTABLE MEDICATIONS

Source: Council on Education and Workforce Development

To encourage colleges of pharmacy to include sterile compounding and aseptic technique instruction in the didactic curriculum and during experiential education; further,

To support the development of postgraduate, curriculum-based sterile compounding training programs to foster an increase in the number of pharmacists with sterile compounding expertise.

Rationale

ASHP distinguishes between two needs related to pharmacy expertise in sterile product preparation: a need for new pharmacy graduates to possess baseline training and knowledge of sterile product preparation, and the need for pharmacists with an advanced body of knowledge on sterile product preparation, especially in pharmacy departments where complex sterile preparations are compounded.

Although there is a clear need for students to have a basic understanding of sterile compounding upon graduation, education in colleges of pharmacy on sterile compounding varies greatly. Some students learn to compound intravenous admixtures proficiently by spending time working in a hospital pharmacy, while others graduate without ever preparing an intravenous solution. Colleges of pharmacy should include sterile compounding and aseptic technique instruction in the didactic curriculum and during experiential education.

The complexity of intravenous therapy, the risk of errors or patient harm, and new biologic therapies all demand a higher level of expertise in sterile compounding in the pharmacy, however. USP Chapter 797 and other efforts have increased the focus on the quality

of injectable medication preparation and have prompted organizations to improve staff training, facilities, and procedures. In such an environment, there is a clear need for pharmacists whose education, training, and experience in sterile compounding provide expertise rather than baseline knowledge. Many pharmacy departments, even in larger hospitals, have relatively few staff members who can fulfill this role. Often these individuals have developed their expertise over time, and their loss, through retirement or job changes, can have severe impacts, as training opportunities are limited. Postgraduate, curriculum-based sterile compounding training programs are therefore needed to increase in the number of pharmacists with sterile compounding expertise.

0916
CONTINUING PROFESSIONAL DEVELOPMENT
Source: Council on Education and Workforce Development

To endorse and promote the concept of continuing professional development (CPD), which involves personal self-appraisal, educational plan development, plan implementation, documentation, and evaluation; further,

To continue the development of a variety of mechanisms and tools that pharmacists can use to assess their CPD needs; further,

To encourage individual pharmacists to embrace CPD as a means of maintaining their own professional competence; further,

To encourage pharmacy managers to promote CPD as the model for ensuring the competence of their staff; further,

To collaborate with other pharmacy organizations, state boards of pharmacy, accrediting bodies, and regulatory bodies in the development of effective methods for implementing CPD; further,

To strongly support objective assessment of the impact of CPD on pharmacist competence; further,

To endorse the efforts of colleges of pharmacy and ASHP-accredited pharmacy residency programs to teach the principles, concepts, and skills of CPD.

Rationale

Maintaining competence throughout one's career is part of a professional's obligation. Traditionally, this has been done through continuing education (CE) activities, but CE has several shortcomings. There is often no mechanism to ensure that CE is effective, since most CE activities have no summative evaluation component. (Summative evaluation takes place at the completion of a program to determine whether goals and objectives have been met.) In addition, CE programs are not usually curricular, are not always competency-directed, and tend to be content-oriented rather than skill-based. There is little evidence that CE changes practice or has an impact on patient outcomes.

Continuing professional development (CPD) is a model that addresses many of the shortcomings of the CE model. CPD differs from CE in that it is ongoing and includes the entire scope of an individual's practice, it is often undertaken in partnership with the professional's employer, it is practitioner-centered and self-directed, and it is intended to be outcomes-oriented. Many pharmacy professionals already assume responsibility for their professional growth and development by reflecting on their practice, recognizing needs, and seeking educational opportunities and activities that will meet those needs. Even when these activities are not documented or reported, this process incorporates many of the principles of CPD.

CPD is a cyclical, five-step process that begins with a self-appraisal by the individual professional to determine educational needs and progresses through the development of a personal plan to meet those needs, an action phase in which the professional participates in the activities identified in the personal plan, a documentation component in which the professional keeps records of all CPD activities in which he or she participates, and an evaluation phase to determine whether the CPD needs were met, if practice has been improved, if patients have benefited, and if learning was or was not accomplished (and why). This step then feeds back into the self-appraisal stage and the cycle continues.

In the self-appraisal phase, identification of CPD needs may be accomplished through personal assessment, performance review by a manager or supervisor, an audit exercise undertaken with other professionals, or as a requirement of a professional organization or regulatory body. There are a variety of mechanisms that pharmacists can use to self-assess their CPD needs. Self-assessment is not a skill most professionals learn during their professional education and training, however. For CPD to be effective, professionals must learn this skill before entering the CPD cycle, in colleges of pharmacy and residency programs.

In the next phase, the personal plan, the professional identifies resources and actions to meet the identified CPD needs. Activities may be informal, such as study clubs, observation of a colleague's practice, and conversations with colleagues, or they may be more formal, such as CE workshops, short courses, seminars, self-study programs, or graduate-level course work.

Whether formal or informal, managed CPD requires that the professional document participation in these activities. This documentation becomes the foundation of the professional's CPD portfolio. Documentation of participation in formal activities is usually given by the provider, but more informal and self-directed activities, such as observation of a colleague's practice, require the individual to establish a format for documentation in the portfolio.

In the final phase, which feeds back into self-appraisal, the professional self-evaluates, is evaluated by a manager or supervisor, enlists the aid of peers, or is evaluated by an external (e.g., regulatory) body. It is important in this phase to determine whether learning was or was not accomplished (and if not, why not) and to feed this back into the ongoing CPD cycle.

This policy supersedes ASHP policy 0408.

0917
PHARMACY RESIDENCY TRAINING
Source: Council on Education and Workforce Development

To continue efforts to increase the number of ASHP-accredited pharmacy residency training programs and positions available.

This policy supersedes ASHP policy 9911.

Rationale

ASHP is committed to achieving the goal that by the year 2020 all new college of pharmacy graduates who will be providing direct patient care will be required to complete an ASHP-accredited postgraduate-year-one residency (see ASHP policy 0701). To accomplish this goal, ASHP will need to increase the number of ASHP-accredited pharmacy residency training programs and positions.

0701
REQUIREMENT FOR RESIDENCY
Source: House of Delegates Resolution

To support the position that by the year 2020, the completion of an ASHP-accredited postgraduate-year-one residency should be a requirement for all new college of pharmacy graduates who will be providing direct patient care.

This policy was reviewed in 2011 by the Council on Education and Workforce Development and by the Board of Directors and was found to still be appropriate.

Rationale

Pharmacists who engage in direct patient care improve patient outcomes and significantly decrease the overall costs of the health care system, which are rising rapidly. With the continuing development of new dispensing technologies, pharmacy technicians will assume more of the dispensing responsibilities, affording the pharmacists more time to provide clinical services. A postgraduate pharmacy residency enables a pharmacist to maximize the provision of these direct clinical services. Based on the assumption that in the next 20 to 30 years most pharmacists will be providing direct patient care, it is incumbent upon the pharmacy profession to ensure that pharmacists are in a position to make the most effective interventions when selecting, modifying, and monitoring patients' drug therapy regimens.

Although it is true that pharmacy students who graduate meet the minimum competency requirements based on the pharmacy licensing examinations, pharmacists who have completed a residency are better equipped to provide direct patient care because they have the ability to deal with complex clinical situations based on the repetitive practice, preceptor guidance, and the advanced training they receive. For example, some skills in pharmacy school may be obtained in a pharmacy laboratory rather than a real world setting (e.g. training a student to give immunizations). Further, because the advanced practice sites and the clinical involvement of the respective preceptors differ greatly from one school to the next, some students may not be able to obtain the advanced skills they need to provide direct

patient care effectively. In addition, two surveys have demonstrated that pharmacists who have completed a residency are more likely to publish newsletter and original research articles and are more likely to be active within national pharmacy organizations. Thus it appears that if all pharmacy graduates completed a residency before engaging in direct patient care, they would have a greater ability to pursue clinical research in addition to being more skilled clinical practitioners. This direction is consistent with both the Joint Commission of Pharmacy Practitioners (JCPP) vision that most pharmacists will provide advanced patient care services by the year 2015 and ASHP's vision for the workforce of the future.

In the beginning of the 20th century, physicians began to realize that medical graduates needed a significant amount of training under skilled practicing physicians before they would become proficient clinical practitioners. New pharmacists also provide better patient care with at least one year of residency training under skilled practitioners. Similar to the medical model, the entire pharmacy education process should be viewed as preparing pharmacists for residency training. The M.D. degree is not considered sufficient training for a medical school graduate to practice patient care. The fact that medical graduates normally complete a four-year B.S. premedical degree, four years of medical school training, and at least a three-year residency allows for the standardization of physician training and the attainment of an appropriate level of competency. The profession of pharmacy would benefit from a similar standardization of training. Furthermore, this will be facilitated if within the next two decades all residencies are accredited and meet specific standards to ensure that the relevant competencies are obtained. Fortunately, the value of pharmacy residency programs has been demonstrated over time and has stimulated a significant increase in accredited residency programs over recent years. An increasing number of pharmacy graduates are also completing one or two years of residency training after graduating in order to bolster their clinical skills and develop confidence.

Another advantage of requiring pharmacists to complete at least a postgraduate-year-one (PGY1) residency is that it would produce a greater number of pharmacists who can fill the increasing number of unfilled pharmacy faculty positions. In 2002, AACP conducted a survey of pharmacy schools that delineated this shortage. Of the 67 schools that responded, 417 faculty positions had not been filled, including 223 in pharmacy practice and 190 in the pharmacy sciences. Furthermore, if a residency is a requirement of practice instead of an option to gain more expertise, it should be easier to garner PGY1 and postgraduate-year-two (PGY2) program support from the government in the future.

This endeavor will face major challenges. By 2020, the pharmacist shortage may be as high as 160,000. The aggregate demand index (ADI) survey, which analyzed data from 1999 to 2003, demonstrated that there is a significant pharmacist shortage throughout the nation and that it has been at least "moderately difficult" to fill these positions. Although the pressure to produce pharmacists for traditional dispensing roles remains high due to the growing demand for these services, it is of paramount importance that colleges and schools of pharmacy focus and intensify their curricula in order to graduate pharmacist professionals who are well versed in pharmacotherapy and prepared to complete a residency in order to prepare themselves for the complex clinical arena. Highly skilled certified pharmacy technicians and technological advances will enable pharmacists to minimize their dispensing roles and afford them time to maximize therapeutic outcomes. Another challenge will be structuring residencies for

pharmacists in practice who will want to develop (or demonstrate) their patient-care skills. The most severe challenge, however, will be increasing the number of available residencies to meet the demand. As the transition to the entry-level Pharm.D. degree demonstrated, with years of dedicated effort and innovation, such challenges can be met.