

CHARTING ACCREDITATION'S FUTURE

Employer Expectations of New Pharmacy Graduates: Implications for the Pharmacy Degree Accreditation Standards

Peter H. Vlasses, PharmD,^a Nisha Patel,^b Michael J. Rouse,^a Max D. Ray, PharmD, MS,^c Gary H. Smith, PharmD,^d Robert S. Beardsley, PhD^{a,e}

^aAccreditation Council for Pharmacy Education, Chicago, Illinois

^bMidwestern University Chicago College of Pharmacy, Downers Grove, Illinois

^cACPE Consultant, Memphis, Tennessee

^dACPE Consultant, Tucson, Arizona

^eUniversity of Maryland School of Pharmacy, Baltimore, MD

As part of its assessment of the professional degree accreditation standards in pharmacy, the Board of Directors of the Accreditation Council for Pharmacy Education (ACPE) desired feedback from employers of new graduates. Specifically, the Board wished to understand what employers from the most common sectors of practice (community, health system, and managed care) were expecting from new PharmD graduates in terms of competencies related to the specific practice areas. Having a better understanding of practice expectations of Doctor of Pharmacy (PharmD) graduates would assist the Board in its revisions of PharmD program standards. At the same time, this information would be valuable to schools and colleges of pharmacy as they continue to revise their curricula to better meet the needs of pharmacy practice.

To achieve the desired feedback, ACPE initially reached out to the American Society of Health-System Pharmacists (ASHP) to establish a joint task force to identify a group of ASHP members that hire new graduates for entry level practice or for first year residency positions and identify their expectations.¹ The methodology used to identify the desired competencies is described in the Methods section below. The information provided by the health system employers informed the 2011 revision of the guidelines to the ACPE accreditation standards.² The ASHP-ACPE Task Force report was shared jointly with the National Community Pharmacy Association (NCPA) and the National Association of Chain Drug Stores Foundation (NACDSF) to engage a similar project to identify the expectations of community (independent and chain) employers.¹ A similar project was undertaken with the help of the Academy of Managed Care Pharmacy (AMCP).¹ The findings of these three reports describing

the expectations of employers from the respective areas of pharmacy practice were included in the preparatory readings provided to participants of the ACPE Invitational Conference *Advancing Quality in Pharmacy Education: Charting Accreditation's Future* held September 12-14, 2012 in Atlanta, GA.³

The purposes of this paper are:

- (1) To describe the common methodology used by three joint task forces to obtain the expectations of employers of new pharmacy graduates from various sectors of practice
- (2) To list the competencies of new graduates desired by employers for each of the studied sectors of practice
- (3) To compare and contrast the findings of the three task force reports
- (4) To evaluate the recommended competencies in the three task force reports against the ACPE Standards and Guidelines for Doctor of Pharmacy degree programs

METHODS

ACPE reached out and established three joint task forces with the following organizations: ASHP, NCPA/NACDSF, and AMCP. The ASHP-ACPE task force initially developed methodology that informed the other two task forces. In each case, the partner organization(s) on the task force identified members that were involved in hiring new graduates. These "employers" developed through an iterative process a set of entry-level competencies expected from PharmD graduates. Two of the task forces (ASHP and AMCP) also sent out a survey to the respective membership regarding the proposed competencies. The survey results were analyzed and the competency lists refined for the three final reports. Full details of the specific methods used by each task force can be found in the final report of each

Corresponding Author: Peter H. Vlasses, PharmD, DSc (Hon), BCPS, FCCP, Accreditation Council for Pharmacy Education, 135 S. LaSalle St, Suite 4100, Chicago, IL 60603-4810.

Table 1. Entry-Level Competencies Identified by Pharmacy Employer Groups: Compared and Contrasted to the Current ACPE Standards 2007 Guidelines 2.0²

Entry-Level Competency	Community Pharmacy Practice	Hospital & Health-System Pharmacy Practice	Managed Care Pharmacy Practice	ACPE Standards and Recommendation
1. Clinical and problem solving skills	Demonstrate strong clinical skills and provide direct patient care services. Proactively identify and resolve patient-specific barriers to medication adherence.	Demonstrate effective problem-solving skills and an appropriate level of clinical knowledge in making decisions or recommendations. Given a case requiring practical application of pharmacokinetic dosing principles for commonly used drugs that rely on serum levels for dosing, determine the correct dose.	Demonstrate strong clinical skills. Apply critical-thinking and problem-solving skills.	Adequately addressed throughout the standards.
2. Communication skills	Support patient behavior change and self-efficacy through skills such as motivational interviewing. Demonstrate compassion, empathy, and respect for patient confidentiality/privacy rights. Document recommendations in the Electronic Health Record (EHR) or similar platforms. Determine patient level of health literacy by observation or interview, appropriately adjust counseling delivery, communicate at all levels of health literacy and solve adherence challenges from low health literacy.	Demonstrate effective verbal and written communications to staff, patients and healthcare team members. Given a real or simulated case, respond to questions with the appropriate level of detail necessary to ensure proper patient care and communication with other relevant parties.	Communicate effectively, orally and written, in a manner appropriate for the intended audience (i.e., patient, health care provider, plan sponsor).	Addition needed: respect for patient confidentiality and privacy rights and documenting in the EHR.
3. Educational material and primary drug literature	Develop a variety of drug-related reports, monographs, reviews and policies using drug literature evaluation skills. Evaluate appropriateness of clinical trials and other study designs, including validation of methodology and assessment of data credibility.	Analyze a recently published study.	Develop educational materials for patients and caregivers (at the appropriate level of understanding) and a variety of drug-related reports, monographs, reviews, and policies using drug literature evaluation skills. Demonstrate expertise in formulating, interpreting, and evaluating clinical medication criteria. Conduct literature searches on marketed drug products and those in the pipeline. Evaluate clinical trials, including trial design and assessment of data.	Adequately addressed throughout the standards. Suggestion to also include in Appendix C (APPE).

(Continued)

Table 1. (Continued)

Entry-Level Competency	Community Pharmacy Practice	Hospital & Health-System Pharmacy Practice	Managed Care Pharmacy Practice	ACPE Standards and Recommendation
4. Formulary system	Discuss the concept of formulary management and define key managed care strategies (i.e., prior authorizations (PA) and step therapy). Outline typical pharmacy dispensing workflow and demonstrate knowledge of appropriate administration techniques for dosage forms commonly dispensed in community pharmacy. Comprehend and adopt a given set of pharmacy operating procedures and an existing collaborative drug therapy management agreement. Describe dispensing processes when pharmacy automation is utilized. Effectively use pharmacy technology (i.e., automated filling systems, prescription processing systems.) Describe the role of computerized pharmacy management systems in dispensing, dispense prescriptions utilizing technology- assisted workflow, and describe the role of pharmacy robotics, point of sale systems and electronic signature capture. Describe EHR and the role of a pharmacist who has access to a certified EHR.	Contribute to medication use policies, criteria and maintenance of the formulary as a student on the Pharmacy and Therapeutics Committee. Describe the medication use process in health-systems, including how pharmacy impacts the safety of storage, prescribing, transcription, dispensing, administration and monitoring steps. Describe the appropriate use of injectable medications, including preparation, concentration, administration rates, special infusion devices and compatibility. Describe the integration and interface of clinical and distributive functions, including the synergy for safe and effective medication therapy. Perform activities within a typical hospital drug distribution system, including order receipt, review, and describe pharmacy staff roles. Outline commonly used automated systems (i.e., automated dispensing cabinets, computerized prescriber order entry systems, bar code medication administration systems), their appropriate/safe use, and unintended consequences.	Define formulary system and explain the rationale for, practical applications of, and steps involved in developing a formulary system. Identify several major factors that contribute to drug waste.	Addition: specific terminology (i.e., PA, step therapy, quantity limits). Addition needed: factors contributing to drug waste, appropriate administration techniques for common community pharmacy dosage forms, collaborative drug therapy management agreement, and EHR.
5. Medication dispensing, workflow, and distribution systems				

(Continued)

Table 1. (Continued)

Entry-Level Competency	Community Pharmacy Practice	Hospital & Health-System Pharmacy Practice	Managed Care Pharmacy Practice	ACPE Standards and Recommendation
6. Medication safety and use of appropriate guidelines	Proactively assess and resolve issues related to medication safety. Describe common doses of drugs requiring monitoring and collaborative drug therapy management. Describe and apply clinical practice guidelines, national standards, and best practices to patient care.	Describe and give examples of national standards, guidelines, best practices, National Patient Safety Goals and established principles and process related to quality and safe medication use (i.e., storage of look-alike/sound-alike medications, storage of concentrated potassium, dangerous abbreviations, etc.) including the impact of pharmacist and pharmacy involvement. Given a patient transitioning from one care setting to another, perform medication reconciliation and appropriate communications to involved pharmacy providers.	Apply major clinical practice guidelines in making therapeutic recommendations for individual patients.	Addition needed: common doses of drugs requiring monitoring and collaborative drug therapy management.
7. Medication therapy management (MTM)	Define and appropriately document comprehensive MTM services, conduct a patient interview and comprehensive medication review and provide education, identify and resolve medication therapy problems, manage drug interactions, and resolve gaps in care. Recommend therapeutic alternatives and generic substitutions, follow-up with other health professionals, and use multiple MTM platforms as required by third party payers.	Given a real or simulated case, document appropriate therapeutic recommendations related to medication therapy.	Demonstrate effective MTM skills.	Addition: define/ document MTM services, multiple MTM platforms, alternatives and generic substitutions, and to Appendix C (APPE) add comprehensive med review.

(Continued)

Table 1. (Continued)

Entry-Level Competency	Community Pharmacy Practice	Hospital & Health-System Pharmacy Practice	Managed Care Pharmacy Practice	ACPE Standards and Recommendation
8. Patient centered care (PCC) and advocacy	Embrace, assist, and advocate changes that improve patient care and behavior. Collect, interpret, and make recommendations based on health screening results and diagnostic tests. Proactively assist with patient self-care (i.e., self-administration of medications and disease monitoring, appropriate dietary supplements and OTC selections), complete physical assessments and make appropriate recommendations or referrals, describe and apply personalized medicine/pharmacogenomics for the selection and modification of a medication regimen.	Accurately triage multiple patient care priorities in times of high activity and workload.	Discuss the principles of PCC management programs. Advocate on behalf of appropriate medication use and needs of patients.	Modification: PCC management programs and add physical assessment with recommendations and referrals to Appendix C (APPE).
9. Pharmacy management	Lead the operations of a community pharmacy practice site: manage inventory, identify and resolve cash flow problems, develop a business plan for clinical service programs, describe basic finance terms and analyze a financial statement, describe strategies for asset protection/safety, and manage the drug procurement process. Describe the pharmaceutical supply chain and identify and troubleshoot problems with the supply chain.	Describe the basic drug procurement process including drug selection, inventory, backorders, recalls, handling of drug shortages and their relationship to safe, effective patient care. Supervise pharmacy technicians in medication preparation and delivery.	Identify the major factors influencing drug costs for a managed care organization (i.e., pharmacy costs, drug pricing methodologies, contracts/rebates, discounts).	Addition: factors influencing drug costs and the pharmaceutical supply chain and resolving it's problems.
10. Professionalism	Demonstrate professional behavior (attitude, dress, appearance, etc.) in practice settings and effectively function as part of a team engaged in interprofessional, team-based care.	Demonstrate professional behavior (attitude, dress, appearance, etc.) in practice settings.	Create and maintain effective relationships, based on the needs of key stakeholders, respect for employer, colleagues, patients, patient confidentiality and privacy, honesty, work ethic, personal responsibility and accountability, function as a productive team member, honor commitments, professional dress and punctuality.	Adequately addressed throughout standards but appearance and attitude not specifically mentioned.

Table 1. (Continued)

Entry-Level Competency	Community Pharmacy Practice	Hospital & Health-System Pharmacy Practice	Managed Care Pharmacy Practice	ACPE Standards and Recommendation
11. Quality management	Describe the concepts of quality measurement and improvement. Develop a plan for quality/performance improvement.	Describe how organizations (i.e., Joint Commission) strive to assure health care quality through the accreditation process. Employ performance improvement techniques used in health systems and describe how they improve the medication use process.	Discuss the principles of quality management. Explain the role of quality organizations in ensuring quality in the managed care setting. Identify quality/outcome indicators used to evaluate a specific pharmacy service or program.	Adequately addressed in standards 12, 13, 14 and appendix B and C.
12. Roles of the pharmacist and pharmacy staff	Describe the roles and responsibilities of each pharmacy staff member and a pharmacist in emergency management	Describe the appropriate roles of pharmacy technicians and pharmacists in the hospital drug distribution system. Demonstrate aseptic technique and describe processes and facilities needed to provide sterile compounded parenteral solutions, including USP 797 requirements.	Identify and explain the major roles of the pharmacist in population-based provision of care (vs. direct patient care).	Adequately addressed in standards 12, 14.
13. Compounding	Perform basic, non-sterile compounding.			Adequately addressed in 12,14, Appendix B and C.
14. Drug information (DI) skills	Given a DI question, access and utilize appropriate DI resources and provide an accurate and credible solution in both written and oral forms. Access appropriate DI resources for patient education.	Given a DI question, access appropriate DI resources, including primary literature, and provide an accurate and credible answer in both written and oral forms.		Adequately addressed in standards.
15. Drug Utilization Review (DUR)	Discuss the concept of DUR and troubleshoot denied claims.		Discuss the concept of DUR management and define associated key elements (i.e., prior authorization, step therapy, and quantity limits). Conduct DUR and evaluate medication-use patterns in a specified patient population.	Addition: specific terminology (see formulary system).
16. Health Care delivery systems	Understand and communicate drug coverage policies, purpose/function of a PBM, and benefit structure of a health plan (i.e., co-pay vs. co-insurance.) Outline Medicare Parts A to D and Medicaid, including enrollment and other payment programs, and provide guidance in patient assistance programs.	Describe the differences between health care delivery (HCD) models (i.e., PPOs, integrated systems, ACPs, patient-centered medical homes.) Outline Medicare Parts A to D and Medicaid, including drug coverage. Discuss the benefit structure of a health plan (i.e., co-pay vs. co-insurance) and pharmacy benefit management (PBM) programs.	Modification: specific terminology of a health plan, more in depth on PBM, Medicare and Medicaid, and differences of HCD models.	

(Continued)

Table 1. (Continued)

Entry-Level Competency	Community Pharmacy Practice	Hospital & Health-System Pharmacy Practice	Managed Care Pharmacy Practice	ACPE Standards and Recommendation
17. Managed care	Understand and communicate managed care- explain its purpose, function, and general concept. Apply health care economics and pharmacoeconomics	Understand regulations and laws (state and federal) that impact pharmacy practice and legal operations. Identify issues, pending legislation, and regulations across all levels of government and how to make a positive impact. Understand and apply legal and ethical aspects of pharmacy practice required to evaluate a patient care decision. Describe the need for a CLIA-waiver and documentation of testing done in the community pharmacy.	Explain the general concept of managed care. Define pharmacoeconomics and explain its practical applications. Discuss the requirements for patient confidentiality under the 1996 Health Insurance Portability and Accountability Act (HIPAA) and professional practice guidelines. Identify several major factors that contribute to drug-related fraud and abuse.	Adequately addressed in Appendix B.
18. Pharmaco- economics	Apply health care economics and pharmacoeconomics		Define pharmacoeconomics and explain its practical applications. Discuss the requirements for patient confidentiality under the 1996 Health Insurance Portability and Accountability Act (HIPAA) and professional practice guidelines. Identify several major factors that contribute to drug-related fraud and abuse.	Adequately addressed in Appendix B & C.
19. Pharmacy law and policies	Understand regulations and laws (state and federal) that impact pharmacy practice and legal operations. Identify issues, pending legislation, and regulations across all levels of government and how to make a positive impact. Understand and apply legal and ethical aspects of pharmacy practice required to evaluate a patient care decision. Describe the need for a CLIA-waiver and documentation of testing done in the community pharmacy.		Health Insurance Portability and Accountability Act (HIPAA) and professional practice guidelines. Identify several major factors that contribute to drug-related fraud and abuse.	Modification needed: factors contributing to drug related fraud and abuse, HIPAA, CLIA-waiver and documentation of testing in community pharmacy, and issues, legislation, regulations across all levels of government.
20. Specialty pharmaceuticals	Demonstrate knowledge of specialty pharmaceuticals and support patient adherence and administration of them.		Explain the term specialty pharmaceuticals, give examples, and describe how they are procured, stored and dispensed to patients.	Addition to the standards needed.
21. Computer skills			Demonstrate strong computer skills and apply those skills in analyses, presentations and communications.	Adequately addressed: 12.1 and Appendix B.
22. Drug approval process			Identify and explain the steps involved in the drug-approval process in the U.S.	Addition needed to the standards.

(Continued)

Table 1. (Continued)

Entry-Level Competency	Community Pharmacy Practice	Hospital & Health-System Pharmacy Practice	Managed Care Pharmacy Practice	ACPE Standards and Recommendation
23. Immunization	Be a certified immunizer (preferably early in curriculum to allow practice during the professional program). Describe the vaccine information statement (VIS), adverse events reporting system (VAERS) and registries.			Addition needed to the standards.
24. Leadership skills	Identify and manage conflict at all levels, supervise and motivate employees, delegate appropriate tasks, effectively articulate team objectives, and measure and report team performance. Display confidence in patient care skills learned in pharmacy school.			Addition: delegate tasks, articulate objectives, and measure/report performance.
25. Public health	Discuss the pharmacist's role in education and intervention in public health initiatives. Proactively promote healthy lifestyle and nutrition and describe how it impacts drug therapy and overall health.			Adequately addressed in guideline 12.1 and Appendix B, C (APPE) and D.

employer group.¹ The authors of this paper compared and contrasted the findings of each task force with the current ACPE standards and guidelines for the professional program in pharmacy leading to the Doctor of Pharmacy degree. Ideas for possible revisions to future revision of the ACPE accreditation standards for the PharmD degree were identified.

Employer Competencies: Compared and Contrasted

Table 1 lists the competencies identified by each of the task forces. The table allows comparison of issues common to each employer group (the first 12 competencies listed in Table 1) and competencies more specific to one or two of the practice areas. Of note, an empty cell does not mean that the competency does not apply at all to the sector but that it wasn't prioritized by the respective task force for inclusion. The table also provides author assessment of the adequacy of ACPE Standards 2007 Guidelines 2.0 in addressing the competency areas identified by the task forces. Finally, Table 1 provides suggestions for the next standards revision process by the ACPE-related authors on how to better address the competencies identified by the employer groups.

DISCUSSION

Most of the entry-level competencies expected from a PharmD graduate found in the three task force reports are covered to some degree in the curriculum requirements articulated within the current ACPE Standards and Guidelines. However, some improvements could be made to Standards 12, 13, and 14 and Appendices B and C to meet the expectations of employers of entry-level pharmacists. For example, all the task force reports identified the need for good communication skills for new graduates and standards address many aspects of verbal and written communications. However, respect for patient confidentiality and privacy rights, as well as documentation by pharmacists in the electronic health record were noted to be areas to be added. Similarly, concepts related to drug formulary systems such as prior authorization, step therapy protocols, and quantity limits should be addressed in the curriculum.

SUMMARY

Individuals involved in hiring new graduates into the main areas of pharmacist employment identified desirable competencies and knowledge areas for entry level practitioners. A number of recommendations from the ACPE Invitational Conference focused on the importance of engaging the employer community in the review and improvement of the PharmD accreditation standards.⁴ The task force reports emanating from ACPE collaborations

with ASHP, NCPA/NACDSF, and AMCP identified opportunities for improvements in the ACPE Standards and Guidelines. The employer suggested enhancements noted in Table 1 will be considered by the ACPE Board of Directors in the next round of standards and guidelines revision, as will the recommendations received during the ACPE Invitational Conference.

ACKNOWLEDGEMENTS

ACPE would like to thank the following individuals for their input into this time-consuming, but critical process.

*Entry-level Competencies Needed for Pharmacy Practice in Hospitals and Health-Systems*¹ (2010) Task Force members:

Nominated by ASHP: Steven Abel, PharmD, Assistant Dean for Clinical Programs, Head, Department of Pharmacy Practice, Purdue University College of Pharmacy, Indianapolis, IN; Cynthia Brennan, PharmD, Director of Pharmacy Excellence, Harborview Medical Center, Seattle, WA; Kristina De Los Santos, PharmD, Assistant Chief, Pharmacy Clinical Services and Education, Southern Arizona Veterans Affairs Health Care System, Tucson, AZ; Andy Donnelly, PharmD, Director of Pharmacy, University of Illinois Hospital, Chicago, IL; Kristie Gholson, PharmD, Assistant Director of Pharmacy, North Mississippi Medical Center, Tupelo, MS; Gerald Meyer, PharmD, MBA, Director, Experiential Education, Jefferson School of Pharmacy, Philadelphia, PA; Rita Shane, PharmD, Director of Pharmacy Services, Cedar Sinai Medical Center, Los Angeles, California; James Stevenson, MS, ASHP Board Liaison, Director of Pharmacy Services, University of Michigan Hospitals, Ann Arbor, MI; Janet Teeters, MS, Director, Accreditation Services; Douglas Scheckelhoff, MS, Vice President, Professional Development.

ACPE Board or Staff: Robert S. Beardsley, PhD, ACPE Board Liaison, Professor, University of Maryland, College of Pharmacy, Baltimore, Maryland; Peter H. Vlasses, PharmD, DSc (Hon), BCPS, Executive Director; Michael J. Rouse, BPharm (Hons), MPS, Assistant Executive Director, International & Professional Affairs.

*Entry-Level Competencies Needed for Community Pharmacy Practice*¹ (2012) Task Force members:

Nominated by NACDS: Michelle Belsey, RPh, Vice President, College and Professional Recruitment, Rite Aid Corporation, Harrisburg, PA; Ami Bhatt, RPh, Director, Talent Acquisitions – Health and Wellness, Wal-Mart Stores, Inc., Bentonville, AR; Janeen Winnike, RPh, Director of Recruiting & College Relations, SUPERVALUE Pharmacies, Franklin Park, IL; Alex J. Adams, PharmD, Director, Pharmacy Programs, NACDSF, Alexandria, VA.

Nominated by NCPA: Patty Johnson, RPh, Owner, Colony Drug and Wellness Center, Beckley, WV; Joe Moore, RPh, Owner, Moose Professional Pharmacy, Concord, NC; Jeff Harrell, RPh, Owner, Ilwaco Drugs/ Peninsular Pharmacies, Ilwaco, WA; Bill Osborn, RPh, Owner, Osborn Drugs, Miami, OK; Barbara Hayward, Vice President Education and Committees, Director, Management Institute, NCPA, Alexandria, VA.

ACPE Board or Staff: Robert S. Beardsley, PhD, President and Task Force Board Liaison, Professor, University of Maryland, College of Pharmacy, Baltimore, Maryland; Peter H. Vlasses, PharmD, DSc (Hon), BCPS, Executive Director; Gary H. Smith, PharmD, FAPhA, FCCP, FASHP, Consultant, Tucson, AZ.

*Entry-level Competencies Needed for Managed Care Pharmacy Practice*¹ (2012) Task Force members:

Nominated by AMCP: Amanda Bain, PharmD, MPH, Assistant Director, Pharmacy Benefit Services, The Ohio State University Health Plan, Inc., Columbus, Ohio; Shawn Burke, BSPHarm, RPh, Regional Vice President, Pharmacy Services, Coventry Health Care, Kansas City, MO; Carey C. Cotterell, BSPHarm, RPh, FAMCP, FCSHP, Managed Health Care Pharmacy Consultant, Diamond Bar, CA; James T. Kenney, BSPHarm, RPh, MBA, Pharmacy Operations Manager, Harvard Pilgrim Health Care, Wellesley, MA; Daniel McConnell, PharmD, Clinical Coordinator, Department of Pharmacy, Geisinger Health Plan, Danville, PA; Ann Nakahira, PharmD, Residency

Program Coordinator, Clinical Pharmacist, OptumRx, Irvine, CA; Lynn Nishida, BSPHarm, RPh, Vice President, Clinical Services, Catalyst Rx Center of Excellence, Northwest Region, Portland, OR; Shirley Reitz, PharmD, Director, Pharmacy Clinical Services, Group Health Cooperative, Seattle, WA; Marissa Schlaifer, MS, RPh, Director of Pharmacy Affairs, AMCP, Alexandria, VA.

ACPE Board or Staff: Stephanie F. Gardner, PharmD, EdD, Task Force Board Liaison, and Dean, University of Arkansas for Medical Sciences College, Little Rock, AR; Peter H. Vlasses, PharmD, DSc (Hon), BCPS, Executive Director; Max D. Ray, PharmD, MS, LHD (Hon), Consultant, Memphis, TN.

REFERENCES

1. Accreditation Council for Pharmacy Education. Task force reports. <https://www.acpe-accredit.org/deans/taskforcereports.asp> Accessed March 1, 2013.
2. Accreditation Council for Pharmacy Education. Accreditation standards and guidelines for the professional program in pharmacy leading to the doctor of pharmacy degree (Guidelines Version 2.0, Adopted: January 23, 2011, Effective: February 14, 2011). <https://www.acpe-accredit.org/deans/standards.asp>. Accessed March 1, 2013.
3. Zellmer WA, Vlasses PH, Beardsley RS. Summary of the ACPE consensus conference on advancing quality in pharmacy education. *Am J Pharm Educ.* 2013;77(3):Article 44.
4. Zellmer WA, Beardsley RS, Vlasses PH. Recommendations for the next generation of accreditation standards for doctor of pharmacy education. *Am J Pharm Educ.* 2013;77(3):Article 45.