

Toward uniform standards for pharmacy technicians: Summary of the 2017 Pharmacy Technician Stakeholder Consensus Conference



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In pursuit of a path toward resolving unsettled issues related to pharmacy technicians, the Pharmacy Technician Certification Board (PTCB) sponsored a stakeholder consensus conference on February 14–16, 2017, in Irving, Texas. Planned in collaboration with the Accreditation Council for Pharmacy Education (ACPE) and the American Society of Health-System Pharmacists (ASHP)^a and under the guidance

of an advisory committee representing all major branches of pharmacy, this invitational event yielded important recommendations concerning the definition, education,^b entry-level requirements, advanced practice, certification, and regulation of pharmacy technicians.

The 89 invited participants in the conference (eAppendix A, available at www.ajhp.org) included pharmacists and technicians from various types of practice and educational settings, pharmacy association executives, regulators, and representatives of the general public. Approximately 350 individuals participated remotely in the plenary sessions of the conference through a Web link.^c

Design of the conference

In consultation with the advisory committee, the conference planners established objectives for the event (sidebar), designed a preconference survey that was sent to pharmacy opinion leaders and conference participants, established the event agenda, selected speakers, identified invitees, and recommended readings for participant review in advance of the event. (Some key readings are cited here.¹⁻⁴) Individuals engaged in planning and conducting the conference are listed in eAppendix B, available at www.ajhp.org.

The program consisted of 5 plenary sessions (each focused on separate facets of the conference objectives), 3 work-group sessions (during which conferees divided into 4 groups to discuss specific issues and draft related recommendations), and a final session for polling of conference attendees on level of agreement or disagreement with recommendations from the work groups.

Conference opening

Everett B. McAllister, chief executive officer and executive director of PTCB, reviewed the objectives of the conference and referred to “the struggles boards of pharmacy, technician educators, and employers face . . . partly because we don’t have a good career plan for technicians.” He added,

Conference Objectives

The aim of the conference was to explore consensus on

1. The necessity of public confidence in pharmacy’s process for ensuring the competency of pharmacy technicians.
2. An optimal level of basic (“generalist”) knowledge, skills, and abilities that pharmacy technicians should have regardless of practice site.
3. An optimal definition of entry-level (generalist) pharmacy technician practice with respect to (a) legally recognized scope of practice, (b) educational requirements, (c) training requirements, (d) certification requirements, and (e) state board of pharmacy registration or licensure.
4. The desirability and feasibility of developing a process for recognizing competencies of pharmacy technicians beyond entry-level practice.
5. The desirability and feasibility of minimizing variability among the states in the definition and regulation of pharmacy technicians.
6. The entities that potentially could take responsibility for any changes in pharmacy’s process for ensuring the competency of pharmacy technicians.

Conference Advisory Committee

- Jason Ausili, Pharm.D.
Director, Pharmacy Affairs
National Association of Chain Drug Stores
- Malcolm Broussard, B.S.
Executive Director
Louisiana Board of Pharmacy
- Al Carter, Pharm.D., M.S.
Senior Director, Pharmacy
Regulatory Affairs
CVS Health
- Charles E. Daniels, B.S.Pharm., Ph.D.
Pharmacist-In-Chief and Associate
Dean
University of California San Diego
- Kenneth Mark Ey, B.S.Pharm.
Vice President of Operations
CARE Pharmacies Cooperative
- Diane Halvorson, RPhTech, CPhT
Lead Pharmacy Technician
Vibra Hospital Fargo

Pharmacy Technician Member
North Dakota State Board of
Pharmacy
- Timothy R. Koch, B.S.Pharm., P.D.,
C.H.C.
Senior Director, Pharmacy Practice
Compliance
Walmart Corporate Office
- Janet M. Liles, M.S., CPhT
Executive Director
Pharmacy Technician Educators
Council
- Scott A. Meyers, B.S.Pharm., M.S.,
FASHP
Executive Vice President
Illinois Council of Health-System
Pharmacists
- Matthew Osterhaus, B.S.Pharm.
Coowner
Osterhaus Pharmacy
- Jon Roth, B.S., M.S., FAPhA, FASHP
Chief Executive Officer
California Pharmacists Association
- Steve Rough, B.S.Pharm., M.S.,
FASHP
Director of Pharmacy
University of Wisconsin, Madison
School of Pharmacy
- Rafael Saenz, Pharm.D., M.S., FASHP
Administrator, Pharmacy Services
University of Virginia Health System

“The time has come to identify realistic and achievable pathways for technicians that support medication safety and protect our patients.” Commenting on PTCB’s decision to suspend implementation of its 2020 accredited-education requirement for technicians seeking PTCB certification,⁵ McAllister said that the results of the conference will help determine future plans for PTCB program changes.

Framing key issues

Two speakers framed the key issues of the conference from separate perspectives—those of the pharmacy profession and the public. The first perspective was provided by **Michael A. Moné**, a vice president at Cardinal Health, president of the Ohio Board of Pharmacy, and a member of the ACPE board of directors. Moné said, “Pharmacists must facilitate the advancement of pharmacy technicians . . . further enabling pharmacists to achieve their rightful place as healthcare providers.” Commenting on the profession’s obligation to assure the public of the competency of technicians, Moné remarked, “The process of providing the public with . . . guarantees of trustworthiness already exists in the form of the ac-

KEY POINTS

- A national consensus conference engaged all sectors of pharmacy in identifying points of agreement regarding entry-level requirements for pharmacy technicians.
- State variability in the regulation of pharmacy technicians poses risks for patients and the profession of pharmacy.
- Conferees were polled on their extent of agreement or disagreement with 59 statements related to unsettled pharmacy technician issues.
- Conferees agreed that a task analysis should be the basis for accredited technician education, technician certification, and state regulation of technicians.
- Conferees recommended the creation of a broad coalition to pursue the recommendations of the conference.

creditation, education, examination, and licensure model” that is applied to pharmacists. He concluded, “Our charge at this conference is to come to consensus [on what the public expects], how to meet those expectations, and what we must imple-



“Optimizing the contributions of technicians in pharmacy practice” was the theme of talks by Michael A. Moné (left), speaking from the perspective of the pharmacy profession, and Christopher Jerry, speaking from the public-interest perspective.

ment in order to deliver the value we promise to the healthcare system, the profession, and patients.” (The full text of Moné’s remarks is published in *AJHP*.)⁶

Christopher Jerry, head of the Emily Jerry Foundation, spoke from the public perspective and drew on the personal tragedy of having lost a young daughter to a fatal compounding error by a pharmacy technician. Commenting on the history of pharmacy-related medication errors, Jerry said that opportunities for such errors are likely to increase given the risks associated with new medications and the expanded use of medications. Jerry said that although the public expects all healthcare workers to be well educated, this basic expectation is not being met in the case of pharmacy technicians. He was critical of the fact that there are no uniform state requirements for ensuring the competency of technicians, which he attributed in part to a lack of public awareness about the scope of technician responsibilities. Jerry said that uniformly trained, competent pharmacy technicians would free up pharmacists to provide more patient consultations, which are proven to reduce medication errors.

Insights from preconference surveys

William A. Zellmer, a consultant who helped plan the conference, summarized the results of the preconference surveys. The opinion-leader survey showed strong agreement, across all sectors of pharmacy, with 7 statements; these statements were considered “foundational precepts” for the conference (sidebar). The 9 survey items that had substantial variability in level of agreement among sectors of pharmacy were taken into account when planning the agenda of the conference. Zellmer said that the comments many respondents made to supplement their answers to the survey suggest that there is room for finding common ground on unsettled technician issues.

Snapshots of the pharmacy technician workforce

Updated PTCB job analysis.

The director of certification programs at PTCB, **Levi Boren**, discussed PTCB’s 2016 technician job analysis, which will be used in guiding test con-

tent and requirements for the Certified Pharmacy Technician credential. More than 44,000 pharmacy technicians answered 1 of 2 surveys in the job analysis, which assessed how frequently specific tasks are performed and probed the importance of specific



Everett B. McAllister (at the lectern) moderated the panel discussion on snapshots of the pharmacy technician workforce. Seated (left to right) are **Levi Boren**, **William Schimmel**, **Janet Silvester**, and **Jason Ausili**.

Foundational Precepts for the Conference^{a,b}

1. Pharmacy supportive personnel encompass different types of workers, ranging from individuals with clerical duties to individuals (pharmacy technicians) who assist pharmacists with their professional responsibilities.^c
2. The profession of pharmacy has an obligation to make certain that pharmacy technicians are educated and regulated in a manner that ensures public safety.
3. In the interest of public safety, state boards of pharmacy have an obligation to regulate the scope of practice of pharmacy technicians.
4. In the interest of public safety, state boards of pharmacy have an obligation to establish the minimum qualifications of pharmacy technicians.^d
5. In the interest of public safety, state boards of pharmacy have an obligation to define the nature of licensed-pharmacist oversight of pharmacy technicians.^e
6. There are “generalist” (entry-level) knowledge, skills, and abilities that all pharmacy technicians should have, regardless of practice site.^f
7. Additional certification programs should be developed to allow pharmacy technicians to demonstrate competence beyond entry level.

^aBased on a preconference survey of pharmacy opinion leaders. Recipients of this survey were selected by member organizations of the Joint Commission of Pharmacy Practitioners.

^bThere was at least 90% agreement with these 7 items among respondents (except as noted in footnotes c–f) in the following pharmacy sectors: independent pharmacies (42 respondents), chain drugstores (38), hospital pharmacies (128), educational institutions (90), regulatory agencies (29), and pharmacy association staff (24).

^c89% of respondents from chain drugstores agreed with this item.

^d87% of respondents from associations agreed with this item.

^e84% of respondents from chain drugstores agreed with this item.

^f83% of respondents from associations agreed with this item.

knowledge, skills, abilities, and other characteristics (KSAOs) in performing the work of technicians.

Based on the job analysis, questions in future editions of the Pharmacy Technician Certification Examination will be distributed across 4 domains: medications (40%), patient safety and quality assurance (26%), order entry and processing (21%), and federal requirements (13%). (The current exam has 9 domains.) The new exam will focus only on core KSAOs relevant to entry-level practice in both of the largest sectors of pharmacy—community/retail and hospital/health-system practice. PTCB will analyze the job analysis results to assess the appropriate precertification educational requirements. Boren said that PTCB intends to develop future certification programs in advanced community pharmacy practice and sterile compounding.

Trends in technician education.

ASHP's vice president of accreditation services, **Janet A. Silvester**, pointed out that there is no single defined path for an individual to prepare to become a pharmacy technician, and there is no uniform national educational requirement. Most pharmacy technicians have received primarily on-the-job training. This is in sharp contrast to the educational requirements for comparable healthcare occupations (e.g., clinical laboratory technician, 2–4 years of education; dental assis-

tant, 1–2 years; physical therapy assistant, 2 years).

Accredited distance-education programs for pharmacy technicians are increasing access to standards-based education. The accreditation standard was recently amended for flexibility related to the number of experiential sites and the pharmacy compounding requirement. The 271 accredited programs are estimated to represent about one fourth of pharmacy technician education programs. Accredited programs graduate approximately 18,000 technicians per year; based on a 2016 ASHP survey, these programs appear to have capacity to expand enrollment by 60%.

Technician education by chain drugstores. The director of pharmacy affairs for the National Association of Chain Drug Stores (NACDS), **Jason Ausili**, reported on a small survey of NACDS members. Among the 24 respondents, 3 said they used primarily an accredited program for educating technicians, 12 used primarily standardized nonaccredited on-the-job training, and 9 provided on-the-job training (no standardization indicated). Sixteen respondents indicated that the number of candidates for technician positions was insufficient to meet their business needs. With respect to the turnover rate among technicians, 10 respondents said it was a nonissue; 9, a manageable is-

sue; and 5, excessive. Fifteen respondents said that their needs were not being met with respect to hiring educated technicians.

Optimal requirements for entry-level practice

Three speakers from different sectors of pharmacy addressed the question, “What knowledge, skills, and abilities must be achieved by individuals who wish to be credentialed as a pharmacy technician for entry-level practice?” The goals in the accreditation standards for pharmacy technician education were a point of reference for their remarks.⁷

Timothy R. Koch, senior director of pharmacy practice compliance for Walmart, explained that his company has 2 types of technician education programs: 1 designed specifically to satisfy its business needs (160 hours didactic, 80 hours experiential, 3.5 hours simulated skills development) and another accredited by ASHP-ACPE (minimum of 160 hours didactic, 80 hours simulated skills development, 160 hours experiential education, and 200 hours allocated among didactic, simulated, and experiential education). The didactic portion of both programs is the same. The accredited program, which is used to meet requirements in 2 states, mandates education in sterile compounding, which is not relevant to the company's current or future retail pharmacy operations, according to Koch. He said that the requirements for the accredited program have helped the company improve its shorter, primary program. Because of the certification success rate of graduates of the shorter program, it has not been feasible to justify accredited education for all technicians. Koch voiced support for standardization of entry-level education for technicians but not at the level required in the current accreditation standards. He supported technician certification but expressed doubt about the necessity of the full scope of knowledge, skills, and abilities currently covered



“Optimal requirements for pharmacy technicians in entry-level practice” was addressed by (left to right) Tim Koch, Rafael Saenz, and Matt Osterhaus.

in the certification exam. He said that registration or licensure of technicians should absolutely be required.

Rafael Saenz, administrator of pharmacy services at the University of Virginia Health System, based his remarks on the belief that the value of pharmacists “lies primarily in their ability and time spent in direct patient care, touching patients, patient education, and ensuring better patient outcomes.” From the perspective of a pharmacy practice leader who wants to free up pharmacists for patient care, Saenz outlined technician knowledge and skills in “must have” and “like to have” categories. Noting that it is common for pharmacy technicians to move from one sector of practice to another, he argued that fundamental concepts in the compounding of non-sterile, sterile, and chemotherapy/hazardous products should be included in entry-level education. Saenz said he believes the various sectors of practice are not far apart in their thinking about a single entry-level standard for pharmacy technician education, certification, and registration.

Matthew Osterhaus, pharmacist and owner of an independent pharmacy in a small community in Iowa, said that personal and interpersonal skills of pharmacy technicians are very important in his practice setting. Other vital skills include professional knowledge and the processing and handling of medication orders. Not required for entry-level practice in his setting are education in anatomy, physiology, and pharmacology and understanding of issues in the profession, nontraditional roles, emerging therapies, and sterile and nonsterile compounding. Osterhaus believes that tech-check-tech, medication reconciliation, assistance with medication therapy management, and compounding should be considered advanced technician practice. He stated that variability in the needs among practice sites must be considered when establishing standards for technician education. Osterhaus indicated support for certification

and state registration for entry-level practice; he suggested that add-on credentials should be developed for compounding and handling durable medical equipment.

Advanced pharmacy technician practice

Four speakers discussed advanced pharmacy technician practice, including whether related standards and credentials should be developed. **Al Carter**, senior director of pharmacy regulatory affairs for CVS Health, discussed the range of practice settings (and the related variety of technician responsibilities) in his company: retail stores (dispensing), specialty pharmacies (dispensing and collaboration with pharmacists and patients on clinical issues), home infusion (compounding), and mail order (central processing and dispensing). Potential advanced responsibilities for technicians in large corporate pharmacy environments include tech-check-tech, accepting oral orders, transferring prescriptions, remote order processing, point-of-care testing, and vaccine administration. Carter said there would be immense value in greater uniformity among the states in how they address technician issues. He asked the audience to consider whether the time will come when technicians have authority to perform whatever tasks pharmacists delegate to them.

Dan Luce, national director of pharmacy affairs for Walgreens, discussed potential advanced roles for

pharmacy technicians based on his perspectives as a chain drugstore executive and former board of pharmacy member. He stated that many experienced technicians are capable of performing advanced roles in pharmacy department management, using barcode technology for product verification, triaging pharmacist-administered services, administering vaccines, and managing call centers and centralized dispensing operations. Luce said that fears about potential pharmacist job loss and compromised safety stemming from an increased technician-to-pharmacist ratio have proved to be unfounded in states where ratios have increased. He suggested that it may be necessary to establish education and credentialing requirements for advanced-practice technicians to address concerns that regulators or legislators are likely to have about expanding technicians' scope of practice. Advanced roles would help with career development among technicians and allow pharmacists to focus to a greater extent on patient care. He asked rhetorically if pharmacy will be ready to allow pharmacists to delegate any nonjudgmental task to technicians and, if that is done, who will hold liability for the technicians' work.

Steve Rough, director of pharmacy at University of Wisconsin Health, described the 700-hour accredited technician education program at his health system. The health system's 4-level career ladder for technicians is



Left to right, Al Carter, Dan Luce, Steve Rough, and Anthony Pudlo spoke on “opportunities related to advanced technician practice.”

designed to foster professional commitment and provide increased compensation as individuals take on more responsibility. Training is provided for technicians who desire to advance to a higher level. Rough advocated (1) accredited education, certification, and licensure for all technicians, (2) certification as a prerequisite for advanced practice, (3) maintenance of entry-level certification after moving into advanced practice, and (4) development of credentials (accredited education and certification) for advanced roles. He suggested that some supportive positions in pharmacy that do not involve handling medications could be given a title other than “technician” (e.g., “pharmacy clerk”) in the interest of moving toward consensus.

Anthony Pudlo, vice president of professional affairs for the Iowa Pharmacy Association, described the demonstration project in his state to assess tech-check-tech (more appropriately designated as “technician product verification”) in the community pharmacy prescription dispensing process. Thus far in the research, there has been no difference in error rate compared with baseline, and greater pharmacist time has been devoted to patient care activities. Community pharmacists in Iowa, through multiple avenues, are experiencing increased opportunities for payment for patient

care services, and they will require more time for providing such services, which warrants an expansion of technician product verification. Because of the success of the demonstration project, legislation will be pursued to expand pharmacy technician product verification to include community pharmacy practice in Iowa.

Models for moving forward

Susan James, director of competence programs for the Ontario College of Pharmacists (a registering and regulating body for pharmacy), was the lead speaker on a panel showcasing how certain provinces or states have advanced their requirements for pharmacy technicians. As the result of a process that began around 2005, pharmacy technicians in Ontario now must complete a nationally accredited education program (minimum of 940 hours) and pass a national entry-to-practice examination.^{8,9} Pharmacy technicians (a title restricted to registered individuals) are able to perform all technical aspects of product preparation and drug distribution, including independent checking of the final product for release to the patient; they are held accountable as autonomous health professionals. Technicians are not allowed to provide therapeutic or clinical services that are within the scope of the pharmacist. Pharmacies in Canada are estimated to employ

about 8 times as many pharmacy assistants as pharmacy technicians; there are no standards for pharmacy assistants. Pharmacy technicians can check and manage the work of pharmacy assistants.

Diane Halvorson, lead pharmacy technician at Vibra Hospital, Fargo, and a member of the North Dakota State Board of Pharmacy, said that it was through the leadership of pharmacy technicians that her state was able to achieve mandatory accredited education and mandatory PTCB certification for registered technicians. The state is pursuing an expansion of technician roles related to the screening and dispensing of prescription refills. She urged the National Association of Boards of Pharmacy to include explicit standards for pharmacy technician scope of practice, education, and certification in its model state pharmacy act. Based on North Dakota’s experience, Halvorson said that in order to move toward uniform national standards, pharmacy technicians should be an active part of the change process, and there should be sharp focus on patient safety.

Malcolm Broussard, executive director of the Louisiana Board of Pharmacy, noted that his state will require (effective January 2018) accredited education and PTCB certification for registration as a pharmacy technician. He suggested that the way forward, nationally, will depend on the answers to 3 questions: (1) What pharmacy tasks should be restricted to pharmacists? (2) What pharmacy tasks should be restricted to pharmacists or technicians? and (3) Should the standards for technician education cover the gamut of technician roles or should a distinction be made between entry-level tasks and advanced tasks? Broussard said that pharmacy should have only 1 accreditation process for technician education and only 1 certification process.

Alex Adams, executive director, Idaho State Board of Pharmacy, discussed his state’s recent expansion of the scope of practice for certified technicians. In making its changes, Idaho



Peter Vlases (at the lectern) moderated the panel discussion on “models for moving forward on pharmacy technician issues.” The speakers were (left to right) **Susan James**, **Diane Halvorson**, **Malcolm Broussard**, and **Alex Adams**.

considered evidence that 44% of pharmacists' time was spent on tasks that could be delegated to competent technicians. Tasks that pharmacists are permitted to delegate to certified technicians (in some cases requiring special training) are in 2 categories: *medication dispensing support* (accept oral prescriptions, clarify technical elements of prescriptions, transfer prescriptions, search the prescription drug monitoring program database, and perform final verification of filled prescriptions that have undergone drug-use review by a pharmacist) and *technical support for pharmacist clinical services* (administer vaccines, administer simple [Clinical Laboratory Improvement Amendment-waived] clinical tests, conduct basic physical assessments, and conduct medication histories).

Consensus recommendations

Four work groups involving all invited conferees met in 3 sessions throughout the conference to formulate recommendations on issues related to pharmacy technicians. Each group had balanced representation from all sectors of pharmacy and was led by a facilitator–recorder team. The

topic assignments were the same for all groups. After the last work group session, the facilitator–recorder teams met with other conference staff to consolidate and prepare recommendations for polling.

At the final plenary session, participants indicated their level of agreement or disagreement with 59 recommendations created by the work groups. Using a Web-based application, polling was conducted on a 4-point scale: strongly agree, agree, disagree, or strongly disagree.^{d,e} The polling results are presented in Tables 1–7.^f

Defining pharmacy technicians.

Most conferees agreed with the need to create a legal definition of pharmacy technicians (Table 1, items 1.1 and 1.2) and to restrict the use of that occupational title to those who have met specified qualifications (item 1.3). In consideration of 2 alternative approaches for technician task analyses (as the basis for national standards), there was greater support for an inclusive all-settings assessment (item 1.4) versus separate assessments for different sectors of practice (item 1.5).

Education of pharmacy technicians. Most conferees agreed that national standards should guide

technician education (Table 2, item 2.1) and that technician education programs should be accredited (item 2.4). There was further agreement that the national standards should focus on the outcomes of education, allowing a certain degree of programmatic flexibility in how those outcomes are achieved (item 2.5).

Entry-level knowledge, skills, and abilities. Conferees voted on the specific knowledge, skills, and abilities that should be achieved by those who wish to be credentialed as a pharmacy technician for entry-level practice (Table 3). These domains apply to education and to competency assessment (certification) of pharmacy technicians. All of the 18 areas polled received majority agreement, but about one third of conferees disagreed with 2 areas—“demonstrate understanding of nontraditional roles” (item 3.5) and “billing” (item 3.12).

Certification of pharmacy technicians. There was strong support for requiring national certification of technicians ahead of state board of pharmacy registration or licensure (Table 4, item 4.1), and there was clear *disagreement* that this should be done without a specified educational re-

Table 1. Defining Pharmacy Technicians: Results of Conference Polling

Issue	% Respondents ^a			
	Strongly Agree	Agree	Disagree	Strongly Disagree
1.1 The profession of pharmacy should develop a contemporary definition of entry-level pharmacy technicians that differentiates them from other pharmacy supportive personnel.	61	33	4	1
1.2 State boards of pharmacy should adopt standardized terminology that defines different categories of pharmacy supportive personnel and their associated scope of work.	48	35	8	8
1.3 State boards of pharmacy should protect the title of pharmacy technician, ensuring that only those that have completed required education may use the title.	63	28	7	3
1.4 A national task analysis should be used to inform the development of national standards, in an objective and data-driven manner, related to the competencies/credentials of entry-level pharmacy technicians.	68	30	1	0
1.5 A separate task analysis of pharmacy technicians should be conducted within different pharmacy practice sectors to develop a cross-walk process for determination of common core competencies.	34	44	15	7

^aThe number of respondents for polling items ranged from 65 to 75. For some items, percentages do not total 100% because of rounding.

Table 2. Pharmacy Technician Education: Results of Conference Polling

Issue	% Respondents ^a			
	Strongly Agree	Agree	Disagree	Strongly Disagree
2.1 The profession of pharmacy should move urgently towards the development and adoption of national standards for pharmacy technician education.	72	23	4	1
2.2 The profession of pharmacy should set a target for implementation of the national standard for pharmacy technician education at 3 to 5 years after adoption of the standard.	51	35	13	1
2.3 Technician education programs should be based on national standards, be foundational across all practice settings, and provide room for innovation and flexibility.	79	17	4	0
2.4 Technician education programs should be accredited and based on defensible standards developed using stakeholder input, taking into account diversity of practice environments.	71	26	3	0
2.5 In the development of national standards for technician education, there should be a focus on outcomes and flexibility in terms of process.	46	51	3	0
2.6 The number of required education hours for pharmacy technicians should be determined based upon the defined entry-level core knowledge, skills, and abilities.	51	39	6	4
2.7 The entrustable professional activities that can be performed by an entry-level pharmacy technician after completion of a standardized education program should be defined.	40	35	15	10
2.8 Employees seeking the entry-level pharmacy technician designation should be required to complete a nationally accredited education program. (See also item 4.2.)	63	21	8	8
2.9 Employees seeking the entry-level pharmacy technician designation should be considered technicians-in-training during the period of completion of education and certification, all of which must be completed in less than 2 years.	44	44	7	4

^aThe number of respondents for polling items ranged from 65 to 75. For some items, percentages do not total 100% because of rounding.

quirement (item 4.2). Maintenance of national certification as a requirement for continued registration or licensure was supported (item 4.3).

State laws and regulations on pharmacy technicians. Nearly all conferees agreed that variability in state regulations regarding technicians should be minimized (Table 5, item 5.1) and that technician practice should be under the purview of the pharmacist (item 5.5). Most conferees agreed that national standards should not prevent states from innovating and expanding technicians' scope of practice beyond established entry-level standards in the interest of improving patient safety and care (item 5.3).

Advanced pharmacy technician practice. Conferees generally

agreed that the profession of pharmacy's immediate priority, with respect to technician issues, should be development of standards related to entry-level education (Table 6, item 6.2) and that advanced roles for technicians (and related education and credentials) will evolve over time (items 6.3 and 6.4).

Moving forward on pharmacy technician issues. All participants in the polling agreed that the conference planners should establish a coalition of stakeholders to pursue the consensus recommendations from the conference (Table 7, item 7.5). Most conferees agreed that participants in this stakeholder event have a responsibility to work toward achieving the consensus recommendations (item 7.7).

Conference wrap-up

The following 5 conferees offered brief reflections on the conference: **Anthony Provenzano** (vice president, pharmacy compliance and government affairs, Albertsons Companies), **Lisa Schwartz** (senior director, professional affairs, National Community Pharmacists Association), **Charles Daniels** (pharmacist-in-chief and associate dean, University of California San Diego), **Janet Liles** (executive director, Pharmacy Technician Educators Council), and **Carmen Catizone** (executive director, National Association of Boards of Pharmacy). They commented on the event's value in candidly exploring unsettled issues and reaching conceptual agreement on important changes that should be pursued relating to the educa-

Table 3. Required Knowledge, Skills, and Abilities of Entry-Level Pharmacy Technicians: Results of Conference Polling

Issue	% Respondents ^a			
	Strongly Agree	Agree	Disagree	Strongly Disagree
3.1 Personal and interprofessional knowledge and skills	70	24	3	3
3.2 Professional knowledge and skills	70	20	5	4
3.3 Calculations	83	15	0	1
3.4 Basic pharmacology	55	35	7	3
3.5 Demonstrate understanding of nontraditional roles	19	45	27	8
3.6 Processing orders	85	12	1	1
3.7 Patient and medication safety	87	13	0	0
3.8 Understanding sterile and non-sterile compounding	39	49	6	7
3.9 Medication use process	67	31	1	1
3.10 Screen prescriptions for completion and accuracy, but not crossing the line into clinical topics such as drug interactions, dosage ranges, etc.	62	34	1	3
3.11 Information technology in general and in the context of medication safety elements	68	31	1	0
3.12 Billing	28	41	24	7
3.13 Quality principles	58	39	3	0
3.14 Regulatory	66	34	0	0
3.15 Maintenance of confidentiality	97	3	0	0
3.16 Ability to reconstitute and compound simple non-sterile preparations using USP's definitions	59	34	4	3
3.17 Proper handling of hazardous drugs	66	28	4	1
3.18 Inventory management	47	42	5	5

^aThe number of respondents for polling items ranged from 65 to 75. For some items, percentages do not total 100% because of rounding.

Table 4. Certification of Pharmacy Technicians: Results of Conference Polling

Issue	% Respondents ^a			
	Strongly Agree	Agree	Disagree	Strongly Disagree
4.1 State boards of pharmacy should require new pharmacy technicians to obtain national certification for registration or licensure.	75	14	5	5
4.2 Entry-level pharmacy technicians should be required to complete a national pharmacy technician certification program, without a specified education requirement. (See also item 2.8.)	7	10	28	56
4.3 State boards of pharmacy should require pharmacy technicians to maintain national certification for continued registration or licensure.	60	19	12	8
4.4 PTCB should initiate conversations with boards of pharmacy regarding the recent updates in the PTCB exam blueprint, i.e., the decreased number of domains from nine to four, and the modification in the level of emphasis on sterile compounding.	33	48	12	7
4.5 State boards of pharmacy should provide a system to recognize experienced pharmacy technicians while not compromising the basic competencies required of a certified pharmacy technician.	29	49	19	3

^aThe number of respondents for polling items ranged from 65 to 75. For some items, percentages do not total 100% because of rounding.

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Table 5. State Laws and Regulations on Pharmacy Technicians: Results of Conference Polling

Issue	% Respondents ^a			
	Strongly Agree	Agree	Disagree	Strongly Disagree
5.1 The variability of state regulations regarding pharmacy technicians should be minimized, while maintaining the required standards to ensure patient safety.	63	36	1	0
5.2 The level of urgency for achieving state-to-state consistency in regulation of pharmacy technicians' scope of practice, education, certification, and licensure or regulation is high.	62	25	12	1
5.3 National standards should not prevent states from innovating and expanding technicians' scope of practice beyond established entry-level standards in the interest of improving patient safety and care.	87	10	3	0
5.4 Evolution of state-level laws and regulations regarding pharmacy technicians should be founded on ensuring patient/public safety.	87	11	1	0
5.5 National standards should be framed in the context of pharmacy technician practice being under the purview of the pharmacist.	68	30	1	0
5.6 State boards of pharmacy should require pharmacy technicians to be licensed based on specific criteria including accountability and administrative liability.	30	37	22	10
5.7 Registration should be required for all individuals who embark upon their initial entry into the profession of pharmacy.	58	30	4	7
5.8 State boards of pharmacy should require that pharmacy technicians complete continuing education or other professional development activities for continued registration or licensure.	72	28	0	0
5.9 State boards of pharmacy should include a pharmacy technician on the board.	59	29	9	4

^aThe number of respondents for polling items ranged from 65 to 75. For some items, percentages do not total 100% because of rounding.

Table 6. Advanced Pharmacy Technician Practice: Results of Conference Polling

Issue	% Respondents ^a			
	Strongly Agree	Agree	Disagree	Strongly Disagree
6.1 The pharmacy profession should clearly articulate and communicate the vision for advanced pharmacy technician practice and disseminate the vision to appropriate stakeholders.	67	30	3	0
6.2 The pharmacy profession should maintain focus and energy toward developing entry-level standards for technician education, with the expectation that advanced-level competencies will evolve over time.	67	25	6	1
6.3 Bridging programs should be developed and offered to build competencies of pharmacy technicians who are currently in the workforce and who would like to advance their skills.	56	40	3	1
6.4 Specific advanced-level educational programming for pharmacy technicians is needed, available, and will continue to evolve as needs within the profession are identified (e.g., sterile compounding, controlled substances, risk management, quality assurance, informatics).	66	30	3	1
6.5 In developing standards for advanced pharmacy technicians, the pharmacy profession must recognize that there are technicians currently practicing at this level and acknowledge the appropriate pathway for their continued development.	67	32	1	0
6.6 The profession of pharmacy should develop credentials for technicians who perform advanced roles beyond entry-level practice.	43	46	10	1

^aThe number of respondents for polling items ranged from 65 to 75. For some items, percentages do not total 100% because of rounding.

Table 7. Moving Forward on Pharmacy Technician Issues: Results of Conference Polling

Issue	% Respondents ^a			
	Strongly Agree	Agree	Disagree	Strongly Disagree
7.1 The profession of pharmacy must be transparent in its message about pharmacy technicians, communicating the priority of public/patient safety, taking ownership of identified issues, assuming commitment to change, ensuring accountability, and reinforcing the positive contributions of pharmacy technicians to achieving optimal medication use.	75	22	1	1
7.2 The profession of pharmacy should develop a communications plan to disseminate its vision for pharmacy technicians and achieve buy-in from all stakeholders (e.g., pharmacists, pharmacy technicians, legislative and regulatory bodies, employers, payers, public, etc.).	73	26	2	0
7.3 The profession of pharmacy should advocate for the removal of pharmacist-to-technician ratios based on existing evidence.	52	25	15	7
7.4 Encourage pharmacy technician inclusion, representation, and membership in professional pharmacy organizations (at state and national levels).	73	24	2	2
7.5 The conference planners should establish a coalition with broad representation to take forth the recommendations from the Pharmacy Technician Stakeholder Consensus Conference.	77	23	0	0
7.6 The Joint Commission of Pharmacy Practitioners should take responsibility for ensuring appropriate priority and accountability in follow-up of conference recommendations, possibly collaborating with organizations such as the Council on Credentialing in Pharmacy, the Institute for Safe Medication Practices, and the National Conference of State Legislators.	39	49	1	10
7.7 All participants in the Pharmacy Technician Stakeholder Consensus Conference have a responsibility to work toward achieving the consensus recommendations from the conference.	62	27	8	3

^aThe number of respondents for polling items ranged from 65 to 75. For some items, percentages do not total 100% because of rounding.

tion, certification, and registration or licensure of pharmacy technicians. They emphasized the urgency of building on this stakeholder consensus event and not allowing momentum to diminish.

Representatives of the conference planning organizations—**Everett B. McAllister**, **Janet A. Silvester**, and **Peter H. Vlasses** (ACPE executive director)—thanked the participants for their constructive engagement and expressed commitment to marshaling forces for pursuing the changes identified at the conference in the interest of patient safety and pharmacy's service to the public.

Larry Wagenknecht, chief executive officer of the Michigan Pharmacists Association and chair of the PTCB board of governors, alluded to numerous previous attempts to build national consensus on standards for pharmacy technicians and asked, "What will be different this time?" His

answer: "We now have a different understanding of where we need to be as a profession and the important role that well-qualified pharmacy technicians must play in helping us reach that place." He declared that PTCB is committed to collaborating with the full range of stakeholders to achieve uniform nationwide standards for pharmacy technicians.

Disclosures

Mr. Zellmer provides contractual services for the American Society of Health-System Pharmacists (ASHP), serves on the *AJHP* Editorial Board, and consulted on the planning of the Pharmacy Technician Stakeholder Consensus Conference. Mr. McAllister is employed by the Pharmacy Technician Certification Board (PTCB). Dr. Silvester is employed by ASHP. Dr. Vlasses is employed by the Accreditation Council for Pharmacy Education (ACPE).

The PTCB certifies pharmacy technicians and provided financial support for the 2017 Pharmacy Technician Stakeholder

Consensus Conference. ASHP provides continuing education for pharmacy technicians, is an owner of PTCB, and holds a permanent seat on the PTCB board of directors. ASHP and ACPE jointly sponsor the Pharmacy Technician Accreditation Commission, which is the accrediting review committee for pharmacy technician education programs.

Additional information

This article will also appear as a Web publication of the *Journal of the American Pharmacists Association*.

^aACPE and ASHP jointly sponsor the Pharmacy Technician Accreditation Commission, which is the accrediting review committee for pharmacy technician education programs.

^bThe term *pharmacy technician education* is used in this report to encompass the full breadth of academic, simulated experiential, and practice-setting experiential education of pharmacy technicians.

^cWeb participants could ask questions or make comments in writing during the discussion portion of

plenary sessions; they did not vote in the polling process at the end of the conference.

^dIndividuals who were involved in planning or staffing the conference were excluded from the polling.

^eThe 2 attendees from NACDS excused themselves from the polling.

^fThere was no predetermined definition of consensus related to level of agreement on polling items. The conference organizers will be guided by the overall polling results in planning how to pursue uniform standards for pharmacy technicians.

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