Opportunities and challenges related to pharmacy technicians in supporting optimal pharmacy practice models in health systems

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Achieving effective new models for pharmacy services in hospitals and health systems will depend on full utilization of pharmacists’ professional knowledge and contact with patients. The need is urgent to redeploy health-system pharmacists’ time to clinical activities, but this will be possible only if pharmacy technicians are adequately qualified to handle medication distribution. Therefore, revised models for pharmacy services in health systems must address the optimal roles of pharmacists and must enhance the capacity of pharmacy technicians. A pharmacy technician is defined as an individual who has been trained to assist in pharmacy activities that do not require the judgment of a pharmacist and who performs those activities under the supervision of a licensed pharmacist. For brevity, this paper generally refers to hospitals and health systems as health systems.

History
Pharmacy has made incremental progress in expanding the qualifications and roles of pharmacy technicians, but more progress is needed in order to achieve new models for pharmacy services in health systems. In 1966, the American Association of Colleges of Pharmacy and the American Society of Hospital Pharmacists (ASHP) developed a joint statement on hospital pharmacy technician-helpers, recommending organized training programs (appendix).1 (Remarkably, that statement’s vision about the needed work of pharmacists remains incompletely realized today.) In 1968, the U.S. Department of Health, Education, and Welfare recommended the development of a pharmacist aide curriculum in junior colleges and other educational institutions.2 Training guidelines for hospital pharmacy supportive personnel were created in 1976.3 (Training deals with teaching skills and building proficiency through actual practice. Education deals with conveying knowledge, understanding, and cultivating reasoning abilities. In order for education or training to be effective, sound pedagogical processes must be used in delivering the content and in assessing the performance of learners. For brevity, the term training is used in this paper to include both education and training.) Competency standards for pharmacy supportive personnel in organized health care settings were released in 1977.

In the 1980s, pharmacy associations in Michigan (1981) and Illinois (1987), launched examination-based certification programs for pharmacy technicians.5,6 ASHP began an accreditation program for pharmacy technician training in 1983. In the 1990s, a formal task analysis of pharmacy technicians was conducted; a national voluntary certification examination was launched by the Pharmacy Technician Certification Board (PTCB); a white paper about pharmacy technicians was published, urging uniform national standards for pharmacy technician training; and a model curriculum...
for pharmacy technician training was published. In 2002, an updated white paper urged the development of a vision for pharmacy technicians, a definition of the responsibilities and functions for pharmacy technicians, standards for technician education and training, an appropriate system for accreditation of education and training of pharmacy technicians, and an appropriate regulatory framework for pharmacy technicians. Still sound, these recommendations merit renewed attention by the profession.

In 2005, ExCPT, a retail-oriented certification examination, was launched; as of 2010, it was in the hands of a third owner. In 2007, a long-range vision for the pharmacy work force in hospitals and health systems noted that eventually only individuals who are graduates of an accredited technician training program and are PTCB certified will be recognized in laws and regulations as pharmacy technicians. In 2009, the Council on Credentialing in Pharmacy released an excellent guidance document for policy development regarding the education, training, certification, and regulation of pharmacy technicians in the United States.

Current landscape

The Bureau of Labor Statistics (BLS) in the U.S. Department of Labor estimated that there were 326,300 pharmacy technicians in the United States in 2008. Of these, 57,800 (17.7%) worked in hospitals. BLS estimated that there may be 477,500 pharmacy technicians by 2018. BLS additionally categorized 54,900 individuals as “pharmacy aides,” most of whom worked in “retail trade” (87.76%); only 3,100 worked in hospitals. BLS did not estimate the number of pharmacy technicians or aides working in health systems other than hospitals.

Training and certification

The pharmacy technician occupation is one of few for which in-the-workplace experience (as opposed to formal education and training) may be accepted for enabling an individual to work in the occupation. Others include medical and clinical laboratory technicians, medical and clinical laboratory technologists, and dental assistants. Multiple national certification programs exist for the first two occupations. Educational requirements for medical and clinical laboratory technicians vary by certifying organization. It is possible for these technicians to learn in the workplace, but they usually have an associate’s degree or a certificate from a hospital, a school, or an armed forces program. For medical and clinical laboratory technologists, educational requirements vary by certifying organization and the type of certificate. A combination of education in the workplace and specialized training can qualify an individual for some technologist jobs, but a bachelor’s degree in medical technology or in a life science is generally required. One certification program exists for dental assistants and requires work experience, other related certificates, completion of a course, and a high-school diploma or general equivalency diploma (Daigle L, ASHP, personal communication, 2010 May 10).

For most health occupations, external certification must occur before an individual is permitted (e.g., via licensure) to engage in the occupation. Typically this occurs after the completion of required education or training. Pharmacists, for example, are required to graduate from a standardized doctor of pharmacy degree program from a pharmacy school that is accredited by the Accreditation Council for Pharmacy Education and then pass a standardized national examination to be permitted to work (and be identified) as a pharmacist. A similar approach for pharmacy technicians would be wise, requiring that they first complete accredited training and then become certified. While health-system pharmacy has long advocated this approach, the pharmacy profession overall has been unable to agree upon the necessity of required, standardized training for pharmacy technicians.

In reversed sequence, pharmacy, instead, chose first to establish a national voluntary certification program administered by PTCB. PTCB’s examination is based on sound task analyses of the work of pharmacy technicians in both hospitals and retail pharmacy settings and is based on psychometrically sound examination principles. In early 2010, the cumulative number of pharmacy technicians certified by PTCB was 372,241. The number of active PTCB-certified pharmacy technicians was 240,315. Since 2004, candidates for certification have been surveyed about their training. They received training from educational institutions (35.6%), a formal on-the-job training program (25.8%), an informal method on the job (26.3%), the military (1.1%), and other sources (11.1%) (Cassano A, PTCB, personal communication, 2010 May 13). According to unpublished ASHP national survey data from 2008, 80.6% of hospitals trained newly hired pharmacy technicians in the workplace; 37.1% required in-house self-study (books, video), and 16.6% provided in-house didactic training with a written examination; in 31% of hospitals, the individuals had completed a structured external training program (this percentage increased to 50.7% in hospitals with 400–599 beds). In 24.4% of cases, the external programs were ASHP accredited (Scheckelhoff D, American Society of Health-System Pharmacists, personal communication, 2010 Apr 30).

Since 2004, the highest level of education among candidates seeking PTCB certification was high school (52.1%), an associate degree (12.9%), a bachelor’s degree (15.9%), a master’s degree (1.8%), a certificate
or diploma from a pharmacy technician program (12.3%), and other (5%). They worked in the following environments: community chain pharmacy (35.2%), community independent pharmacy (11.1%), hospital (13.6%), education and training (4.2%), mail service/home care/long-term care/managed care (6.5%), military (10.4%), and other (19%) (Cassano A, PTCB, personal communication, 2010 May 13). In 2008, according to unpublished ASHP national survey data, 25.6% of hospitals required newly hired pharmacy technicians to be PTCB certified. One third of hospitals required the individuals to become certified within a specific time frame (Scheckelhoff D, ASHP, personal communication, 2010 Apr 30). In August 2009, 5,100 individuals were certified via the ExCPT examination. 11

As of 2010, PTCB’s requirements to sit for its examination are a high school diploma (or equivalent) and an absence of criminal or regulatory violations. In keeping with the logical sequence of “train before certifying,” it would be wise for there to be an additional prerequisite of some level of training and pharmacy experience to be eligible to take the certification examination. Currently, PTCB offers only one level of certification. It might be wise to develop further certifications for advanced and specialized practice areas, such as sterile compounding.

The first accredited pharmacy technician training programs were in hospitals. Later, vocational and technical colleges launched programs that made it unnecessary for hospitals to conduct the training themselves. Accredited programs must deliver at least 600 hours of didactic, laboratory, and experiential education and training (the latter in actual pharmacies) over at least 15 weeks. 17 In early 2010, there were 150 accredited training programs in 38 states. Of these, 53% were in vocational and technical colleges, 36% were in community colleges, and 6 were in colleges and universities. The remaining few were in chain drug stores (n = 3), the military (n = 3), hospitals (n = 3), and a compounding pharmacy (n = 1). A directory of accredited training programs is available at http://accred.ashp.org/aps/pages/directory/technicianProgramDirectory.aspx. As of 2010, accredited programs graduated approximately 12,000 pharmacy technicians annually (Teeters J, ASHP, personal communication, 2010 Apr 30). About half of those graduates were from accredited programs conducted by national retail pharmacy chains. (This is a recent change in demographics. The first accreditation of a chain’s training program occurred in 2006.) From 1983 to early 2010, accredited programs have graduated an estimated 32,000 individuals. The percentage of the graduates working in health systems is unknown (Teeters J, ASHP, personal communication, 2010 Apr 30).

Some career schools and colleges offer pharmacy technician programs of various durations and leading to various degrees or certificates. 18 Some of these institutions are accredited by the Accrediting Commission of Career Schools and Colleges (ACCSC) for their general administrative structure and execution of education and training. 19 ACCSC’s accreditation standards, however, do not specify or assess the content of the programs offered by these institutions. There are an estimated 600 nonaccredited programs that have labeled themselves as education or training programs for pharmacy technicians (Teeters J, ASHP, personal communication, 2010 Apr 23). Some are live programs; some are online. They vary substantially in their content, duration, and rigor. The lack of standardization and external review of the content and quality of these programs poses difficulty for employers and regulators with respect to interpreting the competence of the programs’ graduates.

**Regulation**

State pharmacy acts and regulations have varied substantially over the years with respect to pharmacy technicians, though greater consistency is gradually emerging. According to a 2009 survey by the National Association of Boards of Pharmacy (NABP), the term “pharmacy technician” is used in laws and regulations in 47 states. 20 Colorado refers to “unlicensed personnel” and “unlicensed assistants.” The District of Columbia refers to “ancillary personnel.” Nevada refers to “pharmaceutical technicians;” New York refers to “unlicensed persons;” North Dakota and Wyoming refer to “registered pharmacy technicians;” and Ohio refers to “qualified...
pharmacy technicians.” Thirty-eight states require either licensure or registration of pharmacy technicians, though licensure in some cases resembles registration. No state allows independent licensed practice by pharmacy technicians. Seven states certify pharmacy technicians, but in at least 1 state, it was footnoted that this meant either via PTCB or ExCPT, in which case the state is not doing the certifying.

The NABP survey revealed that 33 states have technician training requirements, though in some cases this means that the state board of pharmacy can approve any training program it wishes. In some states, in-the-workplace training is accepted as training, or a utilization plan for technicians is accepted instead of training. One state said it has a training requirement but will accept PTCB certification instead. Hence, standardized training is not ensured across all states. Eighteen states require a technician examination; one required the examination for “certified pharmacy technicians” but not for “pharmacy technicians.” Overall, the states still have some distance to go to achieve consistency in training and examination requirements.

In September 2008 and October 2009, an NABP Task Force on Pharmacy Technician Education and Training Programs issued several recommendations that were subsequently accepted by NABP’s executive committee.21,22 Among these recommendations were to encourage states to

- Clarify the terms licensure, registration, and certification,
- License or register pharmacy technicians,
- Accept PTCB certification,
- Report pharmacy technician disciplinary information to a central clearing-house,
- Require pharmacy technician education that meets standardized guidelines, and
- By 2015, require pharmacy technicians to have completed an accredited education and training program as a condition of certification.

These provisions seem likely to be reflected in future editions of NABP’s Model State Pharmacy Act and Model Rules of the NABP.23 In addition, the task force recommended that NABP assist in the development of a national accreditation system for pharmacy technician education and training programs by 2015. NABP’s executive committee concurred with this and agreed to convene task forces as needed to develop and maintain national standards for these programs.

Federal pharmacy technicians

The U.S. Air Force, Army, Coast Guard, and Navy offer training programs for pharmacy technicians. The didactic portions of the Air Force, Army, and Navy programs were to be consolidated into 12-week instruction at Fort Sam Houston, Texas, by fall 2010 (Bulato P, U.S. Army, personal communication, 2010 May 26). The Army and Navy will provide 3 additional weeks of advanced training. All of the Department of Defense (DOD) programs will provide experiential training after the initial instruction. The Coast Guard program includes 13 weeks of education, followed by practice experience; these individuals, titled health services technicians, can prescribe medications.24 (It is unclear whether that means all medications.) Currently, in the Air Force, the graduates are titled “pharmacy apprentices”25; in the Army, “pharmacy specialists”26; in the Navy, “pharmacy technicians.”27 In all of the services, under the supervision of pharmacists, pharmacy technicians can dispense medications. In the Army and Navy, they can work independent of a pharmacist. The training of pharmacy technicians is formal and generally includes instruction on anatomy, physiology, physical assessment, and emergency care, in addition to pharmacy matters. The DOD training programs are ASHP accredited. The roles of pharmacy technicians in each service branch are standardized, and the practice settings are not subject to state pharmacy laws and regulations. The competence of military pharmacy technicians and the scope of their practice are often cited as desirable configurations for pharmacy technician utilization in civilian settings.

The Department of Veterans Affairs (VA) does not conduct an accredited pharmacy technician training program but provides instruction in individual hospitals. VA has hired numerous pharmacy technicians after their discharge from the military. Also exempt from state laws and regulations regarding pharmacy technicians, VA hospitals have the potential to expand the scope of practice for pharmacy technicians and standardize their roles across all VA settings. In 2004, VA had 3,260 pharmacy technicians.28 VA requires all pharmacy technicians at grade level GS-6 and above to be PTCB certified.29 Through a partnership with DOD, Web-based training materials are available that can be used across the federal systems.30 The course materials focus on calculations, therapeutics, and pharmacy operations.

Novel roles for pharmacy technicians

Most pharmacy technicians are engaged in drug product acquisition, preparation, dispensing, and distribution under the physical supervision of pharmacists. However, other roles are gradually emerging. Examples of such roles are provided below. ASHP conducted a survey in 2008 to determine the percentage of technicians performing some of these roles. The results of this unpublished survey are provided in parentheses (Scheckelhoff D, ASHP, personal communication, 2010 Apr 30).
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- Enter medication orders into pharmacy department computers to launch the dispensing process (33.7%),
- Obtain and document patients’ medication histories,32
- Administer medications,33
- Conduct benchmarking surveys,34
- Prepare quality-improvement reports,34
- Participate in patient assessment, data collection, and interpretation,34
- Manage vaccination databases,34
- Maintain patient records,35
- Screen electronic medical records to identify patients needing interventions,35
- Select infusion devices for specific patients,36
- Review patient charts to identify medication allergies and clarify medication orders (e.g., resolve misspelled medication names),37
- Purchase and contract for drug products (91.5%),38
- Manage inventory,38
- Manage medication assistance programs,38
- Manage quality-assurance programs,38
- Check the work of other technicians (15.7%),39-43
- Dispense medications remotely with video supervision by pharmacists (i.e., telepharmacy).44 (Currently, telepharmacy is applied to serve remote rural areas, but it may not be limited to rural areas in the future.),44-48
- Reconcile medications,49
- Perform billing tasks (84.1%),
- Manage inventory for controlled substances (47.2%),
- Manage information technology (36.8%),
- Supervise other pharmacy technicians (32.3%),
- Document medication adherence information (Cassano A, PTCB, personal communication, 2010 May 13),
- Work in investigational drug services (Cassano A, PTCB, personal communication, 2010 May 13),
- Manage medication disposal and destruction (Cassano A, PTCB, personal communication, 2010 May 13),
- Compound (Cassano A, PTCB, personal communication, 2010 May 13), and
- Calibrate equipment and monitor sterile work areas for air and surface quality (Cassano A, PTCB, personal communication, 2010 May 13).

The ASHP Long-Range Vision for the Pharmacy Work Force in Hospitals and Health Systems anticipated that some pharmacy technicians will manage medication supply logistics.13 While advocating for new models for health-system pharmacy services and for appropriate regulatory provisions, health-system pharmacists should be careful to preserve the freedom to experiment and innovate with respect to the roles of pharmacy technicians. Specifying roles too precisely could be limiting.

Pharmacy technicians and pharmacy students

Health-system pharmacists bear responsibility for providing experiential education to students enrolled in doctor of pharmacy programs. In a 2008 survey report on the capacity of hospitals to provide experiential education, respondents identified “differentiating students from technicians in scope of practice” as an issue that needs attention.50 Pharmacy departments that utilize pharmacy technicians in a too limited a fashion miss the opportunity to apply pharmacists’ time more directly to patient care and to the experiential education of students who might become future health-system practitioners. Departments that fail to differentiate students and pharmacy technicians appropriately may initially assign students that are novices to health systems to work alongside pharmacy technicians, doing the work of a pharmacy technician. This may “imprint” the students to regard those activities as what health-system pharmacy work is (or aspires to be). What they should experience, instead, is exposure to pharmacists performing direct patient care. Possibly, during introductory experiential education, students’ exposure to the work of pharmacy technicians should be less participatory and more observational. An additional practical reality is that many pharmacy students obtain part-time work in pharmacies during their college years. Their work, during that time, is often the same as that of a pharmacy technician. This is not a problem as long as the students understand that their education is ultimately preparing them for a different role.

State regulations with respect to ratios of pharmacists to students can have a negative impact on the number of students that can be accommodated for experiential education.50 Given the crucial importance of graduating an adequate number of pharmacists, these regulations are counterproductive. Further, it would be ironic for states to allow ratios for pharmacy technicians to exceed ratios for pharmacy students. Fundamentally, health-system pharmacy has long urged regulators to abandon the idea of ratios for pharmacy technicians, noting that the use of formal quality-assurance processes is a better predictor of effectiveness and public safety. Similarly, without stipulating ratios, quality-assurance processes can be applied to the experiential education of students.

Risks associated with expanding the roles of pharmacy technicians in health systems

It seems reasonable to anticipate that health-system pharmacy technicians will, in the future, work rather autonomously in drug distribution within well-documented policies and procedures, similar to the approach used in military settings and in many European countries. There are risks associated with this, but the risks can be reduced via intelligently managing the expansion of technicians’ roles. The following examples illustrate this point:
• In the absence of a formal and ongoing quality-assurance program, expansions in the use of pharmacy technicians could lead to increases in medication errors. An obvious mitigation strategy would be to insist on sound, ongoing quality assurance related to dispensing in all sites where pharmacy technicians’ roles are expanded.

• Regulatory permission to expand the utilization of pharmacy technicians (e.g., allowing them to dispense without a check by a pharmacist or based on a check by another technician) in the absence of a commensurate expansion of pharmacists’ work to more direct patient care would be counterproductive. A mitigating approach would be to allow expanded pharmacy technicians’ roles in pharmacies in which the consistent and predominant work of pharmacists is in direct patient care.

• One could imagine a pharmacy department in which all medication distribution responsibilities are handled by pharmacy technicians, and pharmacists are engaged only in direct patient care. However, it would be detrimental if the pharmacists became so remote from the distribution process that they could not influence its design and performance. An obvious mitigation strategy would be to insist on some continued oversight by pharmacists with respect to the design and performance of medication distribution.

• Complete consistency in medication use across all health systems will not be possible. It should be expected (and encouraged for innovation) that some variability in pharmacy service models will evolve in different hospitals and health systems. The variability could be misunderstood and troublesome to public policymakers, however. That risk could be mitigated by updating the underlying standards of practice for health-system pharmacists and pharmacy technicians in the new models and holding health systems accountable for adherence to those standards.

While the risks described above are hypothetical, actual safety risks exist related to pharmacy technician utilization. Serious errors and harm do occur. Unfortunately, data are not available to determine the extent to which the pharmacy technicians involved in these events were trained in accredited training programs (or any other program) or certified. (However, it should be remembered that errors can occur with individuals of all educational levels.) Regardless, the accumulating events will likely provoke public policymakers to seek changes in the roles and credentials of pharmacy technicians. Further, the changes might be universally applied in all pharmacy settings. Some of the recent serious events that have involved pharmacy technicians include the following:

• In 2000, a retail pharmacy technician in Virginia incorrectly entered into a pharmacy computer the dose of imipramine for a child. The child died.51
• In 2001, a pharmacy technician, who had failed a certification examination (unclear which examination) at a Florida retail chain pharmacy entered a dosage frequency for methadone as “as needed.” The patient died. An undisclosed settlement was reached.52
• In 2002, pharmacists and a pharmacy technician in a Massachusetts hospital were found liable for failure to dilute enalaprilat correctly, which led to neurologic damage in a child. Damages of $7.1 million were awarded.53
• In 2007, a child in an Ohio hospital died from a pharmacy-technician-prepared sodium chloride solution that was too concentrated. An undisclosed settlement was reached. The pharmacist was jailed. The event stimulated a public policy response. Emily’s Law was passed in Ohio, requiring pharmacy technicians to pass an examination approved by the state board of pharmacy before they can dispense drug products.54
• In 2007, a pharmacy-technician-prepared prescription for warfarin was dispensed in a Florida retail chain pharmacy at a dose higher than prescribed. The patient died. Damages of $33 million were awarded.55

A central database of major errors involving pharmacy technicians should be maintained by NABP or the Institute for Safe Medication Practices, including data about the training and certification of pharmacy technicians involved.

Opportunities

Laws and regulations specific to health systems. If the profession of pharmacy does not address the issue of expanding the roles of pharmacy technicians, then, for the safety of patients in health systems, it may be necessary for health-system pharmacy leaders to seek state statutes and regulations about pharmacy technicians that specifically apply to health systems. Several current factors could converge to create an opportunity for just that, including health-system pharmacy’s extensive best practices guidelines, the existence of accredited training and psychometrically sound certification programs, and the use of credentialing and quality-assurance processes in health systems. New models for pharmacy services in health systems could further serve as a catalyst for such statutory and regulatory reforms.

Benefits from standardization of pharmacy technician training and certification. Major opportunities for improvement in the care of health-system patients would be enabled by the redeployment of pharmacists’ time to direct patient care activities. Medication therapy would be made safer and more effective. Health-system pharmacy, as an occupation, would become more attractive to new pharmacy school graduates.

The image of health-system pharmacists would improve as patients, prescribers, and nurses have increased collaborative contact with pharmacists in patient care and
come to appreciate the contributions they make to ensuring safe and effective medication use. To the extent that pharmacy technicians come to be defined in laws and regulations as individuals who have completed standardized accredited training and have been certified by a psychometrically sound standardized process, pharmacy technicians, themselves, would achieve a clearer public identity as a valued occupation. Standardization would assist employers in interpreting the qualifications of pharmacy technician applicants.

Health-system employers can act now. There is much that health-system employers of pharmacy technicians can do directly to foster more rational practices related to this category of workers. Some actions are included in the following professional practice policy of ASHP developed and approved by members in June 2010:26

Minimum Hiring Standards for Pharmacy Technicians

To encourage employers to hire pharmacy technicians who have successfully completed an ASHP-accredited pharmacy technician training program and are certified by the Pharmacy Technician Certification Board (PTCB); further,

To support employment practices that would permit hiring of pharmacy technician trainees only if those individuals (1) are required to both successfully complete an ASHP-accredited pharmacy technician training program and successfully complete PTCB certification within 24 months of employment, and (2) are limited to positions with lesser responsibilities until they successfully complete such training and certification; further,

To encourage employers to require ongoing PTCB certification as a condition of continued employment; further,

To encourage expansion of ASHP-accredited pharmacy technician training programs.

Challenges

A new vision about work roles. New models for pharmacy services in health systems will require an updated vision about the work of both pharmacists and pharmacy technicians in those settings. The existing long-range vision for the pharmacy work force in health systems addresses the education and training of pharmacists and pharmacy technicians, but it does not address the nature of their work in detail.15 Updated task analyses may be needed.

How bad are the problems now? To bolster the case to public policymakers that (1) pharmacists’ time in health systems should be redeployed to direct patient care and that patient care would consequently be made more effective and safe and (2) standardizing the qualifications of pharmacy technicians in those environments will act as an enabler for the redeployment of pharmacists’ time, some ongoing metrics should be planned into practice model transformations.

No comprehensive, systematic documentation of medication-use problems in health systems exists. Unless this is developed, how will health-system pharmacy and policymakers be able to document that revised practice models actually lead to improvements? An ongoing thorough census of medication-use problems across all health systems seems nearly impossible to achieve. However, the problems could be studied at selected sites using a standardized methodology that would enable extrapolation to a national scale.

Formal quality-assurance processes. From a safety perspective, expanding the roles of pharmacy technicians in health systems initially could be worrisome to policymakers and regulators. However, formal quality-assurance processes exist that could provide a high degree of confidence about these expanding roles. A current problem is that many pharmacists and probably most pharmacy technicians do not know how to design, implement, and sustain such quality-assurance processes. This must be addressed in formal education, accredited residency and pharmacy technician training programs, and continuing education. State regulators will not have the resources to assess the design and effectiveness of quality-assurance processes in every individual health-system pharmacy. Therefore, it may be necessary for them to adopt a requirement that each pharmacy (wishing to utilize pharmacy technicians in expanded ways) achieve and sustain certification, such as meeting the requirements of International Organization for Standardization Standard 9001 or those of a Six Sigma program.58 As a condition for expanding the scope of practice for pharmacy technicians, regulatory requirements for education and training about quality-assurance processes for both pharmacists and pharmacy technicians may be necessary.

Conclusion

Clearly, a disconnect exists between fulfilling the medication-use needs of health-system patients and the current qualifications of most pharmacy technicians. As reflected in the appendix, this has been apparent for more than 44 years. While health-system pharmacy has been a long-standing advocate for improving the qualifications of pharmacy technicians and while health-system pharmacists have made significant strides to enhance their qualifications (embracing competency standards for pharmacy technicians, supporting accreditation of training programs, and supporting psychometrically sound certification of pharmacy technicians), pharmacy as a whole has yet to face its responsibility to ensure the competence of pharmacy technicians. This is holding pharmacy back from adequately addressing patients’ clinical medication-use needs, and
it constitutes a threat to the public. Meanwhile, significant patient harm continues to occur, and it is only a matter of time before policymakers act to insist on improvements in the capacity of pharmacy technicians. While pharmacy as a whole may not be ready to address this issue, there is an urgent need (and there may be regulatory opportunity) to do so in health systems. The capacity of health-system pharmacists to address patients’ medication-use needs will be improved by simultaneously improving the capacity of pharmacy technicians.

References
12. Institute for the Certification of Pharmacy Technicians. Pharmacy technician certifi-

Advancing Pharmacy Technicians

Opportunities and challenges


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Appendix—ASHP–AACP Statement on Hospital Pharmacy Technician-Helpers*

January 14, 1966

The increasing complexity of the modern hospital is placing a greater demand on the hospital pharmacist, and his multi-faced role necessitates the most effective utilization of personnel within the pharmacy. There is growing concern about the present shortage of hospital pharmacists and even greater concern about future shortages. Recent legislation will place new demands on hospital pharmacy and will result in a need for increased manpower.

Limitations to the scope of pharmaceutical service being provided in hospitals are due largely to the shortage of personnel. This results in the professional staff performing too many tasks which might appropriately be carried out by non-professional personnel.

If the hospital pharmacist could be freed from performing routine tasks that could be delegated with supervision to trained technician-helpers, he would be able to direct his attention increasingly to subprofessional and technical groups. The work performed by such personnel is now being utilized in most hospitals.

It is believed that in-service training programs can provide the skills essential for hospital pharmacy technician-helpers.

Observations

Introspection into and consideration of this subject by representatives of the American Association of Colleges of Pharmacy and the American Society of Hospital Pharmacists have led to the following observations:

• Previous and current studies indicate the possibility of a grave shortage of professional manpower in the near future.
• The worker classification of hospital pharmacy technician-helper exists in most hospitals today.
• Recent studies stress the dilution of pharmaceutical talents resulting from the performance of duties by pharmacists which may appropriately be assigned to non-professional personnel.
• There may be a need for organized training programs to improve the quality of service and increase the scope of functions of technician-helpers.
• It is believed that in-service training programs can provide the skills essential for hospital pharmacy technician-helpers.

Recommendations

Based on these observations and consistent with the developments of pharmacy practice in hospitals, it is recommended that:

1. The American Society of Hospital Pharmacists assume leadership in the development of in-service training programs for hospital pharmacy technician-helpers to work under the direction of the hospital pharmacist.
2. The American Association of Colleges of Pharmacy provide consultation to the Society in the development of these programs.

*This Statement has been considered and approved, in principle, by the Board of Directors and the Executive Committee, respectively, of the American Society of Hospital Pharmacists and the American Association of Colleges of Pharmacy.