Ohio Society of Health-System Pharmacists
Position Statement on the Advancement of Expanded Roles for Technicians

Under the auspices of the American Society of Health-System Pharmacists (ASHP), a national pharmacy practice summit was held in November 2010 that resulted in the development of the Pharmacy Practice Model Initiative (PPMI). This initiative highlights the imperative for new pharmacy practice models to "ensure the provision of safe, effective, efficient and accountable medication-related care for hospital and health-system patients, taking into account the education and training of pharmacists, the prospect of enhancing the capacity of pharmacy technicians, and the current and future state of technology."[1]

The purpose of this position paper is to support the advancement of expanding roles for technicians in order to optimize pharmacist activities resulting in improved medication use and medication related outcomes for patients. Enhancing the activities of pharmacy technicians will allow for increased service to patients by pharmacists.

Advancement of Expanded Roles for Technicians (Technician-check-technician, other roles)

Beliefs and assumptions from the PPMI regarding advancing the use of pharmacy technicians include: (1) Pharmacy technicians who have appropriate education, training, and credentials could be used much more extensively to free pharmacists from drug distribution activities; (2) Assigning medication distribution tasks to pharmacy technicians would make it possible to redeploy pharmacists' time to drug therapy management activities.[2]   This expansion of pharmacy technician activities is **not** intended to reduce pharmacist positions, but allow for greater pharmacist clinical tasks resulting in improved patient safety and outcomes.   As such, the Ohio Society of Health-System Pharmacists advocates for technician-checking-technician programs (with appropriate quality control measures) in order to permit redirection of pharmacist resources to patient care activities, and further, advocates that the Ohio State Board of Pharmacy approve these programs.

Rationale

Technician-check-technician

A concern surrounding the implementation of a technician-check-technician (tech-check-tech, TCT) program is safety. In order for a TCT program to be successful, there must be certainty behind the ability and mindset of pharmacy technicians. While tech-check-tech programs are a recent concept within the state of Ohio, several other states have developed programs that have reinforced the efficiencies and safety of technician verification. Studies dating back to the late 1970's have observed the ability of technicians to accurately detect dispensing errors. Study sites have ranged from academic to community medical centers with a variety of sizes. Dose verification application has also varied between single unit dose, cart fills, and cassette filling. In every published study looking at the accuracy of unit dose dispensing error detection, pharmacy technicians are able to detect errors at a rate equal to or better than pharmacists (Table A).[3-8] Based on the literature available on technician unit dose verification, safety should not be of major concern, when compared to the current standard.

Table A

Author, Reference	Dose type	Technician Accuracy	Pharmacist Accuracy	Statistical Significance
Ness, 3	Patient drawers	99.91%	99.78%	NS
Ambrose, 4	Cassettes	99.89%	99.52%	P<0.0001
Spooner, 5	Unit dose carts	99.76%	98.91%	NS
Wooler, 6	Cassettes	99.94%	No comparison	
Becker, 7	Unit dose carts	99.13%	98.15%	No analysis
Reed, 8	Envelopes	99.9%	99.8%	P<0.05

Despite the rich history of pharmacy technician verification accuracy, programs that currently utilize a tech-check-tech program implement several safeguards to ensure the effectiveness of participating technicians. All states that allow TCT require a specified training program that technicians must complete before being considered for a verification role. Additionally, in many cases, technicians must prove their proficiency (e.g., 99.8% accuracy for at least 2500 doses) before being empowered with verification responsibilities.[8] Sites also require that proficiency be maintained throughout the technician's employment, and specific procedures are outlined for remediation in the case of deficiency. Beyond training and competency, many states require quality assurance checks by pharmacists (i.e.,' internal audits) to ensure continued accuracy.[9]

While training and quality assurance have become commonplace within policy, and in some cases state law, several other unique practices have also been discussed and/or implemented throughout the United States. Some examples include a requirement that technicians check only those doses dispensed by automation (i.e., tech-check-robot). Another implementation of similar safeguards is to require either the use of bar-coded medication administration (BCMA), or verification by a licensed healthcare professional, as an additional check after the technician verification occurs and prior to medication administration to a patient.[10] In addition to being recommended, it has become standard to implement specified training, competency and quality control policies with any tech-check-tech program. However, if other safeguards or assurances are deemed necessary, additional restrictions or requirements may be considered.

An apprehension regarding the implementation of a tech-check-tech program is the risk of pharmacist employment downsizing. To date, there is no available data to suggest that TCT programs have a direct impact on the employment of pharmacists. On the contrary, three states have enacted legislation to directly counteract the effects of TCT programs on pharmacist utilization. Minnesota specifically states that a tech-check-tech program may not be implemented as a means to reduce pharmacist utilization. Additionally, California and Montana took a similar approach, requiring that TCT only be implemented as a means of pharmacist redeployment.[9] While the risk of pharmacist downsizing is a concern, implementation of rules to counteract such effects may serve as an effective avoidance mechanism.

Other Roles

Several published reports and studies have outlined other tasks successfully performed by pharmacy technicians that allow for increased pharmacist time to focus on clinical interventions and patient care. Medication reconciliation performed by pharmacy technicians has been shown to result in statistically significant reductions in medication discrepancies and decrease the potential for adverse drug events in hospitalized patients.[11,12] Administrative tasks may also be appropriate for delegation to pharmacy technicians including data collection for patient assessment, compilation of quality improvement data, conduction of audits, inventory management, inspection of emergency carts and boxes and replacement of expired medications, billing, maintenance of automated dispensing machines, ordering of medication supply, completion of drug utilization audits, preparation of pharmacy reports, and supervision of other technicians.[13,14] Due to growth in distributive workload, a comprehensive cancer center successfully utilized pharmacy technicians to assume many of the above listed tasks in addition to dispensing responsibilities in order to allow for more pharmacist time addressing clinical consultations. There was minimal technician and pharmacist increase in full-time equivalents (1.5 over 5 years), and interestingly, the number of dispensing errors was dramatically reduced over a three year period from 7 errors per 10,000 doses to less than 1 error per 10,000.[15] Lastly, a survey from 2004 showed high rates of job satisfaction (>67%) among pharmacy technicians with low rates of career withdrawal plans (<7%) in all settings.[16] These findings strongly support that pharmacy technicians are dedicated to the profession of pharmacy and proficient at performing non-clinical duties currently done by pharmacists. This shift in workload responsibilities will inevitably allow for positive expansion of both pharmacist and pharmacy technician roles.

Advancement of Expanded Roles for Pharmacists

Beliefs and assumptions from the PPMI regarding the imperative for new pharmacy practice models include: (1) The opportunity to advance the health and well-being of patients; (2) Future demands on pharmacy to be more efficient with resources and accountable with patient outcomes; (3) Pharmacists assisting in ensuring the cost-effective use of medications and that quality measures are met within hospitals and health-systems. In essence, "All patients should have a right to the care of a pharmacist."[2] By promoting the expanded role for technicians, the Ohio Society of Health-System Pharmacists also advocates the imperative for new pharmacy practice models, and the value to patients that pharmacists offer.

Rationale

Medication complexity continues to increase. Many patients now take multiple medications on a chronic basis. Adverse events caused by medication side effects, drug-drug interactions or drug-disease interactions can be decreased by pharmacists skilled in therapeutic drug monitoring and review. In a 2009 survey, full time pharmacists reported spending an average of 55% of their workday performing tasks related to dispensing and 16% of their workdays devoting time to direct patient care.[17] In addition, "high" or "excessively high" pharmacist workload negatively affected contact time with patients. Despite the significant amount of time spent by pharmacists performing dispensing-related tasks, most medication errors occur at the prescribing and administration phases of the medication-use process.[18] Furthermore, less than one third of hospitalized patients receive basic decentralized clinical pharmacy services such as pharmacokinetic consultations and therapeutic drug monitoring.[19] The expansion of technician roles, including tech-check-tech programs, can improve efficiency in the process to ensure patient safety by reducing the technical functions that pharmacists perform and allowing time for more professional activities related to direct patient care. These opportunities may include: daily appropriateness review of patient profiles, clinical services and patient-centered activities, ordering drug therapy-related patient assessments and laboratory tests, and initiation or adjustment of drug regimens pursuant to physician authorization.

Direct involvement of pharmacists in the care of critically ill patients has been beneficially associated with decreased mortality rate, ICU length of stay, drug charges, and total charges.[20] Clinical and economic outcomes are enhanced by pharmacist involvement in reducing the occurrence of adverse drug events and administration errors, pharmacokinetic monitoring, optimization of fluid, electrolyte, and glycemic control, nutrition management, improved sedation and analgesia therapies to enhance patient comfort, and development and implementation of institution-specific protocols.[20-30] Kopp and colleagues found that the severity of ranked potential adverse drug events intercepted by a pharmacist was significantly greater when the pharmacist was performing various clinical functions compared with order-entry and order-verification activities.[23] These studies indicate that pharmacists can have an important impact on patient outcomes. In spite of this, limited pharmacist time is available to perform these activities in many institutions. In order to ensure that pharmacists are involved in these activities, a more judicial use of pharmacist time is needed. Allowing technicians to participate in checking or other roles that do not require professional knowledge or judgment is one way to more efficiently utilize pharmacist time. The Ohio Society of Health-System Pharmacists supports changes that allow appropriately trained and licensed pharmacy technicians to check doses dispensed by another technician or a robot. These doses dispensed would only be permitted to be checked by a technician after a pharmacist review and verification of the initial order. Therefore, technicians expanded responsibility would only be to ensure that the medication order previously verified by a pharmacist is in fact the medication that is being dispensed.

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Addendum:
OSHP Position Statement on the Definition of a Pharmacy Technician (2001):
A pharmacy technician is a skilled worker* who has been trained to assist in the provision of pharmacy services and is supervised and is responsible to a pharmacist.

The Pharmacy Technician may, under the supervision of a pharmacist:

1. Perform arithmetical calculations required for the usual dosage determinations and solutions preparation.
2. Perform drug purchasing and inventory control functions.
3. Exhibit the ability to perform the usual technician functions associated with contemporary drug distribution systems, including, but not limited to, the following:
    a. Preparing and labeling unit and multiple dose packages;
    b. Preparing, packaging, compounding, or labeling prescription drugs pursuant to medication orders;
    c. Anticipatory compounding;
    d. Cart filling;
    e. Cart checking as allowed or approved by the Board of Pharmacy;
    f. Billing;
    g. Delivery of medications;
    h. Restocking automated dispensing devices.
4. Demonstrate a working knowledge of drug doses, routes of administration, and mechanical, automatic or robotic drug delivery systems.
5. Demonstrate a working knowledge of the procedures and operations related to aseptic compounding and labeling of parenteral admixtures.
6. Perform the essential functions related to computer order entry and the transcribing of orders.
7. Under the supervision of a pharmacist, obtain medication and other required information from patients, customers, and/or healthcare providers.
8. Perform quality assurance/quality control activities under the supervision or direction of a pharmacist.
9. Assist the pharmacist in collection and organization of data for Drug Usage Evaluations, review of clinical screenings and other clinical functions.
10. Perform functions that support automation and computerization in the medication use process.

11. Perform other activities not restricted by regulation.

The Pharmacy Technician may not:
1. Initiate a consult with a patient, his or her agent, or a healthcare professional regarding the clinical
   aspects of a prescription, either prior to or after dispensing. However, a Pharmacy
   Technician may, under the supervision of a pharmacist, impart information to a patient, patient's
   agent or a health-care professional.
2. Interpret clinical data in a patient medication record system or patient chart.
3. Perform any other duty which federal or state law or regulation authorizes only a licensed pharmacist
   to perform.

OSHP supports programs, initiatives, laws, and rules that improve the quality and efficiency of its members and the profession of pharmacy. Technicians who demonstrate commitment to high-quality patient care, and who continuously grow their knowledge base regarding the provision of pharmacy services are inherently greater assets within the pharmacy workforces.

One method of demonstrating such commitment is through certification** programs, such as the Pharmacy Technician Certification Board

As such, OSHP supports the technician certification process, encourages technicians to take the initiative to obtain and maintain certification, and encourages employing health-systems to recognize and reward these certified technicians.

*Skilled worker was not defined, but could be met by the following options: (1) National certification, (2) Associate/formal training, (3) On-site training, (4) Documentation of competency.

**Certification (from ASHP White Paper on Pharmacy Technicians): The process by which a non-governmental agency or association grants recognition to an individual who has met certain predetermined qualifications specified by that agency or association. Within pharmacy, technicians may voluntarily choose to become certified through an examination process administered by the Pharmacy Technician Certification Board.
Adopted by the OSHP House of Delegates   May 11, 2001

OSHP Position Statement on the Regulation and Training of Pharmacy Technicians (2008):
The Ohio Society of Health-System Pharmacists (OSHP) believes that a highly skilled, trained and regulated supportive technical workforce under the supervision, oversight, and responsibility of licensed pharmacists is crucial to pharmacists' ability to provide quality care to the patients they serve. Thus, OSHP supports the concept of state boards of pharmacy regulating the individuals, predominantly referred to as "pharmacy technicians," who assist pharmacists in the preparation and/or dispensing of drug products to their patients, and the collection of drug utilization data necessary to meet those pharmacists' responsibilities.

OSHP supports the registration of pharmacy technicians by state boards of pharmacy. Regulation is defined as making a list or being enrolled in an existing list to help safeguard the public through interstate and intrastate tracking of the technician workforce and preventing individuals with documented problems from serving as pharmacy technicians.

Because "certification" has been defined as the process in which a nongovernmental agency or association grants recognition to an individual who has met certain predetermined qualification specified

by that agency or association, OSHP does not support any state legislative initiatives which seek to grant "certification" as a governmentally imposed credential.

OSHP supports the concept of pharmacy technicians registered by a state board of pharmacy being required to be certified as a "Certified Pharmacy Technician" by an agency accredited by the National Commission for Certifying Agencies.

OSHP supports the concept of pharmacy technicians registered by a state board of pharmacy being required to have completed an educational or training program accredited by a nationally recognized accrediting body or by the board of pharmacy in the state in which they are to be registered.

OSHP does not support the imposing of arbitrary technician/pharmacist ratios in the workplace by law. OSHP can support the imposing of such ratios in the workplace by rule of a board of pharmacy if such rules allow for flexibility on a demonstrated case-by-case basis.
Adopted by the House of Delegates May 9, 2008