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## RESEARCH

## Description and comparison of pharmacy technician training programs in the United States

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## ABSTRACT

**Objective:** To describe pharmacy technician training programs in the United States and to compare pharmacy technician program characteristics between programs with and without a pharmacist on faculty and between programs with different accreditation status.

**Design:** Descriptive, cross-sectional study.

**Setting:** Not applicable.

**Participants:** United States pharmacy technician programs.

**Intervention:** Not applicable.

**Main outcome measures:** Student class size, faculty credentials, coursework components, program length, tuition rates, and admission criteria.

**Results:** Currently, there are more than 698 pharmacy technician programs across 1114 campuses, with complete data available for 216 programs. Programs varied widely in terms of class sizes, faculty credentials, and admission criteria. Programs with pharmacists on faculty were significantly less expensive than were those without pharmacists ( $P = 0.009$ ). Accreditation had no impact on tuition prices.

**Conclusion:** This is the first study of its kind to describe and characterize pharmacy technician training programs. There is relatively little control of technician training by the profession of pharmacy. The quality of these programs in terms of student outcomes is unknown, and it should be explored. Rigorous debate and discussion is needed regarding the future of pharmacy technician roles and the training required for those roles.

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The profession of pharmacy made tremendous advances in education of pharmacists in the 20th century, advancing from apprenticeship training to doctoral level training with a post-doctoral training requirement for many advanced practice positions.<sup>1</sup> As pharmacists moved from dispensing functions to more cognitive and clinical roles, the need arose for “lay-helpers” to assist with distributive functions.<sup>2</sup> In 1981, the state of Michigan began a state-level certification program for pharmacy technicians, and the state of Illinois followed suit in 1988.<sup>3,4</sup> The Pharmacy Technician Certification Board (PTCB) followed from these state certifications and was created in

a joint effort of the American Society of Health-Systems Pharmacists (ASHP), American Pharmacists Association (APhA), Illinois Council of Hospital Pharmacists, and the Michigan Pharmacists Association.<sup>3</sup> PTCB develops, maintains, promotes, and administers a nationally accredited certification and recertification program for pharmacy technicians to enable the most effective support of pharmacists to advance patient safety.<sup>5</sup>

Qualifications and training for pharmacy technicians have mostly been determined by employers. Many technician positions require only a high school diploma and on-the-job training. In 1971, the ASHP House of Delegates passed a resolution to create a mechanism to accredit pharmacy technician training programs in hospitals.<sup>2</sup> ASHP first published training guidelines for pharmacy technicians in 1976 and accredited the first formal technician training program at Thomas Jefferson University Hospital in Philadelphia, Pennsylvania, in 1983.<sup>2,6</sup> As of 2013, 258 pharmacy technician programs were accredited by the ASHP or had accreditation pending.<sup>7</sup>

The Professional Affairs Standing Committee of the American Association of Colleges of Pharmacy published a report on how the importance of pharmacy technician training

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**Key Points****Background:**

- Changes in the pharmacy technician workforce have a significant impact on the profession.
- Standards in pharmacy technician programs need to support the advanced practice roles that pharmacists are fulfilling.
- It is essential that we have a pharmacy technician workforce that meets the high ethical standards held by the profession of pharmacy.

**Findings:**

- Over 698 pharmacy technician programs in the United States were identified in the search. Of the 698, complete data was available from 216 programs and are reported here. Of the 216 programs, 64 (29.6%) were accredited by ASHP and another 17 (7.9%) were accreditation pending, for a total of 81 (37.5%). The remaining 135 (62.5%) programs were either unaccredited or their accreditation status was undetermined. Of the 216 programs a total of 141 (65.3%) of programs were affiliated with PTCB. A total of 53 programs of the 216 were affiliated with PTCB and accredited with ASHP.
- Whether a pharmacist was included in the faculty was ascertained for all programs. Of these, 99 (45.8%) of the programs included at least one pharmacist on the faculty, while 117 (54.2%) did not.
- This is the first study of its kind to describe and characterize the state of pharmacy technician training. The data indicates relatively little control of pharmacy technician training by the profession of pharmacy with only a little more than one-third being accredited or pending.

should be standardized.<sup>8</sup> Well-trained technicians would elevate the professional standing of pharmacists. As pharmacy practice has evolved and pharmacists assume additional clinical roles, there is a need for well-trained pharmacy technicians to assist pharmacists in simple tasks. Therefore, it is crucial that the pharmacy profession be proactive in the training of technicians.

Pharmacy technician programs are now widely available at community colleges and vocational and technical training in part because of the Workforce Investment Act (WIA), which was signed into law by President Bill Clinton in August 1998.<sup>9</sup> The WIA provides vouchers for education and training for adults, displaced workers, and youths through community colleges and vocational training programs approved by a WIA state board. WIA has greatly increased access to community college and vocational training programs, and the federal funding availability has increased the number of these programs.<sup>10</sup> Little is known, however, about the characteristics of pharmacy technician training programs. For example, Federal laws require that certified nurse aides or assistant programs be taught by registered nurses and not by certified nurse

assistants.<sup>11</sup> It is unknown to what extent pharmacists are serving as faculty in pharmacy technician programs especially in pharmacology and pharmacy law courses, which require specialized knowledge and skills among faculty members. Thus, the purpose of this article is to describe pharmacy technician training programs in the United States and to compare program characteristics between accredited and unaccredited programs and between programs with and without pharmacists on the faculty.

**Methods**

The protocol was approved with exempt status by the Institutional Review Board of Cedarville University. Both ASHP and PTCB maintain lists of accredited or contracted, respectively, pharmacy technician programs on their websites,<sup>12,13</sup> and these websites were used to create a list of programs. The Internet was also searched using Google for “pharmacy technician program” to identify any programs that were not listed by ASHP or PTCB. This Internet search was completed between May and August 2012. After the lists of programs were compiled into a spreadsheet, the websites for individual programs were identified and searched to obtain data. If data were not available, then the program directors were contacted by telephone and e-mail.

The following data were extracted for each program: accreditation status, number of students per class, credentials of the faculty, whether coursework in pharmacology or pharmacy law were offered and the credentials of faculty teaching those courses, the length of the program, the tuition prices for the program, whether there was an experiential component to the program, and criteria for admission, including whether drug testing or background check were required. All programs for which accreditation status was undetermined were treated as unaccredited.

*Statistical analyses*

All data were entered in a spreadsheet and checked for accuracy. SPSS version 21.0 (Armonk, NY) was used to analyze the data, with statistical significance set at  $\alpha = 0.05$  for all tests. Descriptive statistics were performed. Comparisons were made between accredited and unaccredited programs, and institutions with and without pharmacists on faculty. All comparison tests were performed using chi-square, Fisher exact tests, or ANOVA, as appropriate.

**Results**

More than 698 pharmacy technician programs in the United States were identified in the search. At the time of data collection, 133 programs were listed on the ASHP website as either accredited (109) or accreditation pending (24; Table 1). There were 533 programs affiliated with PTCB at the time. Of the 698 programs identified through ASHP, PTCB, and Internet search, complete data were available from 216 programs and are reported here. Of these 216 programs, 169 programs were identified using the ASHP or PTCB websites, and 47 programs were identified from Internet search.

Table 1 shows that, of the 216 programs, 64 (29.6%) were accredited by ASHP and an additional 17 (7.9%) had accreditation pending, for a total of 81 (37.5%). The remaining 135

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