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Research paper

Toolkit for US colleges/schools of pharmacy to prepare learners for careers in academia

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ABSTRACT

Introduction: The objective of this article is to provide an academic toolkit for use by colleges/ schools of pharmacy to prepare student pharmacists/residents for academic careers.

Methods: Through the American Association of Colleges of Pharmac (AACP) Section of Pharmacy Practice, the Student Resident Engagement Task Force (SRETF) collated teaching materials used by colleges/schools of pharmacy from a previously reported national survey. The SRETF developed a toolkit for student pharmacists/residents interested in academic pharmacy.

Results: Eighteen institutions provided materials; five provided materials describing didactic coursework; over fifteen provided materials for an academia-focused Advanced Pharmacy Practice Experiences (APPE), while one provided materials for an APPE teaching-research elective. SRETF members created a syllabus template and sample lesson plan by integrating submitted resources. Submissions still desired to complete the toolkit include examples of curricular tracks and certificate programs.

Discussion and conclusions: Pharmacy faculty vacancies still exist in pharmacy education. Engaging student pharmacists/residents about academia pillars of teaching, scholarship and service is critical for the future success of the academy.

Introduction

Faculty recruitment and retention has remained a challenge facing colleges and schools of pharmacy today.¹ Not only does this affect academic pharmacy, but the nursing profession has also faced a shortage of nursing faculty.² Some of the challenges noted in the nursing profession were similar to pharmacy, including a limited pool of graduate-level trained nurses and noncompetitive academic salaries.³ This has affected the numbers of qualified students that healthcare professionals could train, due to limited numbers of faculty members.⁴ White and colleagues⁵ performed a cross-sectional survey of student pharmacists and licensed pharmacists to better understand perceptions of careers in academic pharmacy. In this study, a greater number of students considered

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a career in academia (25%) as compared to a study by Eiland and colleagues,⁶ that found that approximately 6% of respondents were considering an academic pharmacy career. This may have been due to student pharmacists having more exposure to academia in the White study cohort as compared to the other cohorts studied. White and colleagues⁵ also found that a majority of student pharmacists responded that important factors for pursuing a career in academia included meaningful work, mentoring opportunities, student interactions, and flexible hours; however, many student pharmacists remain cautious about choosing an academic career due to the salary, stress, and politics. As prior academic exposure can contribute to student pharmacists considering future careers in academia, it is pertinent that pharmacy programs provide diverse experiences to expose and encourage student pharmacists to consider pharmacy academia.

The American Association of Colleges of Pharmacy (AACP) released a 2016–2019 strategic plan to improve health for all by advancing pharmacy education. This strategic plan includes goals to increase the quantity and quality of pharmacy applicants entering the profession, advancing the profile of pharmacy, and improving the quality of pharmacy education. AACP has a specific goal to encourage training of graduate students, postdoctoral fellows, and new faculty by increasing number of programs (including additional mentorship and certificate programs) within US pharmacy programs to develop successful pharmacy academicians.⁷ New faculty members should have these opportunities for successful careers as academicians.

Although AACP had made strides to encourage careers in academia, there was not a statement within the 2016–2019 strategic plan in regard to exposing pharmacy student pharmacists to careers in academia. Recent pharmacy education literature has illustrated that when student pharmacists are provided opportunities, whether it is through experiential learning, engagement with student organization faculty advisors as well as faculty mentors, these methods improve exposure to academic as a possible career option.^{6,8}

Methods

In response to a previous year's charge by AACP, a subcommittee of the Student Resident Engagement Task Force (SRETF) through the AACP Section of Teachers of Pharmacy Practice set out to develop a model curriculum for student pharmacists interested in academic pharmacy and distribute that model to pharmacy programs. The SRETF distributed a survey to more than 130 AACP member pharmacy programs. The survey results demonstrate that colleges/schools of pharmacy expose their student pharmacists to academic career pathways by utilizing a variety of experiences. Many faculty respondents stated that a majority of student pharmacist exposures to pharmacy academia occurred during an advanced pharmacy practice experience (APPE).⁹ The content of teaching and learning provided to student pharmacists learners within academia-focused coursework also varied with the majority of student pharmacist being exposed to developing learning objectives and some educational theory, while very few learners were exposed to grant writing techniques. Barriers identified in this survey included a lack of time to develop the experiences, a lack of student pharmacists interest, faculty inexperience, and a lack of support from administration.

Additionally, survey respondents were asked to submit examples of academic career preparation practices to be shared in a toolkit to help provide guidance and support in the development and expansion of academic training experiences and provide standardized abilities to exposure student pharmacists to the different aspects of the profession of academic pharmacy. A complete list of respondents who have provided examples is contained within the acknowledgments section of this article. With examples from these submissions, Table 1 compares and contrasts these types and elements of academic preparation.

Results

Skills necessary for an academic career

Student pharmacists who aspire to teach may find that the intensity of their curriculum leaves them little time to acquire skills necessary for a career in academia. Pharmacy programs that can offer multiple options for exposure to careers in academia, may ultimately reach more student pharmacists and thus increase the numbers of student pharmacists who subsequently move into educator roles. Educator preparation programs within colleges/schools of pharmacy may take the form of required didactic courses, elective courses, stand-alone lectures, longitudinal tracks, pharmacy practice experiences, structured research tracks, and independent study. Of these, nearly ubiquitous is offering academia-focused APPEs.⁹ Improving student pharmacist awareness of responsibilities for academics may aid in identifying current learners with an aptitude and interest for a future career in academia.⁹

Pedagogical content knowledge focused on pharmacy education should include an introduction to designing and implementing interactive coursework that effectively uses active learning, as well as methods of learner assessment (formative and/or summative as applicable).¹⁰ This seems likely as requisite content for *any* training program to prepare pharmacy students for future teaching roles. The expected learning setting (whether large classroom, small group, recitation, laboratory, or experiential) will dictate the way essential educator skills should be applied. For some pharmacy education coursework, initial instruction can be delivered in-person, virtually, or a blend between the two. Accordingly, use of instructional technology intended to enhance teaching, learning, or assessment is another important content topic to prepare educators. As today's healthcare team members collaborate using their profession-specific technical content along with their professional attitudes and behaviors, preparedness for an academic career must also include instruction to guide maturation in learners' professional characteristics. Additionally, resources to build advising and mentoring oversight should also be provided. Pedagogical training and development is necessary as it is very common to have non-pharmacist educators transitioning into an academic position. While learning how to teach effectively is paramount in academic preparedness programming, future educators also need to appreciate faculty members' service and scholarship responsibilities.

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