

A Precepting-Focused Advanced Pharmacy Practice Experience in Academia

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ABSTRACT

Description of the Opportunity: Traditional advanced pharmacy practice experiences (APPEs) in academia provide students exposure to job responsibilities and expectations of pharmacy faculty members. The purpose of this manuscript is to describe the development and structure of a precepting-focused academic APPE, APPE student perceptions of the experience, and introductory pharmacy practice experience (IPPE) student perceptions of being precepted by APPE students.

Innovation: An academic pharmacy APPE was developed to emphasize preceptor development in addition to traditional academic pharmacy topics and responsibilities. Pre- and post-experience surveys were completed by APPE students to collect perceptions of academic pharmacy and precepting. During the experience, APPE students, under the supervision of faculty, precepted IPPE students, who were given the opportunity to assess the APPE student's precepting ability by completing a survey following the experience. Descriptive statistics were used to analyze the results.

Findings: Nine students completed the academic APPE and the corresponding pre- and post-surveys. All students indicated the rotation increased their understanding of academia, and the majority (7/9) indicated an increased confidence in their precepting ability. Eighty-five IPPE students evaluated the APPE students, and the majority (78%) rated the quality of instruction from APPE students as "similar" to faculty instruction.

Conclusion: The structure of this experience allowed APPE students to gain exposure to academia and increase confidence in precepting, while facilitating the delivery of the IPPE program. Results indicate offering an academic APPE with an emphasis on experiential teaching is a potential strategy to prepare future pharmacy preceptors.

Keywords: advanced pharmacy practice experience (APPE), introductory pharmacy practice experience (IPPE), academic pharmacy, precepting, layered learning

DESCRIPTION OF THE OPPORTUNITY

Successful delivery of the doctor of pharmacy (PharmD) curriculum involves the recruitment and retention of qualified faculty and preceptors. The Accreditation Council for Pharmacy Education (ACPE) requires colleges of pharmacy to have a "sufficient number of preceptors" who "have professional credentials and expertise commensurate with their responsibilities to the professional program."¹ Similar to the need for more preceptors, the increased number of pharmacy schools in the United States requires sufficient qualified faculty to deliver the didactic and experiential curricula. The American Association of Colleges of Pharmacy (AACP) recognizes the need for promoting interest in academia as a career, suggesting advanced pharmacy practice experiences (APPEs) that emphasize academic skill development as one potential strategy to address faculty workforce demands.² Academic APPEs have been suggested as a strategy for developing precepting skills in pharmacy students, with the goal of graduates being "preceptor-ready."³

Previously described academic APPEs have traditionally emphasized non-experiential teaching opportunities such as participation in lecture delivery, facilitating skills lab and recitation, college committees, topic discussions, and academic exercises (i.e., writing a teaching philosophy or learning objectives).⁴⁻⁸ While many pharmacy faculty maintain practice sites as part of their positions, this component has traditionally not been included in most academic APPEs described in the literature.⁴⁻⁸

Although few graduates pursue careers in academia, many will have precepting opportunities. Therefore, structuring an academic APPE to focus on precepting may provide students an applicable skillset for any career path. To meet the increased need for faculty and preceptors, the University of Georgia (UGA) College of Pharmacy (COP) developed a precepting-focused academic APPE.

INNOVATION

Pinelli and colleagues have discussed the concept of the layered learning practice model (LLPM) in experiential education.⁹ With the LLPM, a pharmacy team is responsible for the provision of patient care, with members typically including an attending pharmacist, PGY1 and PGY2 residents, and APPE students.⁹ In this model, each team member is responsible for precepting less experienced learners. Aspects of the LLPM are similar to the near-peer teaching model, in which more advanced trainees teach more junior students.¹⁰

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When developing the academic APPE at UGA, the concepts of the LLPM and near-peer teaching model were applied to incorporate precepting responsibilities. A core responsibility for APPE students completing this experience is to provide instruction and supervision to second-year (P2) and third-year (P3) introductory pharmacy practice experience (IPPE) students. As student preceptors, academic APPE students assisted IPPE students in real-world application of the patient care process and provided individualized feedback. This experience also includes traditional academic APPE activities, such as topic discussions, journal clubs, committee meetings, and developing and delivering skills laboratories. The purpose of this paper is to describe the development and structure of the UGA COP academic APPE, APPE student perceptions of the experience, and IPPE student perceptions of being precepted by APPE students.

Experiential Program Overview

The UGA COP has a four-year PharmD program, with the third year delivered on four campuses and the fourth year comprised of eight, five-week APPEs. The IPPE curriculum is delivered throughout the first three years of the PharmD program through a combination of blocks and experiences integrated into didactic and skills courses. Of note, the precepting opportunities available during the academic APPE described in this paper focus on Athens-based integrated IPPEs. The integrated experiences consist of simulations, standardized patients, and direct patient care activities. During the P1 year, IPPEs include simulations, community-focused standardized patients, and a 3-week Community IPPE Block. During the P2 year, students are scheduled in small groups of four to complete ambulatory care-focused direct patient care IPPEs during the fall and spring semesters. The P2 Ambulatory Care IPPE provides students eight hours of experience divided into three sessions. During this IPPE, students work with a faculty preceptor at a local outpatient clinic, primarily developing patient education and basic patient assessment skills. In the summer after the P2 year, students complete a 3-week Health System IPPE Block, which is focused on inpatient pharmacy operations. Following this block, Athens-based students complete the P3 Health System Pharmacy Practice IPPE at a local 185-bed community hospital, which further builds the students' skillset in providing direct patient care services under the guidance of a faculty preceptor. P3 students gain 18 hours of inpatient experience during this IPPE (three 3-hour sessions per semester in groups of approximately six). The P2 Ambulatory Care IPPE and P3 Health System Pharmacy Practice IPPE are precepted by COP faculty and graded on a Pass-Fail scale.

Development of a Precepting-Focused Academic APPE

For over a decade, academic APPEs have been offered as elective rotations at UGA. Over time, the experience has evolved with changes in the PharmD curriculum. Efforts by experiential faculty to enhance IPPEs resulted in an increased

need for preceptors to facilitate program experiences, allowing for more individualized student instruction. While traditional academic pharmacy activities are included, the APPE has evolved to emphasize preceptor development.

Academic APPE Structure

The rotation consists of precepting responsibilities at experiential sites, as well as non-experiential teaching opportunities and other traditional academic APPE responsibilities at the college. While academic APPE students assist with nearly all components of the IPPE program, their primary precepting responsibilities are in the P2 Ambulatory Care and P3 Health System Pharmacy Practice IPPE. Two faculty with outpatient backgrounds precept the P2 Ambulatory Care IPPE, and two faculty with inpatient backgrounds precept the P3 Health System Pharmacy Practice IPPE. These four faculty are involved with co-precepting the academic APPE, and there are no more than two APPE students completing the experience per rotation block. Approximately half of the APPE is dedicated to IPPE precepting responsibilities.

To prepare for precepting responsibilities, APPE students are given access to the online course learning management system website, which contains resources applicable to the experience (e.g., patient assessment technique videos), relevant clinical guidelines, and activity outlines for IPPEs. At the beginning of the rotation, students receive training at the site, where faculty model their own precepting style and clarify expectations of the student's role as a preceptor. Faculty also observe APPE student interactions with IPPE students to assess the APPE student's readiness to precept and their overall precepting ability. Factors considered when evaluating readiness to precept include APPE student knowledge and skills relevant to the IPPE, communication with other healthcare professionals and patients, and ability to provide feedback to IPPE students. The length of training depends on the student's comfort, knowledge, and pharmacy experience relevant to the IPPE; for example, students at the beginning of their APPE year may require multiple days of training, while more experienced students are able to assume precepting responsibilities earlier.

Students are given more autonomy as the rotation progresses and as students demonstrate adequate precepting ability based on faculty observation.

The typical IPPE:APPE student ratio is 2:1. APPE precepting responsibilities include assisting IPPE students with patient workups, supervising patient interactions and physical assessments, documenting patient care activities, and providing feedback during patient presentations on rounds. Consistent with the LLPM, this approach allows faculty preceptors to extend their ability to provide more individualized attention and feedback to IPPE students. In addition to facilitating IPPE student learning, the academic APPE students also assist faculty with providing feedback and

completing evaluations on student performance, with faculty serving as preceptor of record.

Assessment of Student Perceptions and Student Precepting Ability

During the 2016-2017 academic year, an 8-item pre-experience survey was administered to academic APPE students prior to the first day of the rotation to collect demographics and assess baseline interest and perceptions on a 5-point scale. A post-survey was administered at the end of the academic year. The 10-item post-survey also included questions about the APPE's impact on their understanding and interest in pursuing a career in academia or becoming a preceptor.

An optional, anonymous survey was administered at the end of the academic year to IPPE students who were precepted by APPE students. This survey asked respondents to compare APPE student instruction to faculty instruction, indicate their comfort level working with the APPE student, and rate the effectiveness of the APPE student's precepting ability.

All surveys and assessment procedures were approved by the UGA Institutional Review Board. Descriptive statistics were used to analyze results.

FINDINGS

APPE Student Perceptions

Nine APPE students completed the academic pharmacy APPE and the corresponding pre- and post- surveys. The majority (7, 78%) of respondents were age 22-26 and were employed by a community pharmacy at the time of the study. Eight students (89%) ranked the academic pharmacy rotation as one of their elective preferences. All students reported the rotation increased their understanding of academic pharmacy, and seven (7, 78%) students indicated an increased interest in academia. Survey responses indicate an improvement in student perceptions for the majority of items rated (Table 1).

APPE Student Precepting Ability

The IPPE Student Evaluation of APPE Student-Preceptors was sent to 113 P2 and P3 students who were directly precepted by APPE students. A total of 85 students completed the survey (P2 = 56, P3 = 29, response rate = 75%). IPPE student perceptions of APPE students serving as preceptors were highly positive, as summarized in Table 2. Of note, the majority of IPPE students (78%) rated the quality of instruction provided by APPE students as "similar" to faculty instruction, with only 8% rating quality as "worse."

CRITICAL ANALYSIS

According to IPPE students, APPE students enhanced their understanding of material and expectations for the fourth year (83% and 73% agreed or strongly agreed, respectively). They also created a comfortable learning environment, with most IPPE students indicating they were equally or more comfortable

working with APPE students compared to faculty (58% and 37%, respectively). Only 6% of IPPE students reported feeling less comfortable working with APPE students.

Students who completed the academic APPE demonstrated a perceived increased understanding of both academic pharmacy and responsibilities of pharmacy preceptors (pre-mean to post-mean increase from 2.7 to 4.7 and 3.1 to 4.4 on a 5-point scale, respectively). APPE student views on the value of preceptors in pharmacy education were high at baseline and did not change following the rotation. Similarly, APPE student consideration of academia as a career and plans to serve as a preceptor were consistent following the experience. These results may have been impacted by selection bias, since almost all APPE students ranked the experience as a desired elective. APPE student confidence in precepting ability improved, with the majority reporting increased confidence (pre-mean to post-mean increase of 3.3 to 4.1 on a 5-point scale). In addition, the majority of P2 and P3 students reported receiving quality instruction and feeling comfortable with the APPE student. Literature describing LLPM in pharmacy practice has traditionally focused on the use of residents to educate either other residents or APPE students.⁹ These results suggest that there may be additional opportunities to incorporate layered learning into IPPEs.

There were several limitations to this study. APPE assessment instruments relied on students' self-reported data and therefore did not provide insight into changes in precepting ability. In addition, APPE students were not formally assessed on their precepting ability prior to working with IPPE students. Instead, faculty used informal strategies to ensure students were prepared to precept different experiences. These limitations may serve as opportunities for future study in pharmacy education.

Numerous benefits have been identified as a result of this academic APPE, creating a mutually beneficial experience for students, faculty, the college, and experiential sites. With the structure described in this paper, APPE students serve as pharmacist and preceptor extenders for faculty, playing a significant role in providing pharmacy care services and the delivery of the college's IPPE program. Study results also indicate providing fourth year students opportunities to develop precepting skills is a potential strategy to prepare future pharmacy preceptors.

NEXT STEPS

The UGA COP has designed and maintained an academic APPE that has precepting as a core component. The model described in this paper may serve as a framework for other colleges that want to incorporate preceptor development opportunities into academic APPEs. To continue to enhance this experience, faculty plan to incorporate self-study modules on academic pharmacy precepting concepts, topic discussions on precepting

strategies, and more formal readiness-to-precept assessments to promote rotation consistency.

Conflicts of Interest: None

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Table 1. APPE Student Perceptions of Academic Pharmacy and Precepting (N=9)^a

Survey Item	Pre-mean	Post-mean
Views on Academic Pharmacy		
I have considered a career in academic pharmacy.	4	4
I understand career opportunities in academic pharmacy.	2.8	4.4
I understand job responsibilities for pharmacy school faculty members.	2.7	4.7
I have been exposed to an adequate number of opportunities to learn about academic pharmacy as a career option.	2.4	4.4
Views on Becoming a Preceptor		
I understand the various responsibilities involved with precepting students.	3.1	4.4
Preceptors are valuable in the education of pharmacy students.	4.8	4.8
I plan to serve as a preceptor for pharmacy students in my future career.	4.4	4.3
I believe my training and education has prepared me to precept students.	3.3	4.1

^a1= strongly disagree, 2= somewhat disagree, 3=neither agree nor disagree, 4=somewhat agree, 5=strongly agree
APPE=Advanced pharmacy practice experience

Table 2. Second- and Third-Year Student Perceptions of APPE Student-Preceptor (N=85)

The academic APPE student who precepted my IPPE during this year enhanced my ...	Strongly Disagree n (%)	Disagree n (%)	Neither n (%)	Agree n (%)	Strongly Agree n (%)
Understanding of the material ^a	0 (0%)	1 (1%)	13 (16%)	48 (57%)	22 (26%)
Understanding of pharmacy practice in this setting	0 (0%)	1 (1%)	14 (17%)	45 (53%)	25 (29%)
Confidence in providing a pharmacy service in the practice setting	0 (0%)	2 (2%)	17 (20%)	38 (45%)	28 (33%)
Understanding of what to expect during APPE year	0 (0%)	2 (2%)	21 (25%)	36 (42%)	26 (31%)

^a84 responses for this item, 85 for all others
APPE=Advanced pharmacy practice experience