RESEARCH

A Qualitative Study Designed to Build an Experiential Education Curriculum for Practice-Ready Community Pharmacy-Bound Students

Teresa A. O’Sullivan, PharmD, Erin Sy, BS, Jennifer Bacci, PharmD, MPH

University of Washington School of Pharmacy, Seattle, Washington

Submitted August 31, 2016; accepted November 18, 2016; published December 2017.

Objective. To design an experiential education curriculum that sequentially and deliberately prepares community pharmacy-bound graduates to practice at the level of the care provider and display the skills needed to be a pharmacist-in-charge.

Methods. Semi-structured interviews were conducted with community pharmacy stakeholders. Transcriptions from the interviews were analyzed to identify common themes in needed community pharmacy training for core and elective advanced pharmacy practice experiences (APPEs). The themes were used to distinguish key elements of a community pharmacy experiential education curriculum that would meet the project objective.

Results. Forty-two individuals were interviewed: 11 were interviewed individually and 31 in focus groups, with each group comprising two to six individuals. There were 11 focus groups. Theme analysis allowed differentiation of activities and performance levels for the community pharmacy introductory pharmacy practice experience (IPPE) and the core APPE as well as the goal of the core APPE for all program graduates. Participants identified two important elective APPEs for students planning to practice in community pharmacy after graduation: an advanced patient care experience and a management experience. Participants emphasized the importance of sequencing the core and advanced elective APPEs so that the advanced electives could build upon the skills demonstrated in the core APPE. Participants identified knowledge, skills, and attitudes needed for practice-readiness upon graduation.

Conclusion. The identified experiential education curriculum for students planning to practice in the community pharmacy setting upon graduation will prepare them to provide care to complex community-dwelling patients and function as a pharmacist-in-charge in this setting.

Keywords: experiential learning, qualitative research, curricular assessment

INTRODUCTION

Student readiness for practice upon graduation, although not a new concern, has generated much recent commentary.1-6 Practice readiness is a concept implicit in the 2013 Center for Advancement of Pharmacy Education (CAPE) educational outcomes,7 and a specifically-stated requirement in of the Accreditation Council for Pharmacy Education (ACPE) Standards 2016, where Standard 24 states that schools or colleges must develop, resource, and implement a plan to assess attainment of educational outcomes to ensure that graduates are prepared to enter practice.8 In their report to the American Association of Colleges of Pharmacy (AACP), members of the 2014-2015 Professional Affairs Committee proposed that AACP encourage its member schools and colleges to define and inform the practice readiness of professional pharmacy program graduates.9

The majority of student pharmacists will enter practice as community pharmacists upon graduation.10,11 They will be expected to provide services well beyond dispensing, including medication management and reconciliation, educational and behavioral counseling, and preventive health care services.12 Patient care, public health, communication, dispensing systems management, business management, pharmacy law, and leadership have all been identified as entry-level competencies for community pharmacists.13 Designing an experiential education program for community pharmacy-bound students through which they can integrate and apply these required competencies will be critical to ensuring their readiness upon graduation to practice in this rapidly advancing care setting.

The ACPE Standards 2016 require a community pharmacy introductory pharmacy practice experience (IPPE), a “core” community pharmacy advanced pharmacy practice experience (APPE), and at least one elective APPE.14 These APPEs are the primary vehicles for achieving practice readiness. A study of 18 APPEs in the IPPE, core APPE, and advanced elective APPE for 174 community pharmacy graduates in 1979 indicated that 80% of the graduates perceived the APPEs as capable of preparing them to practice as community pharmacists; however, there was a mismatch between the perceptions and actual experiences of the graduates and the requirements of the graduates’ future employers.15 These results suggested that the APPEs needed to be revised to better meet the needs of entry-level community pharmacists.

CORRESPONDING AUTHOR: Teresa O’Sullivan, University of Washington School of Pharmacy, Box 357631, Office of Professional Pharmacy Education, South Campus Center, Suite 244, 1601 NE Columbia Road, Seattle, WA 98195. Tel: 206-543-3324. Fax: 206-221-2689. E-mail: terrio@uw.edu
January 1, 2017 for community pharmacists. Zarembski and colleagues in a 2005 publication identified activities in which students can participate in a typical core community pharmacy APPE; however, these activities were based on a 2002 survey and may not reflect the current and emerging state of community pharmacy practice. Devine and Darbishire noted changes in IPPE practice activities between 2008 and 2013, including activities in community pharmacies, but this study was not designed to differentiate IPPE from APPE activities. There is currently no consensus about how community pharmacy IPPE and APPE activities can and should differ, nor are there evidence-based guidelines for how core and elective APPE community pharmacy experiences should differ. It would be useful to distinguish current skills in community pharmacy practice for which all pharmacy graduates should demonstrate competency and determine additional skills needed by students who plan to enter practice in this setting upon graduation.

This study describes a quality improvement investigation conducted at the University of Washington School of Pharmacy (UWSOP) to design an experiential education curriculum that would produce practice-ready community pharmacists upon graduation. This effort was undertaken in response to expanding services provided by community pharmacists nationally and new legislation in Washington state requiring pharmacists to be included as medical providers in health insurance provider networks beginning January 1, 2017 for community pharmacists. The aim of the project was to design an experiential education curriculum that would prepare the graduating community pharmacy-bound student to function as a care provider. Other goals of this project were to differentiate the community pharmacy introductory, core advanced, and advanced elective student learning experiences and identify elements of student pharmacist community pharmacy APPE readiness. These findings could assist other academic institutions in designing an experiential education curriculum for students planning to enter a specific practice setting upon graduation.

METHODS

This study was a qualitative analysis of community pharmacy stakeholders’ opinions using key informant interviews and focus groups. Purposive sampling was used with pharmacy managers, including district managers; staff pharmacists from independent, regional, and national chain pharmacies; executives from the state’s professional pharmacy organization; UWSOP faculty members with a background in or training of community pharmacy-bound students; and community pharmacy-bound students contacted by email and invited to participate. A database of current UWSOP preceptors was used to identify individuals practicing in varying roles and at different community pharmacy sites. The study protocol was reviewed by a University of Washington Human Subjects Division subcommittee and qualified for exemption.

An interview guide was designed to obtain stakeholders’ answers to three questions: the characteristics required in future community pharmacist providers; the skills that student pharmacists should acquire in a core community pharmacy APPE versus an advanced community pharmacy elective APPE; and the essential knowledge, skills, and attitudes needed by students prior to starting their APPEs. In the original interview guide, a fourth question asked participants how community pharmacy IPPE activities should differ from community pharmacy APPEs. It became apparent after the first few interviews that most stakeholders were familiar with either IPPEs or APPEs, but not both. The question was subsequently modified to assess stakeholders’ perspectives on the degree of structure needed for APPEs versus IPPEs. All four interview questions were scripted so they would be phrased the same way to every participant, but the interviewer was allowed to ask unscripted follow-up questions to clarify or expand a point made by participants in their answer to the scripted questions. The interview guide was piloted with a small number of faculty members to test the phrasing and flow of the questions.

Semi-structured key informant interviews and focus groups were conducted with the community pharmacy stakeholders by the primary investigator between August and November 2015. All interviews and focus groups were conducted in private locations at community pharmacies, regional management offices, or locations convenient to the participants. Interviews ranged from 15 to 50 minutes in duration and were audio-recorded with the participants’ consent. Individual and focus group interviews continued until saturation was reached, with saturation defined as no new information detected in two sequential interviews and focus groups.

All audio-recorded interviews and focus groups were transcribed and de-identified by a research team member. The transcripts were analyzed to identify common themes in needed community pharmacy training at core and advanced community pharmacy APPEs. The authors independently read and initially coded words and phrases in the transcripts using inductive coding strategies in ATLAS.ti, version 7.5.10 (ATLAS.ti GmbH, Berlin, Germany). Two authors met repeatedly to compare code titles and descriptions, reconcile differences, and improve code definitions, then began to merge codes into larger

37
thematic areas. Comparison of differential grouping of the thematic areas allowed differences between core and elective APPEs to emerge, and all authors agreed on the final descriptions for these experiences.

RESULTS

Forty-two individuals were interviewed. Eleven individuals were pharmacy managers and participated in in-depth interviews. Thirty-one individuals participated in one of 11 focus groups, with group size ranging between two and six individuals. Thirty-nine participants were licensed pharmacists and three participants were students completing APPEs and planning to enter community pharmacy practice upon graduation. The study participants are further described in Table 1.

Competence is the habitual use of knowledge, technical skills such as communication and clinical reasoning, and attitudes apparent from expressed emotions and values that are demonstrated during daily practice for the benefit of the patient. Participants described two important advanced elective community pharmacy APPEs for community pharmacy-bound students: an advanced patient care rotation and a pharmacy management rotation. Participants identified an advanced patient care rotation as an individualized, clinically focused learning experience that allows students the opportunity to further refine their patient care skills by focusing on specific disease states, patient populations, and patient care services of interest. The advanced patient care opportunity was also an opportunity for students to learn about implementation and evaluation of patient care services. A pharmacy management elective was described as training students to successfully run a pharmacy by focusing on leadership, legal, operational, and financial aspects of community pharmacy practice. Participants also emphasized the importance of APPE timing for community pharmacy-bound students. They felt strongly that schools and colleges of pharmacy should schedule community pharmacy-bound students’ rotations so their core APPE precedes any advanced elective experience, thereby allowing the advanced experience to build upon the basic skills of being a community pharmacist provider. The community pharmacy IPPE, core APPE and advanced electives are shown in Table 2.

Participants felt students should have a strong foundation in eight knowledge, four skills, and two behavioral competencies from their didactic curriculum and IPPE before entering a core community pharmacy APPE. Participants wanted students to enter their core APPE with knowledge of the pharmacist’s patient care process, medications, evidence-based guidelines, drug information resources, immunization schedules, pharmaceutical calculations, insurance plans, and state and federal laws regulating community pharmacy practice. Students should also have a beginning proficiency in four key skills: direct patient care, communication, critical thinking, and dispensing. Participants further
outlined that students should be able to interview a patient or caregiver and identify drug-related problems using effective communication strategies and fill a prescription upon starting their core APPE. The most frequent behaviors participants described as required for entering a core APPE were a positive attitude and awareness of the practice environment. These foundational abilities are explained in Table 3.
Table 2. Differentiating IPPE, Core APPE, and Advanced Elective Community Pharmacy Experiences

| Purpose | Illustrative Quote |
|---------|--------------------|
| **Community Pharmacy IPPE** | The purpose of a community pharmacy IPPE is to perform at the level of a community pharmacy intern by the end of the experience. The student should be able to perform any single step in the dispensing process (except final check), competently counsel patients on commonly-dispensed prescription drugs, collect and assess a patient history in order to appropriately recommend self-care (OTC drug classes and non-drug therapy), administer immunizations (where allowed by law), apply the laws governing the acquisition and dispensing of medications, perform accurate calculations, consult reliable drug and disease state information resources, and display professional and ethical behavior. “I’ll treat them almost the same as an APPE [student], but with a lot more guidance. I’ll put them through all the [dispensing] stations because this is their first experience for most of them in a retail setting. So I’ll put them through all the stations at the very end and I’ll make them counsel. I say, ‘You’re an intern. You have intern on your license. You have to act like an intern.’ [They are] very nervous so we guide them and hold their hand pretty much throughout the entire process.” (CP3) |
| **Core Community Pharmacy APPE** | The purpose of a core community pharmacy APPE is to have the student operating at the level of a staff pharmacist by the end of the experience. The preceptor should feel comfortable that if he or she had to leave the pharmacy for a couple of hours, the vital work would get done. The student should be able to oversee the dispensing process (including the final check), competently counsel patients on any prescription medication, recommend appropriate OTC products for patients, assess patient immunization needs as well as administer and document immunizations, apply the laws governing pharmacy operations including performing a self-inspection (where possible), incorporate primary literature and treatment guidelines into treatment decision-making and patient education, and display professional and ethical behavior. “The [core APPE] should be, from point A to point Z in processing, what pharmacy does. Refill requests. Just the nuts and bolts of the basics. What a good pharmacist can do.” (FG4-DM3) “And the APPE, I would expect my student to truly function as a pharmacist as best to their license ability. And it may not happen on day 1, but I would hope to see it at the end of the rotation, that they truly feel confident, that they could do that job exiting school.” (FG5-DM2) “So at a core pharmacy, my goal when students come is to have them by their fourth week, be able to be the pharmacist. I don’t have to be there. So they do all the checking. They do all the counseling. They do pretty much everything.” (CP9) |
| **Elective Community Pharmacy APPE** | The purpose of an elective community pharmacy APPE is to acquire advanced skills in a specific area of community pharmacy practice. “And the advanced should be what a great pharmacist can do. Leading a team, performance management. Having difficult conversations. Pulling all those different pieces because what we do isn’t just A to Z. There’s all sorts of spaghetti twists in the middle and the spaghetti twists should be the second one.” (FG4-DM3) “I think with the advanced one really is paying more attention to the national trend and being able to bring out innovating practices whereas core APPE is doing the standard.” (FG2-DM3) |
| **Elective Community Pharmacy APPE in Advanced Patient Care** | The purpose of an elective community pharmacy APPE in advanced patient care is to give students an opportunity to focus on disease states, patient populations, and/or patient care services that are complex and challenging. Advanced patient care APPEs should include use of collaborative drug therapy agreements to design or optimize patient medication therapy. “For the advanced, that’s when I think you get into more of the nuances of comprehensive disease state management. Not just looking at the basics of the MTM—what medications are they on and there’s no duplications and no formulary changes—but is this the best therapy for the patient...I think that spending a lot of time interviewing the patient and doing that full work-up, and then writing a letter back to the physician or a summary document: I think that’s kind of an advanced skill, above and beyond the MTM.” (FG11-PO1) |

(Continued)
In order to more clearly distinguish between a community pharmacy IPPE, core APPE, and elective advanced APPE, participant descriptions were used to develop examples of how performance expectations might differ and build across the community pharmacy experiential education continuum. The performance expectation examples are outlined in Table 4.

DISCUSSION

Previous commentaries have identified individual facets of a community pharmacy experiential education curriculum, but only a few studies have examined construction of a longitudinal program in this setting. Kassam and colleagues demonstrated that students with an enhanced orientation versus a traditional orientation made more patient interventions during an 8-week experience at a single community pharmacy site compared to two 4-week experiences at different sites. Rodis and colleagues created the Partner for Promotion program, where students were paired with a community pharmacy partner with whom they completed a core community pharmacy APPE and then spent a 10-month longitudinal APPE setting up a new pharmacy service; 12 pharmacies set up new patient care services in this 2-year project. The Partner for Promotion project has subsequently been adopted by five other colleges of pharmacy. Although these evidence-based efforts were a welcome addition to the literature, a holistic approach to design an experiential

Table 2. (Continued)

| Purpose | Illustrative Quote |
|---------|--------------------|
| Elective Community Pharmacy APPE in Pharmacy Management | “...if you’re going in as an elective, you can kind of more self-directed do a project. I’ve had people call around to schools and set up flu shot clinics or do a presentation kind of go into community and be like, ‘hey, we’re doing a talk on this.’ And do a presentation at the third week or go into the senior centers and see if they want to do medication reviews for the seniors. I think those are great things to do as an elective because you can kind of go outside beyond just like the day-to-day pharmacy operations and do things that make community pharmacy fun.” (CP9) |
| | “...you have to do reviews, inventory control, making sure things get along in the schedule so if a person is really interested in doing that, they can do that in the advanced APPE...When I graduated pharmacy school, I became a manager right off the bat and it was kind of like a miraculous thing. But a lot of these things that I learned how to effectively deal with is [through] trial and error rather than somebody [teaching] me.” (CP2) |
| | “I think that’s the advanced one where they get to delve more into management...I think business is missing in a lot of schools’ curriculums in regards to teaching students reality of life, in regards to money. If you are constantly losing money, you’re not going to have a pharmacy to practice in so you have to be very strategic in how you use your manpower, your hours, your time, your money.” (CP3) |
| | “Although it’s not clinical, there’s a huge need for leadership training and development of future managers because it’s a whole different skill set – just because someone makes a really good staff pharmacist and even a clinical pharmacist does not necessarily mean they’re going to make a good pharmacy manager.” (CP7) |

Abbreviations: APPE=advanced pharmacy practice experience; CP=community pharmacist; DM=district manager; FG=focus group; IPPE=introductory pharmacy practice experience; MTM=medication therapy management; OTC=over-the-counter PO=professional organization leader
## Table 3. Abilities Needed to Begin a Core Community Pharmacy APPE

| Ability                     | Illustrative Quote                                                                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| **Knowledge**               |                                                                                                                                                     |
| Pharmacist’s patient care process Medications Evidence-based medicine/ guidelines Drug information resources Immunization schedules Pharmaceutical calculations Insurance plans Laws and ethics | “They need to have a strong drug database built into their brain already. They need to have the research or look-up skills very quickly accessible and comfortable to them, whatever it is they have decided they will access more information.” (CP6) |
| Medications Evidence-based medicine/guidelines Drug information resources Immunization schedules Pharmaceutical calculations Insurance plans Laws and ethics | “I think they need to have, obviously the clinical knowledge, the book knowledge. Also I think it would benefit them if they have a better understanding of the healthcare system and how that really affects...the patient, because I feel like not a lot, but some time we spent is just educating them on Medicare part B and D.” (FG5-DM1) |
| **Skills**                  |                                                                                                                                                     |
| Patient Care (improve efficiency in APPE) Collect, assess, identify, and resolve care plans Immunization administration Conduct MTM, CMR Counseling OTC recommendations Documentation of patient interactions | “They should be able to assess, interview – do clinical interviewing, gather information from the patient or caregiver.” (FG3-PF1) |
| Collect, assess, identify, and resolve care plans Immunization administration Conduct MTM, CMR Counseling OTC recommendations Documentation of patient interactions | “Be able to identify medication-related issues and communicate that with the provider. And then help to resolve those medication-related issues that they identify.” (FG3-PF3) |
| Collect, assess, identify, and resolve care plans Immunization administration Conduct MTM, CMR Counseling OTC recommendations Documentation of patient interactions | “And be able to counsel a patient on any medication that they’re on.” (FG3-PF1) |
| **Communication**           |                                                                                                                                                     |
| Motivational interviewing Counseling/education Interacting with other health care providers | “They should be able to effectively and comfortably communicate. That’s the cornerstone. Absolutely. If you have all the knowledge in the world but you can’t get it out of your head in a coherent manner, then you’re not of any use, basically. So I’d rather have an average student who has a good rapport with people, because they’re going to make more of a connection and they’re going to help people more than someone that can’t.” (CP11) |
| Motivational interviewing Counseling/education Interacting with other health care providers | “It’s prioritizing. And I think that’s pretty important. That’s also questions I got for residency interviews and things. You have all these scenarios, how do you handle them and in what order and why and that kind of thing. I know that’s somewhere in our curriculum, but maybe it wasn’t enough or something, it just wasn’t in my brain.” (FG6-SP1) |
| **Critical Thinking**        |                                                                                                                                                     |
| Task prioritization Problem-solving Appropriate situations to contact a prescriber | “I think there’s – you can break down the process of which a prescription is filled and depending on the way you look at, there’s seven steps from the intake and getting the right information to the putting in the system and checking for DUR, all those different steps. I think having an understanding of that skeleton and it might look differently in other different areas but having an understanding of the checks and balances that go into the quality assurance side and ensure the right medication gets to the right person and that you’re picking the right drugs off and everything that goes into that would be important to have in your belt.” (FG11-PO2) |
| **Dispensing**              |                                                                                                                                                     |
| Individual steps in filling a prescription (learned in IPPE) Checks and balances Quality Assurance | “I think the students that are eager and want to learn new skills—that’s what they want, you know—they enjoy trying to learn more.” (FG7-DM2) |
| Individual steps in filling a prescription (learned in IPPE) Checks and balances Quality Assurance | “Pick something you’re passionate about so you can excel in it and used the community pharmacy experience as a platform to do that.” (CP10) |
| Individual steps in filling a prescription (learned in IPPE) Checks and balances Quality Assurance | “In a community store there’s a lot going on and you have to be able to go from one thing to another. Pharmacist-ears: that’s what I call them, so you listen to everything that’s going on, so if something is misspoken, or there’s a question, or a customer getting angry, you can go and direct your attention to that.” (CP11) |

Abbreviations: APPE=advanced pharmacy practice experience; CMR=complete medication review; CP=community pharmacist; DM=district manager; FG=focus group; IPPE=introductory pharmacy practice experience; MTM=medication therapy management; OTC=over-the-counter products; PM=pharmacy manager; PO=professional organization leader
Table 4. Differences in Performance Expectations Between Community Pharmacy IPPEs and APPEs, and Between Core and Elective APPEs

| Key Performance Areas | IPPE Performance Expectation Examples | Core APPE Performance Expectation Examples | Advanced Elective APPE Performance Expectation Examples |
|-----------------------|--------------------------------------|--------------------------------------------|-------------------------------------------------------|
| **Knowledge**         |                                       |                                            |                                                       |
| Drug/disease/treatment guidelines | Explain pharmacology and side effects for the top 50 medications dispensed at the pharmacy. | State counseling information for all medications; describe medical conditions. Outline important treatment guidelines. | Create an evidence-based treatment algorithm to support a new patient care service. |
| Law and ethics         | Describe state and federal laws pertinent to the dispensing process. | Describe state and federal laws pertinent to all pharmacy operations. Describe the process of ethical decision-making. | Determine regulatory needs for starting a new pharmacy service. Successfully navigate ethically difficult situations. |
| **Skills**            |                                       |                                            |                                                       |
| Dispensing            | Perform all steps in the dispensing process and articulate to preceptor what needs to happen in each step. | Oversee the dispensing process. | Modify the overall dispensing process to improve efficiency. |
| Patient care          | Collect patient information at intake. Perform patient counseling and simple over-the-counter and self-care recommendations. | Clearly use the pharmacist’s patient care process for drug and non-drug therapy. Know and perform motivational interviewing. Perform basic medication therapy management and comprehensive medication review. | Medication therapy management and comprehensive medication review for individuals with complex medication regimens and precarious health conditions. |
| OTC/self-care         | Identify correct drug classes to recommend for described patient symptoms. | Distinguish and justify which products within a given drug class are appropriate for described patient conditions. | Create informational brochure to help patients learn about the product or condition for which |
| Immunizations and screenings | Administer immunizations safely. Log immunization in registry. Notify patient’s primary care provider of immunization. | Assess a patient’s immunization history to determine needs. Place and read a tuberculosis skin test. | Independently conduct a travel clinic interview and assessment of needed immunizations and prophylactic agents. |
| Communication         | Provide basic counseling on any of the top 50 medications dispensed at the pharmacy beyond just reading the prescription label to the patient. | Provide patient education on drugs and medical conditions beyond basic counseling. Communicate with pharmacy team, patient, and other health providers in a responsive, responsible, and respectful manner. | Promote communication and collaboration with individuals outside of the pharmacy, including other health care providers, patient groups and similar audiences, upper management, and payers. |
| Drug information      | Quickly identify needed information in an appropriate drug reference (eg, Facts and Comparisons, Handbook of Non-prescription Drugs) | Quickly identify needed drug and disease state information and treatment guidelines using professionally appropriate resources. | Incorporate published guidelines appropriately into treatment algorithms for new patient care programs offered by the pharmacy. |

(Continued)
education curriculum that would prepare community pharmacy practice-ready graduates was still needed. This report is the first to distinguish between learning activities in a community pharmacy IPPE versus a core APPE versus an advanced elective APPE.

An important finding of this study was the stakeholders’ perceptions of the importance of advanced elective APPEs for community pharmacy-bound students. While the goal of the core community pharmacy APPE is to produce a graduate capable of functioning as a staff pharmacist in the community setting, stakeholders felt that this level of training was inadequate for students planning to enter community pharmacy practice upon graduation. Advanced elective APPEs were necessary to practice collaborative care of community-dwelling patients and act as a pharmacist-in-charge, skills that stakeholders felt were critical for community pharmacists.

The stakeholders’ emphasis on the timing of the core APPE before the advanced elective APPEs for community pharmacy-bound students was an interesting finding. Students are typically placed at APPE sites via computer programs that use a randomization scheme in matching students to sites and block times to make the process as fair as possible. Randomized allotment minimizes the chance that one student will be favored over another in specific site placement. But randomization also makes it difficult to schedule a deliberately placed succession of experiences designed to build a specific skill set, a directive implied in Standards 10.4 and 13.7 and Guidance 13g of Standards and Guidance 2016. Alterations to current placement methods may be needed to accomplish purposeful building of experiences within the APPE year. For example, students could be placed at the same site for a 3-month longitudinal community pharmacy experience, or the matching program could be modified to only place advanced elective experiences after the core experience for selected sites.

Another concern is finding an adequate number of sites able to offer the advanced patient care electives that allow students to work with pharmacist preceptors practicing at the top of their license. Sites with residency-trained preceptors may be best equipped to guide student decision-making in patient care experiences, and could be targeted as sites for advanced patient care elective APPEs.

A limitation of this study was that all participants resided in Washington state. Participants’ responses may have been heavily influenced by our broad pharmacy practice laws that enable pharmacists to practice at the top of their licenses, limiting transferability in states with narrower practice laws. However, other academic institutions may benefit from our stakeholders’ perspectives on how to produce graduates ready to practice in such a progressive environment. Additionally, most participants lacked familiarity with our current IPPE structure because they infrequently precepted IPPE students. Experienced APPE preceptors were still able to describe skills and knowledge they expected students to have prior to their core APPE rotation, and it was clear which of these could only be acquired through an IPPE. Finally, 23 of the 42 participants were our alumni or students, which may have

Table 4. (Continued)

| Key Performance Areas | IPPE Performance Expectation Examples | Core APPE Performance Expectation Examples | Advanced Elective APPE Performance Expectation Examples |
|-----------------------|--------------------------------------|-------------------------------------------|------------------------------------------------------|
| **Attitudes**         |                                      |                                           |                                                      |
| Change-agile          | Demonstrate grace and flexibility when faced with unplanned situations. | React positively to change with guidance from management. | Lead change and provide guidance to others.          |
| Patient-centric       | Display empathy in patient interactions. | Identify and respond to patient priorities. | Act as an advocate for a patient’s health care needs during interactions with others. |
| Provider mentality    | When given a situation, identify and prioritize options. | Assist patient in achievement of optimal health outcomes. | Independently design, implement, and modify therapy regimens through collaborative agreements. Document clinical reasoning and decision-making in the patient’s health record. |
affected their response to questions about our experiential learning program. Comparison of responses between alumni and non-alumni did not reveal any appreciable differences. Stakeholders were not asked to judge either the current curriculum or that of any other school. It’s unlikely that trustworthiness of the data was affected by this characteristic.

CONCLUSION

The deliberate creation of an experiential education curriculum, rather than just experiential education coursework, might enable community pharmacy-bound students to emerge from a degree program with improved practice-readiness for management and direct patient care opportunities. Such a curriculum aligns with accreditation requirements, with the expectations of employers who hire newly graduated students, and with the desires of the community pharmacy-bound students who participated in this study.

ACKNOWLEDGMENTS

The authors gratefully acknowledge the time given and thoughtful answers expressed by all the participants in this study. The authors also gratefully acknowledge the suggestions of the University of Washington School of Pharmacy Faculty Writing Club in the development of this manuscript.

REFERENCES

1. Catizone C, Maina L, Menighan T. Continuing our collaboration to create practice-ready, team-oriented patient care pharmacists. Am J Pharm Educ. 2013;77(3):Article 43.
2. Murphy JE. Practice-readiness of US pharmacy graduates to provide direct patient care. Pharmacotherapy. 2015;35(12):1091-1095.
3. Robinson D, Speedie M. Is post-graduate training essential for practice readiness? Pharmacotherapy. 2015;35(12):1096-1099.
4. Svensson CK. What should constitute an acceptable advanced pharmacy practice experience? Am J Pharm Educ. 2016;80(3):Article 37.
5. Cox CD. Quantity versus quality in experiential education. Am J Pharm Educ. 2016;80(3):Article 36.
6. Reid LD, Brazeau GA, Kimberlin C, Meldrum M, McKenzie M. Students’ perceptions of their preparation to provide pharmaceutical care. Am J Pharm Educ. 2002;66(4):347-356.
7. Medina MS, Plaza CM, Stowe CD, et al. 2013 Educational Outcomes. Am J Pharm Educ. 2013;77(8):Article 162.
8. Accreditation Council for Pharmacy Education. Accreditation standards and key elements for the professional program in pharmacy leading to the doctor of pharmacy degree. Standards 2016. www.acpe-accredit.org/pdf/Standards2016FINAL.pdf. Accessed February 4, 2015.
9. Taylor CT, Adams AJ, Albert EL, et al. Report of the 2014-1015 Professional Affairs standing committee: producing practice-ready pharmacy graduates in an era of value-based health care. Am J Pharm Educ. 2015;79(8):Article S12.
10. Sweet BV, Kelley KA, Janke KK, et al. Career placement of doctor of pharmacy graduates at eight US Midwestern schools. Am J Pharm Educ. 2015;79(6):Article 88.
11. Accreditation Council for Pharmacy Education. NACDS Foundation-NCPA-ACPE Task Force. Entry-level competencies needed for community pharmacy practice. 2012. https://www.acpe-accredit.org/pdf/NACDSFoundation-NCPA-ACPETaskForce2012.pdf. Accessed July 21, 2016.
12. Avalere Health. Exploring pharmacists’ role in a changing healthcare environment. Washington, DC: Avalere Health, LLC; 2014. http://avalere.com/expertise/life-sciences/insights/exploring-pharmacists-role-in-a-changing-healthcare-environment. Accessed August 18, 2016.
13. Vlasses PH, Patel N, Rouse MJ, Ray MD, Smith GH, Beardsley RS. Employer expectations of new pharmacy graduates: implications for the pharmacy degree accreditation standards. Am J Pharm Educ. 2013;77(3):Article 47.
14. Zarembski DG, Boyer JG, Vlasses PH. A survey of advanced community pharmacy practice experiences in the final year of the PharmD curriculum at US colleges and schools of pharmacy. Am J Pharm Educ. 2005;69(1):Article 2.
15. Devine PS, Darbishire PL. National trends in IPPE program at US schools of pharmacy from 2008-2013. Am J Pharm Educ. 2015;79(3):Article 39.
16. O’Sullivan TA, Danielson J, Weber SS. Qualitative analysis of common definitions for core advanced pharmacy practice experiences. Am J Pharm Educ. 2014;78(5):Article 91.
17. Engrossed substitute. Senate Bill 5557. http://lawfilesex.leg.wa.gov/biennium/2015-16/Pdf/Bills/Senate%20Passed%20Legislature/5557-S.PL.pdf. Accessed July 21, 2016.
18. Guest GS, Namey EE, Mitchell ML. Collecting Qualitative Data: A Field Manual for Applied Research. Thousand Oaks, CA: Sage Publications Inc.; 2012.
19. Guest G, MacQueen KM, Namey EE. Applied Thematic Analysis. Thousand Oaks, CA: Sage Publications Inc.; 2012.
20. Elo S, Kyngas H. The qualitative content analysis process. J Adv Nurs. 2008;62(1):107-115.
21. Merriam SB. Qualitative Research: A Guide to Design and Implementation. 3rd ed. San Francisco, CA: Jossey-Bass; 2009.
22. Saldana J. The Coding Manual for Qualitative Researchers. 2nd ed. Thousand Oaks, CA: Sage Publications Inc.; 2013.
23. Creswell JW. Qualitative Inquiry and Research Design. 3rd ed. Thousand Oaks, CA: Sage Publications Inc.; 2013.
24. Patton MQ. Enhancing the quality and credibility of qualitative analysis. Health Serv Res. 1999;34(5 part 2):1189-1208.
25. Epstein RM, Hundert EM. Defining and assessing professional competence. JAMA. 2002;287(2):226-235.
26. Nenimire RE, Meyer SM. Educating student for practice: educational outcomes and community experience. Am J Pharm Educ. 2006;70(1):Article 20.
27. Dugan BD. Enhancing community pharmacy through advanced pharmacy practice experiences. Am J Pharm Educ. 2006;70(1):Article 21.
28. Koenigsfeld CF, Tice AL. Organizing a community advanced pharmacy practice experience. Am J Pharm Educ. 2006;70(1):Article 22.
29. Thomas RA. Developing structured-learning exercises for a community advanced pharmacy practice experience. *Am J Pharm Educ*. 2006;70(1):Article 23.

30. Calomo JM. Teaching management in a community pharmacy. *Am J Pharm Educ*. 2006;70(2):Article 41.

31. Lee KW, Machado MR, Wenzel MM, Gagnon JM, Calomo JM. An advanced professional pharmacy experience in a community setting using an experiential manual. *Am J Pharm Educ*. 2006;70(2):Article 42.

32. Kassam R, Kwong M. An enhanced community advanced pharmacy practice experience model to improve patient care. *Am J Pharm Educ*. 2009;73(2):Article 25.

33. Kassam R, Kwong M, Collins JB. Promoting direct patient care services at community pharmacies through advanced pharmacy practice experiences. *Int J Pharm Pract*. 2013;21(6):368-377.

34. Rodis JL, Legg JE, Casper KA. Partner for Promotion: an innovative advanced community pharmacy practice experience. *Am J Pharm Educ*. 2009;72(6):Article 134.

35. Rodis JL. Adopting an advanced community pharmacy practice experiential educational model across colleges of pharmacy. *Innov Pharm*. 2011;2(4):Article 56.

36. Accreditation Council for Pharmacy Education. Guidance for the accreditation standards and key elements for the professional program in pharmacy leading to the doctor of pharmacy degree. Guidance for Standards 2016. https://www.acpe-accredit.org/pdf/GuidanceforStandards2016FINAL.pdf. Accessed February 3, 2015.

37. Foote EF, Roland BE, Gionfriddo MR, Holt-Macey S. Differences between residency- and non-residency-trained preceptors on student perceptions and activities of community practice advanced pharmacy practice experiences. *Curr Pharm Teach Learn*. 2014;6(2):259-264.

38. Welch AC, LaBuz M. Residency-trained preceptors and the effect on community advanced pharmacy practice experience activities. *Curr Pharm Teach Learn*. 2014;6(5):617-622.