RESEARCH

Qualitative Analysis of Common Definitions for Core Advanced Pharmacy Practice Experiences

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Objective. To determine how colleges and schools of pharmacy interpreted the Accreditation Council for Pharmacy Education's (ACPE's) Standards 2007 definitions for core advanced pharmacy practice experiences (APPEs), and how they differentiated community and institutional practice activities for introductory pharmacy practice experiences (IPPEs) and APPEs.

Methods. A cross-sectional, qualitative, thematic analysis was done of survey data obtained from experiential education directors in US colleges and schools of pharmacy. Open-ended responses to invited descriptions of the 4 core APPEs were analyzed using grounded theory to determine common themes. Type of college or school of pharmacy (private vs public) and size of program were compared.

Results. Seventy-one schools (72%) with active APPE programs at the time of the survey responded. Lack of strong frequent themes describing specific activities for the acute care/general medicine core APPE indicated that most respondents agreed on the setting (hospital or inpatient) but the student experience remained highly variable. Themes were relatively consistent between public and private institutions, but there were differences across programs of varying size.

Conclusion. Inconsistencies existed in how colleges and schools of pharmacy defined the core APPEs as required by ACPE. More specific descriptions of core APPEs would help to standardize the core practice experiences across institutions and provide an opportunity for quality benchmarking.

Keywords: experiential education, advanced pharmacy practice experiences, acute care, general medicine, ambulatory care, community pharmacy, health systems, qualitative research

INTRODUCTION

With the introduction of ACPE Standards 2007,¹ colleges and schools of pharmacy were required to meet several new guidelines regarding APPEs. Many of these guidelines were not well defined within ACPE Standards 2007, nor was additional guidance provided in the 2.0 version.² For example, Guideline 14.5¹ states, "Required experiences must include primary, acute, chronic, and preventive care among patients of all ages and develop pharmacist-delivered patient care competencies in the following settings: community pharmacy, hospital or health-system pharmacy, ambulatory care, inpatient/acute care general medicine."

While the nature of the community pharmacy setting may be defined similarly across colleges and schools of pharmacy, the descriptions for the other 3 categories of core settings are open to interpretation. An inpatient/acute care

general medicine experience could arguably include any inpatient experience (ie, nursing home or residential care setting), any acute care experience (ie, specialty service in a hospital or an urgent care service in a clinic setting), or only a general medicine experience (where students care for patients with a variety of acute conditions). Interpretation of what constitutes an ambulatory care and a hospital or health-system pharmacy experience could be equally as broad.

Additionally, Guideline 14.4¹ states that, "Introductory pharmacy practice experiences must account for not less than 300 hours (over the first 3 years). The majority of students' time (minimum of 150 hours) must be balanced between community pharmacy and institutional health-system settings. These experiences must permit students, under appropriate supervision and as permitted by practice regulations, to assume direct patient care responsibilities." Therefore, these introductory pharmacy practice experiences (IPPEs) overlap with APPEs in 2 settings: community pharmacy and institutional pharmacy. Guidelines for ACPE Standards 2007^{1,2} do not distinguish what constitutes a health-system or community pharmacy IPPE vs APPE. Appendix C of Standards 2007 contains a list of potential activities for IPPEs and

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another for APPEs, but the activities listed are not specific to a practice setting and frequently overlap (eg, IPPE activity “administering medications,” APPE activity “administering medications where practical and consistent with the practice environment and where legally permitted”).

A 2005 survey³ found that the 5 most common APPEs offered by colleges and schools of pharmacy were community pharmacy, ambulatory care, internal medicine, institutional practice, and adult acute care—a finding that likely formed the basis for the 4 core APPEs required in Standards 2007. Subsequently, opinions have been offered about what constitutes quality learning in these 4 core areas; for example, that the acute care/general medicine experience should include face-to-face interactions with prescribers⁴, and, in ambulatory care practice,⁵ that healthcare quality metrics should be applied. However, the focus of these papers was not on how experiential education programs interpreted Guideline 14.5.¹

Inconsistencies in interpretation, coupled with lack of detail and apparent overlap in the standards, support the use of qualitative methods to explore the current state of practice in pharmacy experiential education. Qualitative research methods would be ideal for describing these variations, revealing inherent nuances and exploring underlying motivations that influence decisions about what APPEs look like around the country. Identifying what these experiences entail would be useful for developing some standardization across colleges and schools of pharmacy. Standardization of some aspects of these experiences could be helpful to preceptors and provide an opportunity for quality benchmarking.^{6,7} The purpose of this study was to identify and summarize how colleges and schools of pharmacy across the United States have defined each of the 4 core APPEs identified in Guideline 14.5.¹ Of additional interest was how colleges and schools of pharmacy differentiated community and institutional practice activities between IPPEs and APPEs.

New educational outcomes from the Center for Advancement of Pharmaceutical Education (CAPE),⁸ which included no direct reference to dispensing activities, further underscored the need for defining these experiences more clearly. If some institutions still allocate dispensing to IPPEs and patient care to APPEs, they will encounter shortcomings in applying current ACPE standards as they integrate the CAPE Educational Outcomes. With more revisions of the ACPE standards underway, characterizing the almost daily dilemma that experiential education directors face in operationally defining APPEs is especially valuable and timely.

METHODS

This study was designed as a cross-sectional, qualitative, thematic analysis of data from experiential education

programs at all US colleges and schools of pharmacy. Experiential education faculty members were contacted via e-mail and asked to participate in a single survey administered in the winter of 2010 (an initial e-mail invitation followed by reminders at 2 and 6 weeks). The distribution list was developed from a contact list obtained from the American Association of Colleges of Pharmacy (AACP) Experiential Education Section for all directors and faculty members directly involved in administering experiential education along with additional research for incomplete contact information available on institutions’ websites. Valid contact information was located and used for potential participants at all institutions accredited at the time of the survey.

University of Washington experiential education faculty members developed the Web-based survey instrument. Participants were invited to answer all questions on the survey instrument (ie, no items were designed to be omitted or skipped intentionally) and nonresponses were accepted. Participants were instructed to provide only 1 response per institution. Initial beta testing was conducted with experiential education faculty in the Northwest region (Washington, Oregon, Idaho, Montana, and Wyoming) to refine questions, clarify wording, and estimate completion time. The responses were primarily open-ended to allow for theme identification. In addition to institutional demographic information regarding public vs private institutions and average class size, respondents were asked about the length of their APPEs, number of APPEs that students typically completed, difficulty in placing students at core APPE sites, and number of APPEs that must involve direct patient care. The University of Washington Human Subjects Division examined the survey instrument and determined that it met the qualifications for exemption status. (A copy of the survey instrument is available upon request from the corresponding author.)

To determine how institutions interpreted Guideline 14.5,¹ respondents were asked to provide operational definitions for the 4 core APPEs in their own words. Survey instructions discouraged providing detailed learning objectives and emphasized sharing specific characteristics that helped program directors categorize experiences. Also, respondents were asked to differentiate hospital or community IPPEs from hospital or community APPEs. Participants indicated whether their institution required that each student complete a general medicine APPE (where patients are admitted with a variety of medical conditions) and they identified other institution-specific required experiences outside of the core APPEs.

While data collection followed traditional survey methodology, thematic analysis was performed using grounded theory, an inductive process of analyzing qualitative data.

Replies to each survey question were examined by 2 reviewers who independently identified themes for each category of core APPE and developed coding rules. Discrepancies between identified themes were resolved via an iterative review process to reach consensus and further clarify themes. A third independent reviewer tested these coding rules and identified themes for verification. The Cohen kappa was used to determine the level of agreement between the theme reviewers and verification reviewer. Differences in reported themes between public and private institutions were compared with a Fisher exact test. The chi-square test for trend in proportions was used to compare responses from institutions of different class size. All statistical analyses were done using the R statistical programming language.⁹

RESULTS

Seventy-one schools (72%) responded to the survey. While 113 schools were invited to participate, only 98 had active APPE programs at the time and, thus, were able to respond to the survey. Comparison of results to all US colleges and schools of pharmacy¹⁰ showed that responses were similar (Table 1 and Table 2).

The colleges and schools of pharmacy that participated required approximately 8 total APPEs (mean=7.8) and 5 (mean=5.1) direct patient-care APPEs. Practice experience lengths were 4, 5, or 6 weeks for most colleges and schools, with 4-week lengths (39%) reported by slightly more respondents than 5-week (27%) or 6-week (31%) lengths. The total number of hours spent in APPEs varied from 1,120 to 1,960. At the time of the survey, some colleges and schools of pharmacy were still implementing the minimum 1,440 hours mandated by ACPE Standards 2007.

Sixty-nine participants responded to the question, "For the following 4 ACPE core required APPE experiences, describe how your college or school's experiential program operationally defines or differentiates them. We are not looking for detailed objectives. Is there a unique characteristic that helps you categorize the experience? For example, how do you decide an experience is ambulatory care vs community or acute care vs health system pharmacy?" One respondent answered this question for community, health-system, and ambulatory care practice experiences, but did not provide an answer for the inpatient/acute care general medicine category of experiences. We reported

themes seen in 25% or more of respondents as well as any trends suggested by the data. (A description of all identified themes, calculated kappas, and results of statistical analysis is available from the corresponding author.)

The predominant theme for the acute care/general medicine APPE was hospital or inpatient setting (85%), and the most common activities included rounding with team (32%), interacting with other care providers (28%), and direct patient care (26%). These highly clinical themes were expected interpretations. Themes were relatively consistent between public and private institutions (Table 3) and across institutions of varying size (Table 4). Respondents from private institutions mentioned that patients must have a variety of conditions less often than public institutions, and programs with a class size of 101 to 150 were more likely to not allow dispensing compared to larger programs, but neither theme achieved significance. The lack of strong frequent themes describing specific activities or requirements within this type of experience indicated that even though most respondents agreed on the setting, the specific type of student experience remained highly variable across colleges and schools of pharmacy.

When asked whether a general internal medicine APPE (where patients are admitted with a variety of medical conditions) was required for each student, 57 (80%) respondents said "yes." However, when asked to operationally describe their inpatient acute care/general medicine APPE, only 17 (30%) of these respondents provided a description consistent with a general medicine experience. Six of the 14 respondents claimed they did not require a general medicine APPE but then described such an experience in the operational definition of their core inpatient acute care/general medicine experience. A higher proportion of respondents from programs with over 150 students (42%) answered that they did not require a general medicine experience compared to programs with class sizes of 101 to 150 (16%) and fewer than 100 (12%).

Common themes for the ambulatory care APPE included clinic setting (65%) and medication therapy management/disease state management/clinical activities (49%), working in an office or with other healthcare practitioners (28%), and outpatient or ambulatory setting without using the word "clinic" (20%). Themes were relatively consistent between public and private institutions and

Table 1. Demographic Comparison of Responses with Known Population by Institution Type

Institution Type	Survey Results, (n=71) (% of Total)	Population Data, ¹⁰ (n=98) (% of Total)	Comparison (% Response)
Public	43 (61)	57 (58)	43/57 (75)
Private	28 (39)	41 (42)	28/41 (68)

Table 2. Demographic Comparison of Responses With Known Population by Institution Size

Class Size	Results, (n=71) (% of Total)	Population Data, ¹⁰ (n=98) (% of Total) Survey	Comparison (% Response)
< 100 students	33 (46)	42 (43)	33/42 (79)
101 – 150 students	25 (35)	31 (32)	25/31 (81)
> 150 students	12 (17)	24 (24)	12/24 (50)

across institutions of varying size. The focus of this experience at most colleges and schools of pharmacy was clinic-based care where students were involved in patient-care decision-making along with prescribers.

Larger institutions allowed community pharmacy settings more frequently than did those with class sizes of fewer than 100 students. We were unable to discern from many of the descriptions whether sites that were essentially community pharmacies within clinic buildings would qualify for this category of experience. In either situation, students would likely participate in dispensing activities during this experience type.

Common themes for the health-system pharmacy APPE were hospital/inpatient setting (81%), and activities included distribution (49%), clinical/patient care (43%), management/ administration (28%), and “operational” functions (26%), which could mean either distribution or administration, or both. These themes indicated that this experience was not primarily a direct patient-care experience and involved significant experience in the operations and distributive functions of inpatient pharmacy.

Themes were relatively consistent between public and private institutions, but there were differences across programs of varying size. Patient-care activities and non-institutional settings were mentioned more frequently in programs with a class size below 100 students, as was medication reconciliation (a patient-care activity). Respondents from programs with a class size over 150 students mentioned non-patient-care activities (formulary/pharmacy and therapeutics committee responsibilities and operational/logistic functions) more frequently than did smaller programs. Colleges and schools with a class size below 100 students were more likely to allow settings of long-term care institutions compared to larger programs.

Common themes for community pharmacy APPEs were a setting described as retail, independent, and/or chain (86%), and activities included dispensing (43%), patient counseling (28%), and direct patient care (23%). Ten responses included mention of an exact amount or percentage (average 49%) to which dispensing was limited. Themes were relatively consistent between public and private institutions and across institutions of varying size, except that respondents from private institutions mentioned compounding more often while respondents from

public institutions mentioned direct patient care more often. Respondents from programs larger than 100 students mentioned medication therapy management more frequently while respondents from programs with a class size below 100 students mentioned disease state management or patient consultation more frequently.

Respondents from 68 colleges and schools of pharmacy answered the question, “How do you differentiate a hospital or community pharmacy IPPE from an APPE? For example, do you limit distribution-related activities to a certain percentage of student time for APPEs?” Eleven (16%) participants responded that there was no distinction made in the amount of time spent in dispensing or distribution experiences between IPPEs and APPEs. Ten (15%) and 12 (18%) of the responses did not overtly describe either IPPE or APPE activities, respectively, so differences were implied rather than stated. Overall, the reviewers felt that 19 (28%) responses were so vague that no distinction between community and hospital IPPEs and APPEs could be made. A typical response to this question was, “We are still sorting through all of that.”

Otherwise, the most common distinctions between community and hospital IPPEs and APPEs were a larger emphasis on distribution/dispensing in IPPEs with more patient care in APPEs (45% of responses) and lower level of expectations/complexity of tasks in IPPEs vs a higher level in APPEs (31% of responses) (Table 5). Other ways in which programs seemed to distinguish between the 2 were shadowing in IPPEs vs active participation in APPEs, shorter duration of experience in IPPEs than APPEs, and different learning objectives or activities listed for IPPEs compared to APPEs. The number of public vs private colleges and schools of pharmacy that differentiated IPPEs as primarily “seeing” and APPEs as primarily “doing” was the only difference in themes that reached significance ($p < 0.05$).

In response to the question, “Which ACPE core required or other required experience(s) do you have the most difficulty in placing students?” 37 respondents (52%) indicated that ambulatory care sites were most difficult, 32 (45%) said hospital/health-system sites were most difficult, and 25 (35%) reported that inpatient/acute care general medicine sites were most difficult for placement. Seven respondents indicated that placement at noncore (specialty)

Table 3. Common Themes Reported for Required Advanced Pharmacy Practice Experiences by Institution Type

Themes With $\geq 25\%$ Of All Respondents	κ for Themes	Total Frequency, No. (%), (n=68)	Private Frequency, No. (%), (n=26)	Public Frequency, No. (%), (n=42)	P Public vs Private
Acute Care/General Medicine					
Setting description used the word “hospital” or “inpatient”	0.70	58 (85)	22 (81)	36 (86)	1.00
Rounding with team	0.74	22 (32)	9 (35)	13 (31)	0.79
Interaction with other health care providers/professionals	0.53	19 (28)	5 (19)	14 (33)	0.27
Direct patient care	0.79	18 (26)	7 (27)	11 (26)	1.00
Ambulatory Care					
Setting description used the word “clinic.”	0.94	45 (65)	16 (59)	29 (69)	0.45
Activity description included medication therapy management or disease state management or used the word “clinical”	0.54	34 (49)	12 (44)	22 (52)	0.62
Setting description used the word “office” or otherwise implied that students would be working with other health care practitioners	0.78	19 (28)	8 (30)	11 (26)	0.79
Health-System					
Setting described as hospital or institutional	0.65	56 (81)	19 (70)	37 (88)	0.11
Activities include dispensing or distribution.	0.69	34 (49)	12 (44)	22 (52)	0.62
Activities include clinical/patient care	0.85	30 (43)	12 (44)	18 (43)	1.00
Activities include management or administration	0.74	19 (28)	10 (37)	9 (21)	0.18
Activities described as learning the “operational,” “logistical” or “inner workings” of pharmacy	0.78	18 (26)	10 (37)	8 (19)	0.16
Community Pharmacy					
Setting includes retail, independent and/or chain pharmacy	0.62	59 (86)	21 (78)	38 (90)	0.17
Dispensing allowed as an activity	0.47	30 (43)	12 (44)	18 (43)	1.00
Patient counseling stated or implied as an activity	0.74	19 (28)	8 (30)	11 (26)	0.79

sites was difficult; 3 of these sites specifically identified the specialty area of drug information. Twenty-eight (39%) of respondents indicated more than 1 core APPE type was most difficult for placement and only 3 respondents indicated they did not have difficulty with any core APPE placements.

When asked to rank the level of competition with other colleges and schools for core APPE sites as low, medium, or high, 85% of respondents indicated medium or high competition. The respondents were given no guidance as to what constituted low, medium, or high competition. There was no relationship between class size, public

Table 4. Common Themes Reported for Required Advanced Pharmacy Practice Experiences by Institution Class Size

Themes With $\geq 25\%$ of All Respondents	<100 Students, No. (%), n=34	101-150 Students, No. (%), n=25	>150 Students, No. (%), n=11	P
Acute Care/General Medicine				
Hospital or inpatient setting	29 (85)	20 (87)	9 (82)	0.90
Rounding with team	10 (31)	9 (39)	3 (27)	0.94
Interaction with other healthcare providers/professionals	9 (27)	6 (26)	4 (36)	0.65
Direct patient care	9 (27)	6 (26)	3 (27)	0.97
Ambulatory Care				
Clinic setting	19 (58)	18 (75)	7 (64)	0.44
Medication therapy management, disease state management or general clinical services	16 (48)	11 (46)	6 (55)	0.82
Interprofessional/team-based care (physician office practice)	10 (30)	6 (25)	4 (36)	0.87
Outpatient or ambulatory (without "clinic")	9 (27)	3 (13)	2 (18)	0.31
Health-System				
Hospital/institutional setting	29 (85)	21 (88)	6 (55)	0.07
Dispensing/distribution activities	21 (62)	10 (42)	4 (36)	0.10
Clinical/patient care	18 (55)	9 (38)	3 (27)	0.08
Management or administration	9 (27)	8 (33)	2 (18)	0.75
Community Pharmacy				
Retail, independent, or chain pharmacy setting	27 (81)	22 (92)	9 (82)	0.72
Dispensing allowed	17 (52)	11 (46)	3 (27)	0.19
Patient counseling	10 (30)	6 (25)	2 (18)	0.42
Direct patient care	10 (30)	2 (8)	4 (36)	0.75

vs private institution, or total number of APPEs/student and difficulty in placement, with 1 exception. For the acute care/general medicine core APPE only, more colleges and schools with a high percentage of volunteer preceptors (Figure 1) and "high" competition with other colleges and schools for practice sites (Figure 2) reported difficulty in student placement. Only 1 respondent indicated that the community pharmacy setting was the most difficult for placement. This respondent also had one of the most rigorous definitions of a community pharmacy APPE of all the responses.

DISCUSSION

During theme analysis we realized that one subset of themes described the setting for the experience, while another subset described activities taking place in that setting. Thematic analysis showed good consensus across colleges and schools of pharmacy on the settings for each core APPE, but not always on activities. Delineation of these activities may be useful to colleges and schools of

pharmacy and to ACPE as policymakers deliberate needed modifications for ACPE Standards 2016.

Most colleges and schools of pharmacy are requiring the inpatient/acute care general medicine experience to involve direct patient care in a team-based, inpatient setting with few or no dispensing responsibilities, the likely intent of ACPE when the title was originally chosen. Whether the experience should be an adult general medicine experience as opposed to any acute care experience is a matter of debate: Is it important for students to be exposed to patients with a variety of medical conditions or is exposure to the patient workup process in any kind of inpatient service the primary goal of this experience? If the intention is to ensure all students complete an inpatient clinical patient care experience where they must care for patients with a variety of conditions (not a single specialty), then there is not yet complete standardization with that concept. We recommend that ACPE rename this experience either "acute care" or "inpatient general medicine." In this APPE, students should be experiencing daily, face-to-face interactions with

Table 5. Differentiation of Community and Hospital Pharmacy Introductory Pharmacy Practice Experiences from Advanced Pharmacy Practice Experiences Among United States Colleges and Schools of Pharmacy

Theme	Total No. (%), n=67	Private No. (%), n=26	Public No. (%), n=41	Class Size <100 Students No. (%), n=32	Class Size 101-150 Students No. (%), n=24	Class Size >150 Students No. (%), n=10
Distinguished by primarily distribution (IPPEs) versus clinical (APPEs)	30 (45)	11 (42)	19 (46)	14 (44)	11 (46)	5 (50)
Distinguished by lower level of complexity/ expectations (IPPE) versus higher level (APPE)	21 (31)	9 (35)	12 (29)	9 (28)	10 (42)	2 (20)
Distinguished primarily by different learning objectives or activities.	10 (15)	4 (15)	6 (15)	4 (13)	4 (17)	2 (20)
Distinguished by primarily “seeing” (IPPEs) versus “doing” (APPEs)	8 (12)	6 (23)	2 (5)	5 (16)	3 (13)	0
Distinguished by shorter duration of experience (IPPEs) versus longer duration (APPEs)	7 (10)	2 (8)	6 (15)	5 (16)	1 (4)	2 (20)

Abbreviations: IPPEs=introductory pharmacy practice experiences; APPEs=advanced pharmacy practice experiences.

other healthcare team members in the acute care setting; shared accountability for team-based, patient-care decisions; drug therapy monitoring; exposure to adult patients with a variety of diseases and/or conditions; and no dispensing functions.

The consistencies found in descriptions of the ambulatory care APPE showed a common understanding across colleges and schools of pharmacy that it is a clinic-based experience, emphasizing patient care decision-making with prescribers. Again, this description is consistent with American College of Clinical Pharmacy (ACCP)

recommendations.⁴ However, the trend where some larger schools allow community pharmacy settings in which dispensing is performed to qualify for this experience, as well as the high frequency of placement difficulty, suggests that some colleges and schools of pharmacy are struggling to locate enough clinic practice sites to meet capacity needs. Based on this analysis, we recommend that the ambulatory care APPE be renamed “clinic-based care,” although the community pharmacy-based medical home model of care may also in some circumstances¹¹ meet criteria^{12,13} for clinic-based care practice. In this experience, students should regularly interact with prescribers in the clinic setting, contribute to team-based decisions about care of patients with chronic conditions, have access to the patient’s medical chart and document clinical activities, and perform limited or no dispensing functions.

The health-system pharmacy core experience is where the systems management portion of the CAPE 2004 learning outcomes¹⁴ is addressed. There was a wide array of interpretations in place for this core experience. Nearly half of these described experiences included distribution, which we thought students would master in the institutional IPPE, and which is not addressed in CAPE 2013.⁸ The difficulty reported by respondents in placing students in this experience may indicate that for many colleges and schools of pharmacy the health-system APPE is not substantially

Figure 1. Comparison of US colleges and schools of pharmacy reporting difficulty in acute care general medicine placement stratified by percent of salaried preceptors ($p=0.03$).

Figure 2. Comparison of US colleges and schools of pharmacy reporting difficulty in acute care general medicine placement stratified by the degree of competition for sites with other area colleges and schools ($p=0.004$).

different from the institutional IPPE. A general lack of capacity in institutional or health-system experiences has been well-documented,¹⁵⁻¹⁹ which may be forcing colleges and schools of pharmacy to craft definitions for this experience at a more basic level of practice. If ACPE had intended that this APPE primarily be either a direct patient-care experience or a management/administrative experience as interpreted by ACCP,⁴ then most colleges and schools of pharmacy are not meeting one or the other of those expectations. If distribution activities are going to be part of a health-system APPE, there needs to be a clear distinction between distribution functions in the hospital IPPE and health-system APPE. We recommend that ACPE continue the title of “health systems pharmacy,” but emphasize that activities in this APPE need to differ from the hospital IPPE by placing less emphasis on distribution functions, and more emphasis on either clinical functions or management/administrative functions.

The community pharmacy setting description was consistent across colleges and schools of pharmacy, but the activity descriptions varied considerably, which represented site-to-site practice differences. The ACCP recommends that at least 30% of students’ time be spent in direct patient-care services (outside of traditional patient counseling).⁴ Identified themes show that some colleges and schools of pharmacy attempted to follow these guidelines, but in most descriptions, patient-care activities were either vaguely or not defined. Advanced patient-care services offered in addition to traditional dispensing vary from none at all to highly-developed, but few pharmacies offer highly-developed clinical services. One reason for vagueness in definition could be the reluctance of experiential education directors to make/turn this into yet another difficult-to-place experience. We recommend continuing the current title of “community pharmacy” and providing specific guidance on practice activities in which students should

participate. Such activities should include dispensing, but dispensing should account for less than 50% of the student’s learning time. Nondispensing activities, such as patient counseling and education and direct patient-care services (eg, disease state management/medication therapy management, collaborative practice, immunizations, and/or public health/wellness education and services), should account for over 20% of the experience.

There needs to be a more distinct delineation between IPPE and APPE activities in the community and hospital pharmacy practice settings. The most obvious distinction seen in our study was percentage of time spent in direct patient-care activities, as indicated by the frequency of responses in this area. Because the current CAPE Educational Outcomes⁸ de-emphasize dispensing, we recommend schools differentiate APPEs from IPPEs by the other methods mentioned in the results such as low- vs high-complexity activities/expectations, observation vs direct participation, or different learning objectives that build students’ direct patient-care skills instead of using a dispensing vs patient-care division. Another way to distinguish IPPEs and APPEs is through inclusion of more management-related activities in APPEs. While inclusion of management-related activities seems obvious for the health systems APPE, it needs to be stated just as overtly for the community practice APPE, considering 60% or more of graduates go on to practice in this setting. Therefore, we also recommend that the community APPE include exposure to management responsibilities such as inventory control, return-on-investment review, class II schedule narcotic drug reconciliation, and personnel management techniques. One caution is if the community pharmacy and health systems APPEs include a substantial management component, core APPEs will effectively include 2 patient care experiences and 2 nonpatient care experiences.

A limitation of our study was a lower than desired response rate. Although the goal response rate of 70% was not met in all subsets of our sample, the distribution of respondents in each category of our sample was similar to the population (Table 1 and Table 2), which is 1 method of testing validity,^{20,21} so our results should apply to all colleges and schools of pharmacy. Verification was not completed to ensure that only 1 survey instrument per institution was received. However, the length and nature of the survey made duplication of respondents unlikely. Although the Cohen kappa values generally demonstrated that identified themes were apparent to our independent verifier, some discrepancies were present. One explanation is that our coding rules (available from authors upon request) were not written well enough for the independent reviewer to distinguish themes from the respondent’s comments. The independent reviewer felt that coding rules were generally

clear, but interpretation was difficult because many of the respondents' comments were vague. Also, most institutions' understanding of what the experiences should entail has likely progressed since the time of this study.

CONCLUSION

Inconsistencies exist in how colleges and schools of pharmacy define the 4 core APPEs as required by ACPE, and it would be beneficial for AACP members to better delineate what these experiences should be. Our thematic analysis allowed us to identify wording that better defines the required core APPEs. More specific descriptions of core APPEs would help to standardize the experience across colleges and schools of pharmacy and emphasize the future of pharmacy practice where direct patient-care functions and collaborative drug therapy management will be basic expectations of practice.

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