Essential Elements for Core APPEs
AACP Experiential Education (EE) Section Task Force
August 2017

Executive Summary

Overview

In the summer of 2015, ACPE approached EE Section leadership about developing common standards for the core APPEs that all schools must require of their students. These standards could be used to guide schools in performing quality assurance across practice sites. If common practice activities and skills were established for what students should be doing on each of these experiences, individual schools can improve accountability across practice sites and ACPE can provide site teams with standardized criteria to assess programmatic quality.

Consequently, the EE Section Chair charged a task force with conducting a peer-reviewed, consensus-building process to develop a set of practice activities for the core APPEs. The goal was to produce a set of standards that define these experiences that balance rigorous, progressive practice with realistic expectations—results that represent standards all or most schools could support and implement. We are pleased to release this final version to the section.

Process and Results

In fall 2015, the task force was formed from volunteers within the section representing all regions of the US, including members of most EE-related consortia in existence and representing an even distribution across type (public vs. private, newer vs. established) and size of school. The task force was further divided into workgroups, each focused on one of the 4 core APPES (inpatient general medicine patient care, ambulatory patient care, community pharmacy, and hospital/health system pharmacy).

Using available literature (see Resource List, Appendix A), each workgroup developed activities/skills for an assigned APPE. Task force members then reviewed the results for all APPEs in an iterative process (comparing/contrasting: 1. acute care vs. health system and ambulatory care vs. community pharmacy, and 2. acute care vs. ambulatory care and health system vs. community pharmacy). At each stage, task force members were asked to share drafts with their school's EE team and members of their consortia to get input. Edits were incorporated iteratively.

In summer 2016, draft practice activities/skills for all 4 core APPEs were shared with the membership in the EE section business meeting at the AACP Annual Meeting in Anaheim, CA. Task force members gathered input and edits from membership in a series of round table discussions. The task force met to consolidate the input, then the chair served as editor to combine all drafts and input into a near final version. This near final version was disseminated electronically to the EE section in spring 2017 for final comment. The task force met one last time to finalize the document at the AACP Annual Meeting in July 2017.

Implications

While only 43 schools (31%) responded to the survey about the hospital/health system APPE, responses were consistent enough to support the following conclusions. Schools remain divided amongst three general approaches to the hospital/health system APPE experience:

- Operations and distribution, medication-use process (primarily non-direct patient care).
- Clinical responsibilities blended with operations (primarily direct patient care).
- Administration and management (non-direct patient care only).

The ability for students to practice supervising technicians is variable across hospital sites. This is an important part of what hospital pharmacists do, but it seems many doubt that students can accomplish this before graduation. Nearly half of respondents stated such a skill should not even be included in the hospital/health system APPE.

Most survey respondents also had concerns about requiring students to participate in sterile compounding. They pointed out that hospitals usually require rigorous training and certification before staff members are allowed to do this. As such, most sites do not allow students to participate in sterile compounding. While most felt familiarity with USP 797 and 800 is important for students to get, actual experience making IVs is probably not a universally realistic expectation.

Many respondents mentioned that activities/skills related to order entry/review, pharmacist patient care process, and interprofessional collaboration should be included in the hospital/health system APPE. Yet others stated that quality improvement projects and other non-patient care activities should be emphasized. No clear consensus was reached about whether the health system APPE is a patient care or non-patient care experience. Half of respondents said the experience should be a blend of clinical and administrative activities. Therefore, we cannot release a set of practice activities/skills for the health system APPE at this time.

The task force identified many professional competencies such as problem solving/critical thinking, professionalism, communication, leadership, cultural awareness, and evidenced-based medicine practices that should be required during these and other APPEs. These competencies are already outlined in the Center for Advancement of Pharmacy Education (CAPE) Outcomes (see resource list), and schools are already assessing student performance of them. Because these competencies should occur in multiple, if not all APPEs, the task force chose to focus on developing a set of practice activities/skills specific to the required experiences that could be used for program evaluation and quality improvement.

The task force recognizes that the common core can be easily confused with CAPE Outcomes and the newly published Entrustable Professional Activities (EPAs) (see resource list). We do not offer these skill sets as another check list to complete about students. We offer this document in the spirit of helping schools to standardize experiences and to provide context for quality assurance, so that all students get a minimum, similar set of experiences with common expectations. Faculty and staff in EE programs can use this construct to develop and provide guidance to sites about what they should have students do. How schools go about assessing student performance will depend on their assessment plan and chosen strategies. We encourage schools to use rigorous (valid and reliable), evidence-based assessment methods for measuring student performance in practice.

We encourage schools to assess student performance of professional competencies during APPEs in conjunction with their regional EE consortia using assessment tools developed regionally. We encourage schools to collaborate to analyze the performance of their assessment tools in order to validate them. This work represents important scholarship opportunity for EE faculty as opposed to dictating a "one size fits all" evaluation form developed by a select few.

Conclusion

The essential elements of core APPEs represent work completed over 1½ years in an inclusive and iterative, peer-reviewed process. The task force determined consensus had been reached for all APPEs except the hospital/health system APPE. Therefore, essential elements for the inpatient general medicine patient care, ambulatory patient care, and community pharmacy APPEs presented here are final.

Questions and further comments can be sent to Jennifer Danielson, University of Washington at: jendan@uw.edu.

Mapping the Essential Elements to CAPE Outcomes and the EPAs

Entrustable Professional Activities (EPAs)

Units of work that pharmacists perform on the job

Center for Advancement of Pharmacy Education (CAPE) Outcomes

Competencies (knowledge, skills and attitudes) that entry-level pharmacists should have upon graduation to be able to work as a pharmacist

Common Practice Activities/Skills for APPEs (APPE Essential Elements)

Required activities/skills that students should do so that they are sufficiently familiar with the responsibilities of phamacists in the most common practice settings

EE Section Task Force on Essential Elements for Core APPEs

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EE Consortia Represented

- Big Ten Consortium
- Canadian Pharmacy Experience Program Special Interest Group (PEP-SIG)
- Florida Consortium
- Iowa Consortium
- Michigan (MCPEP) Consortium
- MidAtlantic Education Consortium
- Northeast (NERDEE) Consortium
- Northwest Pharmacy Education Consortium (NWPEC)
- Ohio Consortium
- Oklahoma Pharmacy Experience Program (OK-PEP) Consortium
- Southeastern Pharmacy Experiential Education Consortium (SPEEC)
- Texas Consortium on Experiential Programs (TCEP)
- Western New York Consortium

EE Section Task Force on Essential Elements for Core APPEs

Acute Care (*Andrea Cameron, Michelle Holt Macey, Lena Maynor, Toyin Tofade, Cathy Worrall*)

Element	Example Learning Objectives or Activities*	Comments
Pharmacist Patient Care (PPC)		
PPC 1. Demonstrate appropriate depth and breadth of pharmacotherapeutics and disease-related knowledge for a variety of common conditions seen in adult acute care patients.	• Participate in and/or lead topic discussions. • Apply the PPCP to every patient assigned by preceptor, essentially independently, and present to preceptor.	We recognize that the patients seen on this rotation may exist in any specialty floor or ICU depending on the hospital size, census and patient demographics served. The goal is to see the most common disease states generally encountered in the acute care setting.
PPC 2. Efficiently and appropriately optimize patient-specific outcomes for acute care patients using the Pharmacist Patient Care Process (PPCP).	• Systematically collect information sufficient to identify drug related problems and to support decisions regarding drug therapy. • Assess collected information to evaluate/identify drug related problems. • Make decisions about a care plan for treatment; prevention; and wellness to optimize patient outcomes that includes, but not limited to, strategies that overcome patient-specific barriers to care. • Implement a care plan in collaboration with health care team and patient that includes monitoring and continuity of care, and considerations for triage, patient referral, and follow-up. • Monitor and evaluate care plan, make needed adjustments.	Practicing the PPCP as it applies in the acute care setting should form the majority of this experience. There are 2 types of clinical practice models in the acute care setting: o *Patient-specific:* taking care of whole individuals (including their entire list of drug therapy) by serving on a team that manages a set of patients (usually rounds with team) o *Task-oriented:* performing kinetic dosing or other monitoring/adjustment for specific drugs according to protocol, performing focused discharge teaching for high risk drugs such as anticoagulation (may or may not include rounding with team) The practice model in an institution often dictates the nature and type of work pharmacists do with or along side their health care teammates. Preceptors will need to work within their practice model to allow students to accomplish these competencies while working collaboratively with other health professionals.

PPC 3. Accurately prioritize multiple patient care responsibilities/needs in times of high activity and workload.	• Determine which patient's needs should be addressed first • Address patient needs within an appropriate time, based on priority/acuity. • Communicate clearly and appropriately regarding patient work that is unable to be completed during an assigned work shift (i.e. hand-off).	The expectation is to have students gain experience managing multiple patients or tasks at once, so they learn how to prioritize and manage time. This also helps students see the importance of developing a standard, efficient process for working up patients and approaching a days work.
PPC 4. Apply pharmacokinetic dosing principles for a variety of commonly used drugs to determine the correct dose.	• Accurately adjust doses according to patient's renal and/or hepatic function. • Perform dose calculations for drugs that require monitoring for peak and trough concentrations. • Participate in dosing protocols that pharmacists are responsible for in the practice site.	While dosing calculations are performed in many settings, pharmacokinetic dosing per protocol is a common responsibility of hospital pharmacists. Students should contribute to this work as appropriate.
Communication and Education (C&E)		

C&E 1. Document patient care activities clearly and concisely to reflect the PPCP in the appropriate site-specific health record system(s).	• Write SOAP notes for inclusion in the patient's medical record
	• Document pharmacist activities as part of a clinical intervention tracking system (where appropriate)
	• Document treatment plans under protocol (e.g. Vanocmycin, anticoag)
	• Document medication histories/reconciliation in EMR
	• Document patient education encounters
		Examples of other types of documentation pharmacists may do in this setting:
		   • Interventions/recommendations for patient care
		   • Outcomes for ACO reporting: Cost savings or length of stay
		Achieving provider status involves documentation, so whenever possible, students should participate in these processes to gain experience in documentation methods.

C&E 2. Educate healthcare team members on pharmacy topics relevant to their roles and practice.	- Provide a formal education presentation, for example: - Patient case presentation - Medication information in-service presentations - Lead informal topic discussions/presentations with/for the interprofessional team	Students learn to present to peers who are health care providers. This kind of communication is different than with patients. Speaking with colleagues is an important skill in establishing credibility with team members.
Interprofessional Collaboration (IPC)		
IPC 1. Actively contribute as a member of an interprofessional healthcare team.	- Independently communicate medication therapy recommendations to members of the healthcare team. - Share accountability for patient care decisions with the team. - Demonstrate effective teamwork/collaboration skills. - Participate in rounds with other health care professionals (if possible).	Collaborating with others on the health care team happens in many settings, however, the greatest opportunity for it is in the inpatient setting where team members are co-located. While schools may choose to incorporate team collaboration into other APPEs, we feel it should at a minimum be required during this experience where face-to-face interactions make shared decision-making more likely.
Evidence-Based Medicine (EBM)		
EBM 1. Apply evidence-based medicine practices to demonstrate knowledge of information applicable to acute care medicine.	- Retrieve, interpret, and apply biomedical literature applicable to the patients seen on this rotation. - Respond to questions with the appropriate level of detail necessary to ensure proper patient care and communication with other relevant parties. - Analyze a clinical study. - Prepare and lead a Journal club.	

	• Defend/justify recommendations using with published evidence in support of a clinical situation.	
Practice-Specific Responsibilities (PSR)		
PSR 1. Perform institutional procedures and apply best practices to ensure continuity of care for patients transitioning across healthcare settings.	• Perform medication reconciliation as appropriate. • Provide discharge counseling as appropriate. • Participate in communications regarding transitions of patients between different levels of care in the same institution (ICU to ward). • Communicate with community pharmacist and other community providers to facilitate successful transition to home upon discharge.	Processes for transitions of care and medication reconciliation vary from institution to institution. As this responsibility grows for pharmacists, students should participate in and contribute to these responsibilities that pharmacists have during admission, transfer, and discharge.

*Example learning objectives are provided as additional information but are neither comprehensive nor expected of all schools or students.

EE Section Task Force on Essential Elements for Core APPEs

Appendix A
Resource List

Hill L, Delafuente J, Sicat B, Kirkwood C. Development of a Competency-Based Assessment Process for Advanced Pharmacy Practice Experiences. *Am J Pharm Educ* 2006; 70 (1) Article 01.

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