AACP SPECIAL REPORT

Core Entrustable Professional Activities for New Pharmacy Graduates

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PREAMBLE

The 2015-16 Academic Affairs Standing Committee of the American Association of Colleges of Pharmacy (AACP) was charged by then AACP President Cynthia Boyle to identify the entrustable professional activities (EPAs) for pharmacy graduates as they transition from completion of advanced pharmacy practice experiences into practice and postgraduate opportunities such as residency training. The process for developing the draft EPAs was described in detail in the report of the 2015-16 Academic Affairs Standing Committee.[1] The 2016-17 Academic Affairs Standing Committee was charged by AACP President Joseph DiPiro with the following: (1) Compile comments and input from a broad range of stakeholders regarding the draft EPAs from the 2015-16 Committee (including comments from District meetings) and complete final edits to the document for submission to the November 2016 AACP Board of Directors meeting; (2) Develop potential uses and applications of EPA statements in pharmacy education; and (3) Create a roadmap for implementation of EPAs across the member schools and colleges. The 2016-17 Academic Affairs Committee Standing Committee Report will contain mapping to the CAPE 2013 Educational Outcomes and the JCPP Patient Care Process as well as recommendations to the AACP for broad implementation.[2,3]

Entrustable professional activities are units of professional practice or descriptors of work, defined as specific tasks or responsibilities that trainees are entrusted to perform without direct supervision once they have attained sufficient competence.[4,5] EPAs are independently executable, observable, and measurable in their process and outcome.[4,5] Core EPAs for New Pharmacy Graduates are discrete, essential activities and tasks that all new pharmacy graduates must be able to perform without direct supervision upon entering practice or postgraduate training. These statements were labeled as "core" to denote that these EPAs are expected of all graduates independent of practice setting. They serve as a baseline, not a ceiling.

There were several points of clarification that arose from feedback received from stakeholders. Three key concepts apply across all core domain statements and example supporting tasks: professionalism, self-awareness, and communication. It is assumed that professionalism must permeate every EPA statement. Without professionalism none of these tasks would

be possible. Further, no single task can comprise the entire construct of professionalism. For the same reason, self-awareness and communication skills are inherent within and essential to all EPA core domain statements. The core EPA domain statements are intended to be evaluated. Example supporting tasks offer suggestions to programs on the component parts of each EPA domain. Stakeholders may choose to supplement or modify the tasks to align with programmatic or regional practice.

The final EPA Statements for New Pharmacy Graduates are presented in Appendix 1. A glossary is provided in Appendix 2 to help clarify bolded terms within the EPA Statements.

REFERENCES

1. Haines ST, Gleason BL, Kantorovich A, et al. Report of the 2015-2016 Academic Affairs Standing Committee. *Am J Pharm Educ*. 2016;80(9):Article S20.
2. Medina MS, Plaza CM, Stowe CD, et al. Center for Advancement of Pharmacy Education 2013 Educational Outcomes. *Am J Pharm Educ*. 2013;77(8):Article 162
3. Joint Commission of Pharmacy Practitioners. Pharmacists' patient care process. https://www.pharmacist.com/sites/default/files/files/PatientCareProcess.pdf. Accessed June 9, 2016.
4. Mulder H, Ten Cate O, Daalder R, Berkvens J. Building a competency-based workplace curriculum around entrustable professional activities: the case of physician assistant training. *Med Teach*. 2010;32(10):e453-e459.
5. Ten Cate O, Chen HC, Hoff RG, Peters H, Bok H, van der Schaaf M. Curriculum development for the workplace using Entrustable Professional Activities (EPAs): AMEE Guide No. 99. *Med Teach*. 2015;37(11):983-1002.

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Appendix 1

Patient Care Provider Domain:	Example Supporting Tasks:
Collect information to identify a patient's medication-related problems and health-related needs.	• Collect a medical history from a patient or caregiver. • Collect a **medication history** from a patient or caregiver. • Discuss a **patient's experience with medication**. • Determine a patient's **medication adherence**. • Use health records to determine a patient's health-related needs relevant to setting of care and the purpose of the encounter.
Analyze information to determine the effects of medication therapy, identify **medication-related problems**, and prioritize health-related needs.	• Assess a patient's signs and symptoms to determine whether the patient can be treated within the scope of practice or requires a referral. • Measure an adult patient's **vital signs** and interpret the results (e.g., body temperature, pulse rate, respiration rate, and blood pressure). • Interpret laboratory test results. • Identify drug interactions. • Perform a **comprehensive medication review** (CMR) for a patient. • Assess a patient's health literacy using a **validated screening tool**. • Compile a prioritized health-related problem list for a patient. • Evaluate an existing drug therapy regimen.
Establish **patient-centered goals** and create a care plan for a patient in collaboration with the patient, caregiver(s), and other health professionals that is **evidence-based** and cost-effective.	• Follow an **evidence-based disease management** protocol. • Develop a treatment plan with a patient. • Manage drug interactions. • Select monitoring parameters to determine the therapeutic and **adverse effects** related to the treatment plan. • Determine the appropriate time interval(s) to collect monitoring data. • Create a patient-specific education plan.
Implement a care plan in collaboration with the patient, caregivers, and other health professionals.	• Write a note that documents the findings, recommendations, and plan from a patient encounter. • **Educate** a patient regarding the appropriate use of a new medication, **device** to administer a medication, or **self-monitoring test**. • **Educate** a patient on the use of **medication adherence aids**. • Assist a patient with **behavior change** (e.g., use shared decision making and motivational strategies).
Follow-up and monitor a care plan.	• Collect monitoring data at the appropriate time interval(s). • Evaluate the selected monitoring parameters to determine the therapeutic and **adverse effects** related to the treatment plan. • Recommend modifications or adjustments to an existing medication therapy regimen based on patient response. • Present a patient case to a colleague during a handoff or **transition of care**.
Interprofessional Team Member Domain:	**Example Supporting Tasks:**
Collaborate as a member of an interprofessional team.	• Contribute medication-related expertise to the team's work. • Explain to a patient, caregiver, or professional colleague each team member's role and responsibilities. • Communicate a patient's **medication-related problem(s)** to another health professional. • Use setting appropriate **communication skills** when interacting with others • Use consensus building strategies to develop a shared plan of action.

Population Health Promoter Domain:

Identify patients at risk for prevalent diseases in a population.

Example Supporting Tasks:
- Perform a screening assessment to identify patients at risk for prevalent diseases in a population (e.g., hypertension, diabetes, depression).

Minimize adverse drug events and medication errors.

- Assist in the identification of underlying system-associated causes of errors.
- Report adverse drug events and medication errors to stakeholders.

Maximize the appropriate use of medications in a population.

- Perform a **medication use evaluation**.
- Apply cost-benefit, **formulary**, and/or epidemiology principles to medication-related decisions.

Ensure that patients have been immunized against vaccine-preventable diseases.

- Determine whether a patient is eligible for and has received CDC-recommended immunizations.
- Administer and document CDC-recommended immunizations to an adult patient.
- Perform **basic life support**.

Information Master Domain:

Educate patients and professional colleagues regarding the appropriate use of medications.

Example Supporting Tasks:
- Lead a discussion regarding a recently published research manuscript and its application to patient care.
- Develop and deliver a brief (less than 1 hour) educational program regarding medication therapy to health professional(s) or lay audience.

Use evidence-based information to advance patient care.

- Retrieve and analyze scientific literature to make a patient-specific recommendation.
- Retrieve and analyze scientific literature to answer a drug information question.

Practice Manager Domain:

Oversee the pharmacy operations for an assigned work shift.

Example Supporting Tasks:
- Implement pharmacy policies and procedures.
- Supervise and coordinate the activities of pharmacy technicians and other support staff.
- Assist in training pharmacy technicians and other support staff.
- Assist in the evaluation of pharmacy technicians and other support staff.
- Identify pharmacy service problems and/or medication safety issues.
- Maintain the pharmacy inventory.
- Assist in the management of a pharmacy budget.
- Interpret pharmacy quality and productivity indicators using continuous improvement quality techniques.
- Assist in the preparation for regulatory visits and inspections.

Fulfill a medication order.

- Enter patient-specific information into an electronic health or pharmacy record system.
- Prepare commonly prescribed medications that require **basic sterile compounding** or **basic non-sterile compounding** prior to patient use.
- Determine if a medication is contraindicated for a patient.
- Identify and manage drug interactions.
- Determine the patient co-pay or price for a prescription.
- Ensure that **formulary** preferred medications are used when clinically appropriate.
- Obtain authorization for a non-preferred medication when clinically appropriate.
- Assist a patient to acquire medication(s) through support programs.

Self-Developer Domain:

Create a written plan for **continuous professional development**.

Example Supporting Tasks:
- Create and update a curriculum vitae, resume, and/or professional portfolio.
- Perform a self-evaluation to identify professional strengths and weaknesses.

[a] in compliance with federal, state and local laws and regulations
[b] all words or phrases in **bold** are defined in the glossary

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Appendix 2: Glossary

Term	Definition	References
Adverse effect/ Adverse drug event	An injury resulting from medical intervention related to a drug. This includes medication errors, adverse drug reactions, allergic reactions, and overdoses.	Health Care Quality and Patient Safety, Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services. https://health.gov/hcq/ade.asp. Accessed September 26, 2016.
Basic life support	Defined as a variety of noninvasive emergency procedures performed to assist in the immediate survival of a patient, including cardiopulmonary resuscitation, hemorrhage control, stabilization of fractures, spinal immobilization, and basic first aid.	Colwell CB, Soriya G. Basic Life Support. In: Vincent J-L, Hall JB, eds. Encyclopedia of Intensive Care Medicine. Berlin, Heidelberg: Springer;2012:285–288.
Basic non-sterile compounding (new term basic <795> USP compounding)	See reference for more information	United States Pharmacopeia. Pharmaceutical Compounding—NonSterile Preparations. http://www.usp.org/sites/default/files/usp_pdf/EN/gc795.pdf. Accessed October 24, 2016.
Basic sterile compounding (new term basic <797> USP compounding)	See reference for more information There is a USP dictionary or USP Compounding Compendium that might have a succinct definition	United States Pharmacopeia. Pharmaceutical Compounding—Sterile Preparations. http://www.usp.org/sites/default/files/usp_pdf/EN/USPNF/usp-gc-797-proposed-revisions-sep-2015.pdf. Accessed October 24, 2016.
Behavior change (include Motivational strategies)	Things people can do to for themselves to positively impact health outcomes	Prochaska JO, DiClemente CC, Norcross, JC. In Search of How People Change. *American Psychologist*. 1992; 27 (9), 1102–1114. Rollnick S, Miller WR, Butler CC. Motivational Interviewing in Health Care: Helping Patients Change Behavior. New York:The Guildford Press, 2008.
Communication skills	Communication skills include: active listening, non-verbal, clarity, confidence, empathy, open-mindedness, respect, feedback, and choosing the right medium.	Effective Interpersonal Communication: A Handbook for Healthcare Providers. http://ccp.jhu.edu/documents/EffectiveInterpersonalCommunication_HandbookforProviders_0.pdf. Accessed October 24, 2016.
Comprehensive Medication review	Is an interactive, person-to-person or telehealth medication review and consultation of a beneficiary's medications (including prescriptions, over-the-counter (OTC) medications, herbal therapies, and dietary supplements) by a pharmacist or qualified provider that is intended to aid in assessing medication therapy and optimizing patient outcomes.	The Centers for Medicare & Medicaid Services. Medicare Part D Medication Therapy Management Program Standardized Format. https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovContra/Downloads/MTM-Program-Standardized-Format-English-and-Spanish-Instructions-Samples-v032712.pdf. Accessed 10/1/2016
Continuous professional development (CPD)	Examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth.	Medina MS, Plaza CM, Stowe CD, Robinson ET, DeLander G, Beck DE, Melchert RB, Supernaw RB, Roche VF, Gleason BL, Strong MN, Bain A, Meyer GE, Dong BJ, Rochon J, Johnston P. Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes 2013. *Am J Pharm Educ*. 2013
Device/Self Monitoring Test (alternate term: Medical Device)	"an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article, including a component part, or accessory which is: (i) recognized in the official National Formulary, or the United States Pharmacopoeia, or any supplement to them; (ii) intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, in man or other animals, or intended to affect the structure or any function of the body of man or other animals, and which does not achieve its primary intended purposes through chemical action within or on the body of man or other animals and which is not dependent upon being metabolized for the achievement of any of its primary intended purposes."	Is the product a medical device? U.S. Food and Drug Administration. U.S. Department of Health and Human Services. http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/Overview/ClassifyYourDevice/ucm051512.htm. Accessed 9/30/2016.

Term	Definition	References
Disease management	Disease management is the concept of reducing health care costs and improving quality of life for individuals with chronic conditions by preventing or minimizing the effects of the disease through integrated care. Disease management programs are designed to improve the health of persons with chronic conditions and reduce associated costs from avoidable complications by identifying and treating chronic conditions more quickly and more effectively, thus slowing the progression of those diseases. Disease management is a system of coordinated heath care interventions and communications for defined patient populations with conditions where self-care efforts can be implemented. Disease management empowers individuals, working with other health care providers to manage their disease and prevent complications.	Concept series paper on disease management, Academy of Managed Care Pharmacy. http://www.amcp.org/WorkArea/DownloadAsset.aspx?id=9295. Accessed September 26, 2016.
Education plan/ educate	Educate all audiences by determining the most effective and enduring ways to impart information and assess understanding	Medina MS, Plaza CM, Stowe CD, Robinson ET, DeLander G, Beck DE, Melchert RB, Supernaw RB, Roche VF, Gleason BL, Strong MN, Bain A, Meyer GE, Dong BJ, Rochon J, Johnston P. Center for the Advancement of Pharmacy Education (CAPE) Educational Outcomes 2013. *Am J Pharm Educ.* 2013
Evidence-based medicine or evidence-based practice	The conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research and patient values.	Sackett D, Evidence-based medicine: how to practice and teach EBM. London, United Kingdom: Churchill Livingstone; 2002 Introduction to Evidence-Based Practice. http://guides.mclibrary.duke.edu/ebmtutorial. Accessed October 24, 2016.
Formulary	See reference for more information	American Society of Health-System Pharmacists Formulary Management. http://www.ashp.org/DocLibrary/BestPractices/FormEndPrinciples.aspx. Accessed October 24, 2016 Academy of Managed Care Pharmacy. Formulary Management. http://www.amcp.org/WorkArea/DownloadAsset.aspx?id=9298. Accessed October 28, 2016.
Interprofessional/ Interprofessional team	Two or more professions working together collaboratively. Interprofessional is contrasted with the term interdisciplinary, which focuses on when two or more fields within the same profession interact.	World Health Organization (WHO). Framework for action on interprofessional education & collaborative practice. http://www.who.int/hrh/resources/framework_action/en/. Accessed June 2013. Purden M. Cultural considerations in interprofessional education and practice. *J Interprof Care.* 2005; Supplement 1: 224–234.
Medication adherence	It is the extent to which patient take medications as prescribed by their health care providers. Assessing medication adherence requires a dialogue involving not only what the patient is doing, but how they are doing it.	Osterberg L, and Blaschke T. Adherence to Medication. *N Engl J Med.* 2005; 353:487–497.
Medication adherence aid	See reference for more information	Costa E, Giardini A, Savin M, et al. Interventional tools to improve medication adherence: review of literature. *Patient preference and adherence.* 2015;9:1303–1314.
Medication history	Medication reconciliation is the process of comparing a patient's medication orders to all of the medications that the patient has been taking. This reconciliation is done to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions. It should be done at every transition of care in which new medications are ordered or existing orders are rewritten. Transitions in care include changes in setting, service, practitioner or level of care. This process comprises five steps: 1) develop a list of current medications; 2) develop a list of medications to be prescribed; 3) compare the medications on the two lists; 4) make clinical decisions based on the comparison; and 5) communicate the new list to appropriate caregivers and to the patient	The Joint Commission. Sentinel Event Alert, Issue 35: Using medication reconciliation to prevent errors. https://www.jointcommission.org/assets/1/18/SEA_35.PDF. Accessed October 24, 2016. R.D. Michels, S. Meisel, Program using pharmacy technicians to obtain medication histories, *Am J Health-Syst Pharm.* 2003; 60: 1982–1986.

Term	Definition	References
Medication related problem	A DRP exists when a patient experiences or is likely to experience either a disease or symptom having an actual or suspected relationship with drug therapy	Strand LM, Morley PC, Cipolle RJ, Ramsey R, Lamsam GD. *DICP*. 1990;24(11):1093–7. Cipolle RJ, Strand LM, Morley PC, Pharmaceutical care practice: The clinician's guide. New York: McGraw-Hill, 2004.
Medication Use Evaluation	Medication use evaluation is the process that helps the health care provider to determine whether a patient could benefit from a trial of a medication. It reveals if the trial would help to alleviate some or all of the symptoms known to be interfering with his/her optimal functioning. Medication evaluation focuses on evaluating and improving medication-use processes with the goal of optimal patient outcomes. Medication evaluation encompasses the goals and objectives of drug use evaluation.	ASHP Guidelines on Medication-Use Evaluation. Formulary management ASHP Guidelines on Medication-Use Evaluation, ASHP Formulary Management–Guidelines. https://www.ashp.org/DocLibrary/BestPractices/FormGdlMedUseEval.aspx. Accessed on October 24, 2016
Patient-centered goals	Any care that is respectful of and responsive to individual patient preferences, needs, and values, and ensures that patient values guide all clinical decisions.	Institute of Medicine. Crossing the quality chasm: a new health system for the 21st century/Committee on Quality Health Care in America, Institute of Medicine. National Academy Press. Washington, DC, 2001. http://iom.edu/~/media/Files/Report%20Files/2001/Crossing-the-QualityChasm/Quality%20Chasm%202001%20%20report%20brief.pdf. Accessed May 2013.
Patient's experience with medication	See reference for more information	Mohammed MA, Moles RJ, Chen TF. Medication-related burden and patients' lived experience with medicine: a systematic review and metasynthesis of qualitative studies. http://bmjopenbeta.bmj.com/content/6/2/e010035.full. Accessed October 24, 2016.
Transition of Care	The movement of a patient from one setting of care (hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, home health, rehabilitation facility) to another.	Transitions of Care Summary, Eligible Professional Meaningful Use Menu Set Measures Measure 7 of 9, eHR Incentive Program, Regulations and Guidance, Centers for Medicare and Medicaid Services.https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/8_Transition_of_Care_Summary.pdf. Accessed September 26, 2016.
Validated Screening Tool	Screening tool is an indicator for a quantitative measure of an aspect of patient care that is used to detect potential problems in quality of life of a patient. Validity refers to the degree to which a tool actually measures what it is designed to measure. Validity may be internal, which refers to the extent to which the results of a study accurately reflect the situation in reality, whereas external validity is the extent to which the study's results are applicable to other populations. In patient care, screening can be defined as the use of quick and simple test procedures to identify and separate people who may be at risk for a disease from those who probably do not have the disease.	Waltz CF, Strickland OL, & Lentz ER. Part II: Understanding Measurement Design. In: Waltz CF, Strickland OL, & Lentz ER, eds. *Measurement in Nursing & Health Research*. 4th ed. New York NY: Springer Publishing Co; 2010:91–225.
Vital signs	Reflect essential body functions, including your heartbeat, breathing rate, temperature, and blood pressure.	Vital Signs, MedlinePlus: Trusted Health Information for You, U.S. National Library of Medicine. https://medlineplus.gov/ency/article/002341.htm. Accessed October 24, 2016.