



Face-Validity of AACP’s Entrustable Professional Activities for New Pharmacy Graduates: Survey of Experienced Pharmacy Preceptors

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BACKGROUND

- Entrustable professional activities (EPAs) describe units of work that consumers, patients, society, and employers trust professionals to competently perform.¹⁻³ Ideally, an EPA statement should describe a focused, observable unit of work and be pertinent to the profession and applicable to most practice environments.
- In 2017, the American Association of Colleges of Pharmacy (AACP) developed and published a list of 15 core EPAs for new pharmacy graduates that are intended for use by colleges/schools of pharmacy to prepare “practice-ready and team-ready” pharmacists.⁴
- While the core EPAs for new pharmacy graduates were developed through a rigorous profession-wide consensus-driven process, the face validity of the statements has not been formally established.

OBJECTIVES

Among experienced pharmacy preceptors, determine:

- the face validity of the core EPAs for new pharmacy graduates published by the American Association of Colleges of Pharmacy in 2017.
- whether the EPA statements are: 1) focused and observable, and 2) transferrable to multiple settings and require the integration of multiple knowledge, skill and attitudinal competencies.
- whether regional differences exist regarding the perceived pertinence and expectations of each EPA statement.

METHODS

This was a prospective content validation study to identify and rate the quality of the 15 core EPA statements for new pharmacy graduates. Only pharmacists with an appointment at one of the investigators’ academic institutions for at least 5 years and who had supervised at least 6 students in the previous 24 months were eligible to participate in this study.

A 28-item online questionnaire was sent to study participants. In addition to demographic information regarding education, training, credentials, and practice setting, participants were asked whether each EPA statement was pertinent to pharmacy practice and an expected activity that all pharmacists should be able to perform. Questions regarding the secondary attributes of the EPA statements examined whether the activity was focused, observable, transferable to multiple practice settings, and an integration of multiple competencies.

The questionnaire used in this study was based on the validated Quality of Entrustable Professional Activities (QUEPA) tool that was originally designed to rate the quality of EPAs developed for internal medicine residents.⁵ We modified the QUEPA tool to reflect differences in pharmacy practice versus medical practice. The modified tool was piloted with 8 individuals (7 experienced pharmacists not invited to participate in the study and 1 biostatistician).

Results were aggregated into descriptive summaries and compared based on demographic characteristics. Pearson Chi-square and Exact Pearson Chi-Square tests were used to evaluate institution demographics and response rates. Fisher’s Exact tests were used for 2x2 associations between EPA Attribute Agreement and the following variables: Site Type (Ambulatory vs. Acute Care), Practitioner FTE (Full-time vs. Part-time), any Board Certification (Yes vs No), and Post-Graduate Training (Residency/Fellowship Trained vs None). Exact Pearson Chi-Square tests were used for 2x4 associations between EPA Attribute Agreement and Region/Institution. Exact tests were utilized because expected cell counts were less than five. Statistical significance was set at p<0.05.

RESULTS

The questionnaire was distributed to 137 eligible participants and 71 usable survey responses were received.

EPA Statement	Pertinent n (%)	Expected n (%)	Focused n (%)	Observable n (%)	Transferable n (%)	Integration of K/S/A n (%)
Collect information to identify a patient's medication-related problems and health-related needs.	69 (97)	68 (96)	64 (90)	66 (93) ^A	66 (93)	65 (92)
Analyze information to determine the effects of medication therapy, identify medication-related problems, and prioritize health-related needs.	68 (96)	68 (96)	59 (83)	59 (83)	65 (92)	67 (94) ^A
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.	66 (93) ^B	67 (94)	61 (86)	62 (87)	60 (85)	68 (96)
Implement a care plan in collaboration with the patient, caregivers, and other health professionals.	67 (94)	64 (90)	62 (87)	61 (86) ^B	58 (82)	67 (94)
Follow-up and monitor a care plan.	68 (96)	66 (93)	59 (83)	62 (87)	62 (87)	65 (92)
Collaborate as a member of an interprofessional team.	68 (96)	68 (96) ^B	54 (76)	64 (90)	63 (89) ^{A,B}	67 (94)
Identify patients at risk for prevalent diseases in a population.	62 (87)	56 (79)	58 (82)	62 (87)	56 (79)	63 (89)
Minimize adverse drug events and medication errors.	69 (97)	68 (96)	56 (79)	52 (73)	66 (93)	63 (89)
Maximize the appropriate use of medications in a population.	68 (96)	64 (90)	51 (72)	46 (65)	61 (86)	64 (90)
Ensure that patients have been immunized against vaccine-preventable diseases.	68 (96)	62 (87)	65 (92) ^A	66 (93)	59 (83)	63 (89)
Educate patients and professional colleagues regarding the appropriate use of medications.	68 (96)	67 (94)	60 (85)	64 (90) ^A	62 (87)	66 (93)
Use evidence-based information to advance patient care.	67 (94)	61 (86)	56 (79)	57 (80)	60 (85)	64 (90)
Oversee the pharmacy operations for an assigned work shift.	65 (92)	61 (86)	59 (83)	57 (80)	51 (72)	58 (82)
Fulfill a medication order.	64 (90)	65 (92)	67 (94)	66 (93) ^A	56 (79)	60 (85)
Create a written plan for continuous professional development.	60 (85)	53 (75)	62 (87) ^A	64 (90)	56 (79)	58 (82)
Percent Agreement - Median (IQR)	96 (92.5 to 96)	92 (86.5 to 95)	83 (80.5 to 87)	87 (81.5 to 90)	85 (80.5 to 88)	90 (89 to 93.5)

K/S/A = Knowledge, Skills, Attitudes
^A Significant difference based on Site Type (all differences Ambulatory Care > Acute Care), Fisher’s Exact test
^B Significant difference based on Region/Institution, Exact Pearson Chi-Square
Note: No differences in percent agreement in bivariate analysis of practitioner FTE, Board Certification, or Post-Graduate Training statuses, Fisher’s Exact tests

DISCUSSION

- Consistently high agreement was found among experienced pharmacy practitioners that the 15 EPA statements describe activities pertinent to pharmacy practice (≥ 85%); articulate what pharmacists are expected to do regardless of practice setting (≥ 75%); are focused (≥ 72%), observable (≥ 65%), and transferable (≥72%); and required integration of multiple competencies (≥ 82%).
- A consistent level of agreement was observed regardless of preceptor’s employment with a college or school/geographic location, board certification status, or completion of postgraduate training and no statistical differences in level of agreement were found based on these attributes.
- These findings align with the rigorous development process used by AACP to determine the core EPAs.

CONCLUSION

The fifteen core EPA statements appear to have strong face validity. Experienced pharmacy preceptors believe the EPAs are pertinent to pharmacy practice and pharmacists should be expected to perform these activities, regardless of practice setting.

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