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Entrustable professional activities for quality and patient safety

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ABSTRACT

Background: Further efforts are warranted to identify innovative approaches to best implement competencies in nursing education. To bridge the gap between competency-based education, practice, and implementation of knowledge, skills, and attitudes, one emerging approach is entrustable professional activities (EPAs).
Purpose: The objective of this study was to introduce the concept of EPAs as a framework for curriculum and assessment in graduate nursing education and training.
Methods: Seven steps are provided to develop EPAs for nurses through the example of a quality and safety EPA. The example incorporates the Quality and Safety Education for Nurses (QSEN) patient safety competencies and evidence-based literature.
Findings: EPAs provide a practical approach to integrating competencies in nursing as quality and safety are the cornerstones of nursing practice, education, and research.
Discussion: Introducing the EPA concept in nursing is timely as we look to identify opportunities to enhance nurse practitioner (NP) training models and implement nurse residency programs.

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Introduction and Purpose

Competency-based nursing education is a practical approach for educators to ensure that students have the knowledge, skills, and attitudes (KSAs) to practice (Pijl-Zieber, Barton, Konkin, Awosoga, & Caine, 2014). Currently in nursing education, however, achievement is primarily time based with rigid requirements regarding hours of exposure to a topic or a task (Wagner & Reeves, 2015). This results in an assumption of competence based on exposure time rather than direct observation in the clinical setting. The efficacy of this method of assessing competence has come under question, as the gap between expectations and performance of nursing graduates widens (Anema & McCoy, 2010); therefore, other approaches to assessing students' competence have been proposed (Giddens et al., 2014). Ultimately, the goal for nursing programs is to produce highly competent professionals who provide safe and

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high-quality care (Hughes, 2008). Although challenges exist, competency-based nursing education is the current driving force to regulate nursing practice and licensure, and to minimize the gap between education and practice (Anema & McCoy, 2010).

The purpose of this article is to introduce the concept of entrustable professional activities (EPAs) as a promising framework for curriculum and assessment in graduate nursing education and training. We will also provide the steps to develop EPAs for nurses through the example of a quality and safety EPA entitled "Communicate Patient Safety Events to Patients and Families." The example incorporates the Quality and Safety Education for Nurses (QSEN) patient safety competencies and evidence-based literature. A particular EPA on patient safety event communication has been chosen as the example as limited attention is given to this topic in nursing education and all health professional students have few opportunities to be assessed performing this activity (Touchie, De Champlain, Pugh, Downing, & Bordage, 2014; Wagner, Harkness, Hébert, & Gallagher, 2012, 2013).

Background

In 2007 and 2009, the Quality and Safety Education in Nursing (QSEN) project published six quality and safety competencies and KSAs for each competency. Two sets of competencies were developed, one for minimum requirements for entry into practice and one for advanced-level nurses (masters and doctoral level) (Cronenwett et al., 2007, 2009; American Association of Colleges of Nursing [AACN], 2012). The competencies focused on six areas: quality improvement, safety, teamwork and collaboration, patient-centered care, evidence-based practice, and informatics.

Competencies provide the blueprint for curricula, but are context independent and thus are often too abstract to teach and assess. To bridge the gap between competency-based education, practice, and KSAs, EPAs were developed in medicine to translate theoretical competencies into practice (Bhuyan et al., 2014; Hauer et al., 2013). EPAs are defined as "tasks or responsibilities that faculty entrust to a trainee to execute, unsupervised, once he or she has obtained adequate competence" (ten Cate, 2014). EPAs are essential day-to-day tasks of a profession (or a discipline or specialty within a profession) that must be observable, measurable, and executable within a given time frame and require the integration of competencies across domains that trainees can be trusted to perform unsupervised based on demonstration of competence. EPAs have been developed to address the need for unsupervised practice as this is a graduation requirement for physician residents (ten Cate & Scheele, 2007). The concept of EPAs has expanded to include undergraduate medical education and other health professional students where the goal is entrustment to perform activities without direct supervision as the next stage of training (Englander et al., 2016).

Because a competency defines an ability of the trainee and the EPA describes the workplace-based tasks that require the integration of those competencies, EPAs provide a mechanism for inferring competence that makes sense to trainees and faculty alike (Rose et al., 2014). EPAs are thereby intended to make competencies come to life in the clinical environment (Van Loon, Driessen, Teunissen, & Scheele, 2014). EPAs also serve as the driving force for educational program developers, by delineating the essential tasks of the professions and then identifying the KSAs necessary to perform those tasks to lead to an entrustment decision, which in turn provides the substrate for teaching and assessing the EPAs (Rose et al., 2014).

Some U.S. medical schools are beginning to test EPAs as a potential framework for assessing competence as a result of the Association of American Medical College's Core EPAs for Entering Residency (Englander et al., 2016). Additionally, some specialties have developed EPAs and are beginning to test their use as a potential framework for assessing physician residents' readiness for practice (Beeson, Warrington, Bradford-Saffles, & Hart, 2014). These specialties include, but are not limited to, nephrology (Yuan et al., 2014), emergency medicine (Beeson et al., 2014), pulmonary and critical care medicine (Fessler et al., 2014), gastroenterology (Rose et al., 2014), family medicine (Bhuyan et al., 2014), geriatric medicine (Leipzig et al., 2014), internal medicine (Chang et al., 2013; Thomas, 2013), and related professions such as physician's assistants (Mulder, ten Cate, Daalder, & Berkvens, 2010). Other topic-specific EPAs, such as those for care continuity (Ng & Ng, 2014) and patient-centered medical homes (Chang et al., 2013), have also been developed. Further, physician assistant (Lohenry et al., 2017) and pharmacy (Pittenger et al., 2016) EPAs are now being considered. Although EPAs have emerged out of graduate medical education, to our knowledge, only one nursing-related article has discussed the use of EPAs in nursing curricula as a method to improve nurse practitioner (NP) training (Giddens et al., 2014), although nurse-focused telehealth EPAs (van Houwelingen, Moerman, Ettema, Kort, & ten Cate, 2016) and interprofessional EPAs that include nurses (Meade et al., 2016; Wölfel et al., 2016) have been conceptualized.

Although EPAs specific to quality and safety do not yet exist, the EPA framework has the potential to enhance quality and patient safety in nursing education and training in a number of ways. EPAs serve as a way to offer transparency in what care providers can and cannot do safely with patients by providing an approach for assessment related to the level of supervision that requires repeated judgments on the part of faculty to assess the level of supervision (ten Cate & Young, 2012). It is the interaction between trainee performance and appropriate supervision that ultimately results in safe, effective patient-centered care

Table 1 – Example of an Entrustable Professional Activity for Patient Safety Event Communication

1. Title	Communicate Patient Safety Events (e.g., Error) to Patients and Families
2. Description	APRNs must be able to facilitate a discussion with the patient and family about a patient safety event by providing a safe environment (e.g., finding a safe and private space) and using advanced communication skills (e.g., anticipating the patient's response to the news, using active listening skills, providing empathetic statements, explaining the situation in terms the patient and the family understand, ensuring understanding, and providing follow-up information).
3. Link with a competency framework	QSEN domains of competence (AACN, 2012): patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement, and safety
4. Required knowledge, skills, and attitudes*	From the graduate-level QSEN competencies (AACN, 2012): Knowledge: analyze ethical issues with continuous quality improvement, analyze factors that create a "just culture," and understand the role and scope of each interprofessional team member Skill: demonstrate leadership skills in creating a safe culture; report errors; use patient-engagement strategies to involve patients and families in the team; elicit values, preferences, and needs as part of the interview; assess patients' understanding of their health issues; and implement care practices based on the strength of available evidence Attitude: commit to concepts of transparency; value ethical conduct, commit to being a safety mentor and role model, value open and honest communication, encourage reporting of errors, and respect that legal and ethical issues provide a framework for patient-centered care
5. Source of information to evaluate progress*	Faculty participation in at least one of the following activities: Role-play scenarios (Gallagher et al., 2006) Completion of hypothetical situations on paper (Martinez et al., 2014) Structured observation of the experience (Jeffs et al., 2010) Interview patient and family following conversation (Vincent, Phillips, & Young, 1994)
6. When is unsupervised practice expected?	This is a more advanced activity and is not expected for new APRN students. Level 4 (acting unsupervised or supervised at a distance) would be expected by graduation.
7. When does formal entrustment occur?	At least two preceptors or faculty members must have observed the APRN trainee in the role of leading the communication process during a clinical encounter.

Note. APRN, advanced practice registered nurse; QSEN, Quality and Safety Education for Nurses.
* Examples provided; list is not exhaustive.

(Carraccio, Englander, Holmboe, & Kogan, 2016; Kogan et al., 2012).

An Example EPA for QSEN

Because EPAs are designed around competency frameworks, the QSEN competencies provide an ideal substrate. We present an example (see Table 1) of a quality and safety EPA to plan, educate, and assess advanced practice trainees when faced with the experience of communicating a patient safety event. Patient safety events such as errors, adverse events, and unanticipated outcomes are now identified as a leading cause of death and injury in the United States, despite efforts to eliminate them (Makary & Daniel, 2016). Because 80% of the root causes of these events relate to insufficient communication, patient safety event communication is an essential work task for any health-care professional. Among the six QSEN competencies outlined early in the article, the relevant domains (Cronenwett et al., 2007, 2009) for this EPA are patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement, and safety. Given that communication of patient safety events is an activity that should be assessed in any nursing program, we chose to focus this EPA at the graduate advanced practice registered nurse (APRN) level (AACN, 2012).

Methods: EPA Development

There are several steps required to develop EPAs. EPA development should best be led by either a specialty or a general nursing organization rather than individual schools or groups to optimize internal and external validities. The first step of the process is to identify the essential work tasks for a given specialty or profession or point in training. Although a number of approaches can be used to identify the work task focus, this initial step generally involves the use of a Delphi Technique to identify such EPAs (Bhuyan et al., 2014; ten Cate et al., 2016; Wagner & Reeves, 2015). The Delphi group should consist of 10 to 15 content experts. With this, between 20 and 30 EPAs are expected to be developed for a particular specialty (Bhuyan et al., 2014; ten Cate, 2014), although some have as few as 13 for medical students with the assumption that they will be entrusted on additional EPAs as they transition into a specialty (Association of American Medical Colleges [AAMC], 2014).

To address how specific vs. broad the EPAs would need to be, a set of core EPAs could be developed, followed by specialty-specific EPAs. An approach with APRNs could be to develop EPAs from the National Organization of Nurse Practitioner Faculties (NONPF) core competencies for all NPs and the six NP

population-focused competencies. (http://www.nonpf.org/?page=14). Using the American Board of Pediatrics as an example (https://www.abp.org/entrustable-professional-activities-epas), 17 general pediatrics EPAs were developed, followed by four EPAs that were common in all subspecialties and then subspecialty-specific EPAs ranging from three EPAs for pediatric rheumatology to six EPAs for pediatric cardiology (Carraccio et al., 2017). Getting the number of EPAs "just right" is the challenge that requires continued discussion and revision from nursing leaders in a professional organization.

The second step of EPA development involves a seven-item format for describing the EPA. Refer to Table 1 for a description of each step. Each EPA includes (a) a title; (b) an EPA description including specifications and limitations, depending on scope of practice and clinical context (Chen, van den Broek, & ten Cate, 2015); (c) relevant competency domains; (d) required competencies and KSAs to develop the curriculum; (e) sources of information to assess progress; (f) a pathway to entrustment that delineates how entrustment decisions are made; and (g) an expiration date (Hauer et al., 2013; ten Cate et al., 2016). The title should be short and worded such that a decision to entrust the learner for unsupervised practice can be made and documented (ten Cate, 2013). Ideally, adjectives subject to interpretation, such as "appropriate" or "effective," should not be used. An example of an EPA title would be "Lead a Patient or Family Discussion on Advanced Directives." In our example, we used the title "Communicate Patient Safety Events (e.g., Error) to Patients and Families." Next, the description of the EPA is meant to clarify what care processes would be included (e.g., explain actions to the patient) and any limitations (e.g., only with patients who are able to make their own care decisions). Third, the EPA authors decide on the relevant competency domains and their particular competencies that a learner would have to integrate to merit entrustment. For our EPA example, we selected the QSEN competency domains of patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement, and safety as the link to a framework. The EPA creators then outline the KSAs that would be required to demonstrate those competencies (Step 4). For example, if the EPA is about the learner performing a procedure, this would include basic knowledge in the procedure, skill in using the necessary devices and communicating the procedure with the patient, and attitude and behavior in knowing one's limits and when to seek assistance (Englander et al., 2013; Step 4 in our table outlines the KSAs at the graduate nursing level that are appropriate for this EPA).

The fifth step of EPA development involves identifying the sources of information required to conduct the assessment. The most common form of assessment is direct observation, which can be as simple as a global decision regarding the level of supervision, or as complex as a standardized checklist based on the expected functions as outlined in Step 2 (Hauer et al., 2013). In Step 5 of our example, we provide evidence-based activities that faculty could participate in as part of the evaluation. Examples of other assessment methods can include observation through high- or low-fidelity simulation with standardized patients (Mulder et al., 2010), patient surveys (Rose et al., 2014), or through chart audits (Beeson et al., 2014). One challenge in EPA assessment is the ability of faculty to achieve standardization of ratings when conducting assessment (Ng & Ng, 2014). Faculty have differing opinions as to what learners should be able to do and make the decision in which they are entrusted to perform an activity (ten Cate, 2005), especially in the earlier stages of training (ten Cate, Snell, & Carraccio, 2010). Faculty judgment is a critical component, as is the feedback provided to the learner. Therefore, faculty development is an essential pillar when incorporating EPAs into a curriculum (Hauer et al., 2013; Mulder et al., 2010). Levels of supervision that align with each level of entrustment should also be considered (e.g., ten Cate scale) (Beeson et al., 2014). As part of individual assessments, the most common scale used to date has five levels of entrustment (ten Cate, 2014) in which learners are entrusted to: observe the activity only, act with direct supervision in the room, act with supervision available within minutes, act unsupervised, or provide supervision to junior trainees (ten Cate & Scheele, 2007).

The sixth step in EPA development is to decide a priori how the entrustment decision will be made. How many individual assessments? In how many contexts? Who will make the decision—will it be by committee or by an individual? The threshold of achieving entrustment for an advanced practice nurse is at Level 4: acting unsupervised. The seventh and final step of the EPA development includes determining an expiration date (e.g., from education to unsupervised practice). The concept of an expiration date was designed to have a limitation on the time out of training that one would be entrusted for without new observations and new opportunities for observation and entrustment.

Discussion and Recommendation

Although the concept of EPAs was developed nearly a decade ago, the use of this conceptual framework is still highly theoretical and in an infancy stage; thus, this is an opportune time for the nursing profession to shape the evolution of EPAs and their use in nursing education. EPAs provide a practical approach to thinking about assessment of quality and safety competencies in nursing as quality and safety are the cornerstones of nursing practice, education, and research (Sherwood & Barnsteiner, 2012). Although competencies are abstract and context independent, EPAs offer a solution as an integrative framework that allows assessment of competencies in the authentic work tasks of the professional nurse. Our application of a QSEN EPA provides just an example; nursing leaders would need to convene regarding the direction the profession would need to

move to explore the utility of EPAs that are either content or specialty specific.

Introducing the EPA concept in nursing is timely as we look to identify opportunities to enhance and to implement nurse residency programs as part of the Institute of Medicine (IOM, 2010) Future of Nursing Report (2010) list of recommendations. Although the implementation recommendations of the IOM report has primarily focused on postregistered nurse (RN) or NP practice residencies (Barnett, Minnick, & Norman, 2014), the number of NP residency programs are increasing (Wiltse Nicely & Fairman, 2015). In addition to the IOM Future of Nursing Report, the Carnegie Foundation for the Advancement of Teaching's "Educating Nurses: A Call for Radical Transformation" calls for the development of residency programs (Benner, Sutphen, Leonard, & Day, 2010). This report recommends a set of performance assessments to be developed as part of an evaluation strategy of competencies to better predict safe nursing practice. The goal of residency programs is to ensure the clinician's readiness for independent practice, yet often this structure is without adequate assessment and evaluation (Aylward, Nixon, & Gladding, 2014). Integrating EPAs into both NP curricula (Giddens et al., 2014) and the NP residency model is recommended. Primary care NP residency programs in the Veterans Affairs (VA) health system are on the cutting edge in developing EPAs for this type of traineeship (Wirtz Rugen, Speroff, Zapatka, & Brienza, 2016). Further discussion regarding how this model is best integrated in formal nursing education programs is warranted.

Based on our scholarly inquiry into the use of EPAs to enhance the quality and safety curriculum, we have numerous recommendations. First, national nursing associations and specialty organizations need to convene to decide if EPAs are the preferred framework for the assessment of nursing competence, what competencies would be utilized, and the core EPAs that would be developed. Further research is warranted to examine patient outcome measures and if a learner's performance on an EPA correlates with a particular patient outcome (Hauer et al., 2013).

Given there are numerous EPAs developed for medicine specialties, further consideration in adapting or adopting these EPAs for advanced practice nursing is also warranted so that our efforts are synergistic to optimize quality and safety for our patients. The adaptation of EPAs whereby multiple health professionals adopt "shared" EPAs and each team member participates in a particular aspect of the activity is one consideration. Defining team role responsibilities within the clinician's scope of practice level would also need to be considered. EPA titles might be the same, but the description of its critical functions would likely differ by profession, specialty, or place in the education–training–practice continuum. We can ultimately move toward a shared approach as a part of interprofessional education whereby medicine and nursing curriculums finally speak the same language (ten Cate & Young, 2012; Wagner & Reeves, 2015).

This article proposes a fresh look at competency-based nursing education as a paradigm that is here to stay. Despite its strengths, assessment and evaluation are the Achilles heel of competency-based education. The main challenge to date is adopting a framework for assessment that is not overly granular, requires the integration of competencies in the authentic workplace, and can have faculty support, development, and buy-in. The introduction of EPAs provides a possible solution to this problem. Using the patient safety event communication process as an example of an EPA, based on the QSEN competency framework, we hope that we have shown the promise of an EPA framework to moving all of us toward the goal of better, safer, more patient-centered care.

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