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Milestones and entrustable professional activities: The key to practically translating competencies for interprofessional education?

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Abstract

Competency-based education and practice have become foundational for developing interprofessional education (IPE) and interprofessional collaboration. There has been a plethora of competencies developed in these areas recently, both at individual institutions and nationally; however, their effective integration and thus potential has not been fully realized educationally. Milestones and entrustable professional activities (EPAs) are new concepts and assessment approaches from medical education that provide a way to functionally use and maximize competencies to ensure that competency is attained. They are applicable to learning activities both within the classroom and the clinic, as well as to lifelong learning. This paper defines and describes milestones and EPAs, considers the importance of their application to IPE, and summarizes a future research project that will identify EPAs for an IPE curriculum.

Keywords

Assessment, competencies, competency-based education, Delphi approach, entrustable professional activities, interprofessional education, milestones

Introduction

There is a clear imperative for interprofessional education (IPE) and a shift towards interprofessional collaborative practice linked to government initiatives to modernize healthcare services and optimize patient/client/family care. IPE instills the competencies—knowledge, skills, behaviors, attitudes and values—necessary for interdependent collaboration and teamwork with a focus on creating collaborative practice-ready clinicians. The link between IPE and equipping students in healthcare for collaborative practice has now been recognized (World Health Organization, 2010).

Competency-based education is a current trend in health sciences curricula that has become popular in IPE as well. Consequently, a variety of IPE competency frameworks have been developed at individual institutions and nationally to support educational endeavors. Challenges in the application of these competencies, however, have hindered their effective and comprehensive use. To fully realize competency-based education, it is considered essential to create not only competencies, but also the components and expected outcomes (e.g., knowledge, skills, behaviors, and attitudes) that are foundational to each. In addition, it is critical to assess achievement and to evaluate the process (Bradley, 2003). Entrustable professional activities (EPAs) and milestones are two new methods being used internationally in medical education that pragmatize competencies and have direct application to IPE.

Background

In 2009, the Accreditation Council for Graduate Medical Education (ACGME) in the US introduced the concept of milestones or “...stages in the development of specific competencies” (ten Cate, 2013, p. 157). These focus on the continuum of learning or developing clinical competence from novice to expert. Entrustable professional activities have been proposed and utilized in medicine as a further key component to link milestones and thus competencies to clinical practice in order to make them meaningful (ten Cate, 2005). Entrustable professional activities are defined as “units of professional practice, defined as tasks or responsibilities to be entrusted to the unsupervised execution by a trainee once he or she has attained sufficient specific competence” (ten Cate, 2013, p. 157). Eight attributes are specified by ten Cate (2005) for EPAs, they must: (1) be core to professional work in a specific context; (2) require competencies obtained through the educational program; (3) yield identified productivity of health profession labor; (4) include only qualified workers; (5) be performed independently; (6) be performed within a specified time period; (7) demonstrate observable and measurable processes and results (e.g., complete or not complete); and (8) demonstrate one or more of the identified competencies.

Assessment of achievement of core competencies is a challenging process and EPAs are one way to ensure competency by envisioning and operationalizing specific holistic learning across competencies and milestones. Entrustable professional activities are seen as “a means to translate competencies into clinical practice” (ten Cate, 2013, p. 157) and are applicable to learning activities both within the classroom and the clinic, as well as to lifelong learning upon graduation. As such, they require integration with clinical education, faculty development and...
continuing professional development in order for their successful application.

Milestones and EPAs, while critical to competency-based education overall, have direct applicability to IPE as well. A framework for the development of interprofessional education values and core competencies: Health Professional Programs, University of Toronto (UT) (Wagner et al., 2008) was one of the first competency frameworks to be produced in IPE internationally and was reviewed and referenced for the development of other IPE competencies in Canada and the USA (Canadian Interprofessional Health Collaborative, 2010; Interprofessional Education Collaborative Expert Panel, 2011). As a result, it is ideally suited to use as a foundation for creating milestones and EPAs for health science professions. In fact, the UT IPE core competencies already include milestones since they are developed within a framework of constructs or themes and across levels. This is a concept that has not yet been applied to IPE, but that the UT comprehensive competency framework illustrates across its levels of exposure, immersion and competence, and constructs of values and ethics, communication and collaboration.

An example of an IPE milestone, taken from the UT IPE core competency framework as a communication construct at the competence or entry to practice level is: advance interprofessional group functioning through effectively addressing interprofessional conflict. As such, this is a skill or behavior, which is expected in the final stage of development within this IPE curriculum. An EPA created for this milestone would focus on an authentic health professional activity, such as communicating effectively with team members to deliver best care. Further work would, therefore, be valuable to elucidate the milestone concept in the field of IPE. In addition, creating EPAs for these milestones and competencies is required to ensure meaningfulness and align actual learning with assessment. Below is a study that aims to address this gap in the IPE literature.

Methods

The proposed study will use a sequential mixed methods approach (Cresswell, Plano Clark, Gutmann, & Hanson, 2003). This will include a first phase or initial possible EPAs based on the existing milestones. The second phase, building on the first, will begin to create specific EPAs for the IPE curriculum at UT to provide a robust approach to assessment. Research Ethics Board approval will be obtained for this research project.

Initially, a quantitative modified Delphi technique will be utilized to identify appropriate EPAs for the effective assessment of IPE based on the UT core competencies. The Delphi is a robust decision-making process that uses expert opinion to reach group consensus through collaboration, analysis and iteration. The opinions are gathered anonymously through a survey, under the guidance and direction of a facilitator. Key features also include provision of specific feedback and statistical summaries following each iteration or round. This method allows for moderation and change through group processes and requires several rounds to obtain consensus (Rowe & Wright, 1999), ten Cate’s (2005) eight EPA attributes will be used to guide this process and ensure best practice and outcomes. Key informants, using criteria developed collaboratively, identify 10 to 15 international experts in IPE to participate in the Delphi. Data analysis follows standard Delphi procedures after each round, where a statistical summary is provided of the group response utilizing a mean or median value as well as upper and lower quartiles. The Delphi is then concluded upon finding stability across responses, wherein the median from the final round is then taken for each item as the final assessment.

The EPAs identified from the Delphi will be created by focus groups of IPE and assessment experts. This will be based on the design guidelines put forth by ten Cate (2013). It involves establishing: (1) a name; (2) a brief description; (3) required core competencies—knowledge, skills, behaviors and attitudes—at specific levels and within expected timelines; (4) possible assessment methods; and (5) consideration of decisions of entrustment achievement. International experts will be sought to form three–four focus groups of five–seven participants that will meet electronically to complete this development. Transcripts of these sessions will be summarized and analyzed to identify and finalize the EPAs.

Discussion

It is expected that this study will generate a series of EPAs appropriate for the effective assessment of IPE learning activities. Future work may involve applying the EPAs where they are typically used in student-based simulated and clinical education settings. This work may also involve faculty development for educators to gain expertise in their application. This will allow a better understanding and functional use of both competencies and milestones that enable the alignment of actual learning with assessment. There is also a potential application of EPAs to continuing professional development in IPE for practitioners. Realizing how EPAs can be applied in IPE across the continuum may well be transformative to optimize collaborative practice across the system for the ultimate benefit of clients/patients and families. In this way, attainment of competencies can be ensured and accountability for interprofessional standards of practice can also be accomplished.

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Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the writing and content of this article.

References


