Preclinical Implementation and Attainment of EPAs: First Tier of A Longitudinal Analysis
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Introduction

- Continual improvement of undergraduate medical education is primarily aimed at meeting the health requirements of patients
- One obstacle to continual improvement is the perceived gaps between preclinical-to-clinical curriculum and assessment, and between undergraduate-to-graduate medical education
- Basic and clinical science integration taken with health system science concepts form a main pillar of integration in medical education and can bridge perceived gaps across all phases of medical education
- Using the Entrustable Professional Activities (EPAs) across the curriculum can provide this framework for improved integration across previous perceived barriers, creating a more linear curriculum across all phases of medical education

Objectives

- The overarching goal of our research study is to inform the preparation of our students for clinical rotations and ultimately residency training. We seek to identify the factors that best predict the preparation of NWPU graduates to enter postgraduate programs of study
- To this end, our research on tier one of a longitudinal analysis:
  1. Evaluates the implementation of the 13 EPAs in the preclinical curriculum by tracking their delivery and student attainment
  2. Evaluates preclinical faculty development occurs relative to improvement in EPA tracking and delivery
  3. Evaluates the programmatic developmental aspects and trajectory of EPA attainment

Methods

- Basic science content is connected to specific EPAs by tagging all assessments such as exam questions, quizzes, and rubrics for each course with one or more of the 13 Entrustable Professional Activities
  - Each of these assessments is tagged with the basic science learning content with either learning objectives or MESH terms
- Student attainment of those EPAs and learning objectives is then compiled for each course, providing a baseline of attainment for each EPA in every course. These results are seen in Figures 1 and 2
- Course directors are given the information specific to their course in order to ascertain attainment and are trained to include more of the EPAs in assessments
  - Course director training focuses on targeting how to use the EPAs as learning objectives
- Finally, individual reports are generated at the end of each term for students to compare their attainment with the rest of the class
- Taking this concept to the next level, we are currently trialing the use of EPAs as an assessment tool in the clinical arena as a next step with integration. The EPAs are carried forward into the clinical curriculum during 3rd and 4th years and each core rotation is assessed using the EPAs as a baseline for those assessments. Data will then be accumulated and evaluated based on preceptor feedback

Results

Figure 1

Figure 2

The potential efficacy of this longitudinal project is assessed with a cross-sectional approach. As can be seen from the figures, student attainment of EPAs in the second year is statistically greater than in the first year (p<0.01). This is indicative of more tagging of EPAs in second year courses, and a statistically significant difference in the overall distribution of student attainment, thus demonstrating the potential for bridging undergraduate and graduate medical education via the EPAs

13 Entrustable Professional Activities

EPA 1: Gather a history and perform a physical examination
EPA 2: Prioritize a differential diagnosis following a clinical encounter
EPA 3: Recommend and interpret common diagnostic and screening tests
EPA 4: Enter and discuss orders and prescriptions
EPA 5: Document a clinical encounter in the patient’s medical record
EPA 6: Provide an oral presentation of a clinical encounter
EPA 7: Form clinical questions and retrieve evidence to advance patient care
EPA 8: Give or receive a patient handover to transition care responsibility
EPA 9: Collaborate as a member of an inter-professional team
EPA 10: Recognize a patient requiring urgent or emergent care and initiate evaluation and management
EPA 12: Perform general procedures of a physician
EPA 13: Identify system failures and contribute to a culture of safety and improvement

References