Abstract

The clinical and basic science faculty teams collaborated to investigate ways of maximizing learner retention of masses amounts of basic science concepts in a way that also develops clinical reasoning skills and links to the skills developing through the patient care courses (PCS). Our goal was to utilize the elements of learning theory which medical students respond to and to develop a framework for the facilitators and students by using the EPAs.

Methods

Clinical Reasoning in Basic Science (CRIBS) is a 2-term-long course in which the development of critical thinking skills and the integration of basic and clinical science concepts is fostered in second year Osteopathic medical students through small group learning activities using clinical cases. The cases discussed by students incorporate history and physical findings, laboratory values, imaging, electrophysiology and histopathological images as needed for students to develop differential and definitive diagnoses as well as treatment plans. During the group discussion, the basic science underpinnings of each case are explored by students as guided by specific learning objectives. Seven EPAs were introduced to the students and assessed through student participation in the case discussion. The EPAs and grading rubric are shown in Figure 1. The EPAs introduced and assessed in this course were: EPA 1, 2, 3, 4, 6, 7 and 10.

At the end of the two-term course we asked the students to participate in a 10 question, anonymous survey aimed at determining student awareness of the EPAs and their perception of improvement in the various activities and skills being assessed.

Results

One of the biggest challenges in teaching medical students in their first two years stems from a disconnect in the student’s motivation and drive to study what seems to be of importance and relevant to part 1 of national board exams and have significant push-back about content and activities that do not believe to be relevant to those exams.

We used the Entrustable Professional Activities for Entering Residency to emphasize the importance of content and activities that bridge basic and clinical science with skills and behavioral competencies. We used a previously designed small group case-based discussion course to introduce and assess 7 of the EPAs.

Figure 1 shows the grading rubric. Figure 2 shows the student’s perceptions of the progress they made in becoming proficient in the 7 EPAs. Although introduced to the EPAs as first year medical students, most do not recall their existence. Most felt that, through the course, they did improve their ability to recognize key aspects of a H&P (EPA 1), develop and prioritize a differential diagnosis (EPA 2), recommend and interpret common diagnostic and screening tests (EPA 3), recommend and explain the basis for appropriate management strategies (EPA 4), present an appropriate summary of the case as though presenting a patient to an attending (EPA 6), utilize appropriate resources when searching for information about the case (EPA 7) and recognize the urgent or emergent nature of the presenting problem, and recommends appropriate evaluation/management (EPA 10).

Summary

The Entrustable Professional Activities are important skills about which medical students should be aware and assessed prior to entering clerkships. We developed a method to increase student awareness of the EPAs and assess their progress in the development of these skills through a small group case-based discussion course. The introduction of the EPAs, as an assessment tool for the case discussions helped increase student awareness of the skills they need to develop prior to graduation. The EPAs, utilized in this fashion, also underscored the importance of basic science as a foundation for the patient care tasks carried out by physicians. Finally, the use of EPAs in their assessment reminded students that the knowledge and skills necessary to function as a physician involve far more than one’s performance on part 1 national board examinations.

Our future step in this project is to refine the method by which faculty critically assess student progress toward entrustment in the EPAs.