Impact of a Competency-Based Curriculum on Medical Student Advancement

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ABSTRACT

In this descriptive study, we reviewed the official SPC minutes for 10 academic years beginning July 1, 1999 through June 30, 2009. Based on information in the minutes, student cases were broadly classified as representing either academic or non-academic (competency-related) deficiencies. The competency-related cases were then further classified according to the specific competencies involved.

For the purposes of this study, we excluded the cases involving deficiencies in competency 3 (using science) because the SPC has adopted the position that competency 3 embodies the traditional medical curriculum, which emphasizes the acquisition of scientific knowledge.

Additional data elements in the analysis included the student's gender, date of birth, year of matriculation, undergraduate science grade point average (USGPA), Medical College Admission Test (MCAT) score, United States Medical Licensing Exam (USMLE) Step 1 score, and year of graduation (if applicable). For each student case, we listed the date of SPC review, the specific competencies involved, and the SPC action with remedial requirements.

Single-sample z-tests were performed to assess differences in the USGPA, MCAT score, and Step 1 score of the students with competency-related deficiencies as compared to the total student population for the same 10-year period. Chi-square was used to assess whether there were differences in the gender. Counts of competency-related deficiencies by year, type, and frequency of occurrence were compared to revealed trends. A tabulation of the various remedial requirements imposed by the SPC over the study period was summarized and listed.

METHODS

Using SPC records, we determined the frequency of competency-related deficiencies reported to the SPC over time, the nature of those deficiencies, and how the deficiencies were remediated.

RESULTS

From 1999-2009, 191 students (138 males, 53 females) were referred to the SPC for one or more competency-related deficiencies in 8 performance domains: effective communication; basic clinical skills; lifelong learning; self-awareness, self-care, and personal growth; social and community contexts of health care; moral reasoning and ethical judgment; problem solving; and professionalism and role recognition.

Collectively, the 191 students were cited for 317 separate competency-related deficiencies (1.67 per student). Of these 317 deficiencies, the most prevalent were in the competencies of professionalism (29.3%), basic clinical skills (28.4%), and self-awareness, self-care, and personal growth (17.7%). Each of the remaining competencies constituted less than 10% of the total. Successful remediation utilized 12 methods ranging from a simple warning letter to being required to repeat the year under close monitoring. Remediation was unsuccessful for 17 students (8.9%) who were dismissed from medical school.

CONCLUSIONS

Based on our School’s experience, we believe that unprofessional behaviors and other competency-related deficiencies can be identified and remediated in most cases.

BACKGROUND

In 1999, the Indiana University School of Medicine implemented a new curriculum based on 9 core competency domains. Documented how the Student Promotions Committee (SPC) has adjudicated students’ competency-related deficiencies in the past decade.

RESULTS

In the 10 years since the competency-based curriculum was formally adopted, the SPC has adjudicated 1,323 student cases, of which 233 were referred to the committee because of unsatisfactory competency performance (17.6%). After correcting for multiple SPC encounters by the same individual, we counted 191 different students with competency-related deficiencies.

Compared to the total student population, the students with competency-related deficiencies had a significantly lower USGPA and Step 1 score (Table 1). However, the magnitude of the USGPA difference (3.5 versus 3.6) can hardly be considered meaningful in a practical sense. These findings suggest that standard admissions criteria are not good predictors of performance in non-academic domains like professionalism. The number of males was significantly greater than the number of females, given their relative proportion in the student body as a whole (Table 1).

REFERENCES