EXPERIENTIAL EMERGENCY MEDICINE

Interactive Orthopedic Case-based Simulated Clinical Experience

Denise Kolojejchick-Coslett, MS, PA-C; Dianna Wachtel, DHSc, MS, PA-C, CCPA; Drew Garcia, MPAS, PA-C; Douglas Brock, PhD

BACKGROUND

The MEDEX Program requires an Emergency Medicine course (4 credit hours divided over 2 quarters). One of the main goals of this course, which has historically been taught in lecture format, is to prepare the student for their emergency medicine rotation.

Research Question: Does student performance on a written assessment improve when comparing lecture-based training with experiential training?

METHODS

The MEDEX Anchorage site piloted an experiential exercise to replace 6-hours of didactic time allotted to an Emergency Medicine Orthopedics lecture.

Objectives of the exercise included:
• Perform a problem-focused history and physical exam
• Order and interpret appropriate studies
• Develop a treatment plan
• Consult with the on-call orthopedic surgeon
• Document SOAP note
• Case presentation to faculty and peers

Students were surveyed following the experiential exercise, and these responses were examined qualitatively.

The performance of the Anchorage training site was compared with students at the other three training sites (Seattle, Spokane, Tacoma) on an objective written examination.

RESULTS

Qualitative and quantitative data were collected post-exercise:
• Students appreciated the clinically relevant interactive nature of this exercise; they felt that it was an improvement over lecture format.
• Student performance on the orthopedic content of emergency medicine exam was compared by site. Median score for the three bachelors’ sites was identical at 91.7% and not significantly different from the Spokane and Seattle masters’ students (94.4% and 89.9% respectively).

From a program evaluation perspective:
• This activity was an efficient use of time and a novel approach to instruction for this material.
• The exercise effectively demonstrated clinical application of diagnosis, management, disposition of orthopedic injuries in an emergency department setting.
• For future application, a structured pre-brief would allow the students to feel more prepared, and less anxious.
• The activity is sustainable and can be readily adapted for other content areas in the emergency medicine course.

DISCUSSION

A pilot test at the Anchorage site showed that changing the presentation format of the emergency orthopedic didactic content to include experiential case-based learning did not change students’ performance on a written exam.

The training was an initial step in bridging didactic information typically learned in lecture-based format with simulated clinical application to patient care in the emergency medicine course.

Potential future applications include redesign of the course to move away from traditional lecture-based learning to a more interactive experiential learning environment for all course content.

This training is adaptable and can be used as a model for case-based clinical simulation integration with didactic training.

REFERENCES


Bachelor Students’ Performance on Orthopedic Exam Questions: Comparison by Site

Masters Students’ Performance on Orthopedic Exam Questions: Comparison by Site

Bachelor Students’ Performance on Orthopedic Exam Questions: Comparison by Site

Masters Students’ Performance on Orthopedic Exam Questions: Comparison by Site