23 Emergency Medicine: Diversity in Discipline, Professions, and Patient Populations

Maglin Halsey-Nichols, MD; Ayesha Ibrahim, MD Candidate; Lauren Querin, MD, MS

Learning Objectives: This course focuses on providing medical students with early exposure to EM and highlights how the specialty addresses areas of healthcare disparities. This course also provides learning opportunities in EM to high school and undergraduate students from diverse and underserved populations.

Abstract:

Background: Despite growing medical student interest in the field of Emergency Medicine, many medical school curriculums lack exposure in the preclinical years. Early exposure has been shown to be a factor in students' decisions to pursue EM as a career. Similarly, programs for high school and college students have previously demonstrated positive effects on students' decisions to pursue careers in medicine.

Educational Objectives: Gain exposure to the field of Emergency Medicine and its subspecialties. Discuss how EM addresses healthcare disparities. Appreciate interprofessional collaborations in EM. Experience patient care in prehospital and ED settings. Develop teaching skills for use throughout education and career.

Curricular Design: At the University of North Carolina, there is a paucity of EM opportunities for early medical students. This EM curriculum includes 3 weeks of medical student education and 1 week of an EM immersion experience for high school/undergraduate students, which medical students help develop and teach. Objectives are achieved using didactics, procedure labs, ultrasound, simulation, and discussions with physicians and interprofessional colleagues. Initial curriculum plans included clinical shifts. Due to COVID-19, the course was shifted to a virtual format. Course evaluation included pre- and post-course surveys completed by the students.

Impact/Effectiveness: The initial course was delivered in 2020 with 6 students. A post-course survey showed globally positive changes with improvements in caring for a sick patient, procedural skills and in understanding roles of the EM physician and interprofessional colleagues. In the future, we plan to increase participant size, add in-person sessions, and expand teaching about healthcare disparities. We believe this curriculum can be a model for educating well-rounded EM physicians and providing underrepresented and underserved students with opportunities in medical education.

Table 1. Medical student perception of individual comfort level and understanding of different aspects of Emergency Medicine and Interprofessional collaboration on a scale of 0 (no understanding/not comfortable at all) to 10 (extremely comfortable/high understanding) beofre and after course.

Question (Comfort Level/Understanding on a scale from 0-10)	Pre-Course: Mean (N=6)	Post-Course: Mean (N=5)	Change?
Identifying a sick patient.	2.8	6.6	Positive
Caring for a sick patient	1.8	4.6	Positive
understanding roles of Emergency Medicine physician	3.2	7.6	Positive
interest in a career in Emergency Medicine	4.8	7	Positive
understanding of role - nursing	4.8	7.6	Positive
understanding of role - respiratory therapist	2.4	7.4	Positive
understanding of role - care management	3.4	7	Positive
understanding of role - psychiatry	4.4	7.8	Positive
understanding of role - child life specialist	0.6	6.4	Positive
understanding of role - pharmacy	3.6	6.6	Positive
understanding of role - peer support specialist	3	6.8	Positive
understanding health disparities = racial/ culture	6.8	7.4	Positive
understanding health disparities = socioeconomic status	7	7.6	Positive
understanding health disparities = uninsured	6.8	7.8	Positive
understanding health disparities = sexual orientation and gender identity	6	7.2	Positive

Table 2. Medical student perception of individual comfort level with procedural skills and ultrasound on a scale of 1 (not comfortable at all) to 4 (extremely comfortable) before and after course.

Procedures 1 = not comfortable at all 2 = somewhat comfortable 3 = moderately comfortable 4 = extremely comfortable	Pre-Course: Mean (N=6)	Post-Course: Mean (N=5)	Change?
Two-handed surgical knot tying.	1	2.4	Positive
One-handed surgical knot tying.	1	2.4	Positive
Instrument knot tying.	1	1.8	Positive
Simple interrupted suturing.	1	2	Positive
Splinting for orthopedic injuries.	1.17	1.4	Positive
Using a bag-valve mask for ventilating a patient.	1.83	3	Positive
Placement of a nasopharyngeal or oropharyngeal airway.	1.5	2.4	Positive
Intubation.	1.67	2.4	Positive
Using a cardiac defibrillator.	2.17	2.2	Neutral
Starting IVs.	2	1.6	Negative
Central line placement.	1.17	1.4	Positive
Bedside cardiac ultrasound.	2.17	3	Positive
FAST ultrasound exam	1.17	2.8	Positive
Lung ultrasound.	1	2.8	Positive