

Integrating EM Into All for Years of the Medical School Curriculum

Background: By the time they graduate, every medical student should have received education in the evaluation and management of the acutely ill or injured patient. A basic knowledge of emergency care and the ability to care for a patient with an emergent medical condition is a charge set forth by the Josiah Macy Foundation and the LCME, is a requirement for graduation to independent practice, and is a societal expectation of a physician. Additionally, students need exposure and experience with a specialty to be able to make an informed choice regarding their career paths. Yet, in many institutions, true EM exposure in the form of the EM clerkship doesn't occur until the fourth year of medical school. By then, many students have already decided on a specialty and there is precious little time to develop the knowledge and skills necessary to have basic emergency care competency.

Many opportunities exist for EM faculty to become involved throughout the medical school curriculum. These are listed below and we will highlight some of the most impactful. Most medical schools have a physician development course in the first two years of training and many schools also have a Learning Communities (LC) program. We believe that LC's are high –impact opportunities for involvement of EM faculty. A LC program is an intentionally created group of students and/or faculty designed to enhance and maximize student learning, interaction, and the medical school experience. Typical objectives include providing academic support, enhancing or creating social support networks, and delivering curriculum with members actively engaged in learning from each other. In the 1930's, the LC concept began in undergraduate curriculum as a means to split a large school into smaller units. Medical school LC's appeared in the 1970's-80's and are now a part of the curriculum in more than half of US medical schools. And although a variety of methodologies are utilized for their implementation, the most common purposes include personal and professional development, interpersonal/professional communication and collaboration, career planning and mentoring, and the establishment of academic and social support networks. Many schools also integrate their LC with the patient-doctor or medical interviewing/physical exam course.

Emergency physicians have many strengths that make them ideally suited to serving as a faculty mentor for a LC:

1. Expertise in the evaluation of the undifferentiated patient
2. Skill in efficient and high yield information gathering and decision-making
3. The ability to care for any patient
4. Understanding of the benefits and drawbacks of the many specialties with which they interact on a daily basis (which prepares them well to assist in the initial career advising of any medical student/advisee).

Additionally, we would very much like to recruit the best and brightest to our specialty early in their careers. Factors known to be influential in career choice for medical students include lifestyle, gender, mentors, student characteristics and specialty specific characteristics. It is unknown whether longitudinal exposure to faculty influences career choice.

So, how do EM medical student educators integrate themselves into, and become indispensable for, all four years of the medical school curriculum? How do we gain early exposure to undifferentiated medical students? Which opportunities are most impactful? Does early exposure to EM attendings matter? This session will explain!

Objectives:

After this session, participants will be able to:

1. Determine the limitations and benefits of extension into the curriculum
2. Discuss the function of an effective EMIG as it relates to medical student interest in EM
3. Discuss the use of Learning Communities, “How to be a Doctor” Courses, and other longitudinal offerings as ways EM Faculty can get involved in and impact medical student education.

Opportunities to Engage Medical Students in EM:

Pre Clinical Years (Adapted from [1])

1. Orientation
2. Didactic lectures
3. Case based Instruction / Problem Based Learning
4. Radiology
5. Electrocardiogram course
6. Basic Life Support / Advanced Cardiac Life Support – Could also be longitudinal (at Uof AZ students take the course and then become instructors for community chest compression only classes...
7. Physical diagnosis/How to be a doctor course (Clinical Assessment and Problem Solving)
8. Clinical case correlations for any basic science course (e.g., Anatomy, physiology, pharmacology)
9. High-fidelity simulation
10. Ultrasound training (e.g., Basics, clinical applications, anatomy correlations)
11. Procedural workshops (Skills labs for suturing, airway management)
12. Observational shifts/Shadowing
13. School physicals
14. Community service
15. Free clinics
16. Medical school service
17. Committees
18. Social Events
19. Intersessions Block

Clinical Years:

1. Third year rotation / elective
2. Fourth year rotation (preferably mandatory)
3. Acting Internship
4. Electives: Toxicology, EMS, Wilderness Medicine, PEDS-EM, Global Health...

Longitudinal Experiences:

Learning Communities

Clubs and organizations (EMIGs)

Ultrasound

High-fidelity simulation

Research

Administration / dean's office

Advising and mentoring [2]

Honors Longitudinal Electives [3]

References:

1. Tews, M C (10/2011). "Integrating emergency medicine principles and experience throughout the medical school curriculum: why and how". *Academic emergency medicine*(1069-6563), 18(10), p.1072.
2. Kman NE, Bernard AW, Khandelwal S, Nagel R, Martin D. A Tiered Mentorship Program Improves Number of Students with an Identified Mentor. *Teaching and Learning in Medicine*, 25:4, 2013.
3. Kman NE, Bernard AW, Martin D, Bahner D, Gorgas D, Nagel R, Khandelwal S. 2011. "Advanced topics in emergency medicine: curriculum development and initial evaluation." *Western Journal of Emergency Medicine*, v. 12 issue 4, 2011, p. 543-50.
4. Newton, DA.; Grayson, MS. "Trends in Career Choice by US Medical School Graduates.: *Journal of the American Medical Association*, September 3, 2003- v. 290, No. 9, p. 1179-1182.
5. Dorsey, ER,; Jarjoura, D,; Rutecki, GW. "Influence of Controllable Lifestyle on Recent Trends in Specialty Choice by US Medical Students." *Journal of the American Medical Association*, September 3, 2003- v. 290, No. 9, p. 1173-1178.
6. Dorsey, ER,; Jarjoura, D,; Rutecki, GW. "The Influence of Controllable Lifestyle and Sex on the Specialty Choices of Graduating U.S. Medical Students, 1996-2003." *Academic Medicine*, v. 80, no. 9/ September 2005, p. 791-796.
7. Boyd, JS.; Clyne, B.; Reinert, SE.; Zink, BJ. "Emergency medicine career choice: a profile of factors and influences from the Association of American Medical Colleges (AAMC) graduation questionnaires." *Academic emergency medicine : official journal of the Society for Academic Emergency Medicine*, v. 16 issue 6, 2009, p. 544-9.

8. Hauer, KE., et al. "Factors associated with medical students' career choices regarding internal medicine." *JAMA : Journal of the American Medical Association*, v. 300 issue 10, 2008, p. 1154-64.
9. Durning, SJ., et al. "Almost internists: analysis of students who considered internal medicine but chose other fields." *Academic Medicine*, v. 86 issue 2, 2011, p. 194-200.
10. Borges, NJ., et al. "Influences on specialty choice for students entering person-oriented and technique-oriented specialties." *Medical Teacher*, v. 31 issue 12, 2009, p. 1086-8.
11. Compton, MT.; Frank, E.; Elon, L.; Carrera, J. "Changes in U.S. medical students' specialty interests over the course of medical school." *Journal of General Internal Medicine*, v. 23 issue 7, 2008, p. 1095-100.
12. Manuel RS,; Borges NJ,; Jones BJ. "Person-Oriented Versus Technique-Oriented Specialties: Early Preference and Eventual Choice." *Med Educ Online [serial online]* 2009; 14:4.
13. Stagg, P (2012). "Are medical students influenced by preceptors in making career choices, and if so how? A systematic review". *Rural and remote health*, 12, p. 1832.
14. Ferguson KJ, Wolter EM, Yarbrough DB, Carline JD, Krupat E. "Defining and describing medical learning communities: results of a national survey." *Academic Medicine*, v84 (11), 2009 Nov, p.1549-56.
15. Smith S, Shochet RB, Keeley MG, Fleming AE, Moynahan KF. "The Growth of Learning Communities in Undergraduate Medical Education." *Academic Medicine*, v89(6), 2014 Jun, p.928-33.
16. Bicket M, Misra S, Wright SM, Scochet RB. "Medical student engagement and leadership within a new learning community." *BMC Medical Education*, 2010 10:20.
17. Wagner JM, Fleming AE, Moynahan KF, Keeley MG, Bernstein IH, Shochet RB. "Benefits to faculty involved in medical school learning communities." *Med Teach*, 2014 Aug, 27: 1-6 [Epub ahead of print]
18. Rosenbaum ME, Schwabbauer M, Kreiter C, Ferguson KJ. "Medical students' perceptions of emerging learning communities at one medical school." *Academic Medicine*, v82(5), 2007 May, p.508-15.
19. Burdick WP, et.al. "Emergency Medicine in Undergraduate Education." *Academic Emergency Medicine*, 1998 Nov, v5 (11), p.1105-1110.
20. Coates WC. "An educators guide to teaching emergency medicine to medical students." *Academic Emergency Medicine*, 2004 Mar, v11(3), p.300-306.

21. McLaughlin SA, Hobgood C, Binder L, Manthey DE. "Impact of the Liason Committee on Medical Education Requirements for Emergency Medicine Education at U.S. Schools of Medicine." *Academic Emergency Medicine*, 2005 Oct, v12(10), p.1003-9.