EPA 13: When should Quality Improvement and Patient Safety be taught and assessed?

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EPA #13

EPA 13: Identify system failures and contribute to a culture of safety and improvement

Description of the activity	Since the publication of the IOM reports "To Err is Human"[25] and "Crossing the Quality Chasm,"[26] the public has been focused on the need to improve quality and safety in health care. Preventing unnecessary morbidity and mortality requires health professionals to have both an understanding of systems and a commitment to their improvement. This commitment must begin in the earliest stages of health professional education and training. Therefore, this EPA is critical to the professional formation of a physician and forms the foundation for a lifelong commitment to systems thinking and improvement. **Functions** • Understand systems and their vulnerabilities. • Identify actual and potential ("near miss") errors in care. • "Speak up" in the face of real or potential errors. • Use system mechanisms for reporting errors (e.g., event reporting systems, chain of command policies). • Recognize the use of "workarounds" as an opportunity to improve the system. • Participate in system improvement activities in the context of rotations or learning experiences (e.g., rapid-cycle change using plan-do-study-act cycles; root cause analyses; morbidity and mortality conferences; failure modes and effects analyses; improvement projects). • Engage in daily safety habits (e.g., universal precautions, hand washing, time-outs). • Admit one's own errors, reflect on one's contribution, and develop an improvement plan.

Objective

The key objective of this project is to share ideas and generate discussion regarding the use of different methods by which to teach and assess Patient Safety (PS) and Quality Improvement (QI).

The Challenge

Quality improvement and patient safety are critical topics for clinical education, yet ones that have often been without specific coverage in traditional medical school curricula.

- Topics which don't specifically "belong" to one discipline are easily left out of the rotational structure of the clinical years
- Students may not be motivated to learn this clinical material in preclinical years.
- Other challenges noted in the literature include[3]:
  - Lack of available expert faculty
  - Lack of protected time
  - Competing curricular and rotational demands

The curriculum designer is challenged to identify when and how these concepts should optimally be incorporated for effective learning and retention.

Programs

A 2013 review noted that PS curricula varied in length from 4-30 hours, with a majority occurring in the 3rd year of medical school. Teaching was best received when integrated into clinical education rather than in pre-clinical lectures, and students found PS/QI most valuable when it incorporated discussions about real-life mistakes. [5]

Preclinical courses

At CUSOM, the Professional Core Competencies course includes four hours focused on Patient Safety and QI.

- Introduction to Patient Safety
- Anatomy of an Error
- Quality, Safety, and Organizational Culture
- Medication Safety

Intensive experiences

For several years, Duke Medical School required a Patient Safety Week immediately preceding the start of the clinical clerkships. Activities included

- Communication skills workshops, TeamSTEPPS
- Prescribing skills and medication interaction exercises
- Root cause analysis of past cases

Johns Hopkins incorporated a 3-day Intersession in the 2nd year. This included case studies, small group exercises, and simulation focused on core issues of medication errors, falls, and pulmonary emboli.[1]

Quality Improvement Projects

QI projects have been incorporated as requirements for students in Family Medicine clerkships.

Assessment

Assessment of entrustability should involve repeated measures across time. The EPA itself includes 2 parts: (1) Identify system failures, and (2) contribute to a culture of safety and improvement. Potential assessment strategies include:

- Standardized patient exercises
- OSCE stations
- Multiple choice tests
- Reflective writing
- Patient safety/QI projects

How can ability to contribute to a culture of safety be measured?

References

1. Aboumatar, HJ et al. Development and evaluation of a 3-day patient safety curriculum to advance knowledge, self-efficacy and system thinking among medical students. BMJ Qual Saf 2012;21:416e4
2. Kaprielian VS, Sullivan DT, eds. Josie's Story: A Patient Safety Curriculum. Duke University School of Medicine, 2013. Distributed with permission by the Josie King Foundation, Baltimore, MD.
3. Kirkman, MA et al. The outcomes of recent patient safety education interventions for trainee physicians and medical students: a systematic review. BMJ Open 2015;5:e007705. doi:10.1136/bmjopen-2015-007705
4. Osteopathic Considerations for Core Entrustable Professional Activities (EPAs) for Entering Residency. American Association of Colleges of Osteopathic Medicine, 2016.
5. Tiegland, CL et al. Patient safety and quality improvement education: a cross-sectional study of medical students' preferences and attitudes. BMC Medical Education 2013, 13:16.

Where should this be taught and assessed?

Block 1	Block 2	Block 3	Block 4
Cell Bio & Biochemistry Micro & Immunology Anatomy	Physiology Pharmacology Pathology Anatomy	Musculoskeletal System Anatomy	Neurosensory System Psychiatry Anatomy
OMM, Clinical Skills, Foundations of Medical Practice, Professional Core Competencies			

Block 5	Block 6	Block 7	Block 8
Cardiovascular System Respiratory System	Blood/Lymph/Immune Integumentary System Renal System	Endocrine System Gastrointestinal System	Reproductive System Clinical App of Biomed Sci Intro to Clinical Clerkships
OMM, Clinical Skills, Foundations of Medical Practice, Professional Core Competencies			

June	July	August	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
SIM	VAC	IM 12	IM2	SUR	Rural/ Under-served	OBG	PED	PSY	FM	Med Select	Med/Surg Select

June	July	August	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
EM	RD	SUB I	ELEC 1	PCS	ELEC 2	ELEC 3	ELEC 4	GER	Med Select	VAC	Graduation