560: Developing a Quality Improvement / Patient Safety Curriculum

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Will give examples of some products that are in the industry or used in our institution. I have no financial ties or disclosures of any kind

ACGME: CPR 2019

- All physicians share a responsibility for promoting patient safety and enhancing quality of patient care.
- Graduate medical education must prepare residents to provide the highest level of clinical care with the continuous focus on the safety, individual needs, and humanity of their patients.
- Residents must demonstrate the ability to analyze the care they provide, understand their roles within health care teams, and play an active role in system improvement processes.

Programs must provide formal educational activities that promote patient safety-related goals, tools and techniques.

- Adverse event or near-miss reporting (Sensor, Healthcare Safety Zone, The Patient Safety Co.)
    - Educate on what constitutes an adverse event or near-miss
    - Educate on how to use the software
    - Collaborate with institutional officials to increase utilization
    - Report statistics on usage
    - Bring officials to QI/PS conference to review events with the residency and discuss investigations, conclusions and interventions from the reporting
- Root Cause Analysis
    - In vivo
    - Simulated
        - Have your GME office help facilitate 2 or 3 per year institution wide
    - Build relationships with institutional officials so that you are aware of RCAs or other proceedings that are occurring at the hospital. If they are aware you are interested you and your residents can be invited.
- Morbidity and mortality conference
    - Review real life adverse event or near-misses

All residents must receive training in how to disclose adverse events to patients and families.

- Educate
    - There are many methods and models for disclosing adverse events to patients
        - http://www.emdocs.net/disclosure-of-medical-errors/
- Simulate – consider standardized patients
    - Spalding CN, Rudinsky SL. Preparing Emergency Medicine Residents to Disclose Medical Error Using Standardized Patients. *West J Emerg Med*. 2017;19(1):211-215.
- Allow clinical implementation
- Patient or family centered Morbidity & Mortality conference

Residents must receive training and experience in quality improvement processes, including an understanding of health care disparities.

- Lean, Six Sigma and Kaizan
    - Discuss with your institution which quality improvement tools they will be using
    - Engage officials in the education of your residents early on in their training (Lean six sigma white belt training during orientation month)
    - Quality 101 didactic with EM faculty
- Quarterly didactic conferences focusing on QI/PS
- Engage your Department of Population Health, Science or Policy

Residents must have the opportunity to participate in interprofessional quality improvement activities.

- Resident team inspired and led project
    - Consider by PGY class
    - Utilize didactic time as working period
- Faculty mentored project
    - Often times institutionally sponsored project with faculty as physician champion
    - One or two resident team members
    - Scheduling working periods where all members can be present may be challenging
    - Consider 2-3 residents from the same PGY class to staff the project, hopefully at least one can make each meeting and they can collaborate offline to complete tasks
- Hospital driven project
    - If no EM faculty is present on the project, often times a solo resident can get left out easily
    - Consider above solution of overstaffing the work group with EM residents
    - Consistent EM faculty oversight will be required to make sure the residents are getting an adequate experience

Patient Safety and Quality Improvement: Bringing it all together

- Find opportunities in your curriculum where you are already doing activities that QI/PS can be woven into (case conference, M&M, simulation, oral boards)
- Enlist a faculty champion who is enthusiastic about QI/PS and can be your point person between EM and the institution
- Collaborate with institutional officials to use GME QI/PS education as way to achieve common goals
    - Successful quality improvement projects will decrease waste, save money, streamline processes and ultimately lead to better patient care
- Identify areas for academic productivity
    - Participation in QI/PS activities can be easily translated into publishable works.
    - Collaborate with research divisions or hire your own
    - Identify publications that are QI/PS friendly
- Build a multidisciplinary team with GME QI/PS + academic productivity in mind
    - Monthly meetings of institutional quality officials, faculty, residents and administrators across all departments and specialties
    - Use the time to collaborate and identify opportunities for quality improvement
    - Vet ideas from the outside the working group
    - Prioritize projects and recruit team members
    - Monthly progress reports for active projects
    - Status updates focusing on publication process of completed projects

Quality Project Examples

- Batten A, Jaeger C, Griffen D, Harwood P, Baur K. See You in 7: improving acute myocardial infarction follow-up care. *BMJ Open Qual*. 2018;7(2):e000296. Published 2018 Jul 3. doi:10.1136/bmjoq-2017-000296
- Steen S, Jaeger C, Price L, Griffen D. Increasing Patient Safety Event Reporting in an Emergency Medicine Residency. *BMJ Qual Improv Rep*. 2017;6(1):u223876.w5716. Published 2017 Apr 27. doi:10.1136/bmjquality.u223876.w5716
- Galanos K, Jaeger C, Coakley K, White P, Griffen D. Effectiveness of a submassive pulmonary embolism protocol to standardize patient evaluation and treatment. *BMJ Open Qual*. 2018;7(3):e000279. Published 2018 Jul 21. doi:10.1136/bmjoq-2017-000279
- Greenwalt M, Griffen D, Wilkerson J. Elimination of Emergency Department Medication Errors Due To Estimated Weights. *BMJ Qual Improv Rep*. 2017;6(1):u214416.w5476. Published 2017 Mar 27. doi:10.1136/bmjquality.u214416.w5476
- Effectively reducing amylase testing using computer order entry in the emergency department: quality improvement without eliminating physician choice. C Jaeger, P Sullivan, J Waymack, D Griffen. J Innov Health Inform. 2017 Oct 6; 24(3): 907. Published online 2017 Oct 6
- Effectively reducing CK-MB utilization using computerized order entry on the Emergency Department. Sullivan P, Waymack J, Griffen D, Jaeger C. Am J Med Quality. 2017 Jan/Feb; 32(1):107.
- Refining reflex urine culture testing in the ED. Jaeger C, Waymack J, Sullivan P, Lankala S. Am J Emergency Med. 2018 Dec 21.

- Next day discharge rate as little use as a quality measure for individual physician performance. Inabnit C, Markwell S, Gruwell J, Jaeger C, Millburg L and Griffen D. Am J Emerg Med. 2018 Sep;36(9): 1635-1639.
- Application of statistical process control to physician specific emergency department patient satisfaction scores: a novel use of the funnel plot. Griffen D, Callahan CD, Markwell S, dela Cruz J, Milbrandt JC, Harvey T. Acad Emerg Med. 2012 Mar; 19(3): 348-55.

- Improving reversal of anticoagulant associated ICH
- Decreasing unnecessary urine cultures in the ED
- Improving length of stay of psychiatric patients
- Improving myocardial infarction follow up care
- Increasing patient safety event reporting in an emergency medicine residency
- Decreasing readmission rates of CHF in the ED
- Optimizing MRI utilization in the Emergency Department
- Point of care lab duplication
- CT utilization in the Ed (CT-PA, CT abdomen, CT C spine)
- Identification of prehospital sepsis
- Improving sepsis care in the ED
- Standardizing the evaluation of Category 2 trauma patients
- Observing 72-hour ED readmissions
- Preventing alcohol withdrawal in the ED
- Preventing pediatric medication errors (in the ED and prescriptions)
- Improving door to incision for hip fractures