Quality/Safety and the new ACGME Common Program Requirements

(There are a lot of them)

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I HAVE financial disclosures

- I am the president of DRDR Mobile Health
  - Create/license mobile healthcare applications at the University of Chicago
- Incident:
  - Mobile Adverse Event Reporting Application
  - I WILL discuss the use of Incident at the U of C
- UCAIR
  - University of Chicago BSD adverse event reporting application for Lab/General Safety incidents and near-miss
  - I will NOT discuss the use of UCAIR
- Step Test
  - Mobile application that reports activity recorded by an iOS device to evaluate perioperative functional status
  - I will NOT discuss the use of Step Test

Objectives

- 1. Analyze the new ACGME core program requirements for patient safety and quality improvement.
- 2. Identify methods to increase resident engagement in patient safety reporting and safety culture.
- 3. Develop strategies for collecting representative quality metrics and benchmarks to provide feedback for residents and faculty.

Outline

- Two very helpful online resources
- The two old requirements
- Ten new requirements were added
  - You have till 2019 to implement most of them
- Discuss strategies for implementing these requirements
  - Patient Safety
    - "Structure" of a culture of safety
    - Adverse Event Reporting/Safety reports
    - Root cause analysis
    - Disclosure of adverse events
  - Quality Improvement
    - QI metrics
    - Report cards
    - Resident driven QI projects
    - Health care disparities
- Questions

These two organizations have a number of helpful resources for patients safety and quality improvement

- Institute for Healthcare Improvement (IHI)
  - ihi.org
  - Online courses/curriculum for both patients safety and QI
    - Offers both free classes and a subscription service
    - Classes involve an online module/content with video case reports
    - Subscription service for residents costs ($500), I believe
  - Provide post-tests and a certificate after completion
- Agency for Healthcare Research and Quality (AHRQ)
  - Ahrq.gov
  - Online material provided, but not online courses
    - Provide the content in PDF/Power point slides, but not a formal "course"
  - Safety culture survey
- Many of the requirements can likely be satisfied with online resources from these websites

Previously there were two limited and non-specific requirements for patient safety and quality improvement

- The program must be committed to and responsible for promoting patient safety and resident well being in a supportive educational environment
- The program director must ensure that residents are integrated and actively participate in interdisciplinary clinical quality improvement and patient safety programs.

Ten new requirements were added to common program requirements Section VI

(virtually all aren't citable until **2019**)

1. Structure that promotes safe care/culture of safety
   Participating in patient safety programs: holdover from previous requirements*
2. Reporting [know reporting responsibilities/how to report]*
3. Provide summary information of institutions patient safety reports
4. Formal educational activities that promote safety related goals, tools and techniques
5. Resident Participation in real/simulated root cause analysis
6. Education on disclosure of adverse events and participation
7. Data on quality metrics in resident patient population
8. Training/experience in QI processes, including health care disparities
9. Participate in interprofessional QI
10. Activities aimed at reducing health care disparities

*=Subject to citation in July 2017

https://www.acgmecommon.org/2017_requirements

1. Programs must establish a culture of safety

- The program, its faculty, residents, and fellows **must** actively participate in patient safety systems and contribute to a culture of safety
- The program **must** have a *structure* that promotes safe, interprofessional, team-based care.
- Taken together they want programs to develop a culture of safety
- But how does one build a *structure* that promotes a culture of safety?

A minimum of five aspects are involved in creating a "structure" that promotes patient safety

- Five* key aspects to developing a safety culture
- Measurement of departmental/institutional safety culture
  - Identify strengths/weaknesses and changes over time
- Leadership engagement
  - Departmental/hospital leadership need to take ownership
- Reporting adverse/patient safety events
  - Helps to identify gaps in safety
- Feedback/Education: Learn lessons from mistakes
  - Feedback lessons learned
- "Blame free" culture
  - Everyone needs to be able to admit mistakes/errors

* Thanks to Thomas R. Chidester

Measuring safety culture identifies the current state of a department

- Safety attitudes and safety climate questionnaire (SAQ)
  - www.med.uth.edu/chqs
  - No guidance for scoring OB or OR versions of the SAQ
- AHRQ
  - Two different survey types available
    - Hospital Survey on Patient Safety Culture
    - Ambulatory Surgery Center Survey on Patient Safety Culture
  - Neither are a perfect fit for anesthesia departments
  - Easily converted to survey monkey
- Identifies specific areas of strengths deficiencies of the institution/department
- Identifies baseline levels to track any changes over time

AHRQ Hospital survey measures 6 domains

- Likert Scale 1-5 [Strongly Disagree – Strongly Agree]
- Unit level variables
  - We have enough staff to handle to workload?
- Supervisor/Attending variables
  - My supervisor/manager seriously considers staff suggestions for improving patient safety?
- Communication
  - We are informed about errors that happen on this unit?
- Event reporting
  - When a mistake is made, but has *no potential to harm the patient*, how often is it reported?
- Hospital level variables
  - Important patient care information is often lost during shift changes?

Safety Culture in the Operating Room: Variability Among Perioperative Healthcare Workers

Marc Philip T. Pimentel, MD, MPH,†‡ Stephanie Choi, BA,† Karen Fiumara, PharmD, BCPS,‡ Allen Kachalia, MD, JD,†‡§ and Richard D. Urman, MD, MBA*†*

- AHRQ Hospital Survey on Patient Safety Culture
- Percent positive response:
  - Percentage of responses with a Likert score of 4 or 5
- Dimensions with the highest percent of positive scores
  - Teamwork within hospital units (69%)
  - Organizational learning and continuous improvement (57%)
- Lowest performance:
  - Feedback and communication about error (34%)
  - Hospital handoffs and transitions. (30%)
- Attending surgeons perceived the highest safety climate overall
  - Surgeon: 64%
  - Anesthesiologist: 47%
  - Nurses: 37%
  - Technologists: 37%

J Patient Saf 2017

Leadership must promote and engage its staff in patient safety

- Leadership sets the tone for safety in a department or unit
  - Determines the priorities of the departmental mission
- Allows for open discussion/collaboration
  - Encourage feedback, open discussion and value team members feedback
- Engage/encourage event reporting
  - Engage staff in identifying potential patient safety issues/concerns
  - Should actively encourage submitting reports

2. Residents **must** know their responsibilities in reporting patient safety events at the clinical site, **must** know how to report patient safety events, including near misses, at the clinical site

- Need a reporting infrastructure/how to report events
  - Hospital based vs. Departmental based
    - Departmental reporting may provide you with more relevant events
    - Residents may be reluctant to report system wide
    - Lack of coordinated response unless events are shared with hospital quality infrastructure
- Different methods of reporting
    - Paper list/E-mail/Web based site/Mobile Application
    - All work and have their own limitations
    - We deployed Incident mobile application in 2015
    - Increased resident participation in adverse event reporting
      - Resident monthly reporting rates went from 4.0±1.7 to 7.3±3.3 reports/months
      - It can be hard to type a lengthy report using a mobile device.
- Residents need to know what to report
  - To specific and reports may reflect what you tell residents to report
  - To vague and you may not get any reports
  - We don't explicitly specify what to report but we do give guidelines

Elucidating Reasons for Resident Underutilization of Electronic Adverse Event Reporting

Jonathan Hatoun, MD, MPH[1], Winnie Suen, MD, MSc[2,3], Constance Liu, MD[4], Sandy Shea, BA[5], Gregory Patts, MPH[6], Janice Weinberg, ScD[6], and Jessica Eng, MD, MS[7,8]

- Survey of residents at tertiary medical center (66% survey completion)
  - Surgery, Medicine, Hospital Based (Anesthesia, EM, Pathology, Radiology)
- Overall top barriers of reporting:
  - Not knowing what to report (50%)
  - Not knowing how to report (43%)
- Of residents involved in an adverse event only 43% actually reported an event
- Primary barriers to reporting for Medicine/Hospital Based Residents:
  - Not knowing what to report
  - Not knowing how to report
- Primary barriers to surgery residents reporting:
  - "I don't think the system will change as a result of my reporting"
  - The majority of surgery residents reported an event (61%)

Am J Med Qual 2016

An Assessment of an Educational Intervention on Resident Physician Attitudes, Knowledge, and Skills Related to Adverse Event Reporting

Barbara G. Jericho, MD
Rosalie F. Tassone, MD, MPH
Nikki M. Centomani, RN, BSN
Jennifer Clary, BA
Crescent Turner, RN, MS
Michael Sikora, MD
David Mayer, MD
Timothy McDonald, MD, JD

- Resident physicians don't report adverse events
  - <1% of adverse event reports came from residents at UIC
- Educational training and expectation of reporting
  - Educational intervention
    - Survey to identify baseline attitudes toward reporting
    - Understanding of errors and relation to ACGME core competencies
    - Methods of reporting and institutional response to a report
    - Expectation of event reporting
    - Case based lecture format
- Increase in adverse event reporting by residents
  - From 0 per quarter in prior years to 28 in last quarter of study
    - Average of 18 reports/quarter over the study period
  - Improved resident attitudes toward error disclosure

JGME, June. 2010

Need to provide individual and departmental feedback on reported events

- Individual feedback with members involved in the event
  - Insufficient feedback is a barrier to reporting
  - Associated with a static system: Why report if the system won't change!
  - We follow up individually after a report is submitted
- Departmental feedback
  - Our departmental M and M has two methods:
    - Quick Hits: quick mention of a number of safety issues reported through our adverse event reporting system
    - In depth: more extensive presentation for events exposing systems issues
  - Limitations
    - Attendance
    - Time constraints: Its only an hour long monthly conference
- Departmental Safety e-mail (I've always wanted to do this)
  - Send out an e-mail with safety events and analysis
  - Limitation would be the high time commitment

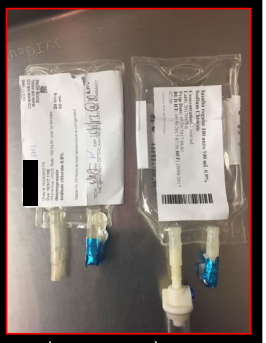
Medication Error: Medication Swap

- Patient Name: ####
- MRN: ####
- Date of event: 10/3/17, 1:39 PM

Description: Insulin infused instead of desmopressin. Bags look similar. 50 units infused mistakingly before noticing. No harm to patient. Blood glucose 250 after infusion.

Reported by: Resident

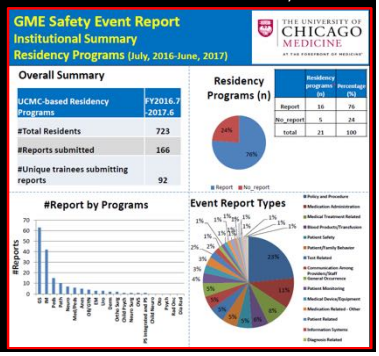
Submitted by Incident version 1.0 (14)



(This would be a quick hit in our department)

3. …**must** Be provided with summary information of their institution's patient safety reports. (This is a report from U of C GME Office)

This report contains:
1. Total number of reports
2. Reports by specialty
3. Total of individual residents submitting a report*
4. Types of events reported

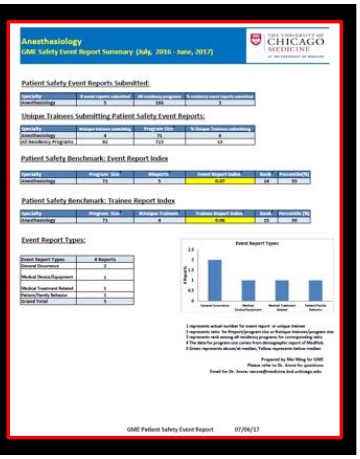


* If a resident submits a report it is not anonymous

They also provide departmental specific data on reporting.

Compares our residents against other residencies with:

Event Report Index
(# reports/program size)
Trainee Report Index
(# reporters/program size)



"Blame free" or "just culture"

- Blame free environment encourages reporting and discussion of safety concerns
  - If individuals will be reprimanded for reporting events, who will report?
  - Emphasizes a deficiency in the system and not the individual practitioner
  - However, some events are worthy of disciplinary action
    - Gross negligence or reckless behavior
- "Just culture" is now widely used to add some accountability
  - Focuses on identifying systems issues that lead to unsafe behavior
  - Holds individuals accountable for gross negligence or recklessness
- Reports submitted to an adverse event reporting system should not impact Clinical Competency
  - Exception: Gross negligence or Reckless behavior
  - Very important to maintain resident engagement in reporting

4. **Must** participate as team members in real/simulated interprofessional clinical patient safety activities, such as RCA or other activities that include analysis, as well as formulation and implementation of actions

- ACGME gives root causes analysis as an example
  - RCA's are the easiest activity to attend/simulate
  - IHI has an online course: PS 201
- Getting every resident to an RCA would be challenging
  - How educational is it if they were not a member of the care team?
  - RCA's are frequently held at the worse possible time for anesthesiologists: 9:00AM
- Simulated RCA's can be challenging to deploy for residents
  - Residents are not familiar with the process
  - Identifying causal factors can be difficult
  - Engaging residents in this process can/was difficult…

Simulated root cause analyses are difficult to engage the residents, we tried!

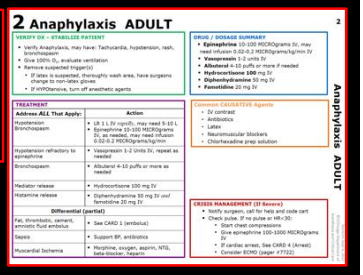
- We did a two stage RCA last year
  - 1st day was didactics on the RCA process
  - 2nd day was a "simulated RCA"
  - Resident engagement was challenging
- Covered the different components of an RCA
  - Identify the intended flow process
  - Identify relevant factors that contributed to the event
    - (e.g: Human, equipment, environmental, etc)
  - Assessment of organizations culture/risk assessment
  - Action Plan: What can we fix and how can we fix it?
- We are going to try again!
  - Rather than have everyone participate, we are going to have "actors" to facilitate the process and discussion
  - Script the discussion and talking points

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

- The most relevant anesthesia tools are handoffs and checklists
- Handoffs/Transitions of care tools
  - SBAR technique: Situation-Background-Assessment-Recommendation
  - Develop in-house handoff technique/checklist
  - We developed an in house transition of care checklist
- Checklists/Cognitive Aids
  - Critical events series: Dr. Anna Clebone
  - Educational process on checklist/cognitive aid use
  - Review of events/low fidelity simulation
- Institute of healthcare improvement based
  - PS 203: Teaming up against healthcare associated infections
  - PS 204: Preventing pressure ulcers

Example of the Cognitive Aid developed at U of C

11 different diagnoses
- Verify the diagnosis
- Treatment
- Medications
- Causative factors
- Crisis Management



Anesth Analg, July. 2017

6. **Must** receive training in how to disclose adverse events to patients and families. **Should** have the opportunity to participate in the disclosure of patient safety events, real or simulated..

- This one is tricky due to significant institutional variability
  - Some institutions tend toward full disclosure, some less
  - State laws vary regarding an apology as an admission of guilt. ("I'm sorry law")
    - Illinois does NOT have an I'm sorry law*
  - Our institution requires *attendings* to lead the conversation in disclosure
- Coordinate with in-house risk management!
  - I talked to them and they approach this on a case by case basis
  - We do not have an official policy but we do have a tip sheet
    - Its okay to say "I'm Sorry."
  - They may want you to take a specific approach
    - Call them after an event, but prior to disclosure
    - U of C has a preference towards disclosure, but your institution might not!
- U of C risk management had no idea this is an ACGME requirement

http://www.ncsl.org/

There are online curricula for adverse event disclosure

- IHI does have an online course addressing this
  - PS 105: Responding to an Adverse Event
  - Structured curriculum
  - Patient story: Cardiac arrest secondary to Local Anesthetic Systemic Toxicity
- AHRQ also has a course material (CANDOR)
  - Online content with sample disclosure videos
    - How to disclose and how not to disclose an event (insulin overdose)
- Make sure your local risk management approves of the on-line curriculum

7. Residents and faculty **must** receive data on quality metrics and benchmarks related to their patient population

- It does NOT need to be patients that they directly care for
- The ACGME FAQ* allows for
  - Providing individual, specialty-specific data is desirable, but not required. The requirement seeks to ensure that quality metrics used by the *institution* are shared with residents/fellows and faculty members.
- Examples of metrics include, but are not limited to, those provided by the following:
  - Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)
  - Centers for Medicaid and Medicare Services (CMS)
  - Press Gainey
  - National Surgical Quality Improvement Program (NSQIP)

* https://www.acgme.org/Portals/0/PDFs/FAQ/CommonProgramRequirementsFAQs.pdf

We provide an attending level report card for 7 different patient outcomes

- Report card outcomes:
  - Post-op pain score >7 in PACU
  - Post-op reintubation <7 days
  - Patient Safety Indicator #11
    - (Diagnosis of respiratory failure)
  - Post-op MI <7 days
  - Post-op Stroke <7 days
  - Mortality <7 days after anesthetic
  - Perioperative hyperglycemia (>250mg/dl)
- For each metric we provide:
  - Departmental range
  - Individual practitioners incidence
  - Case list of affected patients

Our data comes from the EMR (EPIC) and other novel databases

- EPIC provides data for 4 of our metrics:
  - Mortality/Post-op pain/Hyperglycemia/AKI
- We have relationships with other departments for their data:
  - Cardiology has a record of all left heart catheterizations
  - Neurology has a record of all stroke code activations
  - Billing data for a floor intubation
  - Hospital Quality Center provides PSI-11 data
- We then reference out these databases against our billing data
  - To compare the date of surgery to the date of outcome/complication
- It is extremely labor intensive!
  - Each report takes roughly 1-2 hours to complete
  - Setting up the report took a tremendous amount of time
    - (Credit to Dr. Avery Tung)
  - We have a quality nurse who compiles the reports.
  - These resources may be useful for QI projects though…

8/9. **Must** receive training and experience in quality improvement processes, including an understanding of health care disparities. **Must** have the opportunity to participate in interprofessional QI activities.

- I combined these two as they are focused on the same thing: QI processes and experience
- We developed an in-house curriculum utilizing faculty didactics
  - Morning lectures throughout the year
  - Focus is on quality theory:
    - Systems based improvement
    - PDSA system of QI
    - QI theory (Taylorism, Demming, Donabedian)
    - National QI initiatives and Large Databases
  - We do Not have a a dedicated QI rotation
- IHI does have online quality improvement courses
  - 8 different QI courses

We are creating longitudinal QI groups to focus on a care area for QI experience

- Groups of 6 residents [2 CA1, 2 CA2, 2 CA3]
  - CA-3's are the group leaders and divides up the workload
  - Allows for leadership opportunities for the senior residents
  - 9 groups total [54 residents]
  - Allows for continuity for each project
- Focus on a specific product line within a departmental area of care or complication
  - Anesthesia perioperative medicine clinic
    - Compliance with anti-HTN medication instructions for RALP patients.
  - Out of OR airway management:
    - Crowd control during airway management/code activation
- Each group has a faculty leader
  - Faculty working in that care area
  - Each group will require a faculty adviser to keep the group on track
  - However, it is a resident driven project

Each project will focus on a specific high volume procedure in the department

- The P in PDSA requires identifying current practice
  - We target case procedures at U of C >100/yr to identify a baseline practice pattern
  - Try to find relatively homogenous anesthetic cases
    - Robotic Prostates: 350 cases/yr
    - Knee arthroplasty: 261 cases/yr
  - Chart review is performed to identify possible systems issues
- Discuss ways to improve care
  - Identify why it happens
  - Deploy improvement and study
- Minimal objective is to learn the QI process
  - Even if we don't implement the project we have satisfied ACGME requirements
  - Hopefully would present at Hospital Quality fair
  - Ideally publish the results in a quality improvement journal

10. QI activities **should** include activities aimed at reducing health care disparities

- Health care disparities are very real but solutions to reduce those disparities are as yet unknown
  - African American women had highest adjusted odds ratio (1.7, 1.5-1.8) for general anesthesia for c-section (Anesth Analg 2016;122:472-9)
  - The etiology and solutions in the anesthetic world are unclear
- Language/cultural barriers may be an area to focus on
  - Decreased adjusted relative risk of neuraxial anesthetic in Hispanic speaking women (aRR 0.70, 0.53-0.92) (Anesth Analg 2016,122:204-9)
  - Coordinated initiative to overcome Spanish speaking language barrier resulted in a higher rates of adherence with appointments (OR: 1.32, 1.06-1.64) (Pain Medicine 2017;18:265-274)

Enhanced Recovery After Surgery (ERAS) Eliminates Racial Disparities in Postoperative Length of Stay After Colorectal Surgery

Tyler S. Wahl, MD, MSPH, Lauren E. Goss, MSPH,* Melanie S. Morris, MD,* Allison A. Gullick, MSPH,* Joshua S. Richman, MD, PhD,* Gregory D. Kennedy, MD, PhD,* Jamie A. Cannon, MD,* Selwyn M. Vickers, MD,* Sara J. Knight, PhD,* Jeffrey W. Simmons, MD,† and Daniel I. Chu, MD**

- Impact of enhanced recovery after surgery on racial disparities on post-operative length of stay
- Pre-ERAS black patients stayed a mean 2.7 days longer than white ($p < 0.05$)
- Post-ERAS no differences were noted in mortality or length of stay between black and white patients.

(This would be an ambitious but laudable QI initiative)

Ann Surg, June 2017.

I hope all of these new requirements improve patient care and physician engagement in PS/QI

- Patient safety and quality improvement are critical aspects of being a physician
  - …but so is everything else we already have included in a residency curriculum
- Quality Interventions to improve care may not always be effective at accomplishing there goal
  - Surgical Care Improvement Project
- The tension between needing to improve care and knowing how to do it:
  - "Just as in the rest of medicine, we must pursue the solutions to quality and safety problems in a way that does not blind us to harms, squander scarce resources, or delude us about the effectiveness of our efforts."

NEJM, Aug 2007

Thank you!

Questions?

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