A CLER Aim:
Leveraging Trainees to Improve Care

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With Special Guests: Chris Worsham, Andrew Buchert, and Gabriella Butler

Session Code
The presenters have nothing to disclose

Tuesday, Dec 8, 2015
1:30 PM - 2:45 PM

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Session Objectives

- Describe the growing imperative of including GME trainees in efforts to improve patient care
- Provide hospital leaders an organizing framework for engaging GME trainees in efforts to improve quality and patient safety at the point of care
- Share "best practice" examples of current efforts to apply the framework in real health care settings

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The Clinical Learning Environment Review (CLER) Program: and how we can benefit from it.

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Disclosures
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Conflicts of Interest related to this Presentation
None
The CLER Program

- Established by ACGME Board of Directors in 2011
- First CLER site visits Sept 2012
- Completed first round of nearly 300 visits, April 2015
- Release of technical report of findings by end of year
- New ACGME learning collaboration announcement, 11/3

CLER Six Focus Areas

- Healthcare Quality
- Fatigue Management
- Transitions In Care
- Supervision
- Professionalism
Improving Clinical Learning Environments for Tomorrow's Physicians

Thomas J. Nasca, M.D., Kevin B. Weiss, M.D., and James P. Bagian, M.D.

Approximately 2 months ago, I had a patient where I accidentally administered a wrong dose of fentanyl during a procedure. The patient developed severe hypotension, and the procedure had to be temporarily halted until we could get her blood pressure back up. My attending was close by. He responded quickly. Fortunately, no harm was done.

"The reason this happened is that during a procedure the attending physician does not always have a constant eyes on the patient. There are two distinct roles: one is the direct administering of the drug and the other is the role of the observing physician."

This experience was reported to me by a second-year anesthesiology resident, but dozens of similar patient safety experiences have been described to us by residents in diverse specialties during site visits. The Accreditation Council for Graduate Medical Education (ACGME) has developed a new pathway for CLER Pathways to Excellence that addresses this issue. The pathway will require that attending physicians observe residents in the operating room, intensive care unit, and other clinical settings.

CLER Pathways to Excellence are designed to ensure that residents in all specialties have the opportunity to be observed by an attending physician during a clinical procedure. This observation is intended to help residents improve their skills and gain confidence in their abilities.

PDF copies available at ACGME.org
Focus Area: Patient Safety
Preliminary Analyses, January 2015

Experienced event (%) Experienced and Reported through system (%)
All 67 46
PGY1 47 26
PGY2 66 45
PGY3 72 47
PGY4+ 65 45

For those Clinical Learning Environments where information was available:
A median of 1.2% of patient safety events were reported by residents (~60% CLEs did not or could not track)

Based on interviews with nurses and other clinical staff, residents infrequently report events; it was not unusual that the CLE’s system was used to report on individual behaviors

Focus Area: Supervision

Percent of residents perceived placed in or witnessed a peer in a situation where supervision was inadequate (such as an attending unavailable)

In 43% of the CLEs, the safety and quality leaders recalled patient safety events related to supervision in past year

In discussions with nurses, residents, and faculty most common concerns related to nights and weekends
What opportunities does the CLER data provide?

- A new look at the value of our educational mission to better align with our patient care missions
  - Improvement in patient care: new eyes on patient safety
  - Training our own future workforce in system-based skills
  - Improving the patient care experience
ACGME invites input from Sponsoring Institutions, via a Request for Information to help shape the RFP that will be released in February [www.acgme.org/pursuingexcellence](http://www.acgme.org/pursuingexcellence)
Clinical Learning Environment Review

A journey

Some questions to consider

- How can our medical centers capitalize on the soon to be release findings from CLER to improve patient care?

- What might be opportunities—Pursuing Excellence Initiative—-for us, working together, to better engage residents and their faculty within our medical centers to improve their education and patient care?
An Organizing Framework…

Shift in the healthcare landscape is necessitating a change in our approach to training

- To ensure that the healthcare workforce has the necessary knowledge and skills
- And seeing the trainees, in their role at the point of care, as actual ‘drivers’ of health care quality
Addressing current state gaps means addressing *historical norms* in the training environment

- Resident/fellows as transitory
- Trainee QI efforts not linked to system priorities
- Input as frontline staff not incorporated into hospital QI efforts

*Care improvement occurs in organizations despite housestaff as opposed to because of housestaff*

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**GME Learners as Key Stakeholders**

- Opportunity to create change

Diagram:

- **Delivery of Patient Care**
  - Fellows and Residents
  - Faculty
  - Department/Division Chiefs
  - CMO/Physician-In-Chief
  - CEO
  - Board

- **MD Power Structure**
  - Board
  - CEO
  - CMO/Physician-In-Chief
  - Department/Division Chiefs
  - Faculty
  - Fellows and Residents
Benefits to both the training institution and to the housestaff

**Training Institution**
- Frontline staff involvement and input into solutions
- Housestaff become faculty
- Housestaff engagement → QPS culture

**Trainee**
- QPS as an institutional priority
- QPS as part of every day work (identity)
- Learn skills of QPS improvement work

Barriers to address

- Time
- Lack of role models
- Resource and support allocation
- Competing priorities
Three Different Models

Flexible/Adaptable to suit the varied interest of the trainee and the local constraints in the ‘Learning Environment’

Model 1: Short-term, Team-based

- **Definition:** Focused on behavior change and/or process change within control of interdisciplinary medical team
- **Scenario:** Inpatient team spends 2-4 weeks together, integrating QI/PS into daily clinical care routines
- **Improvement Objective:** To solve a proximal workflow issue or gap in care that a team identifies
- **Educational Objective:** Motivate trainees to incorporate improvement principles and systems based thinking into daily clinical routines versus thinking of QI/PS as separate activity

*Example: Team prioritizes ensuring that 100% of patients admitted to the service have a completed VTE Risk Assessment completed by admitting resident prior to initiation of DVT prophylaxis*
Model 2: Medium-term, Unit-based

- Definition: Focused on a workflow in a particular unit or clinic with aims that are tied to institutional priorities

- Scenario: Trainees who rotate through an unit (or clinic) and work on a QI project developed by the unit (or clinic)

- Improvement Objective: To develop new practice or implement an evidence-based intervention for the unit or clinic

- Educational Objective: To demonstrate to the trainee that even with limited period of time spent in one particular unit, he or she can play a vital role in accelerating that unit's improvement initiatives

Example: Trainees who have weekly continuity clinic, participate as part of the clinic's QI team working to improve flu vaccination rates

Model 3: Long-term, Systems-based

- Definition: Focused on a workflow(s) that crosses multiple units/clinics with an aim to improve systems at departmental/institutional level

- Scenario: Trainees who join a hospital taskforce related to improving a corporate quality goal prioritize ensuring interventions are adopted locally as they rotate through a unit (or clinic)

- Improvement Objective: To make system-level change that helps achieve institutional QI/PS objectives

- Educational Objective: To integrate trainees into a larger institutional objectives for quality and safety; to make robust connections between clinical care at the bedside and institutional quality and safety aims

Example: Trainees on a hospital readmissions taskforce join multidisciplinary rounds when on an inpatient rotation to ensure all patients have follow-up with PCP scheduled by the unit coordinator within 2 weeks of discharge
Putting the 3 Different Models to Action
Sharing of ‘Best Practice’ Examples

Model 1
Short-term, Team-based
Aim & approach

- Teach students & residents how to improve (and how not to hate QI)

- What could we improve in 2 weeks?
  - Team-based approach

- Start with this question: What makes your day difficult?

- And then…wait
What Steve told me…

Simple measurement

- So, I asked…how many of our patients had catheters?

- Our Day 1 measure:
  - Total # of catheters

- Data collection plan:
  - MS III to note presence of catheter during bedside rounds
  - Plot number on workroom whiteboard

- Our Day 1 PM measure:
  - Total # catheters/Total # of patients

- Our Day 2 AM measure:
  - Total # of medical necessary catheters/Total # of patient patients

- Our Day 3 AM measure (final measure):
  - Total # of medically unnecessary catheters that were still found inserted by PM rounds
  - **AIM statement:** get to zero (never let the sun set on an unnecessary catheter)
No Foley Left Behind

What changes did we make?

- Daily recording & paying attention
- A focus during AM and PM rounds
- Built into our patient presentations
- Catheter rounds by each MS and PGY-1 duo right after lunch
- Alerted nursing to our effort…nurses joined in.
What I didn’t do

- Teach the Model for Improvement, PDSA, run charts, variation analysis, systems thinking
- Mention Juran, Deming or Shewhart
- Use acronyms
- Tell the residents about the strategic priorities of our hospital
- Work on an abstract idea
- Work on something that didn’t bother them

Model 2

Medium-term, Unit-based
Resident Project

Chris Worsham, M.D.
Internal Medicine Resident, PGY-3
Boston Medical Center

“Improving Infection Control Measures in an ICU”

- C. diff rate higher than national average
- Routine infection control precautions are not always taken
- Hospital epidemiologist looking for pilot project
Resident Project

- Single unit, small 12-bed ICU
- Staff and leadership aware and on board
- Flexible scheduling
- No funding initially

Resident Project: Aim

- Improve adherence to basic infection control measures in the 9N ICU by 15% by January 31, 2016.
Resident Project

- Led by resident
- Team membership has been variable
  - Baseline data: 1 resident, 1 medical student
  - Jr Resident Project: 3 residents, 3 MPH students
  - Currently: 2 residents, 1 medical student
- Mentorship from hospital epidemiologist
- Collaboration with RN and MD leaders, unit RNs

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Resident Project

- Healthcare workers observed with checklist
- Observations at irregular intervals given duty schedule
- Baseline data taken
- Process analyzed by traditional QI techniques

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Resident Project

- All healthcare workers had trouble adhering to basic hand hygiene & special precautions
- Multiple common failure points identified

Resident Project

- Install more hand sanitizer dispensers
- Create a campaign with infection control characters
- Make new alert signs featuring characters
Resident Project

- $1,600 QI grant from Resident Union’s BMC HS QI Council jointly supported by BMC’s Malpractice Captive
- Work orders for new hand sanitizers
- Printed up signs and posters
- Measuring for change currently

![Droplet Precautions](image)

Resident Project

- Lessons learned
  - Duty schedule often not compatible with project schedule
  - Do project in manageable chunks
  - Observations are more difficult than chart-based measurements
  - Resident/student QI programs can work
  - Trainees and students want to take leadership roles

- Unit based project
  - Unit was engaged and interested in improvement
  - Leadership comfortable with resident-run project
  - Smaller is better; easier to make changes
  - Less funding needed
  - Unit-based pilots are the gateway to larger projects

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Model 3
Long-term, Systems-based

Engaging Residents in Patient Safety and QI Work at the Institutional Level

Andrew R. Buchert, MD
Gabriella A. Butler, MSN, RN

Children’s Hospital of Pittsburgh of UPMC
Pittsburgh, PA
Who we are…

- **314 bed free-standing tertiary children’s hospital**

- **Pediatric Residency Program**
  - 85 General Pediatrics Residents, 16 Internal Medicine-Pediatrics Residents, 9 Triple Board Pediatrics-Psychiatry-Child and Adolescent Psych Residents

- **Pediatric Fellowship Program**
  - 25 Pediatric Subspecialty and Surgical Subspecialty Fellowships

- **Clinical site for other non-pediatric residency training programs**
  - UPMC Surgical, Surgical Subspecialty, Anesthesiology, Radiology, Emergency Medicine, Family Medicine, Psychiatry, and Pathology residents
  - Family Medicine and Surgical residents from training programs outside of UPMC

Quality and Safety are at our core…

*Where do Graduate Medical Trainees fit in?*

Residents and fellows are our frontline physicians

- In the trenches of patient care day in and day out
- Recognition of shortcomings in our systems of care is a given – they need to be empowered to share their ideas and to participate in improvement

They are ideally positioned to implement solutions
Are Graduate Medical Trainees EMPOWERED?

- Do they know what to do when medical errors or near misses happen?

- Do they know how to access the patient safety and QI infrastructure of the hospital?

We must provide them with the knowledge to recognize errors and near misses, the invitation to report them, and the power to fix them.

Our Patient Safety and QI Mission for our Trainees

- Engaging graduate medical trainees in patient safety and quality improvement

- Increasing safety event and medical error reporting by graduate medical trainees

- Integrating graduate medical trainees into hospital/institutional safety and quality structures
Strategic Approach

Didactics to provide the foundation
- Orientation
- Noon Conference
- Intern Boot Camp
- Leadership Workshop

Knowledge & Prioritization

Consistent Access to Hospital Leadership
- To Err is Human
- Senior Safety Rounds

Leadership Buy-In

Integration of PSQI into daily activities
- Start morning sign-in and rounds with patient safety
- Discussion about safety events in real time
- Regular inquiry from faculty about safety concerns and opportunities for improvement

Faculty Support

Designated Point-Person
- Chief Resident for Patient Safety and Quality

Protected Time & Bridge to Leadership

Involvement in institutionally-supported QI work
- Hand hygiene, Pediatric Septic Shock Collaborative, Solutions for Patient Safety HAC work, Clinical Pathways, Medication Reconciliation, Handoffs

Sustainability & Meaningful Contribution

Patient Safety Reports Filed by Residents at CHP

Patient Safety Reports Filed by Pediatrics Residents at CHP
Total Number of Patient Safety Reports at CHP

![Chart showing reported patient safety events by all positions]

CHP Serious Harm Events

![Chart showing serious harm events that reached patients]

Serious Harm Events that Reached Patients

Serious Harm Events Include: CLABSI, CAUTI, VAP, VTE Events, ADE(I on MERP scale), Falls of moderate or greater harm, SSI (Cardiothoracic Neuro Shunts & Spinal Fusions), and PU (Stages 3,4, Unstageable).
Evolution

Strong partnership between all stakeholders
- Hospital Patient Safety and Quality leadership, Medical leadership, Nursing leadership, Residency Program leadership, Core faculty

User-friendly safety event reporting system
- Link to reporting software through the EMR

Timely follow-up of safety events
- Non-judgmental follow-up immediately after event
- Resident participation in root cause analyses, workgroups, committees, administrative projects
- Recurrent themes addressed via Senior Safety Rounds, Intern To Err is Human, Housestaff lunch

Invitation to own the solution
- Resident participation in and leadership of workgroups, committees, administrative projects

THANK YOU!!
Summary

- Changing landscape of medicine requires a change in the learning environment of trainees
- CLER, ACGME's new initiative, calls for the better integration and active participation of the trainees by hospital leaders in achieving meaningful quality and safety improvements for training institutions
- Lessons learned from CLER’s initial round of site visits demonstrates a clear gap of where we are currently and where we need to get to at a national level
- Locally, many barriers exist in integrating trainees into Quality and Patient safety initiatives in a meaningful way
- Solutions do exist by integrating trainee improvement work at the point of care
- Which can be done in team based, unit based and system based efforts in which trainees play a central role to realizing improvement