Innovative Ideas for Integrating Patient Safety and Quality Improvement into Medical Student Curriculum

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DISCLOSURES

- None of the presenters have any conflicts of interest or commercial funding to disclose.

- Dr. Murphy
  - Academic Administrative Units in Primary Care (HRSA-07-090)
  - Developing Quality Improvement Curriculum for Medical Students, Residents, and Faculty Development
  - A Collaborative Effort Between Departments of General Internal Medicine, Pediatrics, and Family Practice at University of Massachusetts Medical School.
  - October 2007-2010
# Introductions - Us

<table>
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Introductions - You

- How many of you are involved in:
  - Teaching medical students?
  - Teaching residents?
  - Faculty Development?

- How many of you teach QI/PS?
- How many of you develop QI/PS curricula at your institution/program?
- How many of you are involved in QI/PS initiatives?
Workshop Schedule

- Welcome/Introductions
- Review of Current State PS & QI in UME
- Description of 3 Curriculum Ideas
  1. Ambulatory Patient Safety-Dr. Wood
  2. Inpatient Near Miss Session-Dr. Leizman
  3. Mr. Potato Head Lean Simulation-Dr. Murphy
- Breakout Sessions-Choose 2 of 3
- Wrap Up/Discussion/Evaluation
Workshop Goals

1. Introduce participants to current national trends in the delivery of Patient Safety and Quality Improvement curricula to medical students.

2. Introduce three innovative Patient Safety and/or Quality Improvement activities currently delivered at three medical schools.
Workshop Objectives

After completion of this workshop, participants will be able to:

1. Distinguish the differences between ambulatory and hospital based Patient Safety.

2. Create strategies for teaching Patient Safety in the inpatient and outpatient setting.
Teaching Quality Improvement and Patient Safety to Medical Students
Teaching Patient Safety & Quality Improvement to Medical Students

**REQUIREMENTS** for teaching patient safety and quality improvement to Medical Students are **VERY VAGUE** compared with ACGME requirements for residents.
ACGME Common Program Requirements: General Competencies

- Patient Care
- Medical Knowledge
- Practice-based Learning & Improvement
- Interpersonal & Communication Skills
- Professionalism
- Systems-based Practice
ADDITIONAL ACGME CRITERIA

- Institutional culture of Patient Safety and Quality Improvement
- **Integrate** residents into departmental quality improvement programs
- Data-driven continuity clinic quality improvement
- System focus
- Effective Hand-offs
Teaching PS & QI to Medical Students

The closest LCME (May 2011) standard is: **ED-10.**

The curriculum of a medical education program must include **behavioral and socioeconomic subjects** in addition to basic science and clinical disciplines.

Healthcare Quality Improvement
Patient Safety

”Depth of coverage of the individual topics will depend on the medical education program’s educational goals and objectives.”
Teaching PS & QI to Medical Students

Proposed New Standard ED-25-A
(November 2011)

At a medical education program, students in clinical learning situations involving patient care must be appropriately supervised at all times. While students learn through graded responsibility as their skills progress, supervision at all times must ensure patient and student safety.
Literature Review: Current State of PS/QI Training for Medical Students

- Few schools have a formal curriculum
- LCME, AAMC, WHO, JCAHO have all documented need
- Current models include primarily QI/PS mini-courses lasting several hours to days
- Few schools use interdisciplinary team teaching or continuity over the 4 year medical school training

*Reference List Provided*
Barriers:
- Lack of knowledgeable faculty
- Culture
- Hidden curriculum
- MD denial of the issue

Time

Students are aware of Patient Safety issues but reluctant to talk about them with supervisors

Most training involves inpatient settings

Few address PS in the ambulatory setting where most patient care occurs!
Strategies for Teaching Patient Safety in the Ambulatory Setting

Karen Wood, MD
Assistant Clinical Professor of Medicine
Harvard Medical School
Harvard Vanguard Medical Associates
Ambulatory Patient Safety Mini-curriculum

- PCP at Harvard Vanguard Medical Associates
- Curtis Prout Fellow, Harvard Medical School “Academy for Teaching and Learning” 2011-2012
- Project: Design a curriculum to teach Ambulatory Patient Safety to 3rd year medical students at HMS
- Associate Director: Primary Care Clerkship HMS
- Clinical Preceptor for 3rd year students
- Previous work on the QA committee at HVMA
Why **Ambulatory** Patient Safety?

- Most patient safety focuses on inpatient care, but most patients are cared for in the ambulatory setting.

- Medical students are largely trained in hospitals but most physicians practice in an outpatient setting.

*Where is the risk?*

At BWH in Boston there are 48,000 admissions but 950,000 ambulatory visits every year!
Ambulatory Patient Safety Curriculum for 3rd year medical students

**Goal:**
Introduce learners to key concepts of patient safety with a particular focus on the ambulatory setting.
Curriculum Objectives:

1. Define the term “culture of safety”.
2. Learn how to report a patient safety event.
3. Describe 3 ways in which medical students can contribute to Patient Safety.
4. Compare and contrast 3 routine risks to patient safety in an office vs. a hospital setting.
5. Analyze the “systems” and “interpersonal factors” which contribute to an ambulatory patient safety event.
6. Evaluate the roles of each member of the ambulatory health care team in patient safety.
7. Increase confidence about discussing patient safety concerns with supervisors and colleagues.
Three Part Curriculum

Part 1: Small group seminar; Day 1 of the Internal Medicine Clerkship

1. Discuss/describe a “culture of safety”
2. Review Transitions in care and patient safety
3. Case: delayed diagnosis, communication errors and transition in care
4. Demonstrate the Patient Safety Event reporting system
5. Discuss the role of the Medical Student in Patient Safety.
6. Legal issues

1. Read 2 articles(*) about patient safety in ambulatory care
2. Brief PowerPoint reviewing key concepts in the articles and steps in an office visit.
3. Complete Ambulatory care “Patient Safety worksheet”

(*)
Gandhi, Tejal; “Patient Safety beyond the Hospital”. NEJM, 2010, 363:1001-1003
Part 3: small group seminar;
Ambulatory Block of IM rotation

1. Review the Anatomy of an Office Visit
2. Review key differences between Inpatient and Ambulatory Patient Safety
3. Discuss student cases/worksheets
4. Summarize role of the student in Patient Safety
Final Observations

1. Formal curriculum evaluation in process.
2. Informal feedback very positive.
3. Medical students are engaged and observant about patient safety issues. They enjoy the opportunity to discuss this subject matter.
4. Culture change is needed! We can start with medical students early in clinical rotations.
Breakout Group Agenda: Teaching Ambulatory Patient Safety

Discussion and a mini-case analysis to cover the following:

- Culture of Safety
- Unique aspects of Ambulatory Care and Patient Safety
- Anatomy of an Office Visit
- Patient Safety Worksheet
- Role of the medical student
Inpatient Patient Safety: “Near Miss” Sessions

Debra Leizman, MD
Current Continuous Quality Improvement (CQI) Curriculum at Case Western Reserve Medical School

Year 1
- Health Promotion Project
- Error case and systems thinking introduction
- PLPs (personal learning plans)
- CPCP (community primary care preceptor) web modules - Intro to CQI as an approach to learning and professionalism as part of the patient based programs

Year 2
- PLPs
- CPCP online web modules - Intro to CQI as an approach to learning and professionalism as part of the patient based programs

Year 3
- Root cause analysis of error case (on video) in an inter-professional setting (medical and nursing students)
- PLPs

Year 4
- CQI during the IQ+ curriculum
Current Quality Improvement Initiative from Department of Medicine

- **Residency externship** in quality improvement and patient safety as PGY3
- Patient Safety and Quality **Chief Resident**
- **Hospital Quality Center**
- Millennium Conference 2009 institutional participant

- Can we initiate any effort for medical students during their core clinical rotations?
- Is it possible to integrate patient safety agenda without sacrificing clinical time for students?
Goals of quality initiative during combined med/surg clerkship

- Teach students quality and patient safety concepts, vocabulary and hospital initiatives
- Help students recognize and report one witnessed mistake or near miss
- Use unique perspective of novice insiders to help quality teams to identify future process initiatives
The Quality Curriculum

- 3rd year medical students
- Week 8 (of 16 week rotation in med/surg)
  - Pretest (sent in advance with glossary, article)
  - One hour case based lecture by quality center nurse, doctors
  - Distribute outcome cards
- Week 16
  - Each student presents outcome card data
  - Quality nurses record data, enter PASS reports if not done, follow up on identified issues.
Student Reporting Themes

- Delay in treatment
- Electronic medical record challenges
- Communication problems
- Equipment issues
- Hygiene
- Medication errors
- Clinical care errors
- Proper patient identification
Outcome Card

- Date and Time:
- Patient Name and Medical Record Number:
- Diagnosis:
- Brief Description of Event:
- Error: Y or N
- Near Miss: Y or N
- Adverse Event: Y or N
- Brief Follow Up or What Could Have Been Done to Prevent Event:
- Confidential Quality Assurance Peer Review Report Privileged Pursuant to O.R.C. 2305.24, 2305.23, 2305.251, 2305.252
Think QuIC! Using Mr. Potato Head to Teach Quality Improvement & Patient Safety

Beth Murphy, M.D.
THINK QuIC!

A Quality Improvement Curriculum
What’s QuIC?

- A vertically-integrated QI curriculum for students, residents, and faculty at UMass
- Originated from 3 year HRSA grant
- Collaboration between General Internal Medicine, Family Practice, and Pediatrics
Year 1
- Day 1 Introduction
- Quality issues in the office
- Immersion
  - Small group on how teams should work
  - Observe ward teams, interview patient, interview RN

Year 2
- Interpreters and Quality
- Interpreting Quality literature
- Palliative Care
- Disclosing Medical Errors
- Using PDSA cycles to improve a course/care of chronic disease

Year 3
- Transition to Clinical Years Days
- Patient Safety Interclerkship
  - Personal Story
  - Medical Errors
  - NPSGs
  - Malpractice
  - Mr. Potato Head
- Reflective Write-up in IM
- “Interstitional” Curriculum Thread

Year 4
- Sub-Internship Activity
- Quality & Patient Safety Elective for some
- Senior Scholars Project
GME and CME QuIC

- **GME (IM Residents)**
  - 3 year curriculum delivered during Ambulatory Block
  - Didactics, Independent Learning, QI Projects

- **CME (Faculty Quality Scholars Program)**
  - 9 month program; 10% support
  - Didactics, Independent Learning, Mentored Project
  - Year 3 in Process
Think QuIC! What does Mr. Potato Head have to do with teaching Quality Improvement & Patient Safety?
Mr. Potato Head

- A fun, interactive, innovative way to demonstrate:
  - Quality Improvement concepts
  - Patient Safety/Medical Errors
  - Lean Process Management
  - Teamwork
  - Communication
- Can do with 4 to >100 learners
- Can do with learners of all levels and disciplines
The Situation...

- A bus filled with 16 Potato Head family members is in a terrible crash!
- EMS arrives at the scene to find only potato body parts scattered about.
- Luckily, there is an EMR (photo) showing what each family member looks like.
- Teams work together to correctly assemble (“save”) family members.
- Through rapid fire PDSA cycles, goal is to improve both quality and efficiency.
Quality Inspectors Examine “Patients” for Medical Errors

- How many family members did your team assemble correctly?
- How many medical errors did you have?
PDSA Cycle #1

- What is your AIM Statement?
  - What? In whom? By when?

- What are your measures?
  - Outcome, Process, Balancing

- What changes will you make for next PDSA cycle?

- How would you plot your data?
Even Mr. Potato Head has gone “Lean”

BEFORE

The New “Active Adventures Mr. PH”
A Slimmed Down Spud
PDSA Cycle Variations…

- There’s been a change at work.
- New Team Members
- Lay offs….
- Adding learners (residents/students) into a process
MEDICINE IS A TEAM SPORT!
Breakout Sessions

- Ambulatory Patient Safety - Dr. Wood
- Inpatient Near Miss Sessions - Dr. Leizman
- Mr. Potato Head Simulation - Dr. Murphy

- 25 minutes each session
- You will choose two stations to visit
- Handouts/descriptions will be available for all three sessions
Breakout Session Discussion

- Ambulatory Patient Safety
- Near Miss Inpatient Session
- Mr. Potato Head Lean Simulation
Summary Points: Patient Safety in the Ambulatory Care Setting

1. Medical students are interested in learning how to analyze and participate in a Culture of Safety.

2. Ambulatory Patient Safety is very important and not often addressed in most curricula.

3. Teaching strategies:
   - Anatomy of an Office Visit
   - Patient Safety Worksheets
   - Discussion of student roles and responsibilities
What I learned from Inpatient Near Miss Sessions

1. Repetition of quality terms is important.
2. Students appreciate the opportunity to improve their environment.
3. Students provide fresh perspectives and recognize areas for improvement.
4. Certain categories of errors recur.
5. It is important to transform outcome event reporting into quality issues to be formally addressed by quality center teams.
6. Respectful humor and honesty are important elements of the reporting session.
What I learned from Mr. Potato Head:

1. Team work is essential for Patient Safety.
2. The system is the critical determinant of performance.
3. Good communication is essential for any high-functioning team.
4. Good ideas for improvement can come from anyone on the team.
5. With very simple changes in system, you can improve both quality and efficiency!
6. QUALITY IMPROVEMENT CAN BE FUN!
HANDOUTS

- Please be sure to sign up to receive your handouts by email!
- Updated Session Slides
- Ambulatory Patient Safety Breakout Slides
- Quality Improvement/Patient Safety Reference List
- Quality Improvement Terms “Glossary”
- Patient Safety Pre-Test
- Near Miss Outcome Cards
- Mr. Potato Head Instructions
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