SUCCESS STORIES OF INTERPROFESSIONAL EDUCATION IN QUALITY AND SAFETY AT THE POINT OF CARE

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The University of Missouri Experience
KEY CHARACTERISTICS OF MU SOM GRADUATES

- Able to deliver effective patient-centered care
- Honest with high ethical standards
- Knowledgeable in biomedical sciences, EBM, and social/cultural issues
- Critical thinkers; problem-solvers
- Able to communicate
- Able to collaborate
- Committed to improving quality and safety
- Committed to life-long learning and professional formation
INTERPROFESSIONAL PATIENT SAFETY AND QI LEARNING: DESIGN PRINCIPLES

- Longitudinal and integrated approach
  - Required elements across courses/years of training
- Interprofessional learning: students and faculty
- Involvement top → down (and bottom → up)
- Experiential learning: link to clinical setting
- Partner with the health system
- Evaluate and evolve...a work in progress
The Integrated Interprofessional Patient Safety Curriculum (TIIPS)

*Retooling for Quality and Safety*

- Independent Online Modules on Patient Safety, QI and Fall Risk Reduction
- Interprofessional Simulation: Preventing Falls in Hospitalized Patients
- Bedside Fall Risk Assessment by Student Dyad & Customized Patient Education Plan
- Interprofessional Debrief
INTERPROFESSIONAL SIMULATION AND BEDSIDE ENCOUNTER

Aging/Mobility Simulation
- Team based—groups of 4-5
- Sharing expertise
- 4-5 stations

Bedside Fall Risk Assessment (2 students)
- Chart and medication review
- Environmental observations
- Customized fall prevention plan
## FOCUS: LEARNING & PATIENT CARE

### STUDENT LEARNING

1. **Knowledge**
   - 99% of risk factors reported were correct

2. **Improved confidence assessing risk and educating patients**

3. **Reflection questions**

4. **Potential interventions: Team and institution**

### PATIENT CARE

- 93% of patients interviewed reported encounter valuable

  **Patient:** "The students were interested in my well being; they worked as a team and emphasized I might have a deficit when I go home after surgery...they asked me about home, steps, cords, cars, medications.... and discussed how to be careful..."
CLERKSHIP STUDENTS FOCUS ON SAFETY

Team Preparation of Patient Safety Case

Interprofessional Group Discussion

Changes in Care Delivery

What went wrong?

How did this happen?

What are potential solutions to prevent recurrence?
M3 PATIENT SAFETY CURRICULUM RESULTS

- **Learning and Patient Care**
  - Improvements in orthopedic order sets
  - Improvements in multi-disciplinary rounding process
- Improvement in student comfort identifying patient safety issues and analyzing issues to find a cause
- Student suggestions more robust than typical reporter

Effectiveness of patient safety training in equipping medical students to recognise safety hazards and propose robust interventions

L W Hall, S D Scott, K R Cox, et al.
Qual Saf Health Care 2010 19: 3-8
doi: 10.1136/qshc.2008.031781
ACHIEVING COMPETENCE TODAY

- Grew out of RWJF Collaborative in 2004—adapted
- **Goals:**
  - Learn QI principles and basic tools while improving care
  - Effective teams and IP roles
- **Principles of learning:**
  - Experiential learning in interprofessional teams
  - Faculty, students, and staff collaborative learning

![Diagram showing the flow of learning sessions and project presentations throughout the year](image-url)
ACHIEVING COMPETENCE TODAY

- Create interprofessional improvement teams:
  - Departments/service areas identify learners/faculty
- QI personnel help identify focus for improvement
- Each team focuses on project for service area
  - **Teams:** 6-8 learners, faculty, staff, QI advisor
  - **Faculty:** “new” and experienced
  - **Learners:** 4th year med students, residents, pharmacy residents, graduate nursing students
- Interactive learning sessions & didactics (4 months)
  - 12 Contact hours and (bi-)weekly working team meetings
  - Effective teams, QI basics and tools, Health systems and change
  - Final presentations for system leaders: share projects & outcomes
- Improvements in student knowledge (pre vs. post)
EXAMPLES OF IMPROVEMENTS

- **Pathology:** Improving tracking system for cytology results

- **Pediatrics:** Improving pre-discharge immunization rates for post-partum women (Tdap and influenza)

- **Family Medicine:**
  - Improving knowledge/use of comfort care pathway
  - Improving patient knowledge of care plan

- **Psychiatry:** Decreasing wait time and duplication of work in symptom evaluation unit.
**LEARNER OUTCOMES**

- Using the QI Knowledge Application Tool
- Significant differences noted in both the pre/post QIKAT scores \((p<0.001)\), and between the ACT participants and matched controls \((p<0.0005)\).

![Mean quality improvement skill level measured by QI Knowledge Assessment Tool (QIKAT)](chart.png)
**EVALUATION MODEL**

WHAT WORKS IN THE CONTEXT OF QI/SAFETY EDUCATION AT MU?

- **Satisfaction**
  - Learners usually value IP experiences
  - *Qualitative feedback suggests there is a lasting inoculation effect*
  - *Works best with “booster”*

- **Learning**
  - *Learners usually value IP experiences*
  - *Meaningful tasks*
  - *Linked to the care of patients*
  - *Improved self-perception of teamwork skills*
  - *Improved predisposition toward collaboration*
  - *Increased QI skills*

- **Behavior**
  - *Improved system function and patient outcomes at microsystem level*

- **Outcomes**
  - *Works best with “booster”*
FINAL THOUGHTS

- Develop integrated/required opportunities for IPE
  - Pre-clinical → Clinical training → Practice

- Experiential learning for students (and faculty)
  - Linked to clinical settings
  - Ultimate goal: improvements in care delivery

- Reinforce principles across experiences

- Develop champions: schools and health system

- Equip faculty to be proficient at this work

- Measure outcomes and continuously improve
ACKNOWLEDGEMENTS

- Les Hall, Dean School of Medicine
- Linda Headrick, Senior Associate Dean for Education
- Interprofessional Education Steering Committee
- Education Innovation and Improvement Steering Committee
- Partners in Education Steering Committee
- TIIPS Steering Committee
- Shelden Simulation Center
- University of Missouri Health System
  - Center for Healthcare Quality
  - Office of Clinical Effectiveness
  - Internal Medicine QI Committee
- Reynolds Foundation