USING EXPERIENTIAL LEARNING TO TEACH HEALTHCARE QUALITY IMPROVEMENT TO MEDICAL STUDENTS

GENEVIÈVE DIGBY AND SHEILA PINCHIN
OBJECTIVES

• Highlight an educational experience that was innovative in the Queen’s undergraduate medical curriculum

• Demonstrate how we used experiential learning to provide a basis for introducing a new educational framework

• Showcase how this experiential learning session can translate to other faculties where students engage in workplace learning
TEACHING PATIENT SAFETY

• First attempt to teach explicitly about patient safety in Queen’s curriculum

• Growing healthcare focus
• Important implications for medical education
• Team-based improvement of real-world health systems
What do we do with a cohort of medical students to introduce them to the principles of patient safety in the workplace? (We wanted them to be more critical and introduce the complexity of the topic.)
ANY TEACHERS WHO HAVE ACCESS TO WORKPLACE OR EXPERIENCE-BASED LEARNING
“OUR” FRAMEWORK FOR LEARNING IN/FROM THE WORKPLACE

Foundational learning

+ Experience and observation in the workplace
+ Reflection/analysis
+ Classroom learning (lecture and small group work) =

- Use of higher order thinking skills, more in-depth analysis
- Students become more critical in thinking and are able to introduce additional complexity
PATIENT SAFETY AND QUALITY IMPROVEMENT
TEACHING GOALS

• Goals:

  • Prepare final year medical students who had no prior formal exposure to PS and QI to deal with issues in daily practice

  • Encourage students to critically assess their work environment and appraise the complexity of the real world system (“root causes” and “system analysis”)

  • Propose high-level, sustainable solutions to adverse events in healthcare
THE “PATIENT SAFETY DEBRIEF”

- **Students**: Final year medical students completing in-hospital clerkship rotations (e.g. psychiatry, emergency medicine)

- **Task**: Submit a vignette that described a patient safety-related encounter in which they were involved, and provide preliminary thoughts for solutions for improvement.

- **Thematic Analysis**: 103 vignettes submitted and reviewed
  - Patient safety issues and solutions coded by an expert in patient safety
# TOP PATIENT SAFETY THEMES - CLASS OF 2017

<table>
<thead>
<tr>
<th>Patient Safety/ Resource Utilization Issue</th>
<th>#</th>
<th>Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medication</strong></td>
<td>29</td>
<td>E.g. Issues with medication reconciliation, Allergy, Over medication</td>
</tr>
<tr>
<td><strong>Transitions of care</strong></td>
<td>21</td>
<td>Discharge, Handover, Time delays in seeing patients, Patient transfers</td>
</tr>
<tr>
<td><strong>Investigations (Bloodwork/ Imaging/ Tests)</strong></td>
<td>12</td>
<td>Critical/ abnormal values not detected, Lack of access to test results, Not done according to order</td>
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### Proposed Solutions

- **“Try harder”, “Be more careful”**
- Double-checks
- Education/ Awareness
- Technology
- Checklists/ Protocols
NEW LEARNING: HIERARCHY OF EFFECTIVENESS
NEW LEARNING: TOOLS FOR ANALYSIS

Fishbone or Ishikawa Diagram: Cause and Effect
IN-CLASS SMALL GROUP TASKS: APPLY THE NEW LEARNING TO STUDENT EXPERIENCES

- Student groups were assigned 1 of 3 cases that were inspired by the most common patient safety themes the students had written about.

- Students were asked to analyze the case and in groups take 20 minutes to:
  1. Determine the adverse event/ resource utilization issue
  2. Perform a system analysis using tools learned in class (e.g. Fishbone Cause and Effect Diagram)
  3. Propose high-level, sustainable solutions to the problem

- Whole class report of each case to share their group work
SMALL GROUP LEARNING QUEEN’S MEDS
STUDENT FEEDBACK

• The session was described as being “both timely and necessary”
• It provided teaching around “an essential aspect of medicine to which [they] were not exposed” prior to the session.
• Concepts were interesting and relatable
• Learning took place in a very supportive environment.
CONCLUSION

Framework:

- Foundational learning + experiential learning + reflection/analysis + additional classroom learning = higher order thinking skills, more in-depth analysis
TAKE AWAY’S

• Observations and participation are not the end point—they are the starting point for learning.
• Scaffold the experiential learning task carefully.
• Create an evidence-based matrix or scaffold for teacher’s response to and analysis of reflections.
• Apply reflections to additional learning that requires more in-depth analysis.