Nursing Crew Resource: Innovation in Action

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Background

• Miscommunication = most frequently identified root causes of sentinel events (82%) (The Joint Commission, 2010)

• Effective teamwork requires effective within-team communication (Baker, Gustafson, Beaubien, Salas, & Barach, 2005)

• QSEN identified two key communication skills:
  – assert own position/perspective in discussions about patient care
  – choose communication styles that diminish the risks associated with authority gradients among team members (Cronenwett, Sherwood, Barnsteiner, Disch, Johnson, Mitchell, Sullivan, & Warren, 2007)
Crew Resource Management

• “an active process by crew members to identify significant threats to an operation, communicate them to a person in charge, and to develop, communicate, and carry out a plan to avoid or mitigate each threat”  (US Department of Transportation, 1993, p. 2)

• instrumental in supporting the aviation industry’s excellent safety record

• focuses on behaviors that support communication and teamwork  (Sculli & Sine, 2011)
Crew Resource Management

- The VA National Center for Patient Safety
  - 11 patient care units across the VA system.
  - Significant improvement in teamwork scores post CRM training \( (p<.01) \)
  - 25% improvement in communication of patient goals
  - 18% improvement in confirming that communication messages regarding patient care are received and understood \( \text{(VHA National Center for Patient Safety, 2011)} \)

- Vanderbilt University Medical Center
  - Utility of the training very positive and believed the potential for CRM to improve patient safety and quality was very high (average 4.57 on 5pt scale) \( \text{(France et al., 2005)} \).

- Operating room
  - Significant improvements in teamwork (in 3 of 4 items measured) after CRM \( \text{(Gore, et al, 2010)} \)
Project Purpose

• Purpose: Implement CRM training in the educational training of nursing students in a baccalaureate program in one Midwestern University.

• Why?
  – current strategies focus on individual skill proficiency within each of the professions (Dunn, Mills, Neily, Crittenden, Carmack, and Bagian, 2007)
  – Consider introduction of concepts in education of the disciplines
  – Greater opportunity for deliberate practice of necessary skills
Methods

- Senior nursing students (n=63) enrolled in Leadership and Management (Winter 2011)
- Six hour didactic NCRM workday
- Emphasis placed on two communication tools
  - 3 W’s
  - 4-Step Assertive Communication Tool (Sculli & Sine, 2011)
- Role play simulation focusing on using the 3 W’s
- High fidelity patient simulation (teams of 4-5 students) focusing on using the 3 W’s and 4 step assertiveness tool (3 months post NCRM day)
- IRB obtained
Nursing Crew Resource Management

- Module 1 – introduction to CRM and its history in aviation
- Module 2 – leadership, followership and communication techniques
- Module 3 – situational awareness
- Module 4 – briefings and debriefings
- Module 5 – sterile cockpit
Communication Techniques

Effective Followership

Use Chain of Command

Four-Step Assertive Tool
- Get Attention
- State Concern “I’m Uncomfortable with…”
- Offer Solution
- Pose Question

TAKE ACTION!
Anywhere, at Any Point

Feedback
SHOULD BE:
- Specific · Direct · Concise

AVOID:
“Hint and Hope” Communication
Evaluation

• Evaluation Survey
  – Application to practice, development of new knowledge, overall program effectiveness
  – 5 point Likert scale (1, strongly disagree to 5, strongly agree)

• Simulation Evaluation
  – video review
  – Use of communication techniques by team
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<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
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<tbody>
<tr>
<td>1. The CRM concepts can be applied to nursing care to reduce harm to patients (n=37).</td>
<td>4.7</td>
<td>0.46</td>
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<tr>
<td>2. I developed new skills and/or knowledge as a result of my participation in the session (n=37).</td>
<td>4.4</td>
<td>0.60</td>
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<tr>
<td>3. I see myself using the skills and/or knowledge gained from the program in the clinical area (n=37).</td>
<td>4.4</td>
<td>0.55</td>
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<td>4. Overall the program was worthwhile (n=36).</td>
<td>4.5</td>
<td>0.56</td>
</tr>
<tr>
<td>5. The teaching strategies used in the program were effective (n=37).</td>
<td>4.6</td>
<td>0.55</td>
</tr>
<tr>
<td>6. I would recommend offering this training again for other clinicians (n=37).</td>
<td>4.6</td>
<td>0.54</td>
</tr>
<tr>
<td>7. I would be interested in more training like offered in this training (n=37).</td>
<td>4.3</td>
<td>0.77</td>
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Leading the way.
Simulation Evaluation
(use of communication tools)

<table>
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<tr>
<th>Communication</th>
<th>Attempted to use 3 W’s or 4 Step</th>
<th>Did not use</th>
<th>Used chain of command</th>
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<tr>
<td>Groups (n=9)</td>
<td>5</td>
<td>3</td>
<td>1</td>
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Project Summary & Future Plans

• Summary
  – NCRM day and simulation = deliberate practice
  – Improved use of effective communication from prior student data
  – Project provided opportunity for developing key communication skills identified by QSEN

• Future Plans
  – Implementation into the senior course curriculum
  – Pre- & post implementation study underway (2011/2012)
  – Introduction of concepts earlier in program
Questions?

Comments?
References


