Using Hybrid Simulation to Teach QSEN Competencies
The Institute of Medicine (2003) recognized the need to transform healthcare education. Quality and Safety Education for Nurses (QSEN) competency domains underscore the need for robust management skills. Patient management skills are difficult proficiencies to acquire. Hybrid simulation combines standardized patients and Human Patient Simulators (HPS) and is more representative of clinical practice.
The purpose of this study was to evaluate application of leadership principles and quality and safety–based competencies using hybrid simulation.
To examine the results of using hybrid simulation on achievement scores of a standardized computer-based assessment in a leadership course in a baccalaureate nursing program
Classroom should connect to what actually happens in patient care rather than in the abstract. Students must make connections between acquiring and using knowledge. Integrate classroom with clinical practice. Benner, 2010
METHOD

Two group post-test only randomized experimental design
66 senior level students in a leadership class of a baccalaureate nursing program

Randomly assigned to 2 groups:

- **Group A**: Students who completed the standardized test first then participated in the hybrid simulation scenario

- **Group B**: Students who participated in the hybrid simulation scenario first then completed the standardized test
Integration of selected IOM/QSEN competency domains into unfolding patient scenarios

Opportunity to practice:

- Hand-off reporting
- Teamwork and collaboration
- Use of informatics
- Actively partner with patients and families
The ABC’s of Planning

- Improvisational actors recruited
- Safety errors embedded
- Paper and electronic charts used
- Moulage: “Making it real”
- Prep-scripted and improvisational
- Leadership principles applied
IMPROVISATIONAL ACTORS

- Faculty volunteers
- Standardized patients
- State Tested Nursing Assistants (STNA)
- Physicians

Students assigned roles:
- Charge Nurse, Team Leader
- Supervisor
- Observer/Recorder
• Communication with Charge Nurse

“RN”

• Assessment
  • Implementation
  • Evaluation
  • Communication

SP

• Collaboration
  • Communication through SBAR

STNA

• Delegation
  • Communication
  • Conflict resolution

MD
ABC’s
Tools

- NLN Simulation tools
- Student evaluations
- Actor evaluations
- Standardized assessments
RESULTS

Longitudinal Report
RN Leadership 2007 Form B

Percentage Score(%) / Percentile Rank

Leadership Group B - Sim after - ALL

Leadership Group A - Sim First - ALL

- Red: Percentage Correct
- Green: National Percentile
- Blue: Program Percentile
### RESULTS

<table>
<thead>
<tr>
<th>Group</th>
<th>Percentage Correct</th>
<th>National Percentile</th>
<th>Program Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>70.4</td>
<td>73</td>
<td>83</td>
</tr>
<tr>
<td>B</td>
<td>69.3</td>
<td>60</td>
<td>71</td>
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</table>

<table>
<thead>
<tr>
<th>Assessment Subscale items</th>
<th>Group A</th>
<th>Group B</th>
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<tbody>
<tr>
<td>Management of Care</td>
<td>69.6%</td>
<td>76.0%</td>
</tr>
<tr>
<td>Error Prevention</td>
<td>46.2%</td>
<td>57.1%</td>
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<tr>
<td>Delegation</td>
<td>82.7%</td>
<td>87.5%</td>
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<tr>
<td>Collaboration</td>
<td>26.9%</td>
<td>39.3%</td>
</tr>
<tr>
<td>Continuity of Care</td>
<td>76.9%</td>
<td>92.9%</td>
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Debriefing

- Standardized patients and improvisational members of the healthcare team
- Observer / recorder
- Faculty
- Students
**FEEDBACK**

**Student Feedback:**
“It was harder than I thought to actually talk about a patient situation to a real physician!”
“I forgot how and when to delegate when it was so real”
“I wasn’t as prepared for report to the Doctor as I should have been.”

**Observer Feedback:**
“I learned what I need to do to actually delegate tasks”
“It was hard to take in the whole picture!”
“This helped me think about all that we learned, it made the content real!”

**Actor Feedback:**
“The nurses were competent and concerned but not as observant as I would have hoped, they need to pay more attention to the patient and organize priorities.”
“Teamwork was lacking”
Complex scenarios using a Standardized patient simulation provided opportunity to apply leadership principles and developed student knowledge, skills and attitudes for each QSEN competency domain.
Findings support further exploration of the use of simulation to improve application of quality competencies and leadership concepts.

Subscales measurements show improvement in recognition and prevention of errors on a standardized assessment.