Utilizing Simulation and Learning Theory for Skill Acquisition in Continuing Nursing Education

Mandi Walker MSN, RN-BC, CCRN  
University of Louisville Hospital  
Nursing Education & Research Department  
Critical Care Advanced Practice Educator  
(502) 217-5258  
mandiwa@ulh.org

Gina Stevenson BSN, RN, OCN  
University of Louisville Hospital  
Nursing Education & Research Department  
Oncology Advanced Practice Educator  
(502) 562-4083  
ginawa@ulh.org

Disclosures
The presenters have no conflicts of interest to disclose.

Objectives
At the end of the session, learner will be able to:
1) Apply the tenets of constructivist learning theory to continuing education
2) Describe the impact of simulation on skill acquisition for bedside nurses
3) Design education programs to engage nurses of various experience levels

Background
- BMTU is a 17 bed mixed acuity oncology unit  
  70% critical patients
- Knowledge gap identified regarding general critical care  
  Influx of new graduates  
  Infrequent vents, hemodynamic monitors, vasopressors

Perception of the Unit
- Unit nurses didn’t identify w/ “critical care”
- Facility overlooked the unit as critical care
- Young & inexperienced
Utilizing Simulation and Learning Theory for Skill Acquisition in Continuing Nursing Education

Process
- Unit leadership met with the critical care educator
  - Discussed learning needs
    - Performed needs assessment
    - Knowledge gaps
    - Skill deficits
  - Expressed desire to participate on code team
    - CNO requested further skill development prior to participation on the code team

Theoretical Basis
- Adult Learning Theory
  - Immediately applicable
  - Timely
  - Utilizes prior experiences
  - Collaborative learning environment

- Constructivist Learning Theory
  - Foundation building
  - Use prior knowledge to construct new knowledge
  - Integrate knowledge and skills into existing framework

Educational Plan
- Simulation
  - Realistic learning environment
  - Draws upon existing nursing experiences
    - Critical Care & Dysrhythmia Classes
    - Oncology
    - ACLS Certified
  - Hands on
  - Opportunity to practice and question
    - Practical application
  - Debrief

- Case Scenario
  - Critical thinking development
  - Knowledge integration & application
  - Story telling / reflection
Utilizing Simulation and Learning Theory for Skill Acquisition in Continuing Nursing Education

Implementation
- Implemented spring 2010
  - Unit leadership support
  - Quarterly
  - Mandatory

Progression
- Addition of Oncology Educator
  - Added oncologic knowledge to simulations and case scenarios
    - Patient case reviews
- Staff Requests / Input
  - Follow up needs assessment 2012
  - Transitioning to more emphasis on critical thinking, less on skills
  - Split by experience level

Outcomes
- Code team
  - Stat responses
- Comfort w/ skill
  - ACLS
  - Emergent
  - Critical Care
  - Critical Thinking

**Ability to Respond in an Emergent Situation**

<table>
<thead>
<tr>
<th># Respondents</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Fair</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Good</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Excellent</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>
Utilizing Simulation and Learning Theory for Skill Acquisition in Continuing Nursing Education

Sim Lab Sessions Greatly Improved My...

**Critical Care Skills**
- **Strongly Agree**: 31%
- **Agree**: 63%
- **Disagree**: 6%
- **Strongly Disagree**: 0%

**Critical Thinking Skills**
- **Strongly Agree**: 31%
- **Agree**: 69%
- **Disagree**: 0%
- **Strongly Disagree**: 0%
Utilizing Simulation and Learning Theory for Skill Acquisition in Continuing Nursing Education

**Implications for Practice**

- Simulation & case scenario based on learning theories promotes critical thinking & skill acquisition
- Increased comfort level & confidence
- Addresses needs of adult learners
- Consider experience level of participants
- Unit & learner specific

**Comfort in Caring for Critically Ill Patients**
- Strongly Agree: 38%
- Agree: 62%
- Strongly Disagree: 0%
- Disagree: 0%
Utilizing Simulation and Learning Theory for Skill Acquisition in Continuing Nursing Education

References


Guhde, J. Using online exercises and patient simulation to improve students’ clinical decision-making. Nursing Education Perspectives, 31 (6), 387-389.


