In-Situ Simulation

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Outcome

Participants will be able to use systematic processes in the development of simulation-based education to impact nurses’ knowledge, skill, and confidence in their practice setting.
Experience with simulation?
Determining
Current State
Inputs

Harper & Maloney, 2016
Learning Needs Ideal for Simulations

• High risk/ low frequency
• Failure to rescue
• Challenging communication situations
• Patient safety issues
• New process or practice
Baseline Data: Prioritizing Pilot Units

Volume of Adult RRT Calls per Unit for 2012
• The importance of recognizing deterioration in patient status which can occur 1-8 hours prior to arrest (Gazarian, Henneman, & Chandler, 2010).

• Nurses in acute care units have a lack of knowledge and confidence, or a gap between knowledge and practice (Purling & King, 2012).

• In simulation, staff are able to work through a high-stress situation in a safe environment while receiving feedback and coaching (Lewis, Strachan, & Smith, 2012).

• In-situ simulations are optimal because they provide a realistic context for practice and teamwork (Kobayashi et al., 2008).
Purpose of Simulation-based Education

To increase knowledge, skill, ability and confidence of the nurse in a safe, familiar environment that allows for hands-on practice, communication, teamwork, and coaching for critical thinking.
Theories and Principles

- Kolb’s Experiential Learning (experience, reflection, application)
- Benner’s Novice to Expert
- Brinkerhoff’s High Impact Learning (pre-work, applicability, integration)
Simulation Model

(Aebersold & Tilter, 2014)
Choosing the Right Type of Simulation

• Task/Skills Training
• High Fidelity Mannequins
Choosing the Right Types of Simulation

- Standardized Patients
- Virtual Reality
Four Steps to Designing Simulation

1. Determine outcomes
2. Develop scenario
3. Design content
4. Set the scene
Step 1: Determine Outcomes

Example: Overall Simulation Activity Behavioral Objectives

1. Identifies emergency patient situation and responds appropriately including assessment, intervention and reporting

2. Identifies signs and symptoms of declining state

3. Identifies the appropriate sequence of events for care of the patient with declining status, including escalation of level of care
Step 2: Develop Scenario

Fill in the details that will make the scenario realistic

- Detailed patient story
- Roles that will be needed
- Add complexity
- Policies and protocols
- Plan for alternate decision paths
- Institutional initiatives, e.g. hand hygiene
Step 3: Design Content

- Pre-self assessment
- Pre-brief
- Unit-specific scenario
- Debriefing
- Post-self assessment
Step 4: Set the Scene

• Choose environment
• Equipment attached to Simulator/Manikin
• Equipment available in room
• Medication/Fluids
• Diagnostic results
• Information for pre-brief
It takes a team!
Role of Facilitator

• Guide/support participants to achieve objectives
• Promotes critical thinking/reasoning
• Engages participants in hands-on skill practice
• Adjusts simulation activity based on participant actions and/or non-actions
• Guides participants to reflect best practices for optimal patient outcomes
Video Demonstration
Debrief – sample questions

• How do you think the simulation went?
• What challenges did you face?
• What would you do differently next time?
• What were some of the barriers to effective treatment for this patient?
• Discuss feelings related to working as a member of a team in the care of this patient
Activity Evaluation

• I clearly understood the purpose and objectives of the simulation?
• Working with my peers was useful and enhanced my ability to learn?
• The debriefing session facilitated my understanding and reasoning?
• The clinical scenario was constructive and applicable to my practice?
• Participation in clinical simulation helps me meet clinical expectation when caring for real patients?
• Facilitator feedback was useful and enhanced my ability to learn?
Pre & Post Self-Assessment

• I am confident in recognizing the signs and symptoms of a patient with a declining clinical status?

• I am confident in implementing the initial interventions for a patient with a declining clinical status?
In situ Simulation Evaluations

**Simulation Increased Confidence**

Pre- and Post-simulation evaluations

- Very Confident increased 41.8% to 77.2%

**Post-simulation evaluations over 90% (agree and strongly agree)**

- Stated working with peers enhanced their learning
- Facilitator feedback was useful and enhanced learning
- The scenario was applicable
- Debriefing facilitated my understanding and reasoning
Group Activity (Handout)

Thinking about the video and looking at the sample scenario

• How can the environment and flow of the simulation help to achieve the outcomes?

• How can the facilitator help the learners increase their confidence?

• How does this type of simulation-based education promote critical thinking?
Thank you!
References


