Simulation Essentials: A Framework, Curriculum Integration and Debriefing

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Objectives

The participants will be able to:

• Describe a simulation framework to guide the development and implementation of clinical simulations
• Describe elements to consider when moving to a simulation-based curriculum
• Discuss educational strategies to consider when implementing simulations into the nursing curriculum
• Discuss debriefing/guided reflection and its importance in simulations
• Describe different approaches to take to conduct a debriefing.

Using a Simulation Framework to Develop your Simulations

• Framework developed after research
• Five major components defined for the Simulation Model:
  – Teacher
  – Student
  – Educational practices
  – Simulation design
  – Outcomes

Simulation Model

Simulation Design Features

• Features found to be important in designing a quality simulation:
  – Objectives/Information
  – Fidelity
  – Problem-Solving
  – Student Support
  – Reflection

Simulation Characteristics

• Information about the simulation and objectives for the activity need to be provided to the learner.
Simulation Characteristics: Fidelity (Realism)

Simulations need to:
- Mimic reality
- Be process-based
- Feel authentic
- Include all the realistic environmental factors to make the students’ learning realistic

Simulation Characteristics: Problem-Solving components

Simulations can be:
- Designed from simple to complex
- Built based on the needs of the course and to the level of the student
- Developed for problem-solving, decision-making case scenarios with different levels of uncertainty incorporated

Simulation Characteristics: Student Support

Student support:
- Provide information about the step the student is performing
- Assist the student to progress to the next step (cueing)

*Faculty or other designated persons can provide cues to the learners as they progress

Simulation Characteristics: Reflection

Reflection activities:
- Reinforce the positive aspects of the experience
- Encourage reflective learning, linking theory, practice, and research
- Provide an opportunity to discuss professional interventions

From the evidence... what is needed to incorporate simulations into a curriculum?

- Administrative support
- Technology support and infrastructure
- Equipment resources
- Curriculum plan
- Faculty development

Administrative Support

- Resources needed to implement simulations into the curriculum
- Faculty development – monies for faculty to be trained, ongoing education
- Curriculum development support – release time, decreased workload for development
Technology Support

- LRC personnel need to be on board
- AV/IT infrastructure and resources
- Mobile devices, tablets, apps
- Training for LRC personnel to help with programming for the HPS, set-up props, organize scenarios, etc.
- Technology can be a large percentage of need; start small and build
- Funding needed for technology

Equipment and other Resources

- Patient Simulators
- Task Trainers
- Props to make simulations authentic
- Staff personnel
  - Simulation Director
  - Simulation technologists
  - Lab/simulation manager
- Space for simulations and rooms for debriefing

Curriculum Plan

- Develop simulations to meet curriculum, program objectives, and course competencies
- Identify a curriculum plan for the use of simulations, e.g. 2 simulations per clinical course; clinical simulations for all clinical make-up days, etc.
- Work with curriculum committee

Instructor Training

- Buy-in needed
- Develop a ‘champion’ or a small cohort of faculty to start
- Obtain funding for small projects using simulations
- Seminar development
  - Designing simulations
  - Evaluating the use of simulations

Instructor Training

- Initiate a Simulation Interest Group (SIG) or advisory committee to obtain more buy-in and support for simulations
- Promote partnerships and collaborations with other schools, clinical partners, nursing organizations, corporations, etc.
- Regional conferences, e.g., SUN meetings

Strategies to assist faculty when implementing simulations

- Select a course where simulations will be implemented
  - Ask what experience would you want all students to experience?
  - Faculty develop and write scenario (have peer-reviewed)
  - Pilot simulation with end-users
  - Schedule lab and debriefing times
- Develop a strategic plan to incorporate simulations into the curriculum
  - e.g. 15% of real clinical time substituted by simulations
  - e.g. One full day of simulations in every clinical course
Different Scheduling Approaches
• Sim day
• Flex sim time
• Boot camp sim

Considerations Before Scheduling
• Banking real clinical time so students will have simulation time, but also have their “clinical days” to work with real patients
  • For example, bank ½ hour every clinical for 8 weeks, then at the end of the semester or at mid-term time, students have 4 hours of clinical time to have for simulation
  • Set aside one clinical day every semester just for simulations; students will be scheduled at different times throughout the semester for this

Simulation Day
• A half or full day is set-aside to run simulations
• Stations need to be set-up for students to rotate through the activities, particularly if a large number of students are in the lab needing simulations.
• For example, for 20 students in the lab, set-up 4 stations so 5 students at a time can rotate through.
• With 20 students and a faculty/student ratio of 1:10, this means only 2 instructors are available to help.
• May have two stations run by instructors with two other stations self-paced with student outcomes expected

Station to Station
An example (Childs, 2008, NLN Technology conference)

Flex Simulation Time
• Set aside time certain days of the week when the lab is not busy, e.g. Wed and Friday afternoons
• Students know they need to experience 3 hours of simulations; they need to self-schedule their times in the lab
• Students may work with other peers, not from their clinical group
• Instructors will be assigned selected “flex” times to run sims

Evening or Saturday “Boot Camp” Sim
• Schedule 20 students for an evening (5-9pm) or Saturday morning “boot camp” when the lab is probably not being used
• Set-up stations so students can rotate through the simulations
• Need: Schedule students ahead of time since this may be an “off” clinical time for the student
Standardized Patients

- Standardized Patients can be used in simulations
- Are considered to be high-fidelity
- Can provide the human response
- If trained, are realistic and valuable in the teaching arena

OSCE - Objective Structured Clinical Exam

- Set-up for a Foundations Course
- 10 skills station that were scenario based
- Skills check list for each station
- 20 minute simulations
- Stakes low – remediate or redo
- Instructors trained to evaluate
- Debriefing of the instructors after the event, too
- Positive evaluations!

Examples of incorporating simulations into a nursing curriculum

Medical Surgical I Course
Topic: Care of an insulin-managed patient

Examples Continued

- Interdisciplinary Simulation
- Third year medical students and senior nursing students working together to care for a post-op patient with complications

Interprofessional Education Collaborative (IPEC) (IPEC.org)

- Four domains of interprofessional practice reported
- 4 domains
  - Values, ethics
  - Roles, responsibilities
  - Communication
  - Teamwork

TeamSTEPPS (www.Teamstepps.org)

- Leadership
- Mutual performance monitoring
- Backup behaviors
- Adaptability
- Team/collective orientation
- Shared mental models
- Mutual trust
- Closed loop communication
Examples of Incorporating Simulations into the Nursing Curriculum

- Fundamentals to Advanced Skills Labs
- Task Trainer
- Hearing Voices
- Computer-based Virtual Scenarios

Examples Continued

- Management Leadership Class
- Simulation set-up for managers to handle increase number of family members in the waiting room, wanting to see patient

Examples Continued

Psych and Communications Content

- Instructor portrays patient
- Students perform health history, logs data into a clinical information system
- Standardized patients: excellent scenarios, realism

The Art of Debriefing

Debriefing:
How to Conduct a Guided Reflection and it's Importance

What is Debriefing?

- “A valuable tool when used with simulation, DEBRIEFING is sometimes overlooked. A debriefing activity reinforces the positive aspects of the experience and encourages reflective learning, which allows the participant to link theory to practice and research, think critically, and discuss how to intervene professionally in very complex situations”

What is Debriefing?

- Debriefing is a process that is reflective critical thinking analysis and neutral communication tool for participants of simulation exercise.

- Facilitated, reflective dialogue

“Colorado Simulation Development Group”

“Glenn Brad, MD, OHSU”
Why have debriefing?

• Discovery of knowledge
• Analysis and synthesis of the encounter and events
• Clarify misperceptions, incorrect information
• Reframes the experience
• Communication
• Stimulates the cognitive thinking process
• Student/faculty interaction

Translating the simulation encounter to a clinical experience

• “I don’t like thinking on my feet”
• “I felt overwhelmed, the family member was so pushy.”
• “Has there been a time in clinical when you have to “think on your feet.”
• “Have you ever experienced family members like this in clinical?”

Setting-up the Debriefing Environment

• Create a welcoming space
• Quiet, confidential environment
• Supportive communication
• Teacher serves as a facilitator

Strategies during Debriefing

• Clear any misperceptions or correct errors that have happened in the encounter
• Non-blame attitude
• Address safety issues
• Reinforce positive actions
• Create strategies for improvement

Challenges of Debriefing

• Time
• Fear (consequences, self-esteem, anxiety)
• External pressures
• Environment
• Knowledge base
• Faculty development in this area
• New pedagogy

Role of educator: Facilitator

• Supportive
• Encourage
• Focus on positive
• Acknowledge – be specific and clear with answers
• Evaluate student’s response
• Listen actively
Exemplars of Debriefing Questions?

• Did you accomplish what you wanted to do?
• What would you have done differently?
• Can you help me understand why you performed the intervention when you did?
• Were your interactions/interventions all appropriate?
• How did you feel about the experience?

Questions continued

• How would you do it next time?
• What obstacles did you encounter
• Did this encounter meet your expectations?
• What have you learned in the simulation you will carry over into practice?

Techniques to debriefing

• The facilitator should help to initiate the debriefing encounter, however the students need to do most of the communication

• If an event has not occurred in the encounter, but a critical behavior or response was about to happen or could happen, take your students there…what about? Help them to anticipate what could have occurred

Techniques continued

• You can appoint a student to begin the debriefing
• Avoid direct questions to the student, but use the phrases “how, what, could…” Help me to understand
• End on a positive statement

Approaches to Debriefing

• Delta/Plus
• Advocacy Inquiry
• Good Cop/Bad Cop

Delta/Plus approach

<table>
<thead>
<tr>
<th>Plus +</th>
<th>Delta (areas to change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good communication</td>
<td>Needed to include family members more in the patient’s care</td>
</tr>
<tr>
<td>Used the 5 rights when giving medications</td>
<td>Vital signs not taken</td>
</tr>
</tbody>
</table>
Advocacy Inquiry Examples

Student Comment

• Student: “I don’t feel so good about what I did.”
• Student: “The scenario was too quick, I needed more time to read the chart, see the orders.”
• Student: “Do you have pain?”

Teacher Advocating

• Teacher: “What did you not feel good about?”
• Teacher: “Have you ever felt rushed in the clinical setting when you had many activities to perform?”
• Teacher: “How could you have expanded on the pain assessment?”

Advocacy Inquiry Examples

Student Comments

• Student: “I missed handwashing.”
• Student: “I felt uncomfortable, too many things to do; I wanted to call the RN.”

Teacher Advocating

• Teacher: Reflecting back on the encounter, what essential activities are required when you enter your patient’s room coming onto shift?”
• Teacher: “Have you been in clinical before when you had to multi-task?”

Themes for Advocacy Inquiry

• Clinical Transference
• Reflection – how handled
• Reflection of student’s perception – their perspective
• Non-lecturing, but making-a-point
• Socialization to Practice - the student portrays the RN

Resources/Tools for Debriefing

**Objective**
• Videotape
• Audio
• Logs of information in the computer on the patient simulator

**Subjective**
• Observers
• Participants

Summary on Debriefing:

Emphasize the following:

• Focus on possibilities
• Emphasize lessons learned
• Let the participants lead the discussion and communicate
• Provide summary points at the end
• Keep the debriefing positive and safe

Summary

• Once simulations are integrated into the course, then evaluation is necessary to assess learning outcomes
• Have an evaluation plan in place
• Consider conducting a small research project on your simulation activity
• Disseminate findings to educator community
Goal for using simulations: Optimal Student Learning for High Quality Patient Care

They wanted to come to the Cape with me!!

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