



School of Nursing

THE GEORGE WASHINGTON UNIVERSITY

Building a Simulation-Based Program: The Essentials, Debriefing, and Evaluation

Pamela R. Jeffries PhD, RN, FAAN, ANEF
Dean and Professor

Objectives

The participants will be able to:

- **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 strategies to facilitate best practices**
- **Define the importance of evaluation and exemplars of the process**

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 for 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

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

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



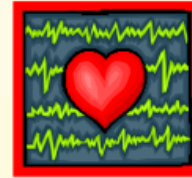
- Initiate a Simulation Interest Group (SIG) or advisory committee to obtain more buy-in and support for simulations
- Promote partnerships and collaborations with other schools, clinical partners, & organizations
- Regional conferences, e.g., SUN meetings
- SIRC - <http://sirc.nln.org/>

Station to Station

Figure 1. Stations and Student Progression Through the Stations

Depending on group assignment, students could start at any one of the four stations.

They progressed in order, according to the arrows.



Station 1: Identifying Cardiac Arrhythmias
Independent. Working in pairs, students completed selected portions of a CD-ROM on identifying cardiac arrhythmias.



Station 2: Identification of Rhythm Strips
Dependent. Working as a group with faculty guidance, students identified a variety of rhythm strips.



Station 3: Arrhythmia Case Studies
Independent. Working as a group, students completed faculty developed case studies. Answers were provided for group discussion.



Station 4: Sim Man HPS
Dependent. Three scenarios were completed. The final, a mock code, involved all students and faculty in the group.



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

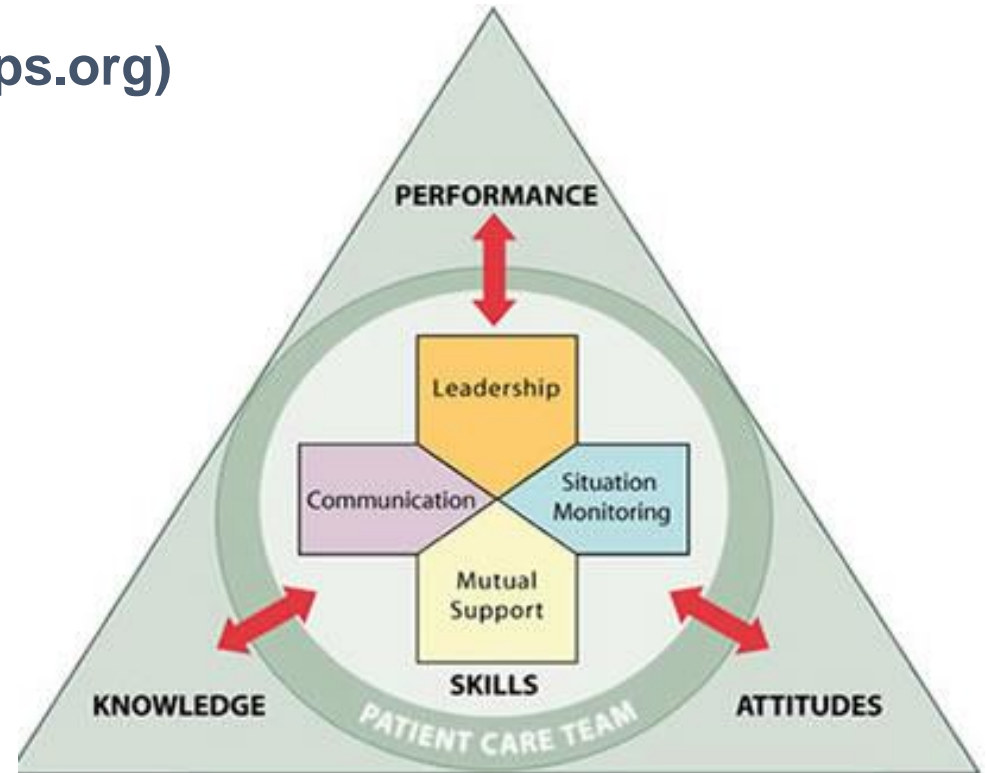
Interprofessional Education Collaborative (IPEC)

- Four domains of inter-professional 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



Debriefing: How to Conduct a Guided Reflection and its Importance

What is Debriefing?

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

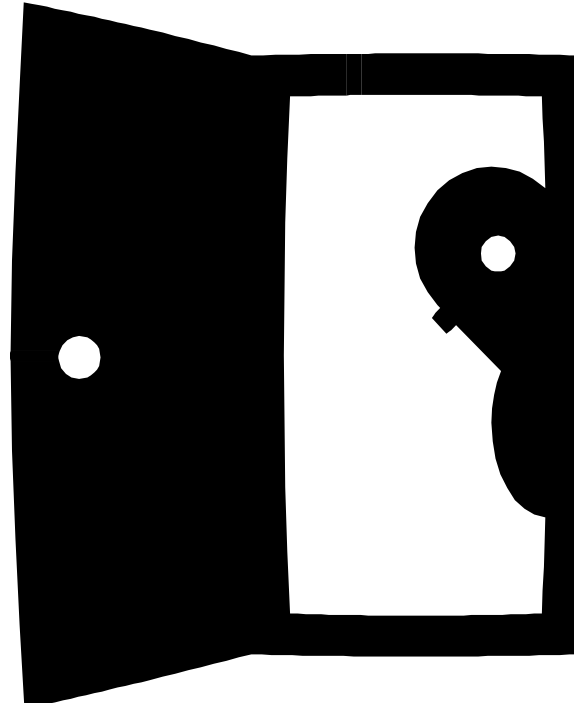
“Colorado Simulation Development Group”

- Facilitated, reflective dialogue

“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

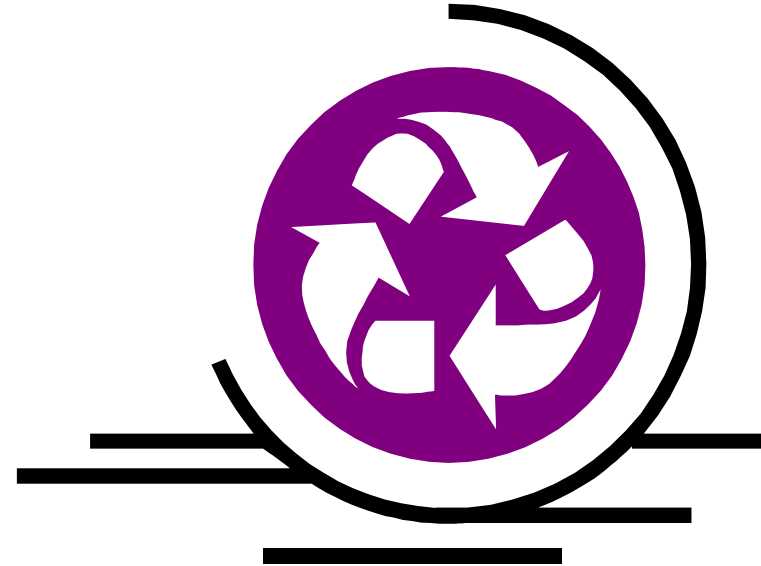
Techniques continued

- 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

Plus +

- Good communication
- Used the 5 rights when giving medications

Delta (areas to change)

- Needed to include family members more in the patient's care
- Vital signs not taken

Advocacy Inquiry Examples

Student Comments

- 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

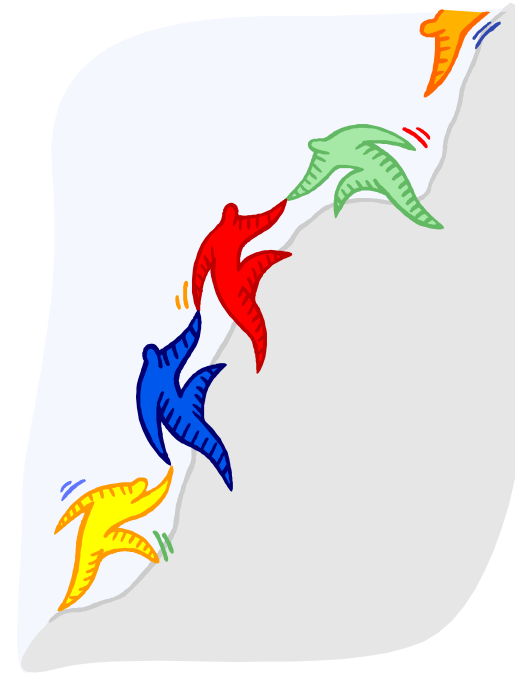
Subjective

- 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



Evaluation and Simulations: Process and Outcomes

WHAT IS EVALUATION?

- **Feedback**
- **Coaching**
- **Assigning Grades**
- **Judgmental:** objective or subjective
- **Form of quality improvement**
- **Assessment**

WHY EVALUATE?

- Determine learning outcomes and program goals achieved
- Give feedback while learning
- Improve effectiveness of teaching and learning
- Attain performance standards
- Assure patient safety

PRINCIPLES OF EVALUATING ADULT LEARNERS

- Respond to feedback (evaluation)
- Need frequent and informative feedback
- Are self-directed
- Learn from each other and can evaluate each other
- Respond to choices...provide options for evaluation

Evaluations and Simulations

Four areas of Evaluation:

- Evaluating the simulation itself
- Evaluating the Implementation phase
- Evaluating student learning outcomes
- Using simulation as an evaluation tool

Evaluating the simulation (design)



- A good simulation design and development is needed to obtain the outcomes you need
- The SDS provides a measure of the importance of each design feature

Evaluating outcomes

- **Formative evaluation measures:** simulation is used by the learner/faculty to mark progress toward a goal
- **Summative evaluation measures:** include determining course competencies, licensing and certification examinations, and employment decisions

Exemplars of student outcome measures used today

- Knowledge
- Skill performance
- Learner satisfaction
- Critical Thinking
- Self-confidence
- Skill proficiency
- Teamwork/collaboration
- Clinical competency

Using Simulations as the Evaluation Tool

When skill sets, clinical reasoning, and selected clinical competencies need to be measured, simulations can be used as the mechanism to do this.



Simulations to Evaluate

Set-up a simulation as an evaluation activity

Issues to address:

- Make sure student is aware it is an evaluation
- Describe the evaluation metrics
- Is it objective?



Methodology Exemplars

- Use of QR code
- Evaluation Apps

Google: *Dash debriefing for assessment* –

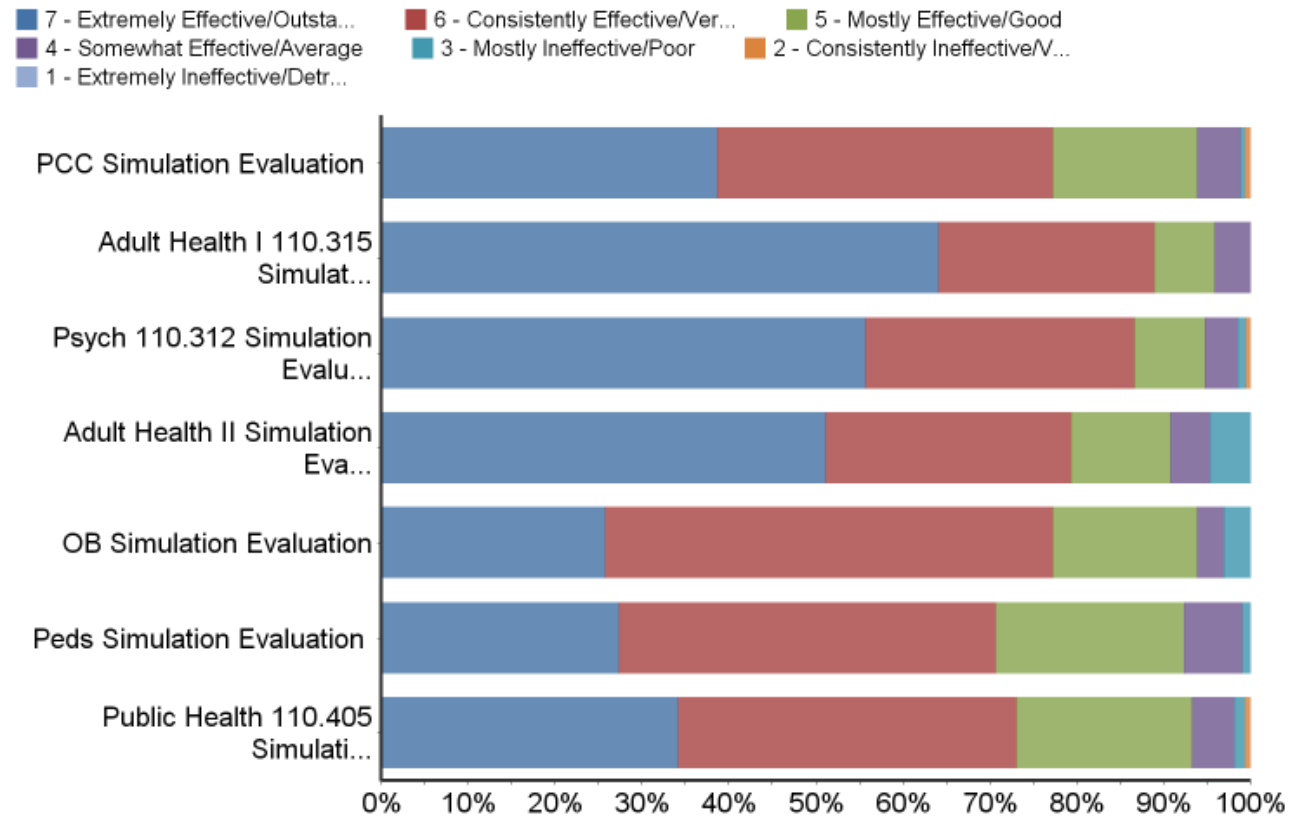
A Debriefing assessment tool

- https://journals.lww.com/simulationinhealthcare/fulltext/2012/10000/Debriefing_Assessment_for_Simulation_in.4.aspx

QR Code- a quick response code for evaluation



At the beginning of this simulation, the instructor set the stage for engaging experience.



Summary

- Simulations require evaluation of many variables, including the simulation design, the implementation process, and learning outcomes
- In addition, simulations can serve as the mechanism to evaluate students

Conclusion

“How to tell students/new graduates, orientees what to look for without telling them what to see is the dilemma of teaching.”

Lascelles Abercrombie

References

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- National League for Nursing Simulation Innovation Resource Center (SIRC), retrieved 9/5/18, <http://sirc.nln.org/>
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Goal for using simulations: Optimal Student Learning for High Quality Patient Care



Questions
pjeffries@gwu.edu