Introduction to Simulation Based Education: The Process

Usha Asirvatham MSN, RN-BC, CHSE
Nursing Education Specialist
## Assessment

### Education Assessment
- Education or Evaluation?
- Based on? - Gap in practice, expressed needs, error management, quality improvement, Institutional mandates
- New technology
- Research
- How can Simulation address this need? Do we need simulation to address this need?

### Learner Assessment
- Who are the learners?
- Their Background?
- Motivation? Exposure to simulation?
- What are the constraints to learning?
- What kind of simulation will this be?
- What would it take to do this simulation?

### What do you want to get out of this?
Story - Scenario

- Create a story to meet your objectives
- Use cases from your clinical area or based on the problems you have encountered
- “Real life”
- Appropriate to the learners level
- Decide on the presentation, flow, transition, duration and outcome
- Use a template
Planning continued...

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<tr>
<th>Performers</th>
<th>Confederates/Embedded Participants</th>
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<tbody>
<tr>
<td>• Mannequins</td>
<td>• Guide learners</td>
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<tr>
<td>• Task trainers</td>
<td>• Offer safety</td>
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<tr>
<td>• Simulated patients</td>
<td>• Add realism</td>
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<tr>
<td>• Computers</td>
<td>• Bridge between faculty and learners</td>
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Other things to add realism... Equipment, Moulage, Physical set up, sound, & smell etc.

Starting point, Flow & Ending points
Simulator/Actor/Equipment

Additional Assistance/Resources

Setting up the stage: Simulation Center vs. Insitu Room set up

Plan A’s & Plan B’s

Education/training for instructors

Developing an evaluation Plan

Chart/figures/Illustration by Usha Asirvatham, Course Faculty
ITS SHOW TIME!!!

Dry Run
Team Meetings

Camera!!

B line

Don’t Forget..
Consent
Disclosures

ITS SHOW TIME!!!

Chart/figures/Illustration by Usha Asirvatham, Course Faculty
# Facilitation

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<th>Before the Simulation Planning</th>
<th>During simulation Implementation</th>
<th>After the simulation Reflection/Evaluation</th>
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<td>Writing objectives</td>
<td>Allow the scenario to progress without interruptions</td>
<td>Debriefing/Feedback Evaluations</td>
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<tr>
<td>Writing the scenario</td>
<td>Observe and monitor for appropriate interventions</td>
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<td>Develop an evaluation plan</td>
<td>“What if they don’t go well?”</td>
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<td>Preparing the learners</td>
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<td>Reporting</td>
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<td>Pre –learning</td>
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<td>Sharing objectives/Rubrics</td>
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<td>PRE-BRIEF</td>
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Pre-Briefing

Commit to mutual respect and psychological safety

Establish a fictional contract

Clarify Expectations
Course Objectives, roles, expectations, Confidentiality, Privacy

Orientation
To mannequins/standardized patients, confederates, & Simulation environment
Patient/scenario introduction

Attend to Logistic details
Start & stop timings, breaks, refreshments, cell phone policy
During Simulation

Scenario Life savers:

• Provide cues to redirect scenario and guide participants down a path of discovery

• Cue may include lab results, phone call from providers, confederates, vital signs on the monitor

• Develop a checklist of basic elements to be covered during course implementation…extremely helpful with evaluation phase as well!!
After Simulation

➢ Debriefing

• Most Important part of Simulation

• Without debriefing, the learning is often left to chance – missed opportunities

• Should start with planning: How long, what points to cover, who will debrief, have a guide for debriefing

• Duration: 2-3 times the scenario time

➢ Providing feedback (Instructor, SPs)
Evaluation

• Learner Evaluation
  – How will you determine if the learners met the course goals and objectives?
  – Will you use a tool/model to measure?

• Program Evaluation
Learner evaluation

• **Formative Assessment**
  – Gives information on improvement of performance and behaviors with 3 domains of learning: Cognitive, affective & psychomotor
  – Process oriented
  – Can be diagnostic
  – Ongoing assessment, to improve learning
  – Assessment *FOR* learning

• **Summative Assessment**
  – Assessments at the end
  – Assessment *OF* learning
  – Measurement of outcomes; tools may be used
  – High-Stakes evaluation ( grades/scores)
Kirkpatrick’s Evaluation Model

**LEVEL 1**
- Learners participation, reaction, what will they do with their learning

**LEVEL 2**
- Will the learning change their knowledge, behavior and attitude?

**LEVEL 3**
- Will those changes in behavior occur on the job (translated to practice?)

**LEVEL 4**
- If there is change on the job, will it improve organizational outcomes?

**LEVEL 5**
- Did the change in behavior positively affect the organization? Was the training worth the cost? (ROI)

Level “0”: (made up one): Hallway evaluation, how did you like the session.. Casual; but don’t underestimate the power of anecdotal information

Chart/figures/Illustration by Usha Asirvatham, Course Faculty
In Situ Simulation

• It doesn’t have to be a surprise!
  – Lay out ground rules
  – Create a sense of safety
  – Use as much of their own equipment
  – Facilitated debriefing for each session
  – Pre-plan for next session
    • What went well/What needs to be changed?
In Situ Process

• Assess, Design, Develop, Implement & Evaluate
  – What do you want to do
  – Who is your audience & how many learners
  – Low, moderate, or high fidelity

• Benefits
  – Integration into the clinical environment
  – Realism

• Challenges
  – Possible technical issues
  – Actual patients and family members
  – Hard stops
QUESTIONS?