Simulation Education:
Setting Standards in both the University and Acute Care Settings

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Evolution of Simulation use by Nursing

- **2004**: Nursing acquired 1st manikin: ICU CORE program
- **2005**: Expanded orientation classes to general RN’s*
- **2006**: CV CORE: Specialty training for new nurses in cardiology areas
- **2010**: CESI opens-current space 10,000 sq ft
- **2011**: CESI hires own nurse educator. **Goal: to utilize sim for Competence Testing Day**
- **2012**: CTD initiated; work in progress
- **2013**: PCA, PAA roles training began using simulation**
- **2004-2005**: First manikin
- **2006**: Trial by fire**
- **2009**: Italy Alice Facente WWBH/Ostomy Exp
- **2010**: Curriculum Immersion Med/Surge
- **2011**: Hong Kong** Total Emersion
- **2013**: Current info**
Where do we begin the discussion

• Simulation Standards
  o International Nursing Association for Clinical Simulation Learning (INACSL)
  o Gets us all on the same page
  o Begins to migrate nursing simulation research into mainstream medicine

• Standards 1-7
Standards ToolBox

**Standard 1: Terminology**
Statement: Consistent terminology provides guidance and clear communication and reflects shared values in simulation experiences, research, and publications. Knowledge and ideas are clearly communicated with consistent terminology to advance the science of simulation.

**Standard 2: Professional integrity of participant**
Statement: The simulation learning assessment, and evaluation environments will be areas where mutual respect among participants and facilitator(s) is expected and supported. As such, it is essential to provide clear expectations for the attitudes and behaviors of simulation participants.

**Standard 3: Participant Objectives**
Statement: All simulation-based learning experiences begin with development of clearly written participant objectives, which are available prior to the experience.
Standards ToolBox

**Standard 4: Facilitation**
Statement: Multiple methods of facilitation are available, and use of a specific method is dependent on the learning needs of the participant(s) and the expected outcomes.

**Standard 5: Facilitator**
Statement: A proficient facilitator is required to manage the complexity of all aspects of simulation. The facilitator has specific simulation education provided by formal coursework, continuing education offerings, and targeted work with an experienced mentor.

**Standard 6: Debrief**
Statement: All simulation-based learning experiences should include a planned debriefing session aimed toward promoting reflective thinking.

**Standard 7: Participant Objectives**
Statement: In a simulation-based experience, formative assessment or summative evaluation can be used.
INACSL’s Official Journal: Clinical Simulation in Nursing

To learn more scan here

or visit:

Now lets incorporate them into acute practice with HH data-
How We Assessed Competence Prior to Simulation

• In FY 2011:
  o 14 individualized stations (avg) for an RN
    – average time for below stations: 28-32 min
  o 2534 staff came through the following stations:

<table>
<thead>
<tr>
<th>Station</th>
<th>Pass Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airway Management</td>
<td>100% (1285/1285)</td>
</tr>
<tr>
<td>Cardiac Drug Box</td>
<td>100% (1211/1211)</td>
</tr>
<tr>
<td>CPR Adult</td>
<td>99.91% (1062/1063)</td>
</tr>
<tr>
<td>Zoll Defibrillator</td>
<td>99.86% (1440/1442)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>99.88% (2531/2534)</strong></td>
</tr>
</tbody>
</table>

We wanted to move away from assessing knowledge ONLY when we saw pass rate 99.88% for these high risk low frequency skills
How can we set expectations to be more rigorous than in prior years?

Blooms Taxonomy

- Cognitive Domain (knowledge)
- Psychomotor Domain (skills)
- Affective Domain (attitude)

• Simulation- will realistically expect skills to be performed simultaneously

• Teamwork and communication become essential to achieve a good patient outcome
Standard 2: Professional Integrity of Participant(s)

It is essential to provide clear expectations for the attitudes and behaviors of simulation participants. Professional integrity related to confidentiality of the performances, scenario content, and participant experience is required during and after any simulation. Confidentiality is expected in live, recorded, or virtual simulation experiences.
“Educators tend to see competency as a blending of knowledge, skills, attitudes and judgment based more on a psychological construct”

(Whittaker, 2000)

- Research studies of simulated competence assessment in general RN practice was extremely limited.

- More volume of data when assessing a homogenous nursing group- i.e. CRNA’s, senior nursing students.
Standard 3: Participant Objectives

All simulation-based learning experiences begin with development of clearly written participant objectives, which are available prior to the experience.

- **Criterion 1** Address domains of learning
  Guideline: Participant objectives should include the domains of learning.

- **Criterion 2** Correspond to participant’s knowledge level and experience
  Guideline: Participant objectives should be appropriate to the level of the participant.

- **Criterion 3** Remain congruent with overall program outcomes
  Guideline: Participant objectives should be congruent with overall program outcomes.
How we transformed RN Competence Assessment in 2012

- BLS response skills seemed to span all clinical areas as a requirement and touch on all three domains
- AHA served as a universally accepted framework for assessment and evaluation parameters
How we transformed RN Competence Assessment in 2012

• **Defined the Scope**
  o Inpatient RN’s only at first
  o Anticipated 1270 RN’s
  o Teams of 3-4 RN’s
  o 30 minute time blocks

• **Simulated an Emergency**
  o One 3-6 minute scenario
  o Clearly defined objectives
  o VF or pulseless VT based on skill

• **Leveled the Playing Field**
  o Mandatory online orientation
    o Simulation orientation video
    o Playing in waiting room
  o Physical orientation to room
    o 5-10 minutes long
    o Scripted for consistency
    o Immediately before scenario
Major considerations in moving to simulated method:

- Needed to train 6 nurse educators to simulation use
  - Orientation
  - Running standardized cases
    - Provider role standardization: pre-recorded vocal sounds allowed for provider interaction/ordering in a non-coaching manner
  - Documenting and debriefing a case

**Standard 5: Facilitator**

Statement: A proficient facilitator is required to manage the complexity of all aspects of simulation. The facilitator has specific simulation education provided by formal coursework, continuing education offerings, and targeted work with an experienced mentor.
Video clip
Standard 7:
Evaluation of Expected Outcomes

In a simulation-based experience, formative assessment or summative evaluation can be used.

- **Criterion 1** Formative assessment
  Guideline: Formative feedback provides information for the purpose of improving performance and behaviors associated with the three domains of learning: cognitive (knowledge), affective (attitude), and psychomotor (skills).

- **Criterion 2** Summative evaluation
  Guideline: Summative evaluation focuses on measurement of outcomes or achievement of objectives.

- **Criterion 3** High-stakes evaluation
  Guideline: Because familiarity with participants is a significant source of observer bias, the influence of observers’ previous knowledge of participants should be avoided whenever possible.
Competency Testing Day 2012
Friday, May 25, 2012 - 10:18 AM

Simulation Details
Instructor: Ginger Goddu
Scenario: VF ACLS
Length: 08:46

Students
Nurse 1: Christopher Madison
Simulation Center
Nurse 2: Liza Nowicki
Simulation Center
Nurse 3: Donna Rescorl
Nursing Service Office

Critical Objectives
- Recognize a change in patient condition and call for help within 30 seconds.
- Demonstrate correct techniques per AHA standards to ensure adequate patient ventilation.
- Perform chest compressions per AHA standards within 10 seconds of recognition of pulselessness.
  - Start CPR within 10 seconds of pulse check.
  - CPR quality meets AHA guidelines.
  - Place backboard within 3 minutes.
- Employ the ZOLL defibrillator per AHA standards and as needed for patient case.
- Administer all medications that are ordered according to HH policy for medication administration.

Number of Prompts Needed: 2

CPR Quality

SimMan Log
00:00 - START CASE
00:21 - Call Code
00:24 - Pulse Checked: Carotid
00:34 - Places Backboard
00:44 - Start Compressions (20s after pulse)
00:46 - Check Patient
00:56 - Compressions Inadequate
01:49 - Airway: BVM start/stop
01:51 - Pulse Checked: Carotid
01:53 - An whom/Charge
01:56 - Airway: BVM start/stop
02:00 - Stop Compressions (01:16)
02:02 - Defibrillated at 150J
02:04 - Zoll Pads Attached
02:05 - Start Compressions
02:09 - Pulse Checked: Carotid
02:26 - Needed Prompt
02:27 - Needed Prompt
02:30 - Airway: BVM start/stop
02:33 - Pulse Checked: Carotid
02:36 - Airway: BVM start/stop
03:37 - Stop Compressions (02:32)
04:02 - Defibrillated at 200J
04:07 - Start Compressions
04:52 - Airway: BVM start/stop
05:00 - Airway: BVM start/stop
06:15 - Stop Compressions (02:08)
08:16 - Defibrillated at 200J
Video clip
2012 Overall Findings

Obj 1: Recognize a change in patient condition and call for help within 30 seconds
Obj 2: Demonstrate correct technique per AHA standards to ensure adequate patient ventilation
Obj 3: Perform chest compressions per AHA standards within 10 seconds* of recognition of pulselessness:
   - Obj 3a: start CPR within 10 seconds* of pulse check
   - Obj 3b: CPR quality meets AHA expectations
   - Obj 3c: Places backboard within 3 minutes
Obj 4: Employ the Zoll defibrillator per AHA standards and as needed for patient case
Obj 5: Administer all medications that are ordered according to HH policy for medication administration
“Had to do airway bag mask on a post op today. Just like at CESI yesterday….I was happy that I knew what I was doing! It really did help. I am not very confident w myself and I have to say it helped me feel better that I was doing it correctly”

(Competency Day Participant, 2012)
Questions

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References


