

A Simulation Journey: Development and Implementation of a Hospital-Based Process for Using Simulation to Enhance Teaching in Acute Care

Mary Jean Potylycki MSN, RN-BC
Lehigh Valley Health Network, Mary_Jean.Potylycki@lvhn.org

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A Simulation Journey: Development and Implementation of a Hospital-Based Process for Using Simulation to Enhance Teaching in Acute Care

The Lehigh Valley Health Network Simulation Committee
Lehigh Valley Health Network, Allentown, Pennsylvania

Journey Destination (Aim):

Recognizing the need for more reliable and patient safety-focused teaching strategies to be used in hospitals today, the aim of this project was to develop and implement a hospital-based process for using simulation to educate and train staff.

Pre-Journey (Background):

Although little evidence was found related to the use of simulation in the hospital setting, evidence involving the academic setting greatly supports the use of simulation. It enhances learner experiences by allowing them to practice in a safe learning environment, receive immediate feedback, and have the opportunity to critique their own clinical decisions as well as those of their peers.

A hospital based simulation committee was created from key interdisciplinary network stakeholders. They identified the importance of simulation education throughout the disciplines. A nurse leader acknowledged the value of simulation and secured funds for the initiative.

Journey's Itinerary (Methodology)

- Formulated a team and obtained monies
- Reviewed evidence related to the use of simulation in healthcare
- Queried unit-based staff development specialists on prospective use of simulation via a needs assessment survey
- Determined type and quantity of equipment to purchase based upon needs assessment results
- Purchased both high and low fidelity equipment
 - **Low Fidelity equipment:** Caucasian and Ethnic IV arms, catheterization/enema simulator, NG tube/trach care simulator, Chester chest, femoral line task trainer, Mega Code Kelly, Mega Code Kid, external jugular module, trauma module and Noelle.
 - **High Fidelity equipment:** Sim Man, trauma module, wound module, and SimNewB.
- Created a simulation policy and outlined processes

Policy Highlights:

- Reservation of equipment via electronic software
- ID badge access to storage area
- Maintenance and storage of equipment
- Return of equipment
- Weekly inventory



- Offered a series of simulation workshops to the unit-based staff development specialists (directed by the Interdisciplinary Simulation Center staff)

Three day education series included:

- Introduction to Simulation
- High Fidelity Simulation
- Debriefing
- Implemented simulation process in January of 2010
- Chose evaluation technique

Journey's Successes (Results):

Pre and post surveys were used to evaluate learner perceptions of the simulation experience. Survey results follow (October 2009 through February 2011):

n=262 presurvey, 84 post survey (Percent change pre to post survey in parentheses)	
Confidence in skill/procedure	(+5.36)
Practice change from learnings	(+3.20)
Answer relevant questions from patients	(+3.17)
Sim is a realistic tool	(+0.53)
Facilitator is effective	(+4.35)
Debriefing is valuable process	(+1.79)
Prepared to perform this skill	(+1.47)
Understand link between theory/practice	(+3.83)
Confident in application	(+4.27)
Adequate knowledge of equipment	(+2.08)
Facilitator makes me question what I do	(+8.01)
Sim is a realistic representation of practice	(-0.27)
I'm able to develop skills in clinical setting	(+2.88)
Confident undertaking new skills	(+6.13)

Journey Detours (Challenges):

- Determining a secure storage area at each hospital site
- Scheduling all staff development specialists for the simulation workshops
- Assimilating the new technology into the educator's existing teaching style
- Facilitating staff completion of pre and post surveys related to use of simulation
- Developing competence and a comfort level with debriefing

Journey Travel Tips (Significance to Nursing):

Simulation has the potential to improve patient safety and to enhance critical thinking and the learning experience in an acute care setting, as it:

- Provides a rich teaching strategy and a safe learning environment
- Promotes enhanced engagement of clinicians in the clinical settings
- Enhances annual education day experiences

Future Journey (Next Steps):

- Establish a link between simulation education and patient outcomes
- Set expectations for ongoing, consistent use of equipment



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