



2012 QSEN National Forum

Innovation to Transformation

*QSEN competency development in
an interprofessional simulation
activity: A pilot study*

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Purpose

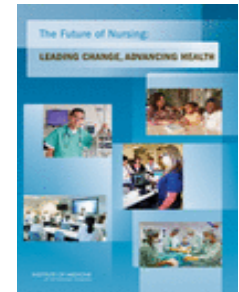
- The purpose of this presentation is to describe an expanded pilot study of an inter-professional simulation focused on quality, collaboration and teamwork in the care of a patient with an acute asthma exacerbation.





Background

- **IOM/ RWJ Future of Nursing Report- (2010)**
Achieving higher levels of education and training
- **Educating Nurses: Radical Transformation in Nursing Education-** Benner, et.al. (2010)
Integrating classroom and clinical learning
- **Quality and Safety Education for Nurses.**
Cronenwett, et.al. (2007). *6 competencies*



Transition to Practice: Promoting Public Safety

Complex Health Care Needs: sicker patients

Practice Readiness: education to practice gap

Expertise Gap: 10% nurses are new grads

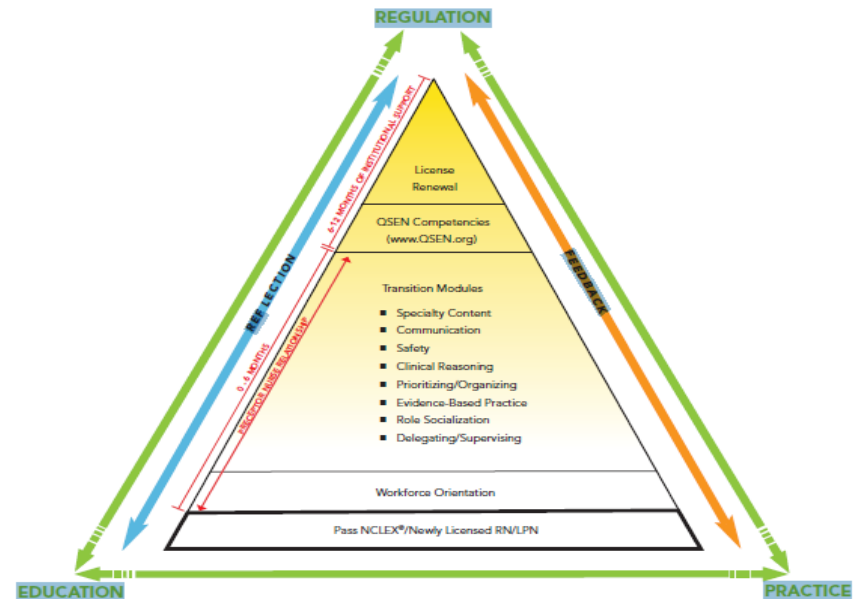
Risk for Practice Errors: increased stress 3 - 6 months

Turnover/Retention: 35 to 60% leave a position 1st year of practice (\$46,000 to \$64,000)

Medical Errors: 8th leading cause of death (\$17 billion preventable); 2,300 hospitalization deaths due to errors/million admits

New Nurse Errors: >40% report making medication errors

Failure to Rescue: 50% fail to recognize life-threatening complications



Transition to Practice Regulatory Model

https://www.ncsbn.org/Transition_factsheet_final.pdf

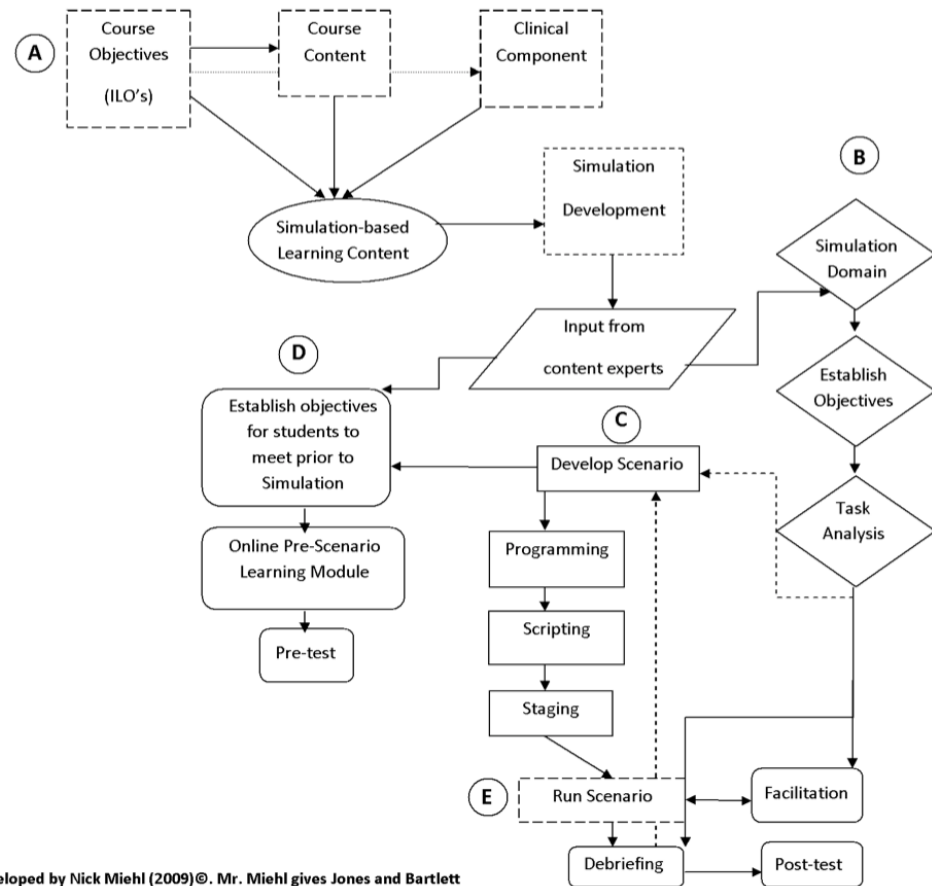


Development

SIMULATION DESIGN



Model for Simulation Development



Model was developed by Nick Miehl (2009)©. Mr. Miehl gives Jones and Bartlett permission to include it in this textbook



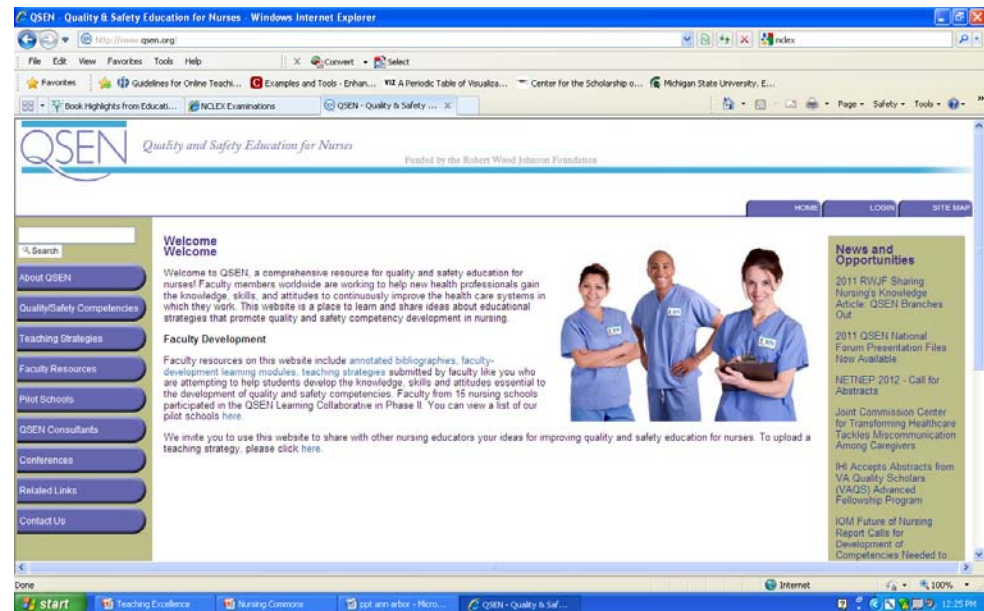
Education & Design Concepts

- Active Learning
- Feedback
- Interaction (faculty and students)
- Diverse Learning
- High Expectations
- Reflection – Deep Learning
- Sense of Salience
- Situation Cognition
- Thinking in Action
- Collaboration
- Interprofessional Teams
- Patient Centered
- Safety
- Evidence Based
- Integration of Technology
- Fidelity
- Complexity Appropriate
- Cues
- Debrief



QSEN: Knowledge, Skills, & Attitudes

- Patient-centered care
- *Teamwork & collaboration*
- Evidence-based practice
- Quality improvement
- **Safety**
- Informatics



<http://www.qsen.org/>



Collaboration



- Faculty Collaboration:
CRNA, BSN, CNS, Skills Lab,
LAC
- Program Objectives and
competencies
- Complexity and readiness to
learn
- Team based scenario
- Role responsibilities
- Content placement
- Evidence based practice



Interprofessional Scenario Objectives

By the completion of the simulation exercise the student will:

- Apply physical assessment skills appropriate to the clinician's scope of practice and the simulated clinical situation.
- Demonstrate the ability to analyze the clinical situation and perform appropriate interventions according to the clinician's scope of practice.
- Demonstrate effective communication between members of the patient care team.
- Apply SBAR communication guideline to a simulated clinical situation and interactions with the patient care team
- Delegate appropriately to the patient care team



Scenario: Asthma Patient

- Scenario: Report - elderly adult patient transferred from ER with a dx of Asthma. Pt. exhibits S/S of respiratory distress.
- All participate in 2 scenarios: 1-Improves with TX & 1 progresses to Intubation
- Debrief after each event
- 4 stations (2 RN and 1 RNA students, 1 NA & 1 RT) per scenario
- Physician orders per phone
- Sequence: orientation, scenario, debrief 1, scenario 2, debrief 2
- Post analysis video review



Simulation Activity Implementation

RESOURCES



Learning Assessment Center and Community Partners

- 4 Respiratory Therapists
- 4 Nurse Aids
- Sim Operators (X4)
- Technicians
- LAC Staff (Director, Simulation Manager & IT).



MSU Learning Assessment Center



Demographics & Data Analysis

METHODS & RESULTS

REVIEWED BY MSU IRB ID# 1039040



College of Nursing Participants

- 64 Senior Level Bachelor's Nursing Students
- 16 Master's level Nurse Anesthesia students
- 4 Master's Level Clinical Nurse – Education Specialist students

Multiple College of Nursing

- Bachelor's Faculty
- Clinical Nurse Specialist Faculty
- Nurse Anesthesia Faculty



Methods Data Collection

- Debriefing Sessions recorded for post review analysis (faculty)
- Simulation event recorded for post review analysis (faculty & students)
- **Pre/post KSA assessment (self assessment completed by students)**
- Evaluation of Expected Competency Performance for BSN & RNA students (checklists completed by faculty)
- ***Student Satisfaction and Self-Confidence in Learning**
- ***Simulation Design Scale**

*Instruments from the NLN/Laerdal Simulation Study Project.

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Student Satisfaction and Self-Confidence in Learning (SSSCL)

Instructions: This questionnaire is a series of statements about your personal attitudes about the instruction you receive during your simulation activity. Each item represents a statement about your attitude toward your satisfaction with learning and self-confidence in obtaining the instruction you need. There is no right or wrong answers. You will probably agree with some of the statements and disagree with others. Please indicate your own personal feelings about each statement below by marking the numbers that best describe your attitude or beliefs. Please be truthful and describe your attitude as it really is, not what you would like for it to be. This is anonymous with the results being compiled as a group, not individually.

Mark:

- 1 = **STRONGLY DISAGREE** with the statement
- 2 = **DISAGREE** with the statement
- 3 = **UNDECIDED** - you neither agree or disagree with the statement
- 4 = **AGREE** with the statement
- 5 = **STRONGLY AGREE** with the statement

Categories	Category Means and Standard Deviations N=66
Satisfaction with Current Learning	\bar{x} 4.07; s: 0.051
Self-confidence in Learning	\bar{x} 4.01; s: 0.272



Simulation Design Scale (SDS)

In order to measure if the best simulation design elements were implemented in your simulation, please complete the survey below as you perceive it. There is no right or wrong answers, only your perceived amount of agreement or disagreement. Please use the following code to answer the questions. Use the following rating system when assessing the simulation design elements:

- | | |
|---|--|
| 1 - Strongly Disagree with the statement | 4 - Agree with the statement |
| 2 - Disagree with the statement | 5 - Strongly Agree with the statement |
| 3 - Undecided - you neither agree or disagree with the statement | |

Categories	Category Means and Standard Deviations N=66
Objectives and Information	\bar{x} 4.2; s: 0.131
Support	\bar{x} 3.98; s: 0.227
Problem Solving	\bar{x} 4.12; s: 0.15
Feedback/Guided Reflection	\bar{x} 4.34; s: 0.155
Fidelity (Realism)	\bar{x} 4.31; s: 0.095

Rate each item based upon how important that item is to you.

- | | |
|-------------------------------|---------------------------|
| 1 - Not Important | 4 - Important |
| 2 - Somewhat Important | 5 - Very Important |
| 3 - Neutral | |

Support	\bar{x} 4.38; s: 0.061
Problem Solving	\bar{x} 4.34; s: 0.102
Feedback/Guided Reflection	\bar{x} 4.49; s: 0.051
Fidelity (Realism)	\bar{x} 4.43; s: 0.06



Pre-Post Questionnaire Knowledge, Skills & Attitudes

Pre-Post Questionnaire Knowledge, Skills & Attitudes			
Skills & Knowledge: Pre Test BSN N=62	1: Strongly disagree with the 2: Statement Disagree with the statement 3: Agree with the statement 4: Strongly agree with the statement		
	Mean	Mean	TTEST 2 tailed Paired sample
I have the ability to analyze a clinical situation and perform appropriate nursing interventions.	3.016	3.145	*0.044
I have the knowledge to effectively delegate to a team member based upon the five rights of delegation.	2.71	3	*0.001
Skills & Knowledge: Pre Test RNA N= 15			
	Mean	Mean	TTEST 2 tailed Paired sample
I have the knowledge to effectively delegate to a team member based upon the five rights of delegation.	3	3.4	*0.008



Comparison between BSN and RNA			
Skills & Knowledge: Pre Test	1: Strongly disagree with the 2: Statement Disagree with the statement 3: Agree with the statement 4: Strongly agree with the statement		
	Mean BSN N=62	Mean RNA N=15	TTEST 2 tailed Unequal sample
I have the ability to analyze a clinical situation and perform appropriate nursing interventions.	3.016129	3.466667	0.00029
I have the knowledge to effectively delegate to a team member based upon the five rights of delegation.	2.709677	3	0.047314
Attitude: Pre Test			
I have effective communication skills with patients and their families.	3.854839	3.933333	0.046532
Skills & Knowledge: Post Test			
I have effective communication skills with other healthcare team members.	3.241935	3.466667	*0.053559425
Attitude: Post Test			

* statistically significant at 0.05



1: Based on participation in the simulation activity and review of the video, describe the most important points you learned about your clinical performance in the role of a nurse?

Response summary themes for BSN:

Communication-SBAR; delegation; **Seek assistance**; Confidence, trust, calm (personal affect); team work; Self improvement (SI) needs; Leadership role of RN patient outcomes

Response summary themes for RNA:

Clear Effective Communication and listening (pt. & team); Delegate appropriately; Team roles/knowledge; Self improvement; Ability to Prioritize .



2: Please provide recommendations or revisions to the simulation experience that would improve your learning.

Response summary themes for BSN:

Increase Orientation to room, equipment, supplies; Additional preparation; More simulations and earlier in program; Clarification of role responsibilities

Response summary themes for RNA:

Valued learning & well organized; Greater role RNA & revise scenarios; NA specific debriefing



Application to Practice

DISCUSSION



Practice Application

Improved Teamwork & collaboration (role responsibilities)

**Enhanced awareness
Safety (causation)**

**Patient-centered care
(assessment,
communication &
advocacy)**

- Student Reflection
 - Failure to Rescue
 - Medication Management
 - Role Accountability
 - Role Responsibility
 - Self Improvement Needs
 - Listening



Implications for Research

- Application to clinical practice.
- Impact on failure to rescue rates.
- Confidence levels in clinical collaboration.
- Student cognition and thinking during simulation.





Lessons Learned

- Interprofessional simulation is challenging to coordinate
- Positive collaborative experience
- Scenario length and number of students was a constraint
- Debriefing time too short (15 minutes)
 - Challenge varied student expectations for feedback
- Need to revise second scenario – same competencies, different dx
- Sustainability – resources, cost, & participants



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Student Comment

- *.....Before I went I thought "another LAC simulation Boy, was I wrong! Turned out to be one of the most beneficial simulations we could have had. I REALLY enjoyed the inter professional aspect of it. That has the potential to set our college apart from others.*



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