

Use of Multi-patient Simulations to Facilitate Transition of New Graduate Nurses



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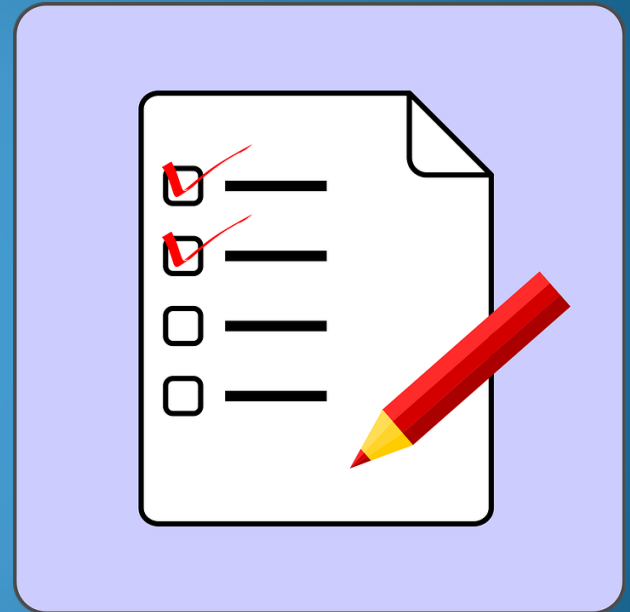
Acknowledgements

- University of Maine Grant Development Office
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Needs Assessment

- NCLEX Pass Rate
- Exit Surveys
- Feedback from community
- Nurse Residency Program
- Maine Nurse Core Competencies



Identifying Measurable Objectives

- Change from disease focus
- Program Outcomes--aligned
 - Leveled Outcomes
 - Course Outcomes
 - MNCC
 - Specific Simulation Outcomes
- Simulation Program Objectives
 - SWIPES
 - Assessment
 - Communication—ISBAR format
 - Evidence-Based Practice
 - Exit Strategy

Measurable Objectives

Simulation Learning Objectives:

- Prioritize care based on patient assignment needs in a multi-patient simulation
- Communicate and delegate appropriately tasks to the team based on the multi-patient assignment needs
- Evaluate data and assessments; provide EBP interventions as needed
- Investigate any abnormal findings or change in patient status
- Develop patient-centered communication skills
- Provide patient care in a safe environment

Designing the Course

- Graduating BSN seniors—transition to practice
- 4-credit course
- Delivery format:
 - F-2-F
 - Online
 - Simulation
 - NCLEX Prep
- Simulation 40% course grade
- 4 separate multi-patient simulations

Fidelity

High-Fidelity Manikin

Standardized Patients



Students= 37
Staff=7

| Monday | Report | Simulation | Debriefing | Evaluator | Patient 1 | Patient 2 | Voice/Manikin |
|------------------------------|-----------------|------------|------------|--------------------|-----------|-----------|---------------|
| Kayla Darcey Lexi | 12:25- 12:45 | 12:45-1:00 | 1:00-1:15 | Rater 1 Rater 2 | Mary B | Chris | Haley |
| LJ Molly Marisa | 12:45- 1:05 | 1:05-1:20 | 1:20-1:35 | Rater 1 Rater 2 | Mary B | Chris | Haley |
| Ali Mandy Sarah | 1:05-1:25 | 1:25-1:40 | 1:40-1:55 | Rater 1 Rater 2 | Mary B | Chris | Haley |
| Ava Shannon Rebecca | 1:25-1:45 | 1:45-2:00 | 2:00-2:15 | Rater 1 Rater 2 | Mary B | Chris | Haley |
| Break | | | | Rater 1 Rater 2 | | | |
| Nicolette Haley Kendra | 2:00-2:20 | 2:20-2:35 | 2:35-2:50 | Rater 1 Rater 2 | Mary B | Chris | Rachel |
| Shelby Nicole Sarah | 2:25-2:45 | 2:45-3:00 | 2:55-3:10 | Rater 1 Rater 2 | Mary B | Chris | Rachel |
| Josie Mikayla Haley | 2:45-3:05 | 3:05-3:20 | 3:15-3:30 | Rater 1 Rater 2 | Mary B | Chris | Rachel |
| Nyia Maddy Courtney | 3:05-3:25 | 3:25-3:40 | 3:35-3:50 | Rater 1 Rater 2 | Mary B | Chris | Rachel |
| Break | | | | Rater 1 Rater 2 | | | |
| Summer Jillian Alyssa | 3:40-4:00 | 4:00-4:15 | 4:15-4:30 | Rater 1 Rater 2 | Mary B | Chris | Haley |
| Ryan Grace Erika | 4:00-4:20 | 4:20-4:35 | 4:35-4:50 | Rater 1 Rater 2 | Mary B | Chris | Haley |

The Study

- **Evaluating Entry-Into-Practice Behaviors: Interrater Reliability**
- **Research Questions:**
 1. What are the critical student behaviors identified by the Creighton Competency Evaluation Instrument (C-CEI[®]) that are needed to achieve competency in a senior-level transition-to-practice nursing course?
 2. Does the use of a detailed evaluation tool in simulation experiences increase interrater objectivity and reliability in assessment of behaviors required of nursing students?
- **Perceptions of Self-Confidence and Preparedness: Casey-Fink Readiness for Practice Survey**
 1. In senior nursing student nurses preparing to graduate, what is the effect of the simulation lab on students' perception of preparedness, and self-confidence level about entering the practice setting in comparison to their feelings of preparedness and self-confidence level at the start of the semester.

Method of Evaluation: Interrater Reliability

- Creighton Competency Evaluation Instrument (C-CEI©)
- Two Raters
- Permission and Training
- Behaviors clarified for each item
 - Lead Faculty
 - Simulation Educator

Creighton Competency Evaluation Instrument (C-CEI[©])

| Student name/number: | 0=Does not demonstrate competency 1=Demonstrates competency | Comments |
|---|--|----------|
| ASSESSMENT | | |
| 1. Obtains Pertinent Objective-Subjective Data | 0 1 NA | |
| 1. Assess the Environment in Orderly Manner | 0 1 NA | |
| COMMUNICATION | | |
| 1. Communicates effectively with patient/family | 0 1 NA | |
| 1. Responds to Abnormal Findings Appropriately | 0 1 NA | |
| 1. Promotes Professionalism | 0 1 NA | |
| CLINICAL JUDGMENT | | |
| 1. Interprets Vital Signs, Subjective-Obj. Data | 0 1 NA | |
| 1. Prioritizes Appropriately | 0 1 NA | |
| 1. Performs Evidence-Based Interventions and Rationales | 0 1 NA | |
| 1. Reflects on Clinical/Simulation Experience | 0 1 NA | |
| 1. Delegates Appropriately | 0 1 NA | |
| PATIENT SAFETY | | |
| 1. Uses Patient Identifiers | 0 1 NA | |
| 1. Uses Standard Practices and Precautions | 0 1 NA | |
| 1. Reflects on Potential Hazards and Errors | 0 1 NA | |

Total Points _____/13_____

C-CEI[®]

Critical Behaviors

Total
Points _____/13_____

| | |
|--|---|
| ASSESSMENT Discussion Worksheet | |
| 1. Obtains Pertinent Objective/Subjective Data | <ul style="list-style-type: none"> Inquires about subjective patient status Asks patient about any allergies Pain Assessment Obtains all baseline vital signs (HR, BP, RR, Pox, Temp) Performs baseline head-to-toe assessment Performs focused assessment |
| 2. Assess the Environment in an Orderly Manner | <ul style="list-style-type: none"> Checks IV pumps, tubes, dressings, lines, etc. Bed low, side rails up, call bell in reach, side-table in reach |
| COMMUNICATION Discussion Worksheet | |
| 3. Communicates effectively with patient | <ul style="list-style-type: none"> Explains any assessment or intervention prior to performing and why Provides a plan for the encounter Responds and answers all patient inquires and questions at appropriate level (no medical jargon) Utilizes professional communication when interacting with patients and other team members Acknowledges patient and/or family member concerns |
| 4. Responds to Abnormal Findings Appropriately | <ul style="list-style-type: none"> Assess and responds to all abnormal findings using EBP |
| 5. Promotes Professionalism | <ul style="list-style-type: none"> Dressed in University of Maine SON uniform Comes prepared with all required equipment, i.e. stethoscope, note pad, watch, etc. |
| CLINICAL JUDGMENT Discussion Worksheet | |
| 6. Interprets Vital Signs, Subjective and Objective Data | <ul style="list-style-type: none"> Collects and correctly interprets all patient vital signs, lab results, etc. Assess subjective and objective data, and then able to determine relevant data in providing care |
| 7. Prioritizes Appropriately | <ul style="list-style-type: none"> Correctly identifies and prioritizes which patient to assess first, i.e. catheterization patient |
| 8. Performs Evidence Based Interventions and Rationales | <ul style="list-style-type: none"> Performs appropriate focused assessments, i.e. GI, cardiac, etc. Provides EBP discharge teaching Provides appropriate rational that supports actions taken in the simulation |
| 9. Reflects on Clinical/Simulation Experience | <ul style="list-style-type: none"> Participates in the debriefing process Identifies areas of strengths and areas for development Articulates "evaluation" of the intervention and outcomes based on evidence |
| 10. Delegation | <ul style="list-style-type: none"> Understand the responsibility, authority, and accountability related to delegation, and then communicates appropriate tasks to individuals within their scope of practice |
| PATIENT SAFETY Discussion Worksheet | |
| 11. Uses Patient Identifiers | <ul style="list-style-type: none"> Uses at least 2 points of patient identification (name, DOB, MR #) |
| 12. Uses Standard Practices and Precautions | <ul style="list-style-type: none"> SWIPES Maintains sterility with any IV medication administration Any medication administration, uses 6 Rights of Medication Administration |
| 13. Reflects on Potential Hazards and Errors | <ul style="list-style-type: none"> Able to identify any potential hazards/errors |

Summative Evaluation

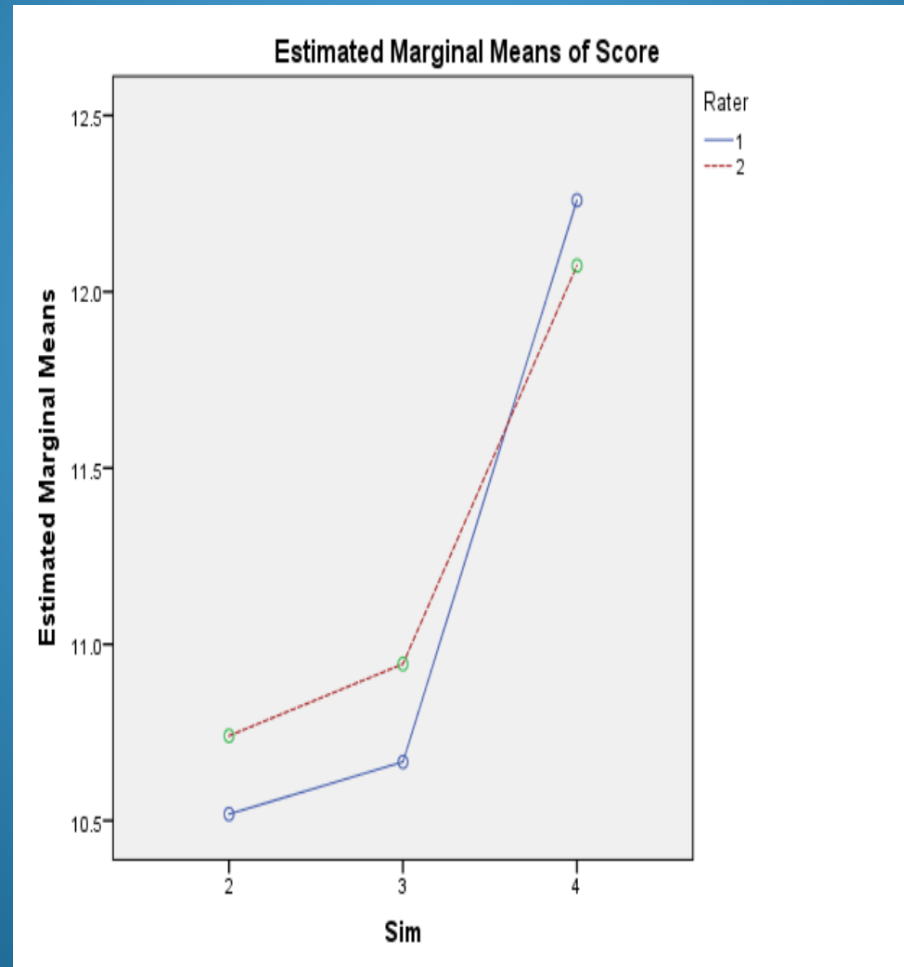
- Identification of Essential Behaviors
 - Assessment
 - Communication
 - Clinical Judgment
 - Patient Safety
- Clarification of Behaviors
- n = 37
- 4 Discrete Points in Time
- Longitudinal Progressive Performances
- Limitations

Reliability Analysis

| Simulation | Valid Cases | Excluded Cases | Intraclass Correlation Coefficient | Intraclass Correlation Coefficient —Lower Bound | Intraclass Correlation Coefficient —Upper Bound | Cronbach's Alpha |
|------------|-------------|----------------|------------------------------------|---|---|------------------|
| Sim 1 | 21 | 16 | 0.84 | -.480 | .528 | .130 |
| Sim 2 | 33 | 4 | .418 | -.147 | .709 | .426 |
| Sim 3 | 37 | 0 | .599 | .594 | .222 | .789 |
| Sim 4 | 37 | 0 | .902 | .719 | .952 | .914 |

n = 37

Interrater Reliability: Multivariate Tests



Method of Evaluation: Participant Survey

- 4 Aims of Casey-Fink Readiness for Practice Survey Tool
 - Identify Skills
 - Validate instrument
 - Understand perception of readiness
 - Identify and correlate readiness
- 3 Sections
 - Demographic
 - Quantitative
 - Qualitative
- Data Collection

Method of Evaluation: Participant Survey

| | Significance |
|-----------------------|--------------|
| Caring for 2 Patients | .001 |
| Caring for 3 Patients | .004 |
| Caring for 4 Patients | .003 |
| Communicating with MD | .000 |
| Problem Solver | .030 |

Table 1 - Data Significance

Pre-simulation overall mean preparedness level was 3.2167

Post-simulation overall mean preparedness level was 3.5714

P-Value Significance of .000

Method of Evaluation: Participant Survey



Graph 1 - Preparedness for Practice

LESSONS LEARNED & RECOMMENDATIONS

- ❑ Resources
- ❑ Evaluation Research Recommendations:
 - Use of tool
 - Interrater Reliability– How many cases?
- ❑ Casey–Fink Readiness for Practice
- ❑ Transferability of KSAs

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