

Simulation: A Clinical Nurse Specialist Strategy to Improve Registered Nurse Bedside Shift Report

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Purpose

- ❖ Improve post-licensure RN compliance with guidelines for bedside shift report (BSR) when caring for hospitalized adult medical-surgical patients on acute care units
- ❖ Standardize simulation methods for post-licensure RN training on consistent use of defined critical elements of BSR
- ❖ Increase post-licensure RN self-efficacy with BSR practices



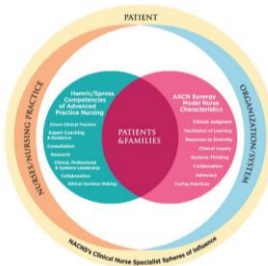
Scope of Problem: Patient Impact

- ❖ Breakdowns in healthcare provider communication during handoffs can account for **up to 80% of serious medical errors** (Joint Commission Center for Transforming Healthcare, 2013)
- ❖ More than half of these events are associated with errors in handoff between healthcare providers (Weinger et al., 2010)
- ❖ In 2015, these reported **events accounted for 744 patients harmed**, representing only a **small proportion of actual events** (Joint Commission, 2015)
- ❖ Registered nurses (RNs) give handoff in the form of bedside shift report multiple times a day for any given patient, **increasing opportunity for communication failures and compromised patient safety**

Scope of Problem: Practice

- ❖ National patient safety organizations **prioritized the work to optimize nurse change of shift report**, specifically recommending evidence-based critical elements (Agency for Healthcare Research and Quality [AHRQ], 2013; Joint Commission Center for Transforming Healthcare, 2015)
- ❖ Despite this work, 55% of respondents to a survey of over half a million hospital staff indicate that **patient handoffs continue to “need improvements”** (AHRQ, 2012)
- ❖ RN compliance with evidence-based elements for shift report is **inconsistent and handoff processes vary** (Carroll, Williams, & Gallivan, 2012; Fuhmeister, 2014; Keenan, Yakel, Lopez, Tschannen, & Ford, 2013; Poletick & Holly, 2010)

Role of CNS



- ❖ Direct Care
- ❖ Systems Leadership
- ❖ Coaching
- ❖ Research
- ❖ Evaluation of Clinical Practice

CNS Core Competencies: Organizational Framework
<http://www.nacns.org/wp-content/uploads/2017/01/CNSCoreCompetenciesBroch.pdf>

Research Questions

- ❖ Is there a difference in RN adherence to Agency for Healthcare Research and Quality (AHRQ) critical element guidelines during BSR for hospitalized adult medical-surgical patients on acute care units after RN participation in simulation training?
- ❖ Is there a difference in RN self-efficacy with BSR practices after participation in simulation training?

Study Site

- ❖ Academic medical center located in central Virginia
- ❖ Level 1 Trauma Center
- ❖ Magnet® Recognized
- ❖ 26-bed inpatient, acute care, medical-surgical unit



Methods

- ❖ Pre-experimental design (Pre/Post-test comparison)
 - ❖ University of Virginia Health Science Research IRB# 19138
 - ❖ Old Dominion University IRB# 937550-2
- ❖ Participants took part in a two-hour simulation learning intervention with deliberate practice on BSR skills led by a Clinical Nurse Specialist



Simulation Intervention

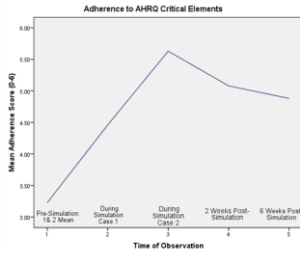
- ❖ Standardized patients and virtual electronic medical records
- ❖ Incorporated International Nursing Association for Clinical Simulation (INACSL 2013) *Standards of Best Practice: SimulationSM*
- ❖ Clinical Nurse Specialist with experience in simulation facilitation in academic setting
- ❖ Two hour simulation sessions occurred over six week timeframe



Results: RN Adherence

↑ Post-simulation adherence scores > pre-simulation scores

Simulation impact on:	Mean (n)
RN Adherence to AHRQ Critical Elements for BSR	
Before	3.167 (24)
After	4.938 (24)
Wilcoxin Signed Ranks p-value (within)	p = 0.000



Results: RN Adherence

Observed Adherence (Mean and Median) to AHRQ Bedside Shift Report Critical Elements

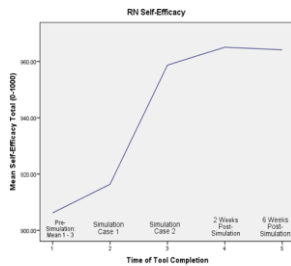
Critical Element	Pre-Simulation Training Mean (SD)	Post-Simulation Training Mean (SD)	Pre-Simulation Training Median (50 th Percentile)	Post-Simulation Training Median (50 th Percentile)	p
1. Invited the patient & family to take part in the bedside shift report.	1.354 (0.3451)	1.063 (0.1989)	1.5	1.0	0.002
2. Accessed the electronic work station in the patient's room.	1.771 (0.2941)	1.333 (0.3510)	2.0	1.5	0.001
3. Conducted a verbal report with the patient & family.	1.821 (0.2654)	1.479 (0.3120)	2.0	1.5	0.002
4. Conducted a focused assessment of the patient & safety assessment of the room (visually inspected wounds, incisions, drains, IV sites, IV tubing, catheters, etc. & patient's room for any physical safety concerns).	1.479 (0.4293)	1.125 (0.2212)	1.5	1.0	0.003
5. Reviewed tasks that needed to be done (such as labs, tests, medications).	1.146 (0.2750)	1.000 (0.0000)	1.0	1.0	0.020
6. Identified the patient's & family's needs or concerns	1.189 (0.2879)	1.022 (0.1943)	1.0	1.0	0.014

↑ Adherence scores for each individual AHRQ Critical Element > post-simulation

Results: RN Self-Efficacy

↑ Post-simulation self-efficacy scores > pre-simulation scores

Simulation impact on:	Mean (n)
RN Self-Efficacy with Participation in BSR	
Before	906.917 (24)
After	965.563 (24)
Wilcoxin Signed Ranks p-value (within)	p = 0.000



Results: RN Self-Efficacy

Perceptions of Self-Efficacy during Bedside Shift Report (BSR): Participant Responses (Mean and Median Likert Scale Scores)					
Question	Pre-Simulation Mean (SD)	Post-Simulation Mean (SD)	Pre-Simulation Median (50 th Percentile)	Post-Simulation Median (50 th Percentile)	p
1. I can identify what is expected of me during BSR.	99.24 (9.7080)	97.563 (3.8400)	90.85	100.00	0.000
2. I can perform all elements of BSR delivery.	98.254 (11.3772)	96.180 (4.9096)	89.15	99.5	0.000
3. I can perform all elements of BSR receipt.	89.867 (7.4527)	96.917 (4.9753)	90.85	100.00	0.000
4. I can introduce the oncoming nurse to the patient & family.	97.429 (4.3169)	98.375 (4.0115)	100.00	100.00	0.357
5. I can invite the patient & family to take part in BSR.	87.521 (13.2953)	95.354 (6.9101)	91.65	100.00	0.002
6. I can access the electronic work station in the patient's room.	95.071 (6.5166)	97.863 (5.0783)	98.35	100.00	0.073
7. I can conduct a verbal report with the patient and family present.	82.471 (17.6628)	91.563 (7.4357)	85.65	91.25	0.001
8. I can conduct a focused assessment of the patient & safety assessment of room.	88.392 (10.8098)	96.000 (4.4429)	90.00	98.5	0.000
9. I can review tasks that need to be done (labs, tests, medications, etc.)	93.238 (6.8861)	98.000 (4.0940)	93.30	100.00	0.001
10. I can identify patient & family needs or concerns.	94.633 (5.4161)	98.125 (3.5547)	96.35	100.00	0.006

↑ Self-efficacy scores for each question > post-simulation

Conclusions

- ❖ Significant pre and post differences found in RN adherence to evidence-based practices and self-efficacy during BSR
- ❖ Suggests that simulation methods have benefit and applicability to post-licensure RN training
 - ✓ ongoing practice competency
 - ✓ increased standardization of practice
 - ✓ optimization of safe patient care



Implications for the CNS

- ❖ CNS-led simulation provides a safe environment for nurses to gain competence and increase self-efficacy in complex, rapidly changing inpatient settings
- ❖ Additional research necessary
 - ❖ Longitudinal studies
 - ❖ Expanded samples



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Questions?