Is Bedside Shift Report Associated with Improved Patient Satisfaction and Decreased Falls and Medication Error Rates?

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MARCH 9-11, 2016 LAKE BUENA VISTA, FL www.nursingworld.org/ANAcconference

2016 American Nurses Association Annual Conference
Connecting Quality, Safety and Staffing to Improve Outcomes

MUSC Medical Center
Charleston, South Carolina

Serves over 170,000 patients annually through four inpatient facilities:
• 709 beds (plus 66 neonatal care beds)
• 36,114 Inpatient visits
• 5,629 Observation visits
• 66,736 Emergency Department visits
• 7,000 Employees
• 2,400 Nurses
• 750 Physicians
Problem Statement

Despite limited empirical evidence nursing leaders advocate the implementation of bedside shift report (BSR) to promote patient safety and nursing accountability.

Background

- Joint Commission – communication breakdowns during care transitions leading cause of sentinel events (Blouin, 2011)
- Nursing shift report most common care transition
- Systematic reviews of literature found little empirical evidence to support specific structure, protocol, or method (Riesenberg, Leizsch, & Cunningham, 2010).
Purpose of Research

To evaluate
- average rates of patient falls
- medication administration errors
- patient satisfaction with nurses’ communication before and after the implementation of bedside shift report across multiple patient areas.

Nursing Services Delivery Theory

Meyer & O'Brien-Pallas, 2010 – used with permission of John Wiley and Sons®.
Literature Review: Bedside Shift Report

Findings

- Research focuses primarily on:
  - Throughput (content and context or report)
  - Outputs (clinical outcomes, staff outcomes)
  - Little exploration of inputs
    - Limited to basic demographic information

Positive Staff Perceptions

- Promoted patient centered care
- ↑ patient involvement
- ↑ nurse accountability
- Intercepted errors

Negative Staff Perceptions

- Inconsistent practice
- Lack of patient involvement
- Concerns R/T privacy and confidentiality
Literature Review: Bedside Shift Report

Findings

• Positive Patient Perceptions
  • Opportunity to build relationships
  • Feeling engaged, informed
  • Maintained patient safety
  • Opportunity to give feedback
• Negative Patient Perceptions
  • Maintains professional dominance

Sand-Jecklin & Sherman, 2013
• 7 med-surg units; 1 month prior, 6 months post implementation
• Decrease in adverse events (patient falls and medication errors) not statistically significant

Merrill & Brown, 2012
• 6 units across 3 hospitals; 12 months post implementation.
• Decrease in patient falls and communication related adverse events not statistically significant.
Methods

• Quasi-experimental retrospective design
• Two group, with and without bedside handoff
• 709 bed academic hospital with ADC 592
• 15 adult inpatient units located in two separate hospital buildings within a 3 block radius.
  • # beds = 304
  • # RNs = 424

Bedside Shift Report Protocol Implementation – IMPROVE project

• Pilot on one unit: May 2012
• Implemented across 30 units: June 2012
• Adherence measured by patient interview: 7/9/12 – 4/15/13
• Research Proposal approved: October 2013
• IRB Approval: 11/4/2013
Bedside Shift Report Protocol

Tools used for Implementation

- Bedside Report Packet
  - Desired outcomes
  - How To's
  - Report guide
- Bedside Shift Report Presentation
- Kardex
- Report template
- Data Collection tool
Bedside Shift Report Protocol Unit-based Validation Tool

<table>
<thead>
<tr>
<th>Activity/Behavioral Items</th>
<th>Achieved (yes/no)</th>
<th>Opportunities for Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduce oncoming nurse to patient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage up oncoming nurse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used key words appropriately</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Checked equipment and supplies in room</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visitors: Patient wants them to leave or stay?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report in SBAR format</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior to leaving, thank patient for allowing provision of care.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data collection: Unit Demographics

- Population
- Number of beds
- Accommodation codes – routine, intermediate
- Patient days – observation and inpatient
- RN worked hours
- Nurse to Patient Ratio - calculated
- RN Education & Certification
- Adherence to Bedside Shift Report
Data collection - Outcome Variables

**Patient Satisfaction with Nursing Communication – Proprietary Survey**

- The nursing staff asked me for input about my daily care.
- When nurses changed shift, the nurse caring for me introduced me to the new nurse.
- The nurse reviewed my daily care with me in a way that I could understand.

**Data collection - Outcome Variables**

**Medication Administration Error Rate**

- Deviation from physician order and/or hospital policy that reached patient and had potential to cause harm
- Entered into the Patient Safety Net reporting system and identified as occurring during the administration phase
- Calculated for each unit - (# errors / patient days)*1000 = error rate.
Data collection - Outcome Variables

- **Fall Rate**
  - Sudden, unintentional patient descent that results in the patient coming to rest on the floor, on or against some other surface, with or without injury
  - Entered into the Patient Safety Net reporting system and identified as occurring on the nursing unit
  - Calculated for each unit - (# falls / patient days)*1000 = fall rate.

**Unit Demographics**

<table>
<thead>
<tr>
<th>Characteristic per Unit</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F</td>
</tr>
<tr>
<td># Beds Pre</td>
<td>15</td>
<td>20.6</td>
<td>5.33</td>
<td>0.068</td>
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<tr>
<td># Beds Post</td>
<td>15</td>
<td>20.1</td>
<td>6.135</td>
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<tr>
<td>Total Pt Days Pre</td>
<td>15</td>
<td>565.3</td>
<td>157.267</td>
<td>0.003</td>
</tr>
<tr>
<td>Total Pt Days Post</td>
<td>15</td>
<td>557.6</td>
<td>158.296</td>
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<tr>
<td>% Routine Pre</td>
<td>14</td>
<td>36%</td>
<td>14.462</td>
<td>0.226</td>
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<tr>
<td>% Routine Post</td>
<td>14</td>
<td>40%</td>
<td>14.019</td>
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</table>
### Unit Demographics

<table>
<thead>
<tr>
<th>Characteristic per Unit</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean NTPR Pre</td>
<td>13</td>
<td>3.2</td>
<td>0.301</td>
<td>3.426</td>
</tr>
<tr>
<td>Mean NTPR Post</td>
<td>13</td>
<td>3.5</td>
<td>0.352</td>
<td></td>
</tr>
<tr>
<td>% RN ≥ BSN Pre</td>
<td>15</td>
<td>14.5%</td>
<td>5.402</td>
<td></td>
</tr>
<tr>
<td>% RN ≥ BSN Post</td>
<td>15</td>
<td>14.8%</td>
<td>5.136</td>
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</tr>
<tr>
<td>% RN Certified Pre</td>
<td>14</td>
<td>1%</td>
<td>0.980</td>
<td></td>
</tr>
<tr>
<td>% RN Certified Post</td>
<td>14</td>
<td>3.4%</td>
<td>3.254</td>
<td></td>
</tr>
</tbody>
</table>

*ANOVA: F = 3.426, Sig = 0.08 (Mean NTPR Pre vs. Mean NTPR Post)*

### Adherence to Protocol per Patient Interviews

- **Mean % Adherence**
  - Overall Mean
  - Overall Mean + 3 SD
  - Overall Mean - 3 SD

**Bedside Shift Report Implemented**

*Mean % Adherence BSR*
**Patient Satisfaction with Nurse Communication**

- **Mean Patient Satisfaction**
  - No BSR: Mean=85.5, SD=0.601
  - BSR Yes: Mean=87.3, SD=0.618

**Medication Administration Error Rate**

- **Mean Med Error Rate**
  - No BSR: Mean=4.17, SD=2.427
  - BSR Yes: Mean=2.13, SD=1.185
Discussion

- Significant improvement in two outcomes:

  1. **Medication Administration Errors**
     - Reduced by half with Bedside Shift Report
     - Consistent with findings of other studies

  2. **Patient Satisfaction with Nurse Communication**
     - Increased 2% with Bedside Shift Report
     - Consistent with findings of other studies
**Discussion**

- **Patient Fall Rate**
  - Slight increase with Bedside Shift report – not statistically significant
  - Inconsistent with other studies
  - Covariates (RN education/certification, Nurse to Patient Ratio) did not impact results.

**Limitations**

- Retrospective analysis
  - Data previously collected for other purposes may have lacked rigor
  - Little to no quantitative data available on how implementation was managed and consistency of practice
  - Missing data – units dropped out
  - Relatively small number units
Implications for Practice

• Medication administration error rate decreased with bedside shift report
• Bedside shift report improves patient satisfaction with nurse communication

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