Organization: Sinai Hospital of Baltimore

Solution Title: Reduction Nurse Sensitive Conditions: Utilizing an Observational and Retrospective Review Methodology

Focus Area: Clinical Nurse Specialist & PI Coordinators focusing on 8 MHAC focusing on diverse populations

Program Project Description:

Healthcare delivery must be organized in a way where organizational structures and processes deliver quality outcomes that continuously result in the securing of patient safety (Dunton, Byron, Klaus, Pierson, 2007). Critical to the securing of patient safety is the prudent consideration and incorporation of the Nurses contribution to improvement and sustainment of quality and safety outcomes. Sinai Hospital (Nurses) created an innovative, inter-disciplinary approach to enhancing patient safety. The approach employed by a specialized group of Nurses embraced the IOM recommendations (2) that “healthcare organizations should engage in Nurse led, collaborative improvement efforts that involve other healthcare professionals (2010). The project described in this proposal illustrates the empowerment of nursing to lead the way in producing patient safety outcomes that are integral to excellence in patient care delivery.

Currently, the state of Maryland has established guidelines that require the essential monitoring of Maryland Health Acquired Conditions (MHAC) or Potentially Preventable Complications (PPC’s), which includes key Nurse Sensitive Indicators (NSI or PPC). The reporting process for MHAC”’s provides a cross-sectional view of the acceptable, expected occurrence of 65 MHAC’s; eight of those are Nurse Sensitive Indicators that reflect the impact of nursing care:

- PPC 5 Pneumonia and Other Lung Infections
- PPC 6 Aspiration Pneumonia
- PPC 16 Venous Thrombosis
- PPC 28 In Hospital Trauma and Fractures (Falls)
- PPC 31 Decubitus Ulcer
- PPC 65 Urinary Tract Infection without Catheter
- PPC 66 Catheter Related Urinary Tract Infection
- PPC 54 Infections due to Central Venous Catheters

The MHAC process entails state level calculation of a hospital rate based on a ratio of observed and expected PPC occurrences, reporting of inter-hospital ranking for Maryland facilities, and based on the computed rate/ranking a subsequent reward or penalty status obtained. Through the monitoring of PPC’s the state of Maryland
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hospitals are required to create ongoing initiatives that reduce the occurrence of the PPC’s.

Problem Description

In May 2014, the overall PPC rate for Sinai Hospital was .26 with a Maryland Hospital comparative ranking of “43” out of 46 Hospitals (third lowest MHAC score for the state); and a Nurse Sensitive Indicator rate of .21. The State scoring process employs a positive scoring system based on a 0-1 schema, the higher the rate the better the standing and reward. If an institution scores poorly it invokes a financial penalty, reflects the delivery of care, and may impact the community perception of care.

Baseline Data and Goals

The goals are as follows:

• Improve the MHAC rate from .26 to .60 as evidenced by the reduction of PPC’s
• Improve the Nurse Sensitive groupings rate (.21) as evidenced by the reduction in the number of Nurse Sensitive PPC’s,

Baseline: May 2014 Nurse Sensitive PPCs

<table>
<thead>
<tr>
<th>PPC</th>
<th>Description</th>
<th>Observed PPCs</th>
<th>Expected PPCs</th>
<th>O/E Ratio</th>
<th>Attainment Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Pneumonia &amp; Other Lung Infections</td>
<td>10</td>
<td>12.30</td>
<td>0.81</td>
<td>4</td>
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<tr>
<td>6</td>
<td>Aspiration Pneumonia</td>
<td>4</td>
<td>6.09</td>
<td>0.66</td>
<td>7</td>
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<tr>
<td>16</td>
<td>Venous Thrombosis</td>
<td>6</td>
<td>6.17</td>
<td>0.97</td>
<td>1</td>
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<tr>
<td>28</td>
<td>In-Hospital Trauma and Fractures</td>
<td>1</td>
<td>1.27</td>
<td>0.79</td>
<td>3</td>
</tr>
<tr>
<td>31</td>
<td>Decubitus Ulcer</td>
<td>1</td>
<td>1.89</td>
<td>0.53</td>
<td>0</td>
</tr>
<tr>
<td>65</td>
<td>Urinary Tract Infection without Catheter</td>
<td>31</td>
<td>23.29</td>
<td>1.33</td>
<td>0</td>
</tr>
<tr>
<td>66</td>
<td>Catheter-Related Urinary Tract Infection</td>
<td>6</td>
<td>0.99</td>
<td>6.09</td>
<td>0</td>
</tr>
</tbody>
</table>

|               |                                              | 59            | 52.00        | 1.13      | 0.21              |

Process

Applying the Plan-Study-Do-Act (PDSA) Model and evidence-based practice the following were strategies utilized:

- Identify potentially preventable conditions directly impacted by nursing practice
- Conduct retrospective chart reviews to identify opportunities in nursing practice
- Identify interactive solutions to engage and empower nursing staff in reducing nursing sensitive conditions
- Educate nursing staff regarding high impact interventions to reduce the risk to patients for developing nursing sensitive conditions
- Assess the impact of the interdisciplinary process using the hospital O/E (observed to expected) ratio for nursing sensitive conditions
Solution: **Education & Practice Observation Strategy:**

- Developed Nurse Sensitive Educational Tools (Appendix B)

- A **“PPC of the Week Concept”** was developed in May 2014 to provide a vehicle for observation of staff compliance with preventative practices for Nurse Sensitive Conditions.

- **Team:** Each PPC was assigned to a team that consisted of a Clinical Nurse Specialist (CNS), a Performance Improvement/Risk Management (RM) Coordinator and an Education Specialist. (Appendix A)

- **Starting 23 June 2014:** Rotation of PPC Week based observations (Appendix A)

  1. **Identification of PPC at risk patients:** the CNS/RM Coordinator/Educator while on the unit identified “PPC at risk patients” via a brief record review.

  2. A PPC of the week was designated and, during that week, the team would perform 10 observations and engage 1:1 with staff about the patient care, and documentation throughout the hospital (just in time teaching occurred).

- **Summary** of unit findings, communication of the findings to the staff, and Patient Care Services Leadership

- **Currently:** The group is conducting the 3rd series of rounding observations. The timing/order of the “PPC of The Week” is based on findings/issues identified during the MHAC Team (CNS/RM Coordinator/Educator observations on the unit.

- **Ongoing** review of patient records for all other PPC’s and collaboration with physicians continue.

**Measurable Outcomes**

Overall Sinai Hospital MHAC Rate: Establishing the Nurse Sensitive Indicator PPC goals were critical to achieving a Sinai current aggregate score of .64, with a **MHAC ranking of “12” out of 46 Hospitals**; which is based on the HSCRC Hospital MHAC ranking. A score of .64 reflects the movement of Sinai Hospital from a potential penalty zone to the Maryland reward zone; this is an overall improvement from .26 in May 2014.
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Nurse Sensitive (NS) data: 1) During the first and second quarters there was a 63% decrease in the number of NS PPC’s, and 2) Currently: the Nurse Sensitive PPC grouping score is .57, an improvement from .21 in May 2014.

Sustainability

The overarching question that must be addressed to ensure compliance with the implemented solution is the hardwiring of the PPC preventative practices and processes.

Sinai Hospital of Baltimore developed a standardized approach to manage the process of care and to control the incidence of Potentially Preventable Complications, including those that are nurse sensitive in nature. The goal of this initiative was to maintain accountability with a defined standard of care for clinicians at the bedside to further reduce PPC-Potentially Preventable Complications.

Measures used to sustain this goal include:

- Decrease and prevent PPC's through the adoption of the Centers for Disease and Control (CDC) Improvement bundles in and outside the intensive care units
- Reduction in variation in care and knowledge barriers through multiple channels of communication between clinical leadership, administrative leadership, and staff at the bedside
- Engagement of front line staff in clinical improvement efforts, through daily and weekly rounding with Clinical Nurse Specialist & Performance Improvement Coordinator
- Established and maintained educational forums for improvement. Provided real time learning specific to the PPC under review for the week.
- Continuously assess outcomes and sustain improvements; with concurrent and real-time feedback to providers
- Increase communication to raise consciousness of the caregiver, presented at nursing grand-rounds on PPC, provided fact-sheets on each PPC for preventability
- Standardized reporting by creating a system-wide dashboard for Nurse Sensitive PPC and widely communicated results from the caregiver at the bedside to the board of trustees
- Education, communication, assessment of each PPC is a must, thus making preventable and avoidable Hospital Acquired Conditions actionable, and key to the success of this initiative.

Hardwiring: PPC preventative practices on units

- Developed Nurse Sensitive Document for Units
- Developed PPC Education Tool to educate staff
- Educated PCS Directors/CNS on PPC reduction for units
- Educated Clinical Leaders-Managers on utilization EBP
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- Developed Health Stream Module: requiring annual completion of educational module for current RN staff, and all new RN employees
- Continuing the “PPC of the Concept” for unit based, 1:1 observations

Role of Collaboration and Leadership

Integral to the innovative solution for decreasing the Nurse Sensitive Potentially Preventable Conditions (PPC) was the formation of partnerships. These partnerships originally consisted of the Clinical Nurse Specialist and the Quality /Risk Management coordinator. The original dyad investigated the Hospital Acquired Condition and searched for best practice to address them. The addition of the Education Specialist added an element of staff education for the nurse practice facet of the PPC.

With the oversight of the executive leadership (Vice Presidents of Nursing and Quality/Risk), the Directors of Professional Practice and Quality/Risk conducted frequent meetings. These meetings began on a daily basis, moved to three times per week and are currently twice a week. The meetings consist of just in time data analysis (from the Health Management Department) with discussion of findings. Discussion of best practices form the action plans for the identified PPCs. Reports are shared on findings from PPC observations. The hospital methodology of Plan/Do/Study/Act is the framework for the triad action plans. It is a continual feedback loop/quality cycle.

Innovation/Conclusion

Innovative: Sinai Hospital of Baltimore implemented a real-time, data-driven approach to educating staff on Nurse Sensitive Indicators to facilitate a reduction Maryland Hospital Acquired Conditions (MHAC). An interdisciplinary group conducted observations with staff to implement a change in practice that reduced Potentially Preventable Conditions. Staff education and observations are continuously re-evaluated to ensure an evolving and innovative process. Since this process was implemented, Sinai has shown improvement in their MHAC scores and serves as a leader and resource to other hospitals throughout the state.

Submitters:

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Michelle Salmon, RN, MSN, ACNP, CNS-BC
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Leanne Bond, RN, BSN
Patti Wilcox, RN, MSN
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Andrea Earl, RN
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Gloria Lay, RN, MSN
References


### Appendix A: PPC of the Week Example

| I. Education Format & Schedule | 1. NS Fact Sheet (resource) COMPLETED  
2. PPC OF THE WEEK- Started: 23 June 2014 |
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>• 13 October - Week 1: UTI (PPC 66,) with catheter</td>
</tr>
<tr>
<td></td>
<td>• 20 October - Week 2: UTI (PPC 66,) with catheter</td>
</tr>
<tr>
<td></td>
<td>• 27 October - Week 3: UTI (PPC 65) without catheter</td>
</tr>
<tr>
<td></td>
<td>• 03 Nov- Week 4: CLABSI (PPC 54)</td>
</tr>
<tr>
<td></td>
<td>• 10 Nov - Week 5: VTE (PPC 16)</td>
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<tr>
<td></td>
<td>• 17 Nov - Week 6: HAPU (PPC 31)</td>
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<tr>
<td></td>
<td>• 01 Dec - Week 7: In Hospital Trauma/Fractures (PPC28)</td>
</tr>
<tr>
<td></td>
<td>• 08 Dec- Week 8: Pneumonia and Other Lung Infections (PPC 5)</td>
</tr>
<tr>
<td></td>
<td>• 15 Dec- Week 9: Aspiration Pneumonia (PPC 6)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Team</th>
<th>Educational &amp; Observation Team: Assigned Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNS, PI Coordinator, Educator resource</td>
<td>• Michelle Salmon , Tina Gionet, Denise Meekins: IMC, GIGU</td>
</tr>
<tr>
<td></td>
<td>• Debby Harper &amp; Tamara McDuffie: Cardiac Areas</td>
</tr>
<tr>
<td></td>
<td>• Diana McKevitt &amp; Leanne Bond , Tricia Rogers: B5, 5 South Tower</td>
</tr>
<tr>
<td></td>
<td>• Patti Wilcox &amp; Kathleen Friedel, Joanne Dobry: B6, 3N, ONT</td>
</tr>
<tr>
<td></td>
<td>• Candy &amp; Andrea, Jacki Sapp: Periop, OB</td>
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<tr>
<td></td>
<td>• Pat &amp; Gloria,– PID, Peds</td>
</tr>
<tr>
<td></td>
<td>• Kristen Liberto, Stacy, Linda Duncan(observation only) &amp; Shelby (record review only)– -3S, ICU, ER</td>
</tr>
</tbody>
</table>
Appendix B: Educational Tool Example

**PPC #31 - HAPU**
Hospital Acquired Pressure Ulcer

**Practice**
- Perform and document a complete skin assessment on admission, transfer and once per shift.
- Consult WOC for all Stage II, III, IV, Deep Tissue Injury and Un-stageable pressure ulcers via Cerner.
- Prevention Order set should be initiated by the direct care RN when there is potential for the development of skin breakdown and/or a Braden score ≤ 18. Risk factors include pressure, shearing, friction, moisture, poor nutrition, immobility.
- Turn patients at least every 2 hours.

**Documentation**
- Patients admitted with pressure ulcers that are not documented within 24 hours of admission are considered hospital-acquired.
- Document a complete skin assessment on admission, transfer and once per shift.
- Document turns.
- Document a Braden Risk Assessment on admission and every shift.
- Document all wounds and pressure ulcers present on admission.

**PPC #31 Powerform Documentation Example**

**Integumentary Assessment**
- Wound and all Pressure Ulcers

**Patient Activity / Hygiene**
- Document turns every 2 hours

Document all wounds and pressure ulcers present on admission
Project Team

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