

APPLICATION FORM

Title of Entry: Taking HAP off the Map with a Routine Screen

Division: Small Organizations

Award: In Safe Hands

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Date Results Achieved: 04/01/2016

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Executive Summary

Taking HAP off the Map with a Routine Screen

PROBLEM AND OPPORTUNITY

Hospital Acquired Pneumonia (or HAP) is a leading cause of prolonged hospitalization in patients admitted in an acute care setting. On the inpatient telemetry unit at a cancer-specific hospital, there was a noted increase in the number of HAPs. The nurses on the unit took a closer look at the HAP rates on the unit and found an opportunity to improvement.

EVIDENCE

Hospital Acquired Pneumonia (HAP) is a leading cause of prolonged hospitalization in patients. Risk factors for HAP include multiple comorbidities, previous compromised respiratory diseases (e.g., lung cancer), debilitated condition, recent treatment with immunosuppressive therapies, and surgeries that increase risk of aspiration during recovery. The oncology population is especially susceptible to critical illness related to an immunocompromised state.

BASELINE DATA

The pre-intervention phase of the study evaluated January to April 2015 revealed 4 HAPs acquired on the inpatient telemetry unit, demonstrating 2.45 incidence/1000 patient days. The purpose of this study was to implement the Massey Bedside Swallowing Screen upon admission to the oncology telemetry unit to detect any deficits that could potentially lead to HAP, in conjunction with strict oral care for identified high risk patients.

INTERVENTION

Each patient admitted to the inpatient telemetry unit was screened with the Massey Bedside Swallowing Screening tool. Acutely ill oncology patients unable to perform their own oral care were placed on a strict oral care regimen performed by the nursing staff. The charge nurse audited compliance with the oral care protocol and further audited compliance with screening each admission from the day prior.

RESULTS

Post-intervention from May 2015 to March 2016 indicated zero HAP found on the unit. With the implementation of the Massey Bedside Swallowing Screen for each admission and strict oral care regimen for high-risk patients, the incidence of HAP on the unit decreased by 50% and then further to zero.

Assessment

Hospital-acquired pneumonia or Healthcare-associated pneumonia (known as HAP) is a fairly common healthcare-associated infection found in acute care facilities. According to recent literature, HAP is the second most common hospital-acquired infection in the country, accounting for about 15% of all hospital-acquired infections in acute care settings. The incidence of HAP is linked to increased mortality rates.

For patients with cancer, acquiring a nosocomial infection can many times be fatal. Many times, those patients are admitted to the hospital as a result of chemotherapy treatment or radiation, leaving patients in a debilitated state. HAP is defined as pneumonia acquired at least 48 hours after admission to an inpatient unit. These patients are acutely ill and acquiring a HAP during their inpatient stay could be a life threatening complication.

On an inpatient telemetry unit in a cancer-specific hospital, the hospital-acquired pneumonia rate was on the rise. Patients admitted to this unit are often very ill, admitted with a number of acute issues and comorbidities. The oncology patients on the unit admitted are often at risk due to the nature of their disease – including patients with head and neck cancers; patients with percutaneous endoscopic gastrostomy (PEG) tubes receiving tube feedings; or those patients with cancer that has metastasized to their brain, often causing acute changes in mental status. The nurses on the unit decided action needed to be taken to decrease their HAP rates, improve quality care, and ultimately increase patient safety, as there was no current protocol in place to identify patients at high-risk for aspiration. Implementing a procedure upon admission to screen all patients admitted would benefit our entire patient population.

Intervention

The Massey Bedside Swallowing Screen is a simple bedside tool that was obtained from the Pennsylvania Patient Safety Authority. It is identified and validated as a swallowing screening tool that may be used as the preliminary screening of a patient's swallowing abilities. The tool is easy to administer, readily available, validated to be predictive of identifying high-risk patients. The nursing staff was educated on this tool first by the manager then by the charge RN on the unit. Education through lecture format and a handout on utilization of the Massey Bedside Swallowing Screen was provided to the nursing staff.

Every patient admitted to the oncology telemetry unit was screened with the tool. The RN admitting the patient would initiate this tool upon patient arrival to the unit. Based on the nurses' assessment, if any of the questions were checked "no" that identified the patient as high risk for aspiration, specific prevention strategies were put in the place. Patients identified as high-risk were placed on nothing-by-mouth (NPO) precautions. The attending physician was immediately notified and orders were requested for aspiration precautions; this was also placed by the RN in the header of the electronic health record and appropriate signage outside patient room alerting all staff the patient was high risk for aspiration. A Speech and Swallow Evaluation would also be ordered to further evaluate the patient.

Acutely ill oncology patients unable to perform their own oral care were placed on a strict oral care regimen performed by the nursing staff. The oral care regimen for high risk patients included: salt/baking soda rinses around-the-clock while awake; Oasis Mouthwash twice a day and as needed Oasis oral spray; and Chap Stick. For dependent patients or any patient with changes in mentation, the RN utilized chlorhexidine oral care suction kits performed for the patient every four hours. Those nurses were monitored for compliance with the kits by the charge RN with a specific audit tool. In addition to the oral care regimen, the nurses collaborated with the speech therapists from the rehabilitation department to ensure daily follow-up.

Results

The pre-intervention phase of the study evaluated January to April 2015 included 1,605 patient days. The data revealed 4 HAPs acquired on the oncology telemetry unit, demonstrating 2.45 incidence/1000 patient days. Post-intervention, from May to August 2015 indicated 2 HAPs acquired on that unit, signifying 1.35 incidence/1000 patient days. With the implementation of the Massey Bedside Swallowing Screen for each admission and strict oral care regimen for high-risk patients, the incidence of HAP on the unit decreased by 50%. Furthermore, data collection continued from September 2015 – March 2016 with no additional cases of HAP on the unit.

From May to August 2015, RN compliance with screening every patient upon admission averaged 65.5%. After increased staff education and accountability, RN compliance from September 2015 to March 2016 averaged 94.4% compliance with screening.

A major factor that contributed to increased compliance was the introduction of Lean Daily Management System (LDMS) Board on the inpatient telemetry unit. Lean Daily Management is a system created to engage team members on the unit to work together to find their own solutions to problems and increase accountability. The LDMS board is a visual tool posted in the unit that includes unit metrics related to patient and stakeholder safety and a commitment to quality. A daily huddle is conducted during each shift at the board to review unit performance, identify any issues on the unit, and address opportunities for improvement. This team meeting usually lasts about 15 minutes.

The RNs decided to integrate the Massey Bedside Swallowing Screen to LDMS board to increase awareness of HAP on the unit. The nurses felt it was extremely important to monitor that each admission from the prior day had their Massey Screen completed. Each day during the LDMS huddle, the number of Massey Screenings from each admission on the day prior is reported out. This heightened awareness of the importance of completing the Massey Screen on admission, while contributing to staff accountability. The Massey Screening audit was incorporated into the board in September 2015, and with that, the screening rates skyrocketed 30%.

With education, compliance, and dedication, the inpatient oncology telemetry unit was furthermore able to decrease the incidence of HAP on the unit from 1.35 to 0 indicating a decrease of 4 HAPs on the unit to zero in 12 months.

Adaptability

Oncology patients assessed with the Massey Bedside Swallowing Screen upon admission to the oncology telemetry unit were noted to have improved outcomes and decreased length of stay. Every oncology patient admitted to an acute care unit should have an admission screen in place to evaluate risk for aspiration. Early detection of patients at high-risk for aspiration and implementation of interventions to improve oral care in high-risk patients leads to improved quality patient care through lower incidence of HAP in the acute care setting. With excellent outcomes from the inpatient telemetry unit, this admission screening process was adopted by all other inpatient units within the hospital and HAP rates have remained low.

The Massey Bedside Swallow Screening tool is supported by the PA Patient Safety Authority of the Commonwealth of Pennsylvania. As stated on the website, *“This swallowing screening tool may be used as the preliminary screening of a patient’s swallowing abilities.”*

The tool may be obtained here:

<http://patientsafetyauthority.org/EducationalTools/PatientSafetyTools/aspiration/Pages/screen.aspx>

Supporting Appendices

Figure 01. Massey Bedside Swallowing Screen



Massey Bedside Swallowing Screen
 This swallowing screening tool may be used as the preliminary screening of a patient's swallowing abilities.

Patient Name: _____
 Date of Screen: _____ Time of Screen: _____ Date of Admission: _____

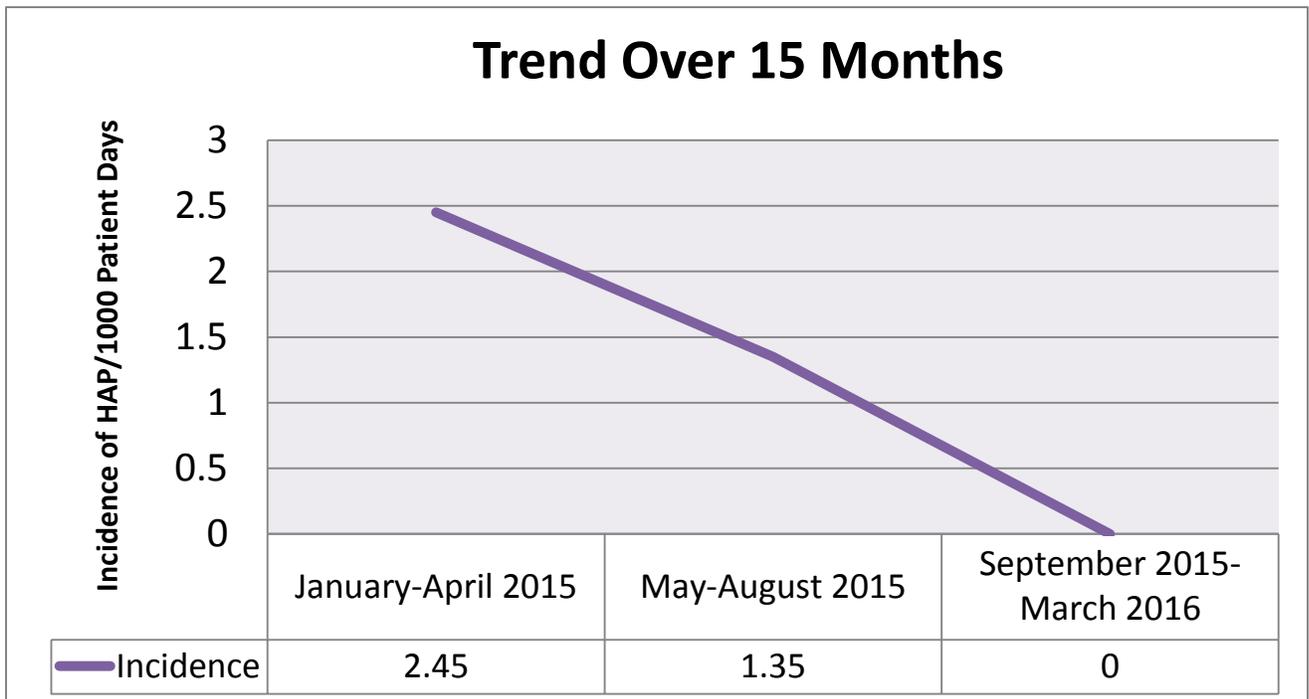
	Yes	No	Comments
1. Patient is alert (can follow command)	<input type="checkbox"/>	<input type="checkbox"/> (if No, Stop)	_____
2. Dysarthria (speech slurred or garbled)	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Aphasia (trouble speaking or understanding words)	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Able to clench teeth	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. Able to close lips	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. Face is symmetrical with movement	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. Tongue is midline	<input type="checkbox"/>	<input type="checkbox"/>	_____
8. Uvula is midline	<input type="checkbox"/>	<input type="checkbox"/>	_____
9. Gag reflex is present	<input type="checkbox"/>	<input type="checkbox"/>	_____
10. Has voluntary cough (have patient cough 2 times)	<input type="checkbox"/>	<input type="checkbox"/>	_____
11. Able to swallow own secretions (no drooling)	<input type="checkbox"/>	<input type="checkbox"/>	_____
12. Swallow reflex is present	<input type="checkbox"/>	<input type="checkbox"/>	_____
13. Give a teaspoon of water			
a. swallows without choking	<input type="checkbox"/>	<input type="checkbox"/>	_____
b. voice sounds gurgly	<input type="checkbox"/>	<input type="checkbox"/>	_____
c. coughed after water	<input type="checkbox"/>	<input type="checkbox"/>	_____
d. water dribbles out of mouth	<input type="checkbox"/>	<input type="checkbox"/>	_____
14. Give 60 cc of water (if teaspoon was tolerated)			
a. swallows without choking	<input type="checkbox"/>	<input type="checkbox"/>	_____
b. voice sounds gurgly	<input type="checkbox"/>	<input type="checkbox"/>	_____
c. coughed after water	<input type="checkbox"/>	<input type="checkbox"/>	_____
d. water dribbles out of mouth	<input type="checkbox"/>	<input type="checkbox"/>	_____

For more information, go to <http://www.patientsafetyauthority.org>.
 This form accompanies the following:
 Does your admission screening adequately predict aspiration risk?
 Pa Patient Saf Advis [online] 2009 Dec [cited 2009 Dec 1];
 Available from Internet: [http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2009/Dec09/De09\(4\)/Pages/115.aspx](http://patientsafetyauthority.org/ADVISORIES/AdvisoryLibrary/2009/Dec09/De09(4)/Pages/115.aspx).

Adapted with permission from Reghe Massey MD, Columbus, Ohio.

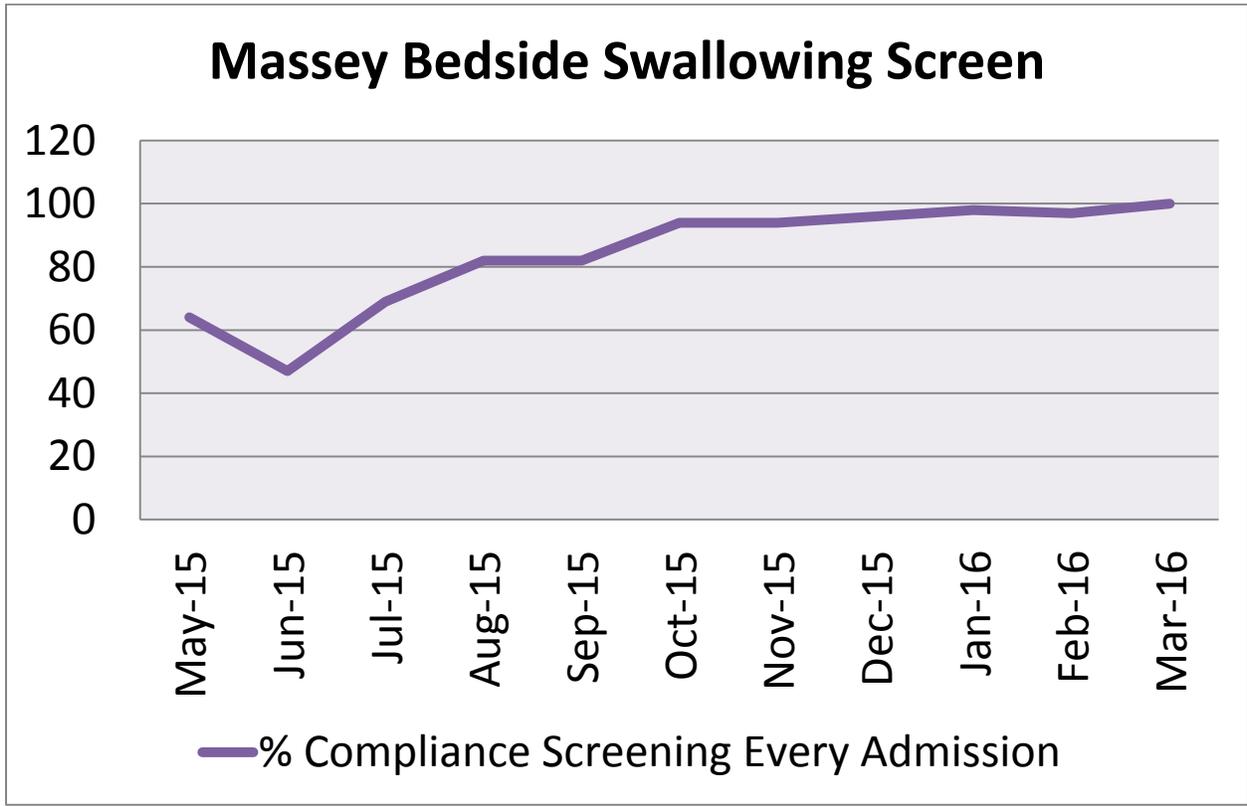
2009 Pennsylvania Patient Safety Authority

Figure 02. Incidence of HAP



Supporting Appendices (con't)

Figure 03. Screening Compliance on the Unit



References

- Balderrama, D., & Boling, B. (2016). Pneumonia, healthcare-associated. *Cinahl Nursing Guide*, EBSCO Publishing. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=nrc&AN=T701261&site=nrc-live>
- Daniels, S.K., Anderson, J.A., & Peterson, N.J. (2013). Implementation of stroke dysphagia screening in the emergency department. *Nursing Research and Practice*, 2013.