Utilizing Root-Cause Analysis to Decrease Pressure Ulcer Prevalence in the Acute Rehabilitation Hospital

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Background

Purpose/problem: Pressure ulcer formation in the hospital setting is a problem with significant implications for both the hospital and its patients. It is a quality of care issue and has been classified by CMS as a sentinel event. This left the burden of cost on hospitals because of the preventative nature of pressure ulcers. In addition to impacting quality of care for hospitals, pressure ulcer formation greatly impacts the patient. "Pressure ulcers represent a major burden of sickness and reduced quality of life for patients, as they can cause pain, systemic illness, increased length of hospital stay, loss of earnings, low self-esteem, amputation and death" (Kelly & Isted, 2011). Several pressure ulcer prevention measures are taken to decrease the formation of pressure ulcers during a patient's hospital stay including, but not limited to: turning and repositioning patients every two hours, floating patients' heels, using appropriate support surfaces, and using preventative bandages on boney prominences. However, with an increase in hospital-acquired pressure ulcers, our rehabilitation hospital initiated the implementation of mini root-cause analyses for every hospital-acquired pressure ulcer.

Objective

To complete a medical record review in a group setting with all nursing staff who cared for the patient to identify missed opportunities for interventions to prevent pressure ulcers and to utilize the findings of the root-cause analysis to educate other staff.

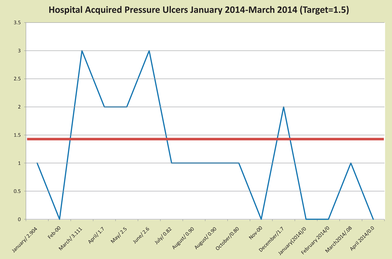
Methods

Upon discovery of a stage II or greater pressure ulcer beyond 24 hours after the patient is admitted, the wound care coordinator, along with hospital nursing leadership, will conduct a mini root-cause analysis with required attendance of nurses caring for the patient prior to discovery of the pressure ulcer. During the analysis, an extensive examination of the patient's electronic record including patient positioning, nutritional status, skin assessments, and Braden scale scores is reviewed to determine what caused the formation of the pressure ulcer .

Outcome

Implementation of the mini root-cause analysis for every hospital acquired pressure ulcer provides improvements to clinical practice for effective rehabilitation of patients with a variety of diagnoses. Improvements that are made based on the analysis conducted from the mini root-cause decreases pressure ulcer prevalence and improve patient care in the rehabilitation hospital setting.

After HealthSouth of Northern Virginia implemented the mini root-cause analysis in June 2013, hospital acquired pressure ulcers had over a 50% decrease in prevalence dropping from 13 the first half of 2013, to six the second half of 2013, in one rehabilitation hospital. Our target rate of 1.5 was consistently met through the first quarter of 2014.



Review and Analysis

I. ATTENDANCE		
II. EVENT UNDER REVIEW		
1. Date and Time of Occurrence		
2. Description of the Occurrence	Patient is a 85 year old male admitted on December 1, with multiple fractures and a history of bladder cancer, diabetes, hyperlipidemia, osteoporosis, and prostate cancer. Braden score was 16 at admission. Turn order placed and foam mattress pad applied to bed within 24hrs of admission. Admission Braden indicated bedfast status with very limited mobility. On December 6, 2013 the nurse discovered a stage II pressure ulcer to patient's coccyx. Braden at time of discovery was 13. Nurse wrote a noted with wound description, charted on the wound assessment, and obtained a picture. Wound care order was placed as well.	
3. What Departments Were Involved in this Occurrence?	Nursing	
III. REVIEW AND ANALYSIS		
Indicate for each area below ask if this area had any impact on the outcome, and if so describe. If impact may have been adverse, ask why and analyze any underlying issues for resolution		**Contributing Factor? Yes, No or NA**
1 Physical Assessment Process	Skin assessments and Braden scale assessments were consistently completed throughout the patient's stay with only one missing day/shift Braden assessment on 12/6. Braden score was consistently low ranging from 9 to 17 with a few high outlying scores. Assessment indicated intact skin until the discovery of the wound. A nutritional assessment was completed by the dietician on 12/4 with the result of moderate malnutrition and decreased PO intake with plan for nutritional supplementation with Glucerna.	Yes
2 Patient Identification Process	Not a factor	N/A
3 Patient Observation Procedures	Missing documentation for turning the patient every 2 hours was seen for 4 different days/shifts. One of the missing days/shifts was the shift prior to the discovery of the wound. All other turning documentation was present for the patient's stay.	Yes
	every 2 hours order. Updates were made as needed with a wound care order placed after discovery of the wound.	
Continuum of Care	Not a factor	N/A
Staffing Levels	Not a factor	N/A
Orientation and Training of Staff	The utilization of the Braden scale to assess risk for skin breakdown for patients with dark pigmented skin should be reviewed with staff in addition to staff education on assessing dark pigmented skin to decrease pressure ulcer prevalence.	Yes
Competency Assessment / Credentialing	Staff competency not an issue. Staff had recently completed wound skills fair and competencies on 10/13 and hospital-wide skills fair/competencies with turn order refresher by 11/30 for staff.	No
Supervision of Staff	Not a factor	N/A
Communication with Patient / Family	Staff has reported patient refused to be moved at times, no documentation to support this however. Staff to document with progress note patient refusal and education on importance of turning and pressure ulcer prevention in the future.	Yes
Communication Among Staff Members	Not a factor	N/A
Availability of Information	Not a factor	N/A

Statement of Root Cause

13	Adequacy of Technological Support	Not a factor	N/A
14	Physical Environment, and Equipment	Not a factor, foam mattress pad placed within 24 hours of admission.	N/A
15	Security Systems and Processes	Not a factor	N/A
16	Medication Management Processes	Not a factor	N/A
IV. STATEMENT OF ROOT CAUSE			
The patient developed a stage II pressure ulcer to his coccyx due to decreased mobility, refusal at times to be repositioned, and occasional lack of turning every 2 hours as evidence by low Braden scores and lack of documentation of turning. Staff knowledge deficit when assessing dark pigmented patients may have contributed to missing the start of this wound at a stage I closer to admission.			

Action Plan

V. ACTION PLANS		
Area for Improvement & Process Addressed	**Action Plan in Response: Include responsible party and time frame.**	**Method of Verifying Completion and/or Monitoring Implementation**
	Action Plan #1: Wound RN to provide nursing staff with educational article to read on assessing darker pigmented patients with corresponding quiz to ensure understanding to be completed by 1/10	Staff to complete corresponding quiz to ensure understanding of how to assessing patients with darker pigmentation. Wound RN will monitor pressure ulcer prevalence in patients with dark-pigmented skin monthly.
	Action Plan #2: Staff nurses with missing turning documentation to be held accountable for completing education with wound RN on turning and repositioning with corresponding documentation by 1/10	Wound RN to complete 10 random chart audits/month to assess rehab nursing turning documentation and will follow up with staff as needed when documentation is missing.
	Action Plan #3:	

References

Kelly, J., & Isted, M. (2011). Assessing Nurses' Ability to Classify Pressure Ulcers Correctly. Nursing Standard, 26(7), 62-71. Retrieved January 19, 2013.