

Hospital Acquired Pressure Injuries (HAPI) In Critical Care: A Quality Improvement Project

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Introduction and Significance

Pressure injuries are a nurse-sensitive quality indicator that impact more than 2.5 million people in the United States annually (Agency for Healthcare, Research, & Quality (AHRQ), 2014). Pressure ulcers can result in longer hospital stays, and an increase in morbidity and mortality (AHRQ, 2014). Critically ill patients develop Hospital Acquired Pressure Injuries (HAPI) despite efforts to decrease the incidence of injuries (Pittman et al., 2019). Critical care patients are at increased risk of developing HAPI due to increased presence of medical devices, immobility, and alterations in tissue perfusion (Black, 2020)

Complete and accurate documentation of skin integrity and nursing care in the Electronic Health Record (EHR) is important because it reflects care and is used to assess outcomes and quality measures (Bagwell et al., 2017). A comprehensive approach to pressure injury prevention entails appropriate assessment of risk, skin and tissue assessment, use of preventative measures, and appropriate care when pressure injuries occur (NPIAP, 2019). Use of silicone foam dressings in reducing HAPI was statistically significant (Tayyib & Coyer, 2016). In a large, mid-western hospital, the majority of HAPI were identified in critical care patients.

Problem Statement

In patients admitted to or transferred from MICU II at a large mid-western hospital, what interventions to prevent pressure injuries will affect development of HAPI while in MICU II or identification upon transfer to a lower level of care unit?

Project Description and Design

The framework for the project includes the Plan-do-study-act (PDSA) method for quality improvement and Jean Watson's Theory of Human Caring (Watson, 2008).

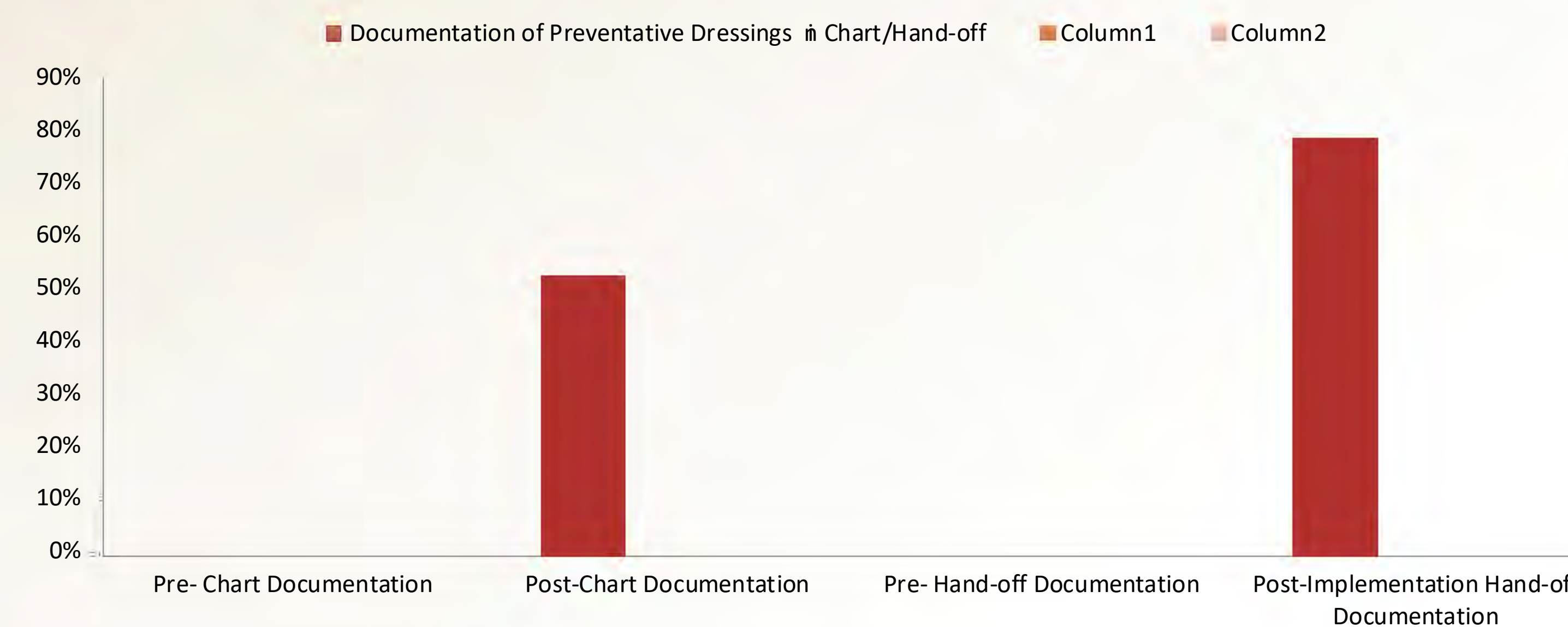
A retrospective chart audit was used to identify the exact issues, identify the causes, and develop a plan to reduce or eliminate the issues causing the increased incidence of HAPI.

The change project consisted of education sessions, semi-weekly rounds by skin champions, clinical leads, and Wound, Ostomy and Continence (WOC) nurses, and the addition of "preventative 5-layer silicone dressing in place" to the nursing "hand-off" tool. Ninety percent of the nurses on MICU II participated in the education process.

The "study" phase of the change project consisted of concurrent audits of hand-offs for preventative 5-layer silicone dressing documentation each day for a 30-day period. The charge nurse or designee conducted audits. The auditor conducted chart audits randomly by starting the audits at random room numbers every day as a means to protect patient privacy. Reminders and audit results were announced in safety huddle at the start of every shift and updated weekly. Pressure injury occurrence was monitored through the current system.

Outcomes and Evaluation

- Pre-implementation documentation audit of preventative 5-layer silicone dressing in the EHR and on the hand-off tool revealed 0% of 336 charts were completed.
- Documentation audits of EHR preventative 5-layer silicone dressings during 30 days of project implementation demonstrated a mean=48.3% and median=52.5% completion.
- Documentation audits of the hand-off tool revealed a mean=75.46% and median=78.5% completed.
- The project results are consistent with a potential improvement in documentation with the addition of a visual reminder. Documentation was higher on the hand-off tool, which had a designated place for documentation of preventative 5-layer silicone dressings.
- The occurrence of pressure injuries at the conclusion of the project remained unchanged from the three-month period prior to the implementation of the project.



Pre and Post-Implementation Chart Audit/Hand-off Results

	Number of days Audited	Number of Patient Charts Included	Mean of Complete Chart/Hand-off Pre-project Percentage	Median of Monitored Days Concurrent and Post-project Percentage	Mean of Monitored Days Concurrent and Post-project Percentage
Chart Audit	30	660	0	52.5	48.53
Hand-off Audit	30	660	0	78.5	75.46

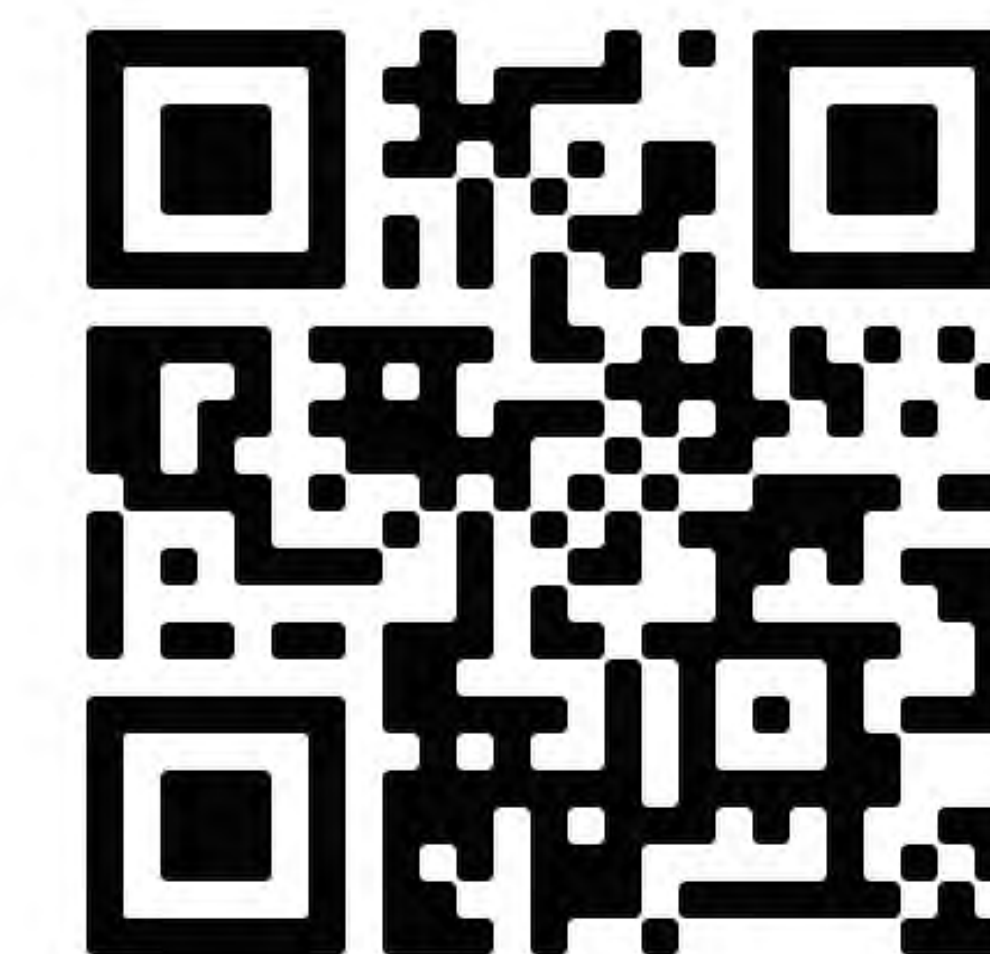
Conclusions and Recommendations

- During education sessions, nurses noted that they applied preventative 5-layer silicone dressings to the sacrum and heels for patients with a Braden score of less than 18, but did not document in the EHR because there is not a dedicated place to document preventative dressings.
- The addition of a specific field in the Braden Assessment or Skin Assessment section of the Flowsheet with drop-down menus will allow for the seamless integration of preventative 5-layer silicone dressing documentation into the nursing workflow.
- Documentation of preventative 5-layer silicone dressing will be added as a Key Performance Indicator (KPI) measure for MICU II in the month of May to assess sustainability and reinforce documentation as part of unit-based performance improvement.
- The addition of a dedicated documentation field for preventative dressings will be addressed as a "new idea" process through submission to the Business Cage for Change at the OhioHealth system level. Once the approval process is complete and the documentation change made in the EHR, chart audits will be performed to assess compliance.

Acknowledgements

A special thanks to the MICU II staff and leadership for participating in the project despite the challenges of the pandemic surge.

Abstract and References



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