

Implementation of Pressure Injury Prevention Bundle in Surgical Intensive Care

Jacquelyn C. Quilao, BSN, RN, CCRN, CMSRN
Marilyn Miller, PhD, CRNP, CS-P
Barbara Van de Castle DNP, RN, NI-BC, OCN
Beverly Bradley, PhD, RN, ACNS-BC, NE-BC
University of Maryland School of Nursing

Problem Statement

- Hospital-acquired pressure injury (HAPI) costs the United States \$26.8 billion annually, with about 2.5 million reported cases and 60,000 deaths per year.
- Critically ill patients have an incidence rate of 15% to 23.8%, posing a greater risk of in-hospital mortality, readmission, and development of hospital-acquired infections.
- In an academic medical center, the Surgical Intensive Care Unit (SICU) recorded seven incidents of HAPI in 2022. The average pressure injury intervention and documentation compliance rate was 72.27% within the first 24 hours of admission, 69.17% for patients with ≥ 48 hours of stay, and 68.76% for the entire stay.
- Root causes include lack of standardized interventions, poor documentation, inconsistent availability of supplies, inadequate education/training, and unavailability of wound care nurses.

Purpose of Project & Goals

Purpose: To implement an evidence-based standardized pressure injury prevention intervention bundle (PIPB) and checklist in a 10-bed adult SICU to improve staff compliance with HAPI prevention strategies.

Process Goal: 100% of RNs will demonstrate compliance with skin inspection/assessment and Skin Inspection/Assessment Note documentation in the electronic health records (EHR) on all SICU patients on admission, every shift, and with any change in condition.

Outcome Goal: 100% RN compliance with PIPB interventions and checklist for all high-risk patients in the SICU for pressure injuries at the time of admission, every shift, and with any change in the patient's condition.

Methods

Setting: 10-bed adult SICU in an academic medical center

Population: 14 RNs and 2 CNAs working in the SICU

Interventions:

- Used the PARIHS framework to guide the process
- 15-week implementation
- PIPB and checklist implementation

Pressure Injury Prevention Bundle (PIPB) is a set of evidence-based practices used together to prevent HAPIs in at-risk patients (Braden score ≤ 18). Components include risk assessment, skin/tissue assessment, preventative skin care, pressure redistribution, and nutrition management.



Scan the QR code for PIPB and checklist process



Scan the QR code for PIPB Checklist

Methods

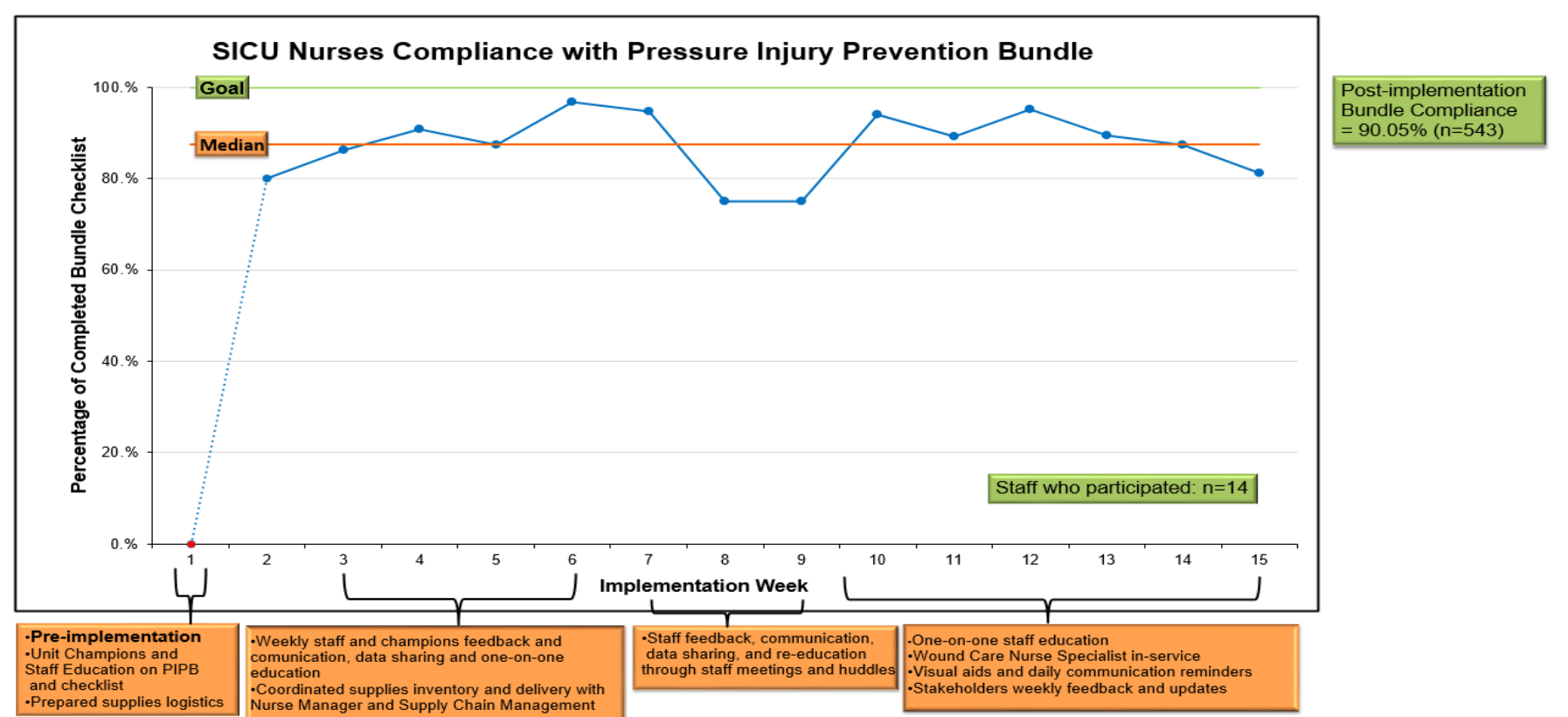
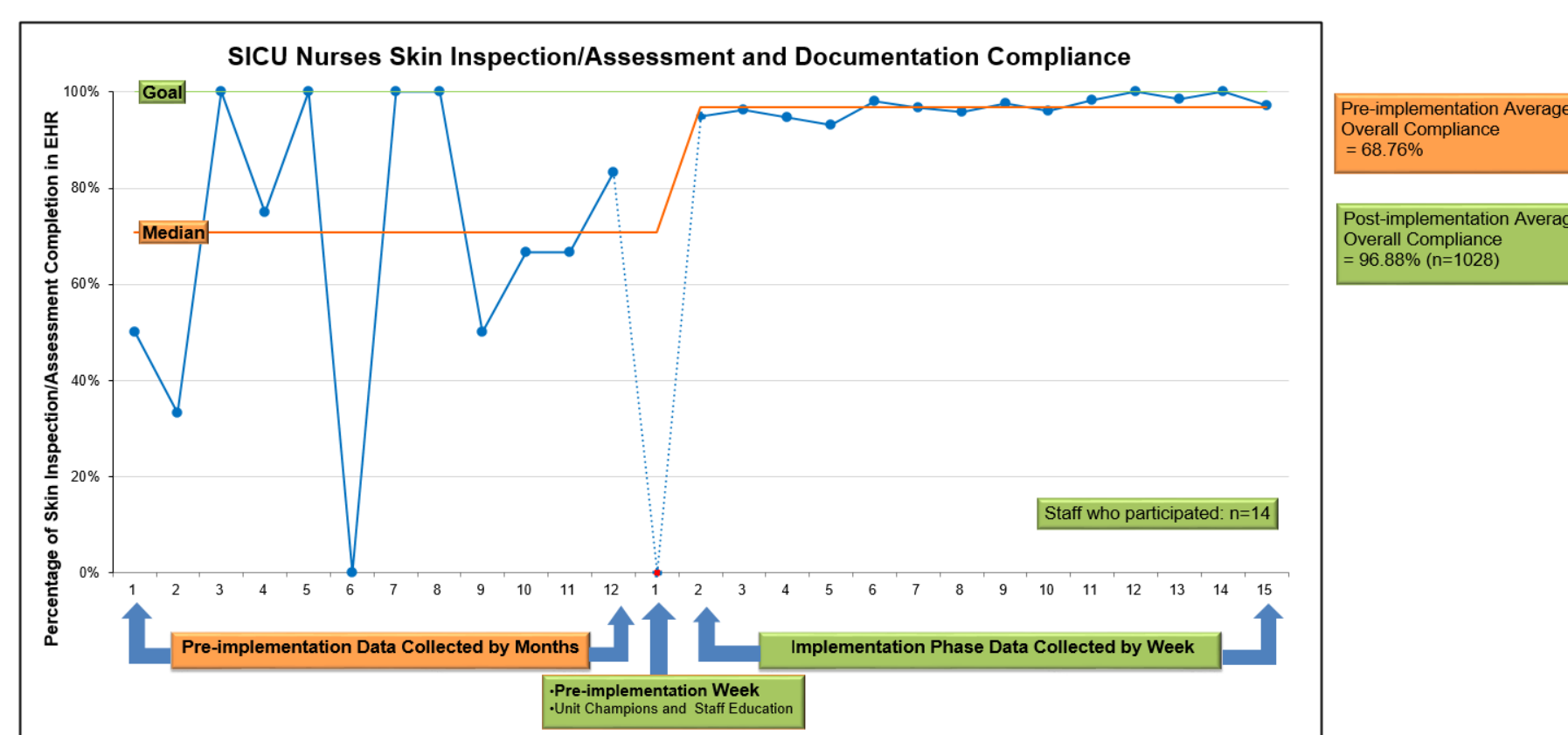
Implementation Strategies: Recruited unit champions, provided staff education and training on pressure injury prevention bundle and checklist, established designated supplies logistics and daily supplies inventory management, supervised the project on-site 2-3 times a week, provided staff feedback, communication, and re-education, encouraged staff buy-in through small incentives and positive feedback, developed an educational resource binder and visual aids, reinforced reminders, and saved PIPB checklist QR code and URL shortcuts on the computer screens

Data Collection: Weekly Skin Inspection/Assessment Note documentation (in EHR) and PIPB audit in RedCap. Data tracked using run chart.

Process Measure: Weekly number of completed Skin Inspection/Assessment Notes (in EHR) divided by total number of Skin Inspection/Assessment Notes (in EHR).

Outcome Measure: Weekly number of completed PIPB checklist audit tool for patients with Braden score of ≤ 18 divided by the weekly number of patients with Braden score of ≤ 18 .

Results



Discussion

Process Goal: Although the process goal was not achieved, there was an improvement in skin inspection/assessment and skin inspection/assessment notes documentation, and compliance improved by 29.12%. Data showed consistently high compliance rates throughout the 14-week period, averaging 96.88%. (n=1028).

Outcome Goal: The high compliance rate of 90.05% with the PIPB intervention and bundle checklist demonstrates the effectiveness of implementing the evidence-based intervention, strategies, and tactics.

Facilitators: Leadership support and commitment, evidence-based practice guideline, availability of resources, staff education, training, feedback, and communication, visual aids and daily reminders, and staff willingness to participate

Barriers: Workflow challenges (lack of time and high patient acuity), inadequate staffing, lack of integration of the PIPB checklist in the EHR, and inconsistent bedside handoff/communication

Limitations: Short implementation period and several initiatives in progress simultaneously

Conclusions

- Implementing a standardized pressure injury prevention bundle and bundle checklist in SICU can improve staff compliance with HAPI prevention intervention and documentation practices.

Spread and Sustainability:

- Disseminate results with leadership
- Provide ongoing education and resources
- Integrate bundle checklist documentation into the EHR
- Regular audits, feedback, and continuous improvement.
- Continue including unit champions to facilitate change
- Maintain supplies, logistics, and stocks

Implications for Practice:

- Adhering to skin inspection/assessment, PIPB interventions and documentation is crucial for early detection and prevention of skin breakdown, pressure injuries, and other related complications, enhancing patient safety, promoting practice standardization, and fostering professional development and accountability.

Next Steps:

- Monitor project impact on reducing HAPI incidence and cost savings.

References & Acknowledgments



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