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Sno More HAPIs

A Quality Improvement Project

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Purpose Statement

The purpose of this project was to implement evidence-based interventions to reduce hospital acquired pressure injuries in patients on a critical care unit.





Background and Significance

- Critically ill patients are inherently vulnerable to skin breakdown due to:
 - Immobility
 - Hemodynamic instability
 - Impaired perfusion
 - Frequent need for life-sustaining (ie. BiPAP & intubation)
- Many ICUs report elevated rates of HAIs and DRPIs which are associated with increased morbidity and mortality.
- Literature emphasizes the importance of proactive, evidence-based nursing practices in mitigating risk, improving patient safety, and reducing mortality in critically ill populations.





Analysis of Literature

- Structured repositioning programs and PI prevention bundles can significantly reduce HAPI occurrence.
- Nurse-driven turning schedules and the use of appropriate support surfaces report lower PI incidence.
- Integrating repositioning with other preventive elements such as skin assessment, moisture and nutrition management, and device-related PI surveillance appears more effective than isolated measures alone.
- Additional interventions shown to improve outcomes in hospitalized patients:
 - PI prevention bundles,
 - Repositioning and support surfaces
 - Repositioning, appropriate sizing, & padding of medical devices
- Collectively, the literature supports systematic turning programs embedded within comprehensive, risk-informed prevention strategies, while highlighting the need for further high-quality trials to strengthen the evidence base.



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Context

- Methodist Hospital Critical Care
 - Patient population: adult medical and surgical population
 - 20-bed Private Room Unit
 - Average daily census (ADC): 15 patients
 - Annualized patient numbers: 759
 - AACN Gold Beacon Award for Excellence 2024





Measures

- Individualized education provided to all ICU staff members focused on:
 - Prevention of pressure injuries
 - Oxygen devices related to pressure injuries
 - Turn and position systems (TAPS)
 - Turn clocks
- One week post education turn clocks were posted outside each patient room.
- One month after education, TAPS were placed in each room.
- Ongoing quarterly individual education was provided to all nursing staff covering:
 - Turn metrics
 - Mask fitting of BiPap devices
 - Escalation of care based on collaboration with RT & providers
- Compliance-based audits were completed throughout the project.
- Data analyzed to compare pre and post intervention pressure injury occurrence





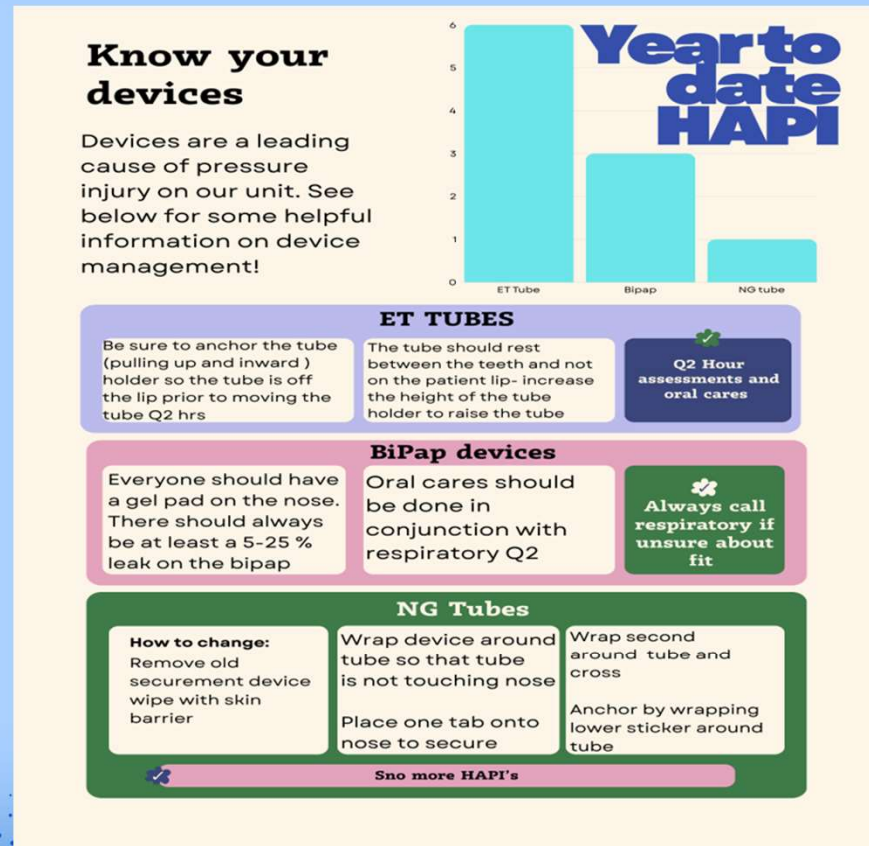
Education

- Individualized education focused on HAPI project with 95% staff education
 - Educated in 1:1 setting across all shifts for one week
- Collaboration with multiple departments-ongoing collaboration with multiple department heads
 - UBC presentations, meetings with RT department heads
- Shared governance of responsibilities (collaboration)
 - Turns: NAs to take initiative
 - Empowerment of bedside staff to create an environment of change



Education

- Educational flyer produced to aid in 1:1 sessions
- Education provided on the floor in a short - individualized timeframe designed to be engaging and impactful



Results

- 22% reduction in total HAPI
- 2.5% reduction in O2 DRPI
- Audited compliance results revealed poor compliance with updating turn clocks following repositioning efforts.

Pre Intervention Data		Post Intervention Data	
Time Frame	# of HAPIs	Time Frame	# of HAPIs
Sep-24	1	Sep-25	1
Oct-24	4	Oct-25	8
Nov-24	1	Nov-25	2
Dec-24	6	Dec-25	3
Jan-25	7	Jan-26	3
Feb-25	6	Feb-26	3
Mar-25	2	Mar-26	1
Total HAPI	27	Total HAPI	21
Total DRPI	13	Total DRPI	13
Total O2 DRPI	8	Total O2 DRPI	7
Total Non-DRPI	14	Total Non-DRPI	8





Fiscal Impact on Organization

- \$21,767= 1 pressure injury cost (Wassel et al., 2020)
- September 2024-March 2025: 27 HAIs x \$21,767 = \$587,709
- September 2025-March 2026: 21 HAIs x \$21,767 = \$457,107
- **Total Savings from project = \$130,602**





Future Recommendations

- Interdisciplinary collaboration:
 - ICU Mobility
 - ETT repositioning standardization
 - Standardized BiPAP mask fitting and mask rotation
 - Maintaining the availability of supplies - TAPs stocked in rooms



Limitations

- Single study site
- Short implementation phase
- No true control/intervention group
- Interventions studied together rather than individually to measure individual impact
- Poor compliance with turn clock





Implications to Nursing Practice

- Targeted, evidence-based prevention strategies can effectively reduce pressure injury incidence in critically ill patients.
- Nurses play a vital role in implementing preventive interventions, as well as the effectiveness of interactive, in-person teaching/learning strategies, in addition to clinical audits with personal feedback.
- The decrease in O2 DRPIs highlights the importance of diligent management of medical devices, including frequent assessment of skin beneath and around ETT, BiPAP, and CPAP interfaces.
- Continued emphasis on staff education, adherence to prevention protocols, and ongoing quality improvement initiatives may further reduce PI rates, enhance patient safety, improve clinical outcomes, and decrease healthcare costs associated with pressure injury treatment.





Reference

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