Implementation of Hospital-Acquired Pressure Injury (HAPI) Preventative Bundle (HAPIPB): A Quality Improvement (QI) Project

Red East D Tumang, DNP, MSOL, MSN, RN, PHN. Jessica Grimm, DNP, APRN, ACNP-BC, CNE. Andrea Hill, DNP, APRN, FNP-BC

Introduction

National Database of Nursing Quality Indicators (NDNQI) had estimated that the average HAPI costs about $50,000 to $150,000 per injury, & mortality increase by 12%. 2.5 Million HAPI patients are treated in US healthcare facilities annually 60,000 US Hospital Patients die each year from complications related to HAPI

322,946 reported cases of CMS patients with HAPU/HAPI as secondary diagnosis each case.
Average charge of $40,381/case
Annual total cost of $13 billion.

Variability / Case Mix / Level of Cares: 62% of HAPI are surgical patients, 76% ICU patients, 81% admitted patients

Centers for Medicare & Medicaid Services (CMS) none reimbursement for HAPI. Considerable fines & litigation for development of HAPI Patient safety, comfort, morbidity and mortality at risk.

Objectives

To investigate the reduction of pressure injury incidence and prevalence in the adult critical care or intensive care patient population environment and address any clinical knowledge gaps.

Does a HAPIPB assist in reducing HAPI rates in the adult critical care and/or intensive care patient population of a level one academic trauma medical center within a 5-week timeframe?

Design/Sample

Pre-Post Comparative Study Analysis Design
Tool: HAPIPB Bundle & AHRQ Toolkit Questionnaires
N=1120 (Pre 560 & Post 560 in eight weeks)

Results:

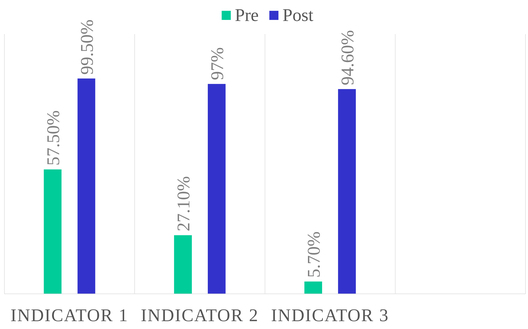
	HAPIPB (*NPIAP Preventative Bundle*)	
AHRQ Toolkit	Risk and Skin Assessment	Strength of Evidence: A
S (surfaces)	Support Surfaces	Strength of Evidence: C
K (keep turning)	Reposition	Strength of Evidence: A
I (incontinence)	Microclimate Control	Strength of Evidence: C
N (nutrition	Nutrition	Strength of Evidence: A

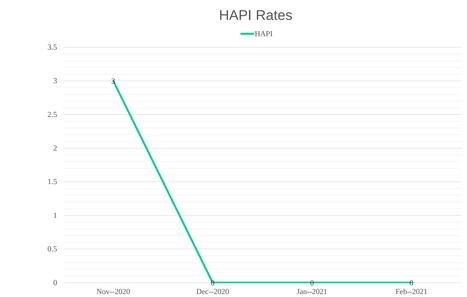
- **S**kin: Surfaces
  - Utilize facility specialty redistribution beds and pressure redistribution tools such as waffle mattress, waffle seats, and waffle boots.

s**K**in: Keep Turning
Turn q2-3 Hours, 30 degrees on specific side, Stay off of existing pressure ulcers, Disable turning mode on the Bed, Head of Bed as ordered

- sk**I**n: Incontinence & Moisture/Shear Management
  Utilize facility foley & stool management systems
  Utilize products in our supply carts such as heart mepilex, skin protectant, and etc.

–ski**N**: Nutrition
Weight on admission & weekly
Assist patient with food & fluid intake
Ensure dietician consult from primary team





3 confirmed HAPI cases prior to HAPIPB Implementation

- Post zero HAPI cases as monthly data extraction from 8th of Feb 2021, 8th of January 2021, & 8th of December 2020.

1120 Chart Audited in eight weeks

- (Indicator 1): 42.3% increase in documentation of skin monitoring.
- (Indicator 2): 69.9% increase in positioning documentation.
- (Indicator 3): 88.9% increase of nursing staff documenting upon admission.

Z scores of each behavior as follows *-15.201, -19.723, and -22.271* is less than the standard alpha & Asymp. Sig (2-tailed) less than 0.05 which conclude a difference between to sets of data are statistically significant.

Literature Review

Table of Elements			
Citation	Design	Bundle	Results
(Anderson et al., 2015)	quasi-experimental	skin emollients, assessment of health-to-toe, floating heels of the bed, early identification of courses of pressures, and repositioning	HAPI from 15.5% to 2.1%
(Krupp and Monfre, 2015)	Literature Review	involvement of all key stakeholders, staff education, pressure injury prevention teams, and continued audits and feedback	NA
(Coyer et al., 2015)	quasi-experimental with a control group and intervention group	InSPiRE protocol assess skin integrity, strategies to prevent pressure injuries, protect from pressures, and friction reduced pressure injuries	HAPI 30% to 18%.

Conclusions

Positive clinical behavior changes factored into the overall reduction of HAPI rates.

Pilot unit had 3 HAPI case reported in November 2020. After HAPIPB; follow up data extraction zero HAPI cases as of December 2020, January 2021, & February 2021

These findings supports the HAPIPB on reducing HAPI rates in the adult inpatient critical/intensive care unit.

Reference

Agency for Healthcare Research and Quality (AHRQ) (2020). Section 7. Tools and Resources. Content last reviewed in October 2014. Agency for Healthcare Research and Quality, Rockville, MD. www.ahrq.gov/patient-safety/settings/hospital/resource.

National Pressure Injury Advisory Panel (NPIAP) (2019). Prevention and treatment of pressure ulcers/injuries: quick reference guide 2019. Cambridge Media. Retrieved from https://npiap.com. Print.