

Evaluating the Impact of Implementing Nursing Education and an Evidence-Based Skin Documentation Template on Hospital-Acquired Pressure Injuries in an Intensive Care Unit

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Introduction & Background

- Hospital-acquired pressure injuries (HAPIs) are caused by continuous pressure to soft tissues and impact affecting **22-49%** of intensive care unit (ICU) patients
- HAPIs are a **significant public health concern** that can result in medical complications, poor quality of life, higher length of hospital stay, mortality rate, & healthcare costs
 - About **60,000** patients **die** as a direct result each year
 - HAPIs cost the US healthcare system **\$11 billion** annually
- Review of the literature supports implementation of a **standardized skin documentation template** in the electronic medical record (EMR) as it **reduces errors** and **increases efficient, comprehensive documentation and retrieval of data**

Purpose & Aims

- Purpose:** to evaluate the impact of implementation of a standardized skin documentation template and nursing education on the incidence rate of HAPIs in an adult cardiac ICU
- Project Aims:**
 - Compare incidence rates of hospital-acquired pressure injuries in the months pre- and post-project implementation
 - Provide education for unit nurses and compare their knowledge of pressures injuries before and after education
 - Create a standardized, evidence-based skin assessment documentation template and assess nurse adherence rate of implementing the skin assessment template

Methods

Design: pre- and post-test quality improvement project

Setting: cardiac ICU in a suburban, tertiary medical center in Virginia

Inclusion Criteria: all nurses on the unit; all newly admitted patients to the unit

Exclusion Criteria: travel and float nurses were not assigned the education portion

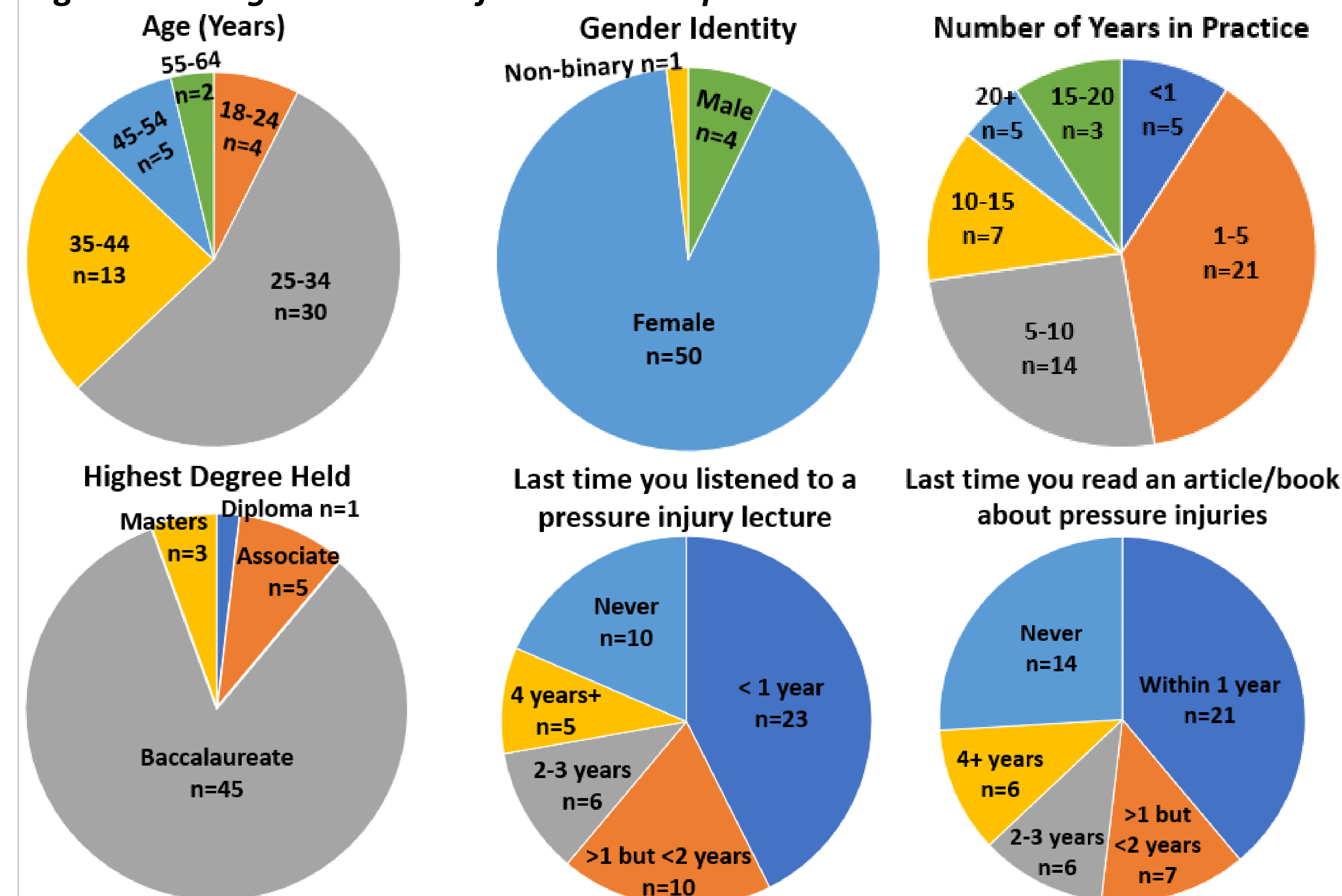
Interventions:

- Assigning a pressure injury education module with a pre- and post-test to all nurses
- Creating & implementing standardized skin assessment template for new patients

Measures:

- The Pieper-Zulkowski Pressure Ulcer Knowledge Test (PZ-PUKT) was utilized to assess for changes in nursing knowledge about pressure injuries – validated, standardized instrument with 72 true/false questions in 3 sections (prevention, staging, & wounds)
- Nurse adherence of template implementation was measured through chart audits
- HAPI incidence rates were tracked pre- and post-intervention

Figure 1. Background Data of Nurse Participants



Nursing Education:

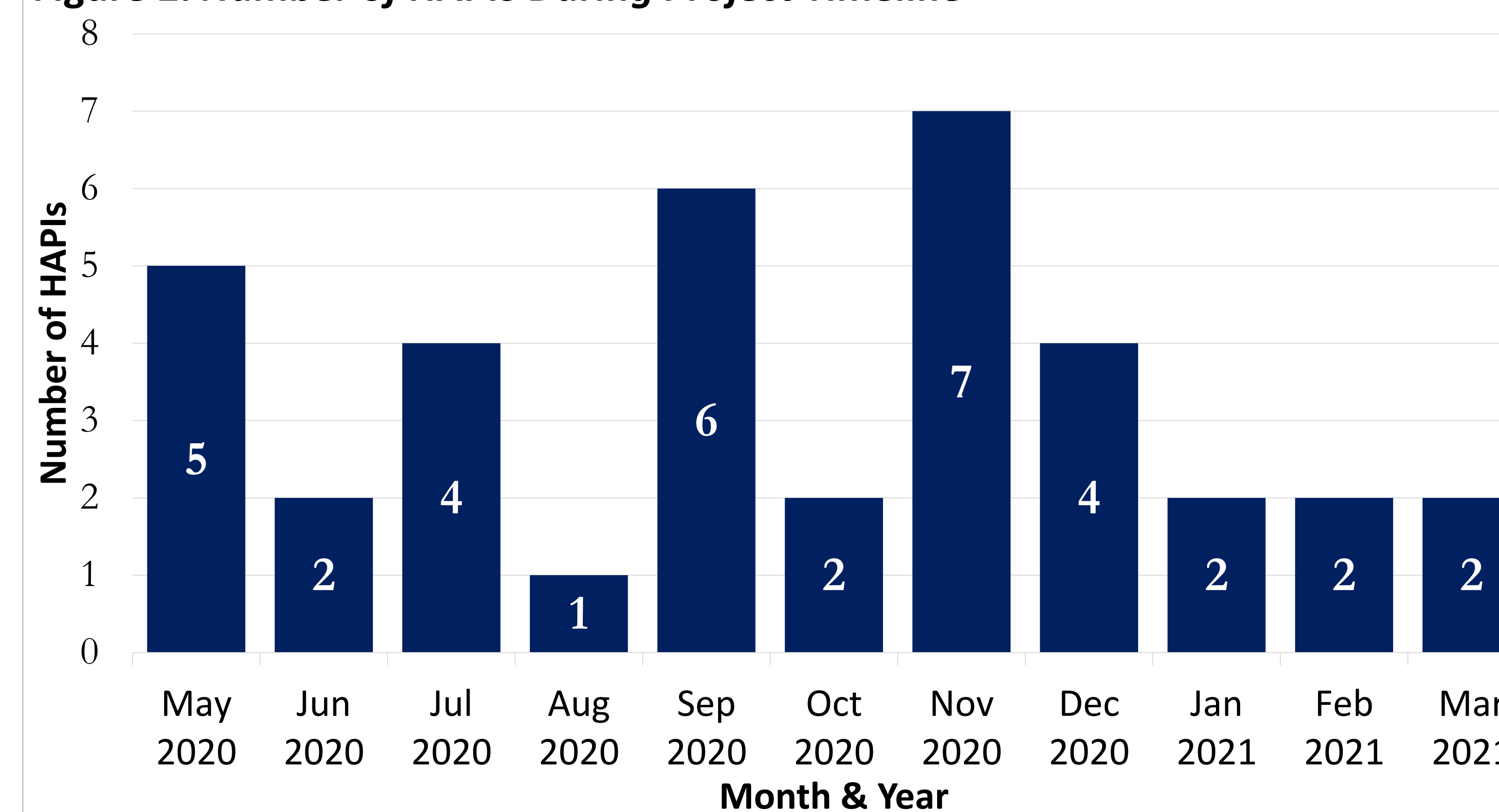
- Of the sample of 54 nurses (2 lost to change in employment, n = 52), 33 completed the full education module and tests (**64.46% completion rate**)
- Statistically significant increase** in nursing knowledge scores after pressure injury education
 - From pre-test to post-test there was a mean 3.80 percentage point **improvement in nursing knowledge** about pressure injuries (p-value = 0.022 on a paired t-test)

Table 1. Template Adherence

		Percent Adherence
Total number of admissions	320	45.31%
Total number of admissions excluding travel/float nurses	263	55.13%
Total also excluding end of life/comfort care patients	252	57.54%

Results

Figure 2. Number of HAPIs During Project Timeline



HAPI Incidence Rates:

- Between May-August 2020 there were 12 HAPIs (pre-intervention period)
- Education was released September 2020
- The template was implemented November 2020
- Project timeline formally ended February 2021

Conclusions & Dissemination

- Data showed statistically significant **improvement in nursing knowledge** after providing education
 - Indicates that **more frequent education/training** schedule may be ideal
 - Aligns with National Pressure Injury Advisory Panel recommendations for continuing professional development
- Illustrated the potential utility of a skin assessment documentation template in **guiding a thorough admission skin screening**
- These interventions could have the potential to **increase early identification** and implementation of pressure injury prevention strategies, decrease HAPI incidence rates, and decrease overall patient harm and healthcare costs
- This intervention will be **integrated** into the standard unit workflow and EMR for streamlined use and dissemination to other units in the facility/system
- Dissemination** will be through presentations at the project site to organization leadership and stakeholders, professional conferences, & future publication

See Attached Reference List