The effective use of data to gain stakeholder support for ongoing quality improvement in pressure injury prevention

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Topic

Global pressure injury (PI) statistics reveal that hospital-acquired pressure injuries (HAPIs) remain a substantial burden, with over one in ten hospitalized adults being affected[1]. PI are defined as an injury to the skin resulting from intense and/or prolonged pressure, or due to a combination of pressure and shear[2].

Purpose

The purpose of this analysis is to describe how the consistent collection, analysis, and use of data allows hospitals to validate their clinical and economic outcomes, and to adjust pressure injury prevention (PIP) strategies accordingly. This work recognizes the important role of Value Analysis Teams, which consider a variety of factors including clinical outcomes, product quality and comparisons, financial analysis, and education.[3]

Process

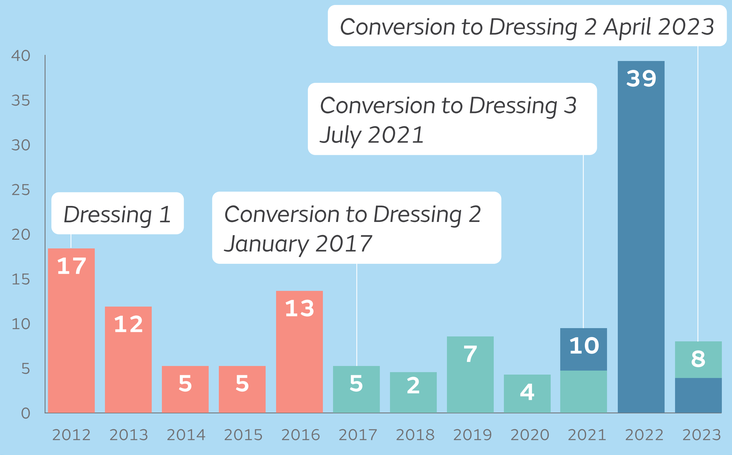
HAPI incidence data for all inpatient visits at a 280-bed regional community hospital in West Virginia was collected from January 2012 – July 2023.

Soft silicone multi-layered foam dressings from three manufacturers were used at four different time periods and the outcomes evaluated.

- Dressing 1*: January 2012 – December 2016
- Dressing 2†: January 2017 – June 2021, April 2023 – July 2023
- Dressing 3‡: July 2021 – March 2023

Average annual HAPI incidence was analyzed retrospectively to allow comparison of outcomes during the time periods. The data presented here demonstrates real-world evidence of HAPI incidence while utilizing various soft silicone multi-layered foam dressings as part of a PIP protocol.

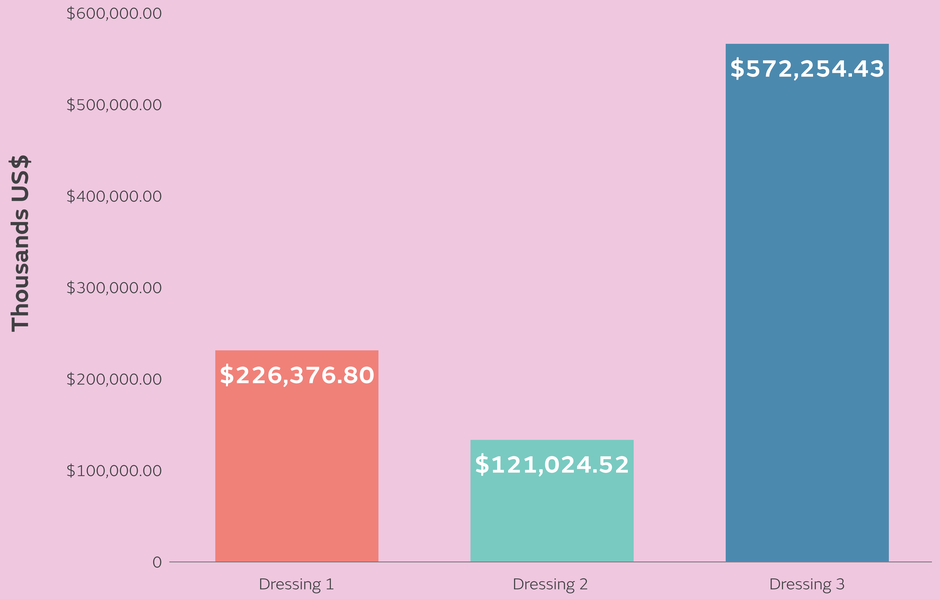
HAPI incidence by year with dressing conversion dates indicated



Outcomes

Annual averages show that the use of Dressing 1 resulted in 10.40 HAPI per year, Dressing 2 an average of 5.56 HAPI per year, and Dressing 3 an average of 26.29 HAPI per year. A 46.54% reduction in annual average HAPI incidence was experienced during the use of Dressing 2 as compared to Dressing 1, and a nearly fivefold increase in annual average HAPI incidence was experienced during the use of Dressing 3 as compared to Dressing 2. Wassel et al. estimated the incremental cost of a HAPI, based on the weighted average across all stages, to be $21,7674. Thus, an estimated sum of $451,229.91 was saved when using Dressing 2 compared to Dressing 3, and $105,352.28 saved during the use of Dressing 2 as compared to Dressing 1. Tracking HAPI data over time has allowed the VAT to navigate the vast landscape of advanced wound management products, making selections that are advantageous to both costs and the delivery of quality care.

Estimated annual costs based upon the average incremental cost associated with HAPI[4]



*Dressing 1: Mepilex™ Border Sacrum, Mölnlycke Healthcare, Gothenburg, Sweden.
†Dressing 2: ALLEVYN® LIFE Foam Dressing, Smith and Nephew, Hull, UK.
‡Dressing 3: Optifoam™ Gentle EX Silicone, Medline Industries, Inc., Northfield, Illinois.

References: 1. Li Z, Lin F, Thalib L, Chaboyer W. Global prevalence and incidence of pressure injuries in hospitalised adult patients: A systematic review and meta-analysis. *Int J Nurs Stud.* 2020;105:103546. **2.** European Pressure Ulcer Advisory Panel (EPUAP) NPIAPN, Pan Pacific Pressure Injury Alliance (PPPIA). Prevention and treatment of pressure ulcers/injuries: clinical practice guidelines. *3rd ed.* 2019. **3.** Geisinger K. Quick Guide to Understanding the Hospital Value Analysis. https://www.symplr.com/blog/understanding-hospital-value-analysis-committee. Published 2022. Accessed May 10, 2023. **4.** Wassel C, Delhougne, G, Gayle, J, Dreyfus, J, Larson, B. Risk of readmissions, mortality, and hospital-acquired conditions across hospital-acquired pressure injury (HAPI) stages in a US National Hospital Discharge database. *International Wound Journal.* 2020;17(6):1924–1934.