

The Implementation of a Comprehensive Wound Care Program Powered by A Digital Wound Platform to Decrease Hospital Acquired Pressure Injuries Incidence Rate

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Overview

The Pressure Injury Challenge

- Pressure injuries (PIs) are a major acquired, yet avoidable, complication across clinical settings,^{1,2} estimated to impact 1.3-3 million adults in the US annually.³
- The cost of treatment of each PI in the US ranges between \$500 - \$70,000, depending on the stage,^{4,5} which accounts for at least 3.6% of the annual health setting budget.⁶

Gerald Champion Wound Care Program

- In 2021, Gerald Champion Regional Medical Center (GCRMC) launched a centralized wound care program to deliver scalable, standardized wound care.
- This model leveraged revised wound care protocols and nurses' expertise to ensure a high quality of wound care.
- To enable this innovative model of care, GCRMC partnered with Swift Medical, an AI-powered wound management platform to allow frontline clinicians to easily capture high precision, clinically-calibrated wound images, accurately measure wounds and track healing, and share this data to augment clinical decision making and drive more standardized and preventive care.
- There is limited research on whether adopting wound management technology as a part of a comprehensive wound care program leads to improvements in PI rates.

Objective

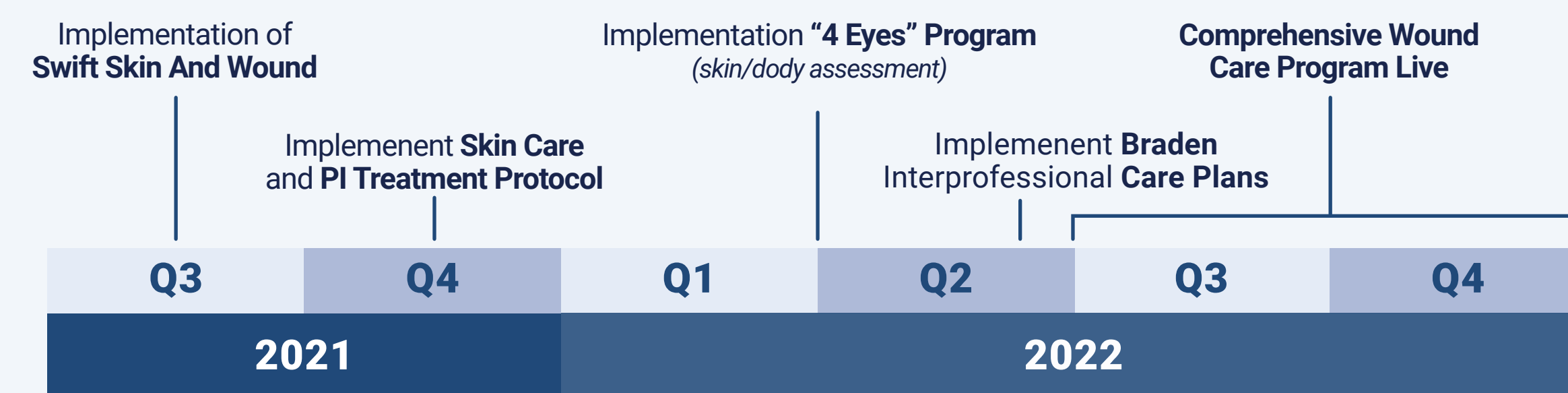
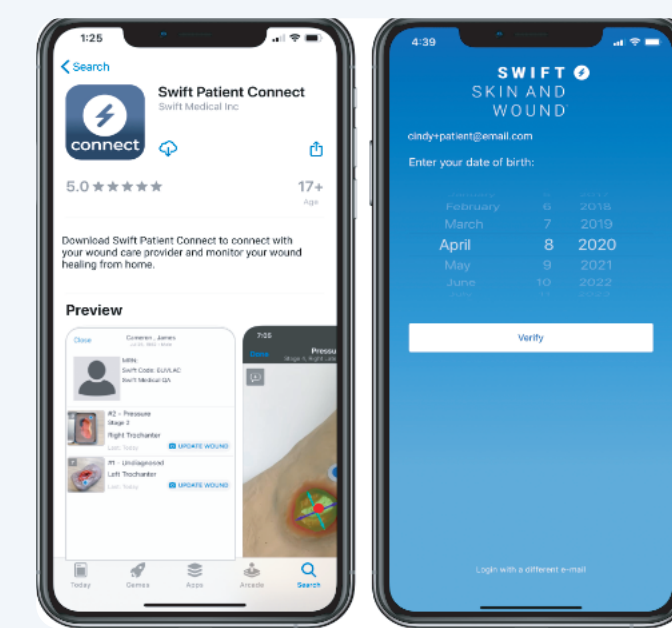
- This retrospective study aimed at assessing the incidence of hospital-acquired pressure injuries (HAPI) after full implementation of the comprehensive wound care program (WCP)- August 2022-Jan 2023.
- This study also compared rates at first three months vs. last months of implementing the comprehensive WCP.
- We also compared HAPI rate post-full implementation to the different phases of the program implemented at different periods.

Methodology

This descriptive study used Swift's database to access anonymous PI wound care evaluations of 6,211 patients assessed at Gerald Champion from Aug 2021-Jan 2023.

The complete strategy of the WCP included adopting the following:

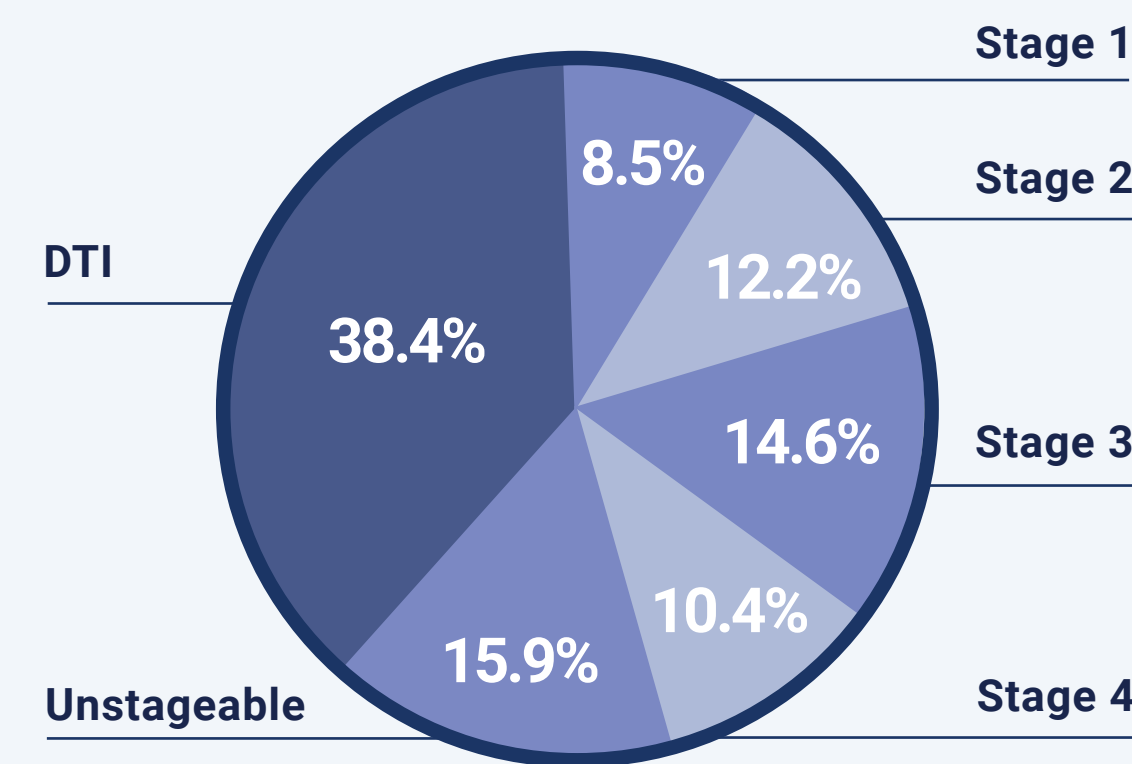
- Swift-Digital wound care solution and a revised PI treatment protocol in 2021.
- "Four Eyes" program where two registered nurses conduct a complete body assessment within 4 hours of admission in 2022.
- Braden care plans for scores of ≤ 18 in 2022.



Ongoing Initiatives: Education, Reporting, Governance and Policy/Chart Reviews

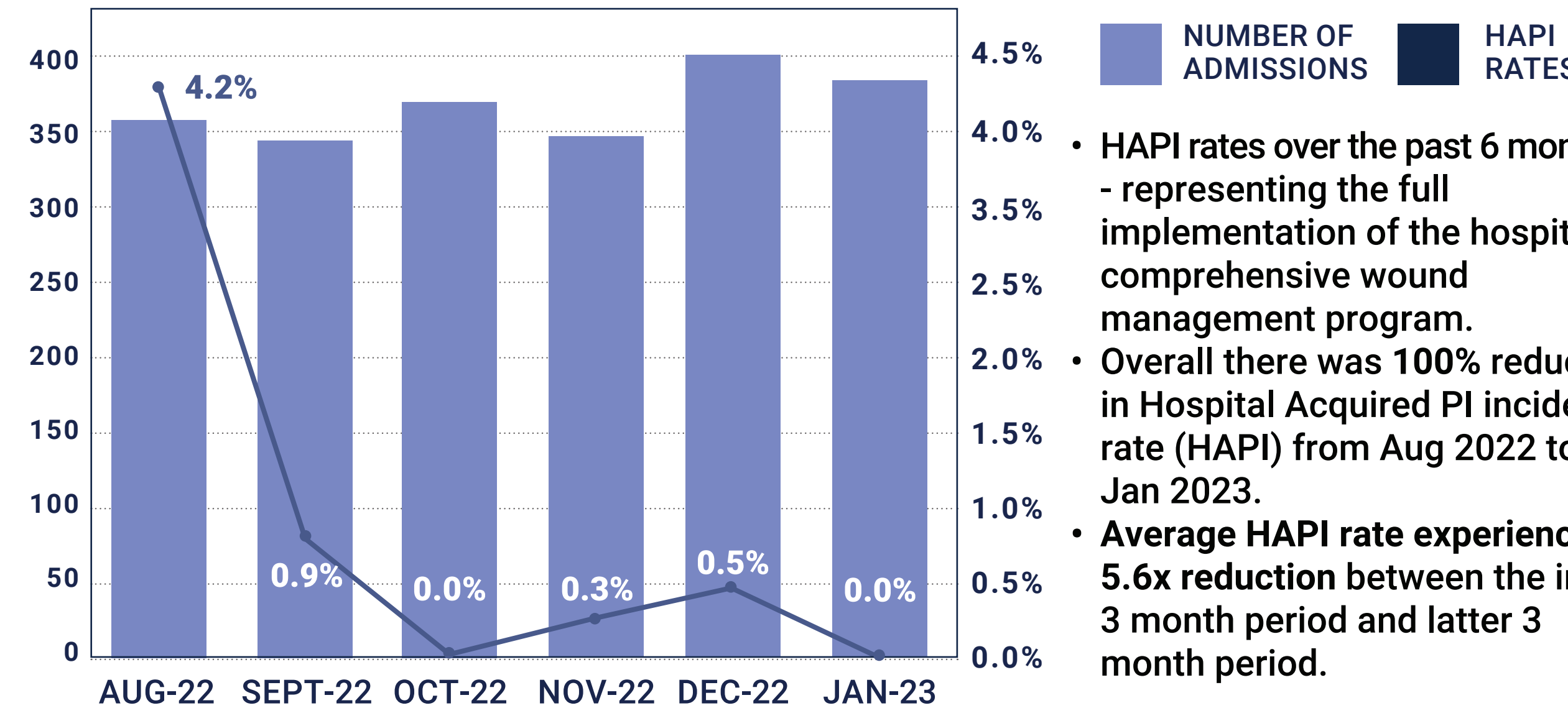
Results

Distribution of PI Patients (Aug 22-Jan 23)



- A total of 2,166 patients admitted between Aug 22-Jan 23.
- Of these, 8.2% were PI patients with 260 wound care assessments.
- The mean age of PI patients is 77 years. 50.5% of PI patients were males.
- Overall, 15% of PI wounds were acquired after admission.

Hospital Acquired Pressure Injuries (6-Months trend)

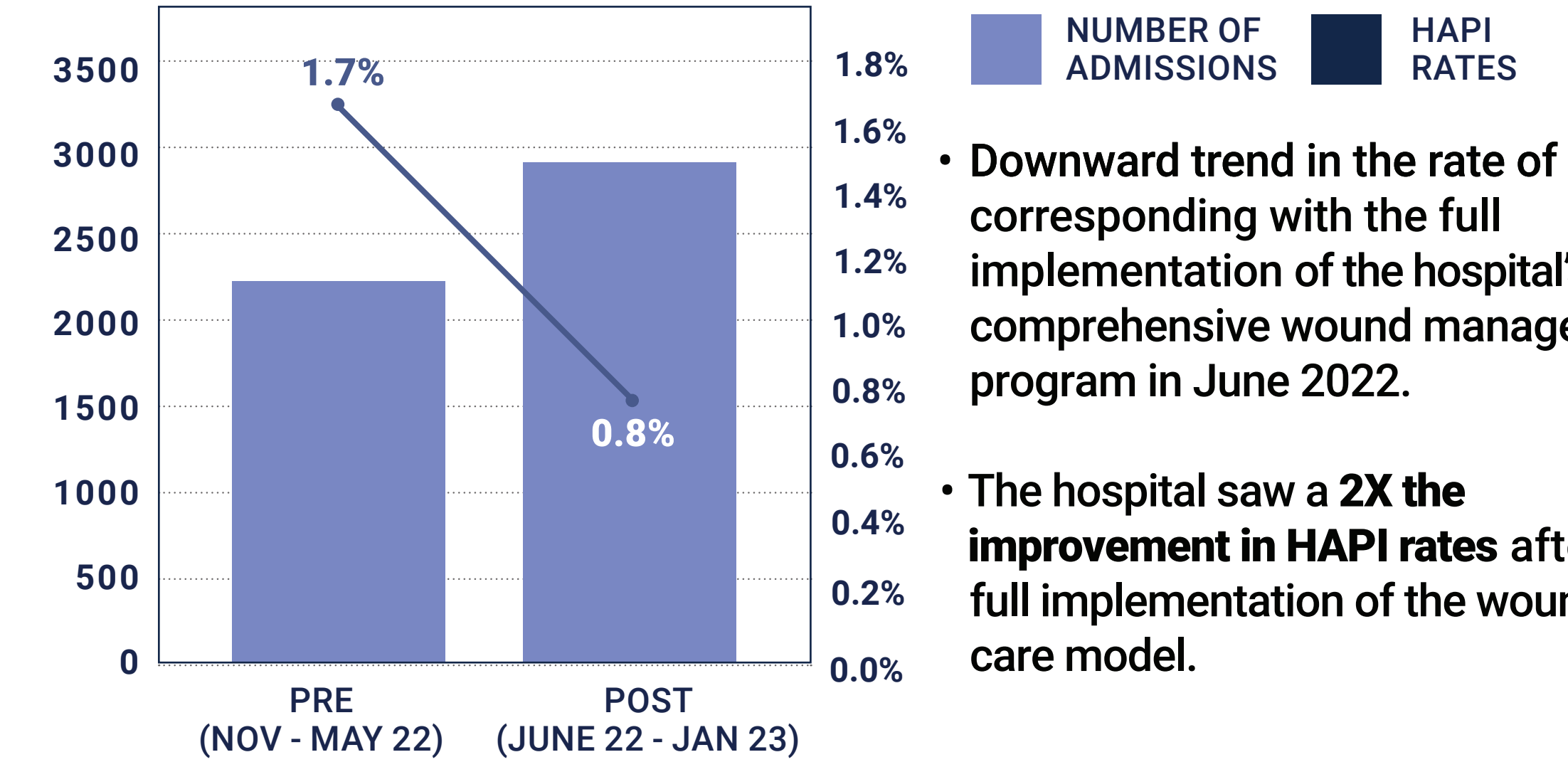


- HAPI rates over the past 6 months - representing the full implementation of the hospital's comprehensive wound management program.
- Overall there was 100% reduction in Hospital Acquired PI incidence rate (HAPI) from Aug 2022 to Jan 2023.
- Average HAPI rate experience a 5.6x reduction between the initial 3 month period and latter 3 month period.

Discussion

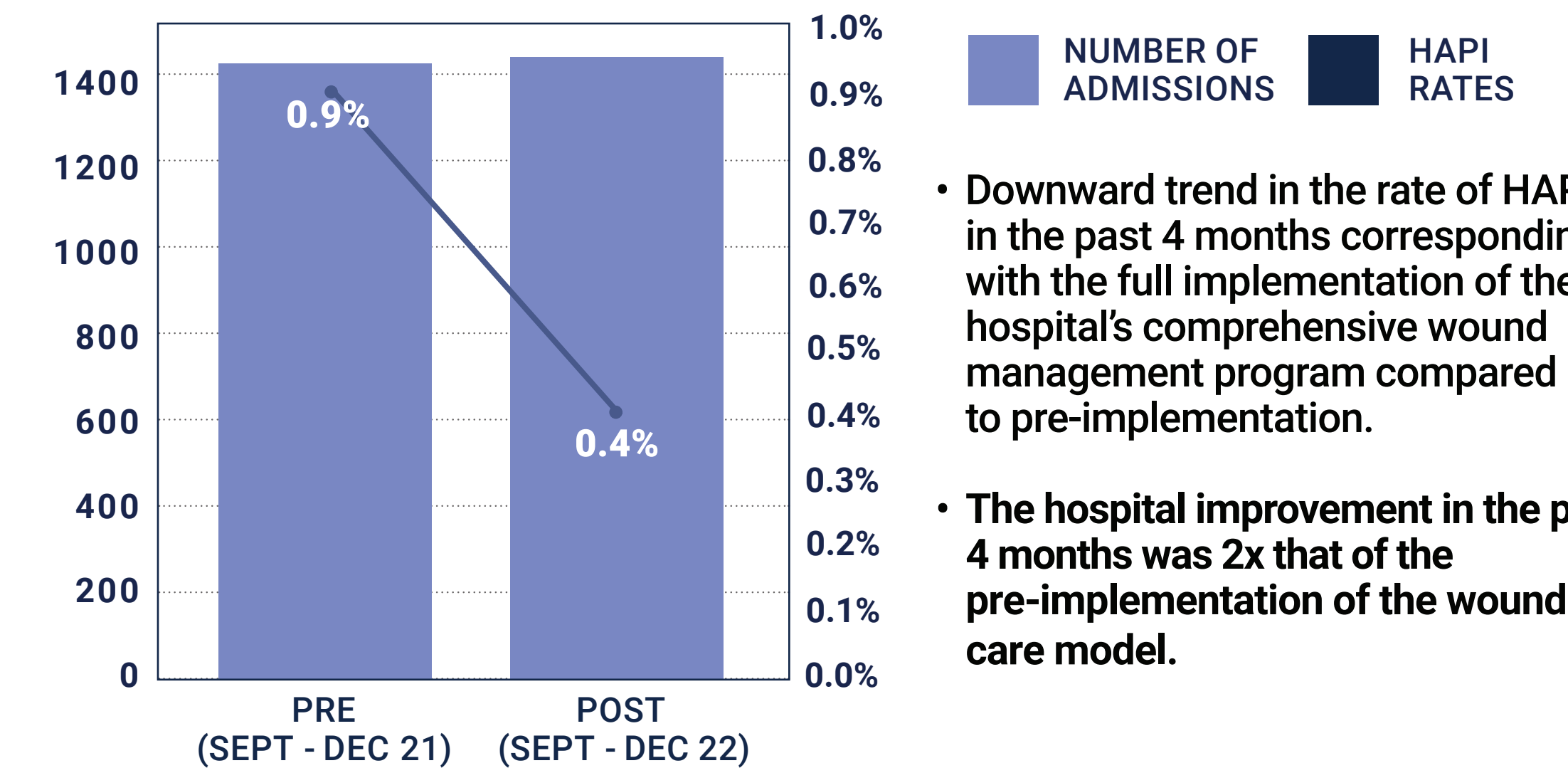
- The recent quality improvement initiatives to enhance wound care at GCRMC, supported by adopting Swift Medical's solution, played a vital role in the observed clinical benefits.
 - A significant decrease in HAPI rates was observed after adopting the centralized wound care program integrated with Skin and Wound digital management platform (P<0.001).
 - Incorporating Swift as part of WCP is pivotal to identifying at-risk patients and improving the HAPI incidence rate.
 - Clinical benefits associated with adopting a digital wound care technology as part of the centralized wound care model are linked to potential cost savings. For example, reducing HAPIs can save healthcare costs on nursing, medication, dressing, laboratory tests, radiology, mattresses, surgical procedures, and office visits ranging between \$10,231-\$70,619 per injury.⁷
 - Centralized wound care program with digital platform has the potential to save about 4-11 days of unintended hospital stay⁸ and support fewer patient-initiated litigations, estimated at approximately 279,000 per injury.⁹
- Adopting a centralized wound care program where clinicians fully utilize digital tools would improve clinical outcomes and reduce costs in managing PI.**

Hospital Acquired Pressure Injuries (Pre VS. Post Implementation All Time)



- Downward trend in the rate of HAPIs corresponding with the full implementation of the hospital's comprehensive wound management program in June 2022.
- The hospital saw a 2X the improvement in HAPI rates after the full implementation of the wound care model.

Hospital Acquired Pressure Injuries (Pre VS. Post Implementation 2022 vs. 2021)



- Downward trend in the rate of HAPIs in the past 4 months corresponding with the full implementation of the hospital's comprehensive wound management program compared to pre-implementation.
- The hospital improvement in the past 4 months was 2x that of the pre-implementation of the wound care model.

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