

Sustained Enhancement of Wound Care: The Role of Integrated Digital Technology in Consistently Reducing Hospital Acquired Pressure Injuries within a Comprehensive Wound Care Program

Heba Tallah Mohammed,¹ Monika Dahlin,² Lisa Skutnik,² Lee Preiss,¹ Rob Fraser,^{1,3}
¹Swift Medical, Toronto,²Gerald Champion Regional Medical Center,³Arthur Labatt Family School of Nursing, Western University



Overview

The Pressure Injury Challenge

- Pressure injuries (PIs) pose a significant clinical concern.¹ The Agency for Healthcare Research and Quality reports that approximately 2.5 million PIs are treated annually in the US,² and its complications lead to around 60,000 patient deaths.³
- Healthcare costs associated with each PI ranges between \$10,231-\$70,619 per injury.³
- The financial impact on both the healthcare system and patients is substantial, with the estimated annual cost of treating PIs in the US ranging from 9.1 to 11.6 billion dollars.⁴

Gerald Champion Regional Medical Center Wound Care Program

- 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.

Objective

- This retrospective study assessed the immediate impact of the full implementation of digital wound technology (Swift Medical) as part of a comprehensive wound care program (WCP) on the incidence of hospital-acquired PI (HAPI) over 6 months.
- Further, it compared the effect of continuous use of Swift Medical on HAPI for 4 months immediately following the full implementation of the CWCP to the same 4-month period a year later.

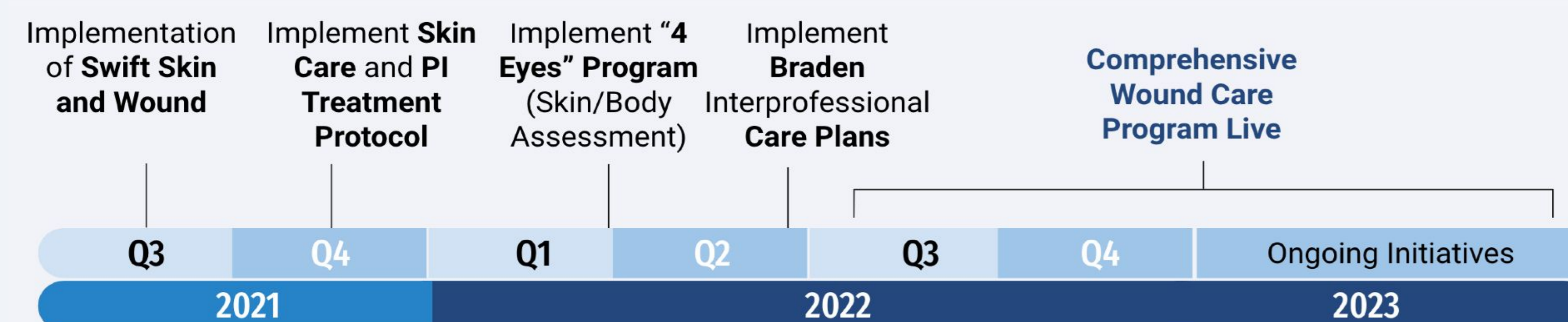
Methodology

This descriptive study used Swift's database to access anonymous PI wound care evaluations of 4,553 patients assessed at Gerald Champion from June 2022-Sept 2023.



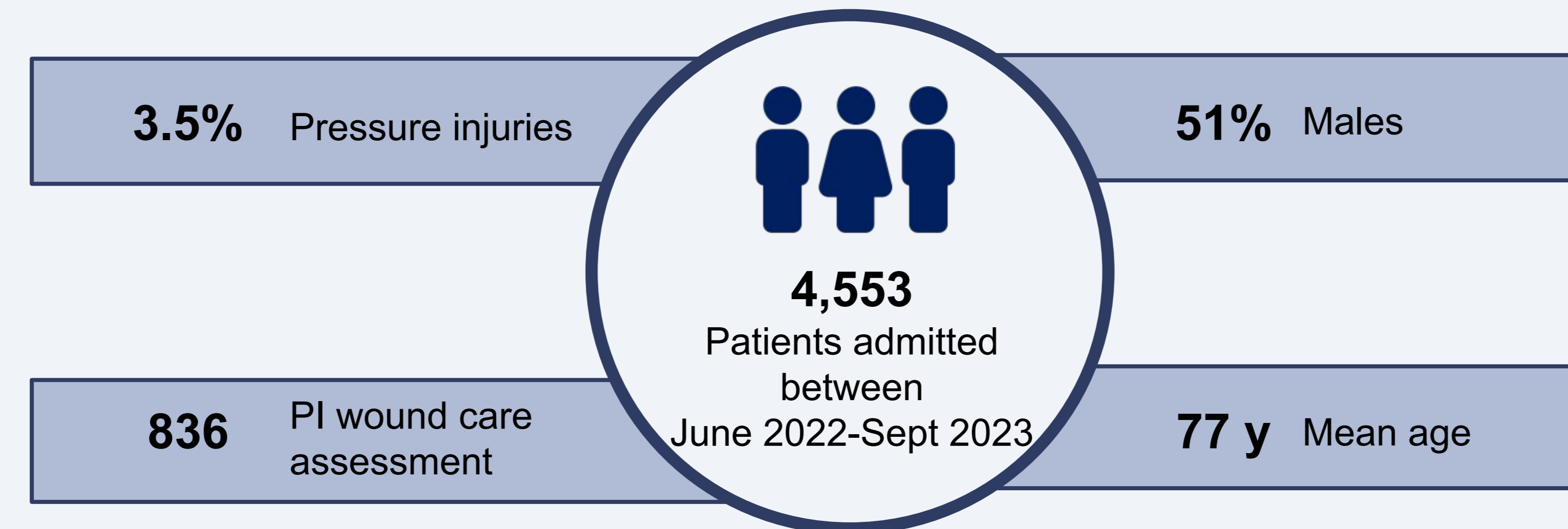
The complete strategy of the WCP included adopting the following:

- 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.
- All program processes have been fully implemented since June 2022.

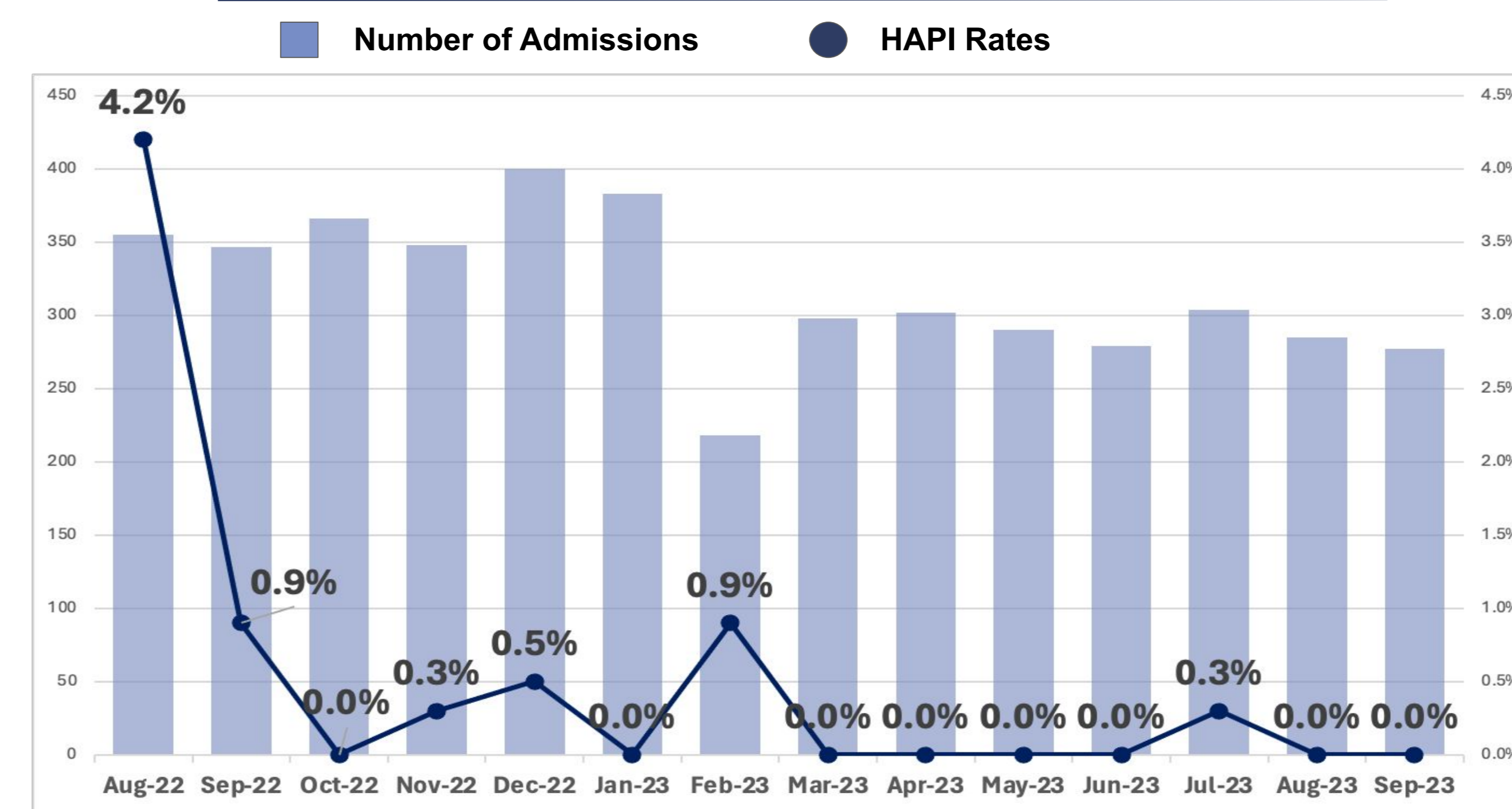


Results

Overview of Patients Admissions and Distribution

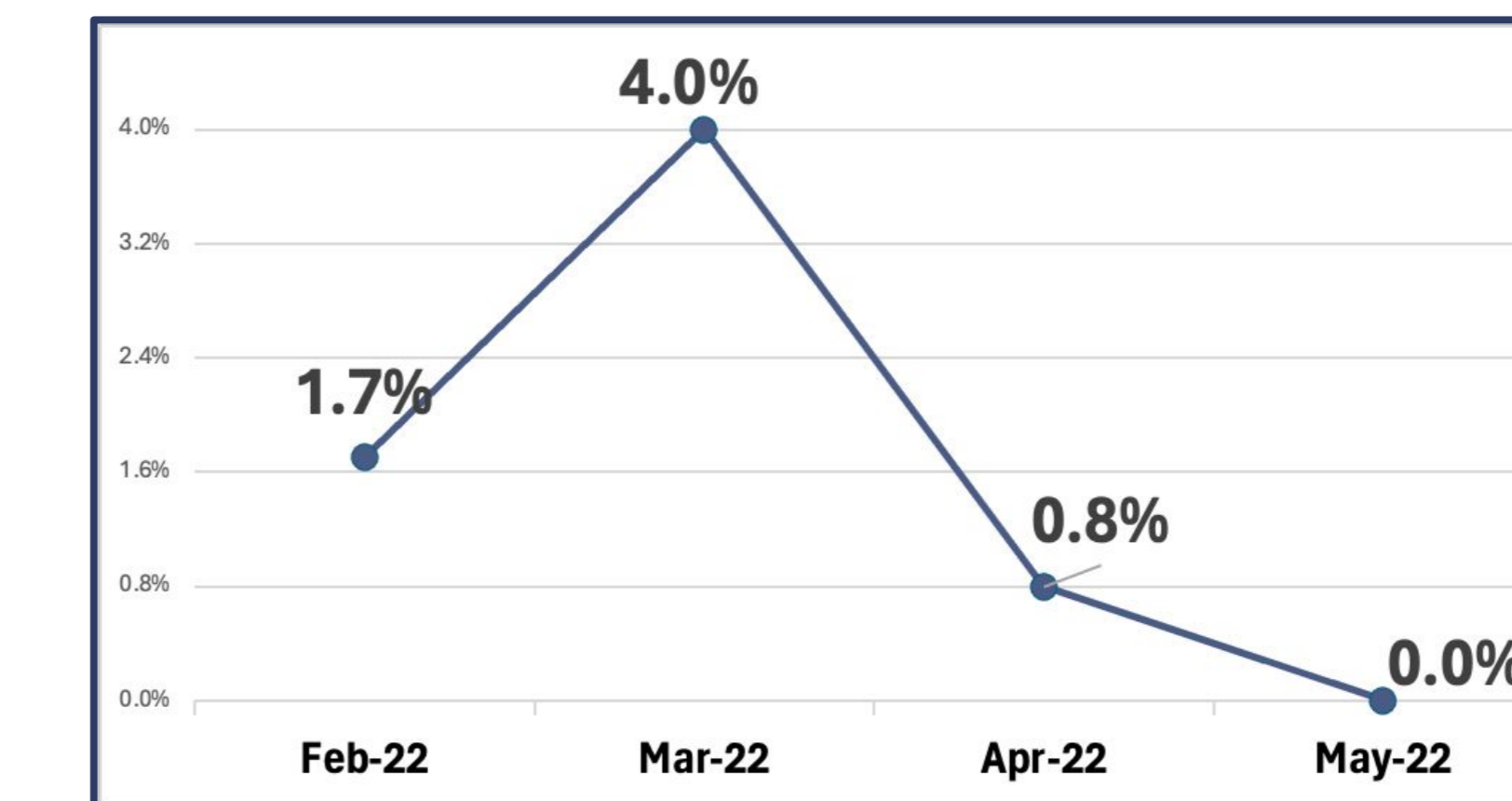


HAPI Rates: 14-Months Trend following the full implementation of the WCP

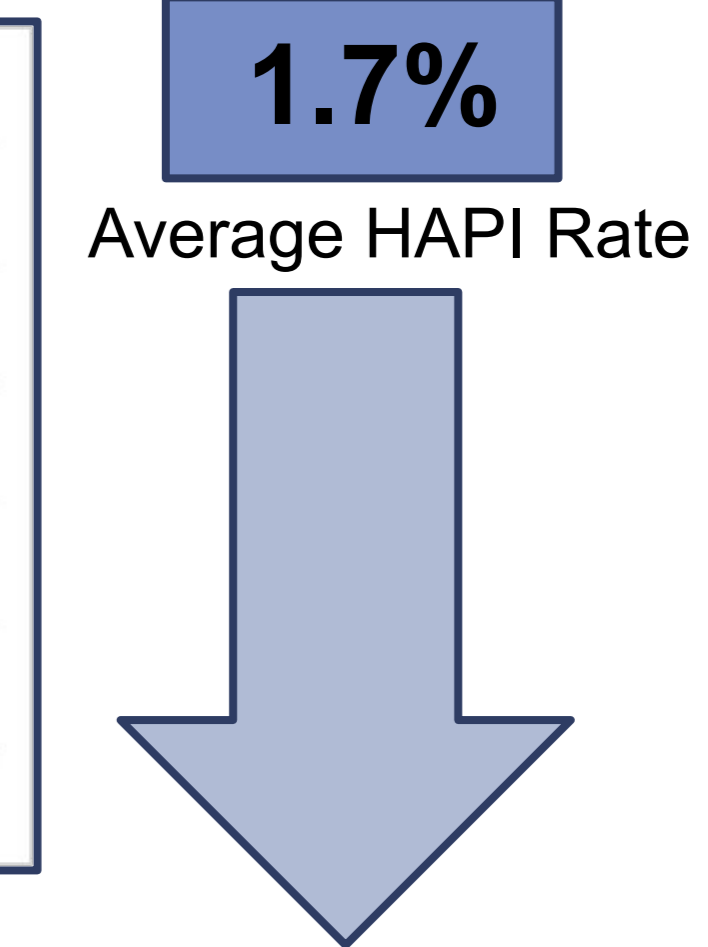


- Overall there was 100% reduction in Hospital Acquired PI incidence rate (HAPI) from Aug 2022 to Sept 2023

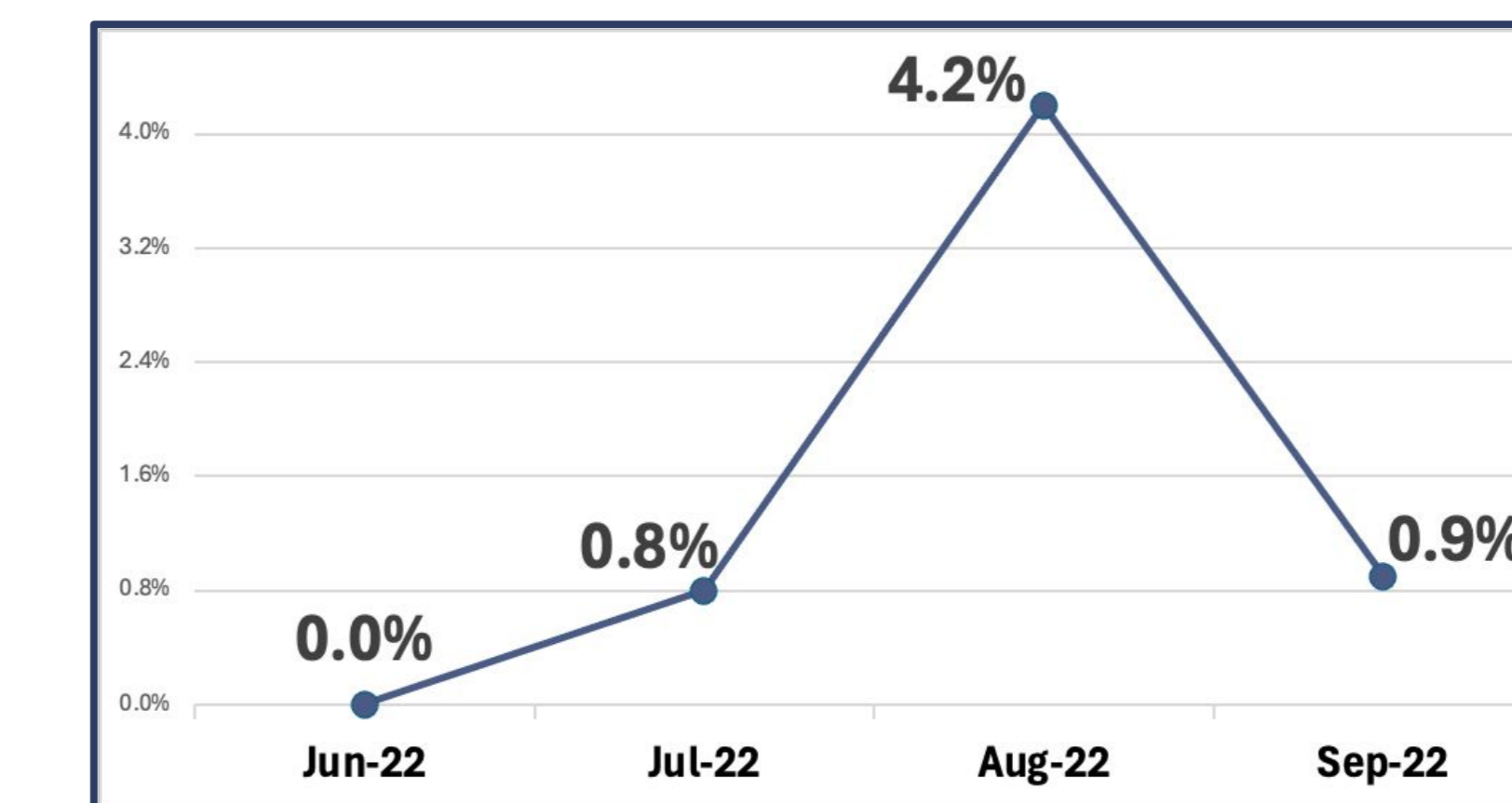
Sustained Reduction in HAPI Rates with the Continuous Use of Wound Care Model



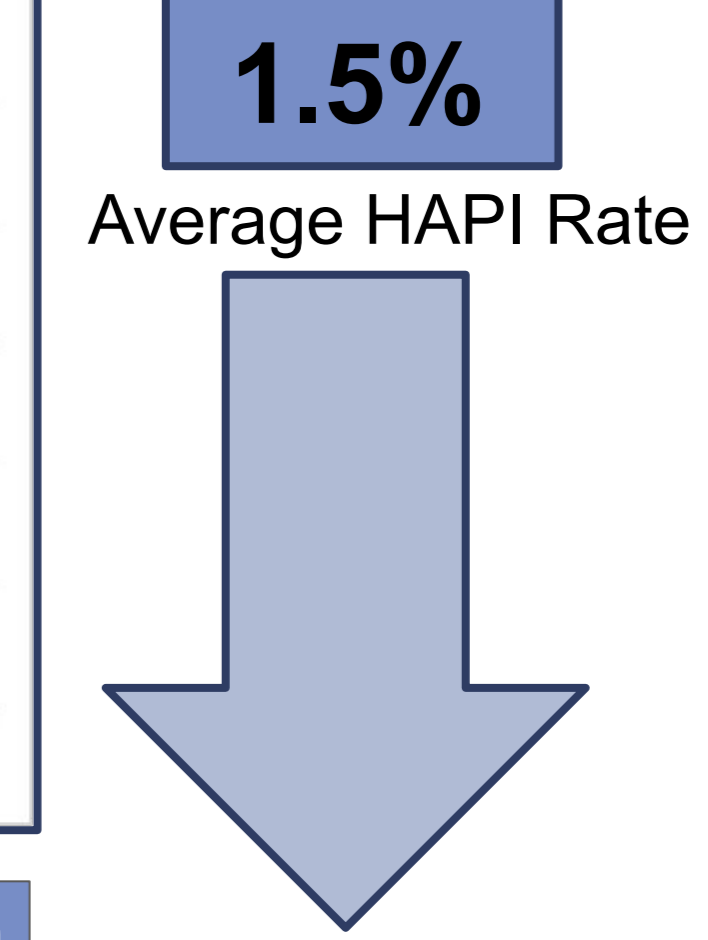
HAPI rates prior to full implementation



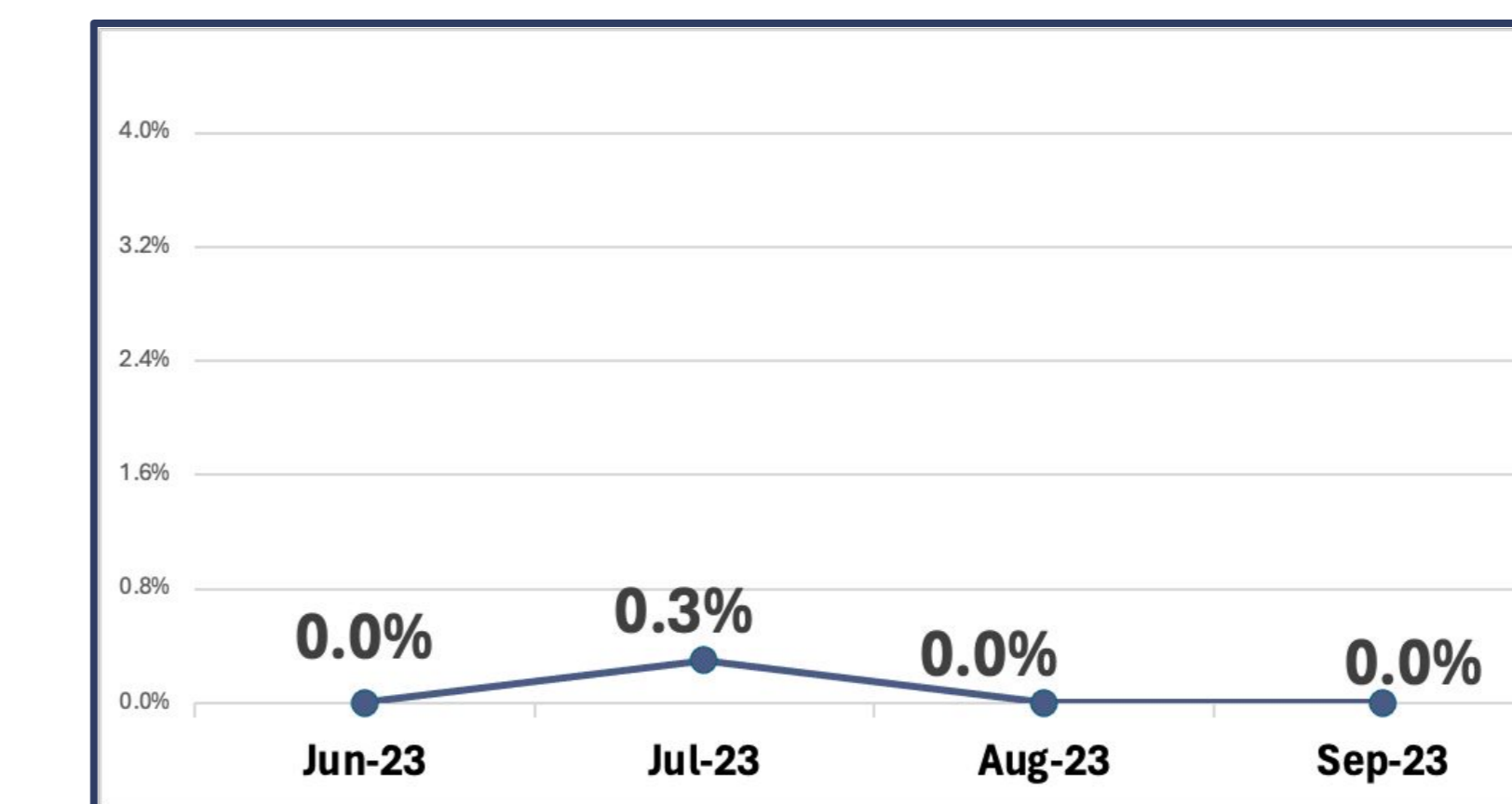
The assessment of HAPI rates four months prior to the full implementation of the WCP revealed an average HAPI rate of 1.7%, which was higher compared to the HAPI rates following the full implementation of the program.



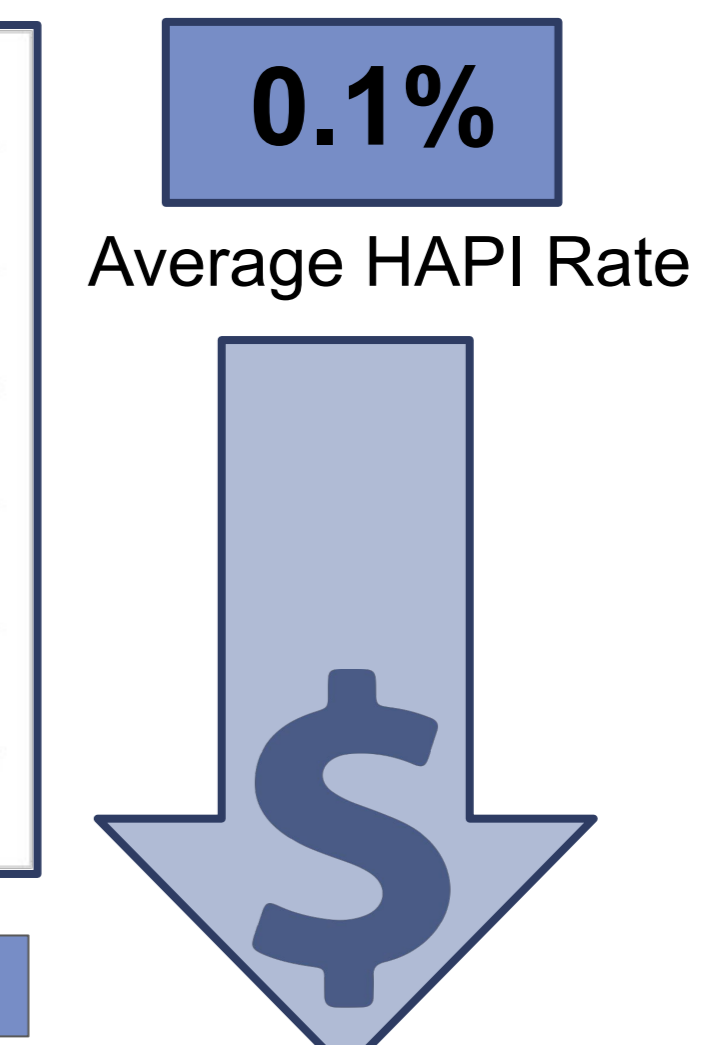
HAPI rates immediately after full implementation



Comparing the 4-months prior to the full implementation of the WCP to the 4-months immediately following the implementation showed an 0.2% reduction in HAPI rates, representing 11.2% improvement.



HAPI rates one year after full implementation



The continued use of WCP has significantly improved HAPI rates by 93%, highlighting the importance of strict and continuous adherence for sustained and notable success. **\$4M** is projected annual savings with the 1.4% decrease across the organization.

Discussion

- A significant decrease in HAPI rates was observed after adopting the centralized wound care program integrated with Skin and Wound care digital management platform.
- Sustaining a reduction of HAPIs poses several challenges after implementing an innovative WCP that integrates digital technology for better assessment of at-risk patients. These challenges may include ensuring consistent staff adherence to new protocols, maintaining the proper utilization of digital tools, and continuously monitoring and evaluating the program's effectiveness to make necessary adjustments for long-term success.
- Overall, 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.³
- Centralized wound care program with digital platform has the potential to save about 4-11 days of unintended hospital stay⁵ and support fewer patient-initiated litigations, estimated at approximately 279,000 per injury.⁶

Adapting comprehensive wound care program that integrates digital wound technology (Swift Medical) has resulted in a significant and sustainable reduction in HAPI incidence rates

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