

# Reducing Days to Heal Wounds in Home Health: A Retrospective Study on a Digital Wound Care Solution

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## OVERVIEW

- With the persistent rise in chronic wounds in the US,<sup>1</sup> Home health agencies (HHAs) direct a significant portion of their resources toward wound care to alleviate its burden on patients and society.<sup>2</sup>
- Evidence shows that a digital wound care solution (DWCS) supports practice improvement and enhances organizations' clinical capacity.<sup>3</sup>

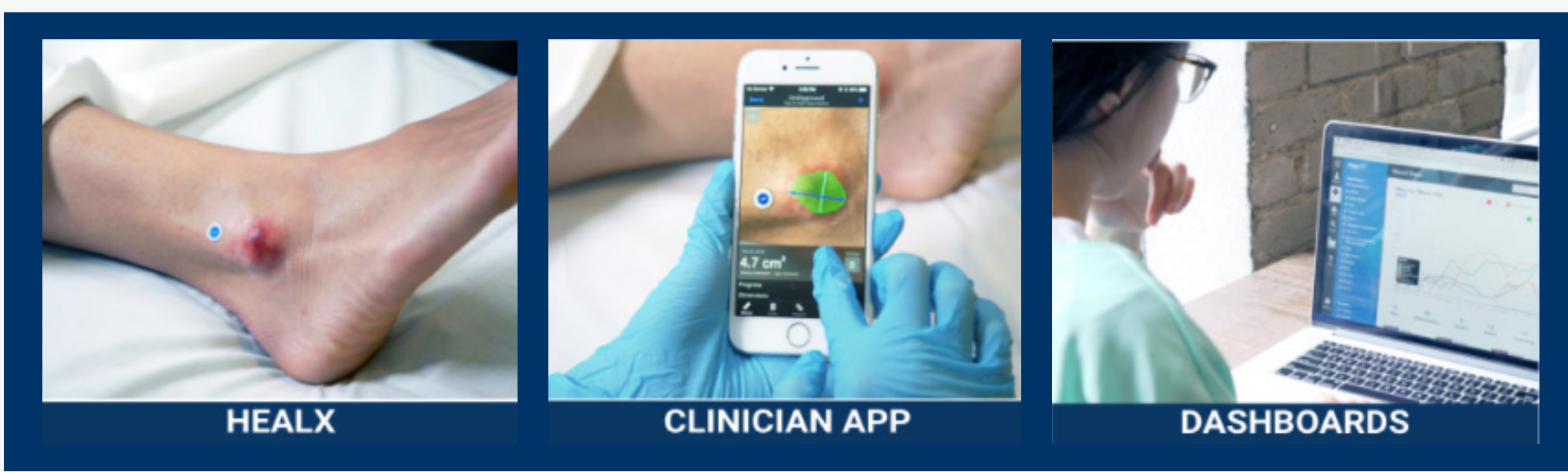
### Innovative Wound Care Program

- Many HHAs across the US partnered with Swift Medical, an AI-powered DWCS to enable an innovative model of wound care practice where artificial intelligence (AI) enables standardized wound assessment.
- Swift Medical allows frontline clinicians to easily capture high precision, clinically-calibrated wound images, accurately measure wounds, track healing, and share this data to augment clinical decision making and identifies at-risk patients.
- DWCS provides a model for practice improvement optimizing management plans and the cost of care.
- There is limited research whether adopting DWCS as a part of a comprehensive wound care program leads to improvements in days to heal a wound.

## OBJECTIVE

- Leveraging a large, clinically calibrated wound database, this study aimed to understand time to heal wounds in home health agencies (HHAs).
- This retrospective study assessed the average time to heal wounds across a cross-sectional sample of 128 HHAs that adopted DWCS as part of their advanced wound care programs from 2020-2022 (N=139,198).
- The study also tracked the change in healing times in 2021 vs. 2022 in a subgroup of 36 HHAs that have sustained using the Solution since 2020 (N=63,923).

## METHODOLOGY

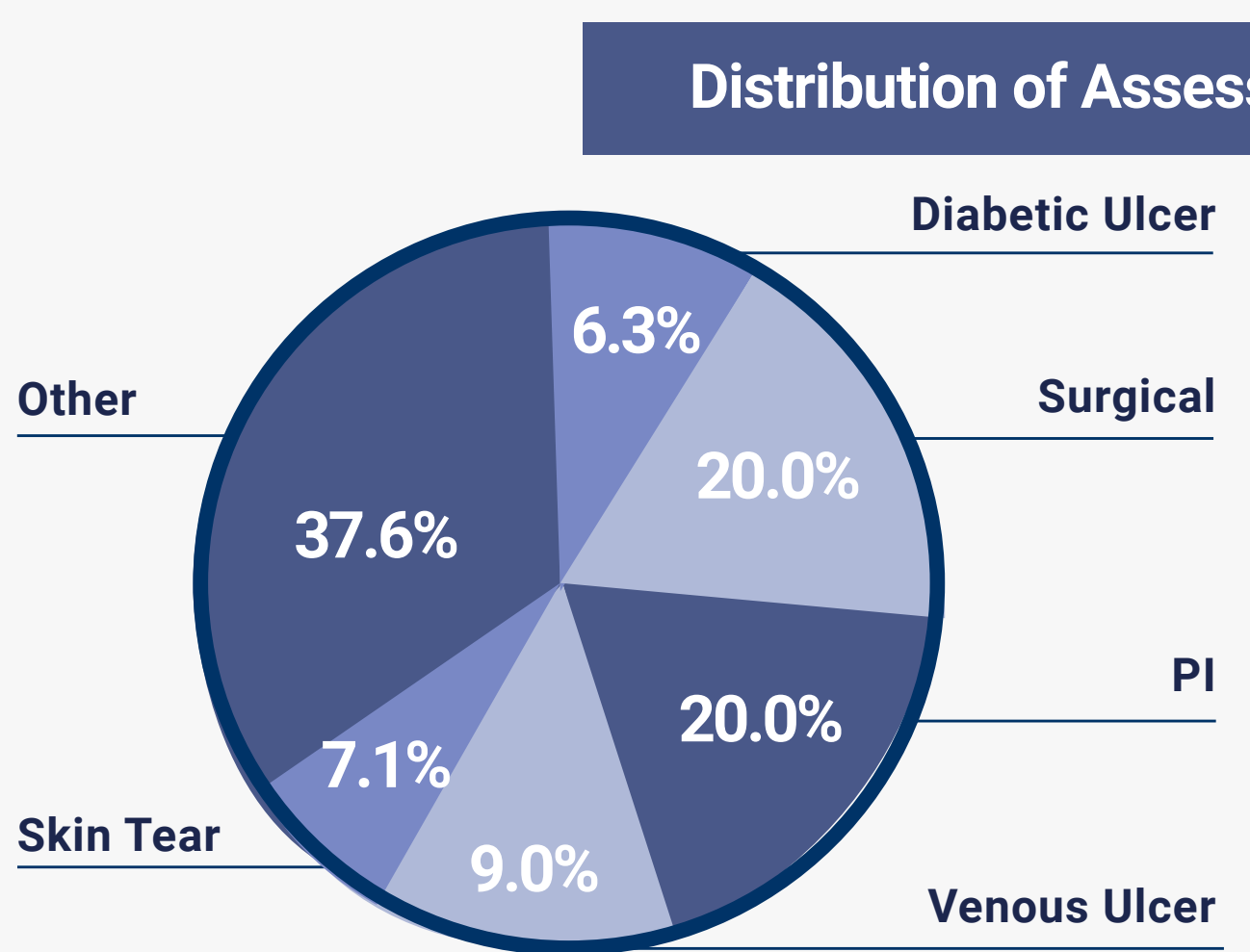


- A retrospective study used a subset of anonymous clinical data from a Swift Medical care technology provider's database.
- This descriptive study used a cross-sectional sampling to access 139,198 wound series data evaluated using the digital solution at 128 organizations from Jan 1, 2020, and Dec 31, 2022.
- Wounds were considered healed when area measurements recorded 0 and were marked as healed. Calculation was then based on the number of days between the start date and the inactive date of the wound. Open and discharged wounds were not included - if not known to be healed.
- Analysis was segmented by the wound type (i.e. pressure injury, venous ulcer, etc.). A student sample t-test was used to examine mean difference in average days to heal a wound with the significance of the statistical test was accepted at the p-value <0.05. Bonferroni adjustment was applied to 2020-2022 data; the significance of the test was accepted at the p-value =0.016.

## RESULTS

### Distribution of Wound Patients Across HHAs (2020-2022)

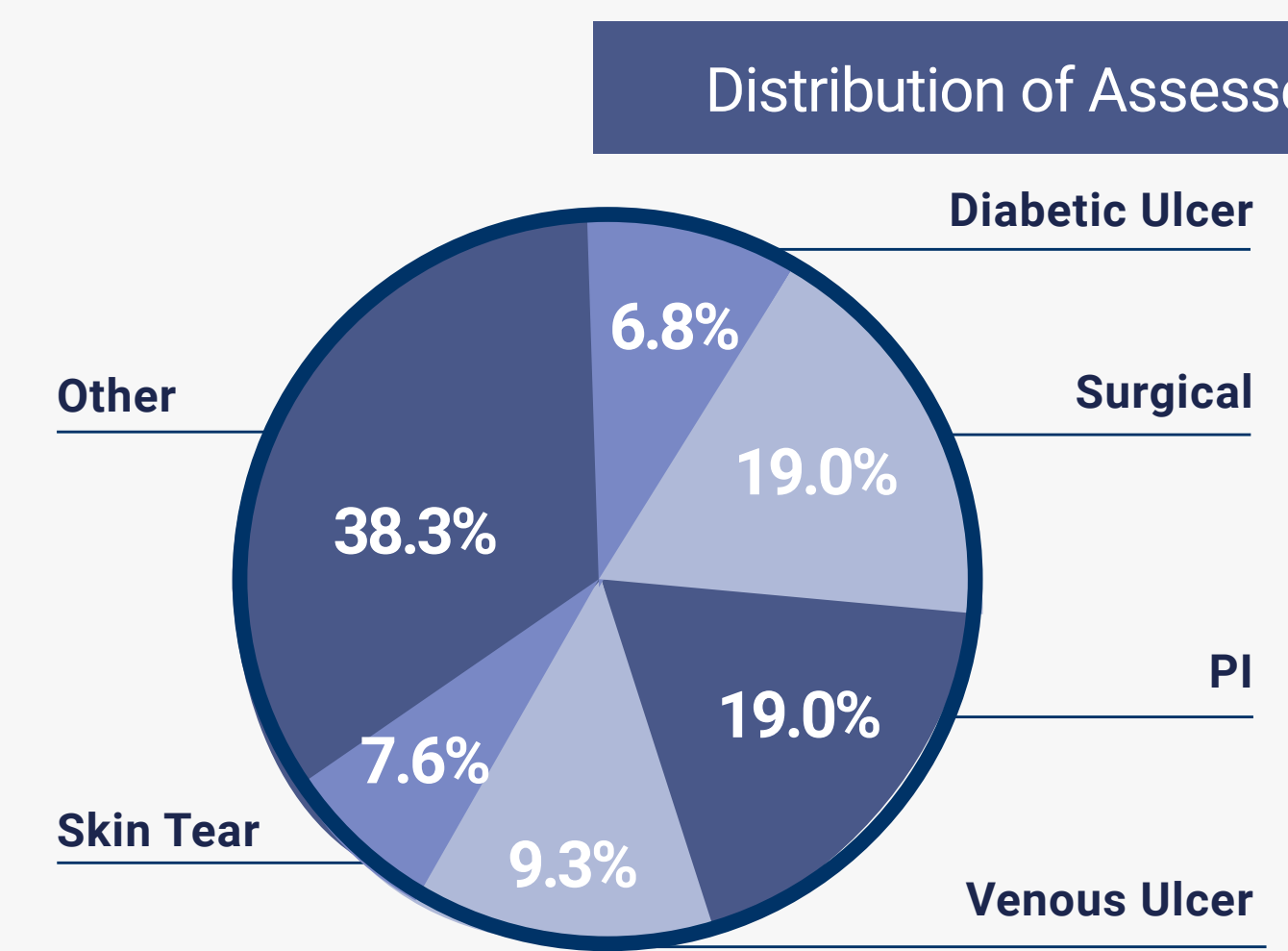
A total of 139,198 wound episodes were evaluated between Jan 1, 2020, and Dec 31, 2022, of which 31% were healed.



- We evaluated 25,162 wounds in 2020, 42,433 in 2021 and 71,603 in 2022.
- Included wounds were of different types and the most common were surgical wounds and pressure injuries.
- Overall 25% of wounds were acquired after admission to HH.

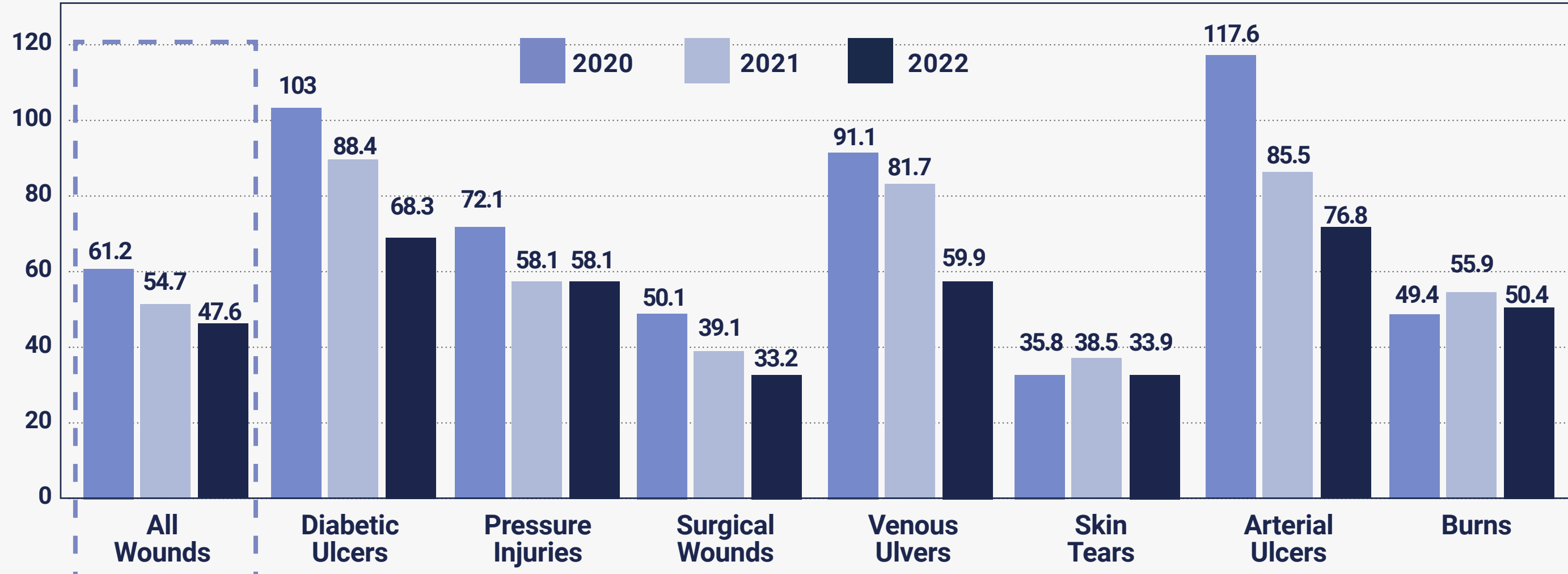
### Distribution of Wound Patients Across Subgroup of HHAs (2021-2022)

A total of 63,923 wound episodes were evaluated between Jan 1, 2021, and Dec 31, 2022, of which 33% were healed.



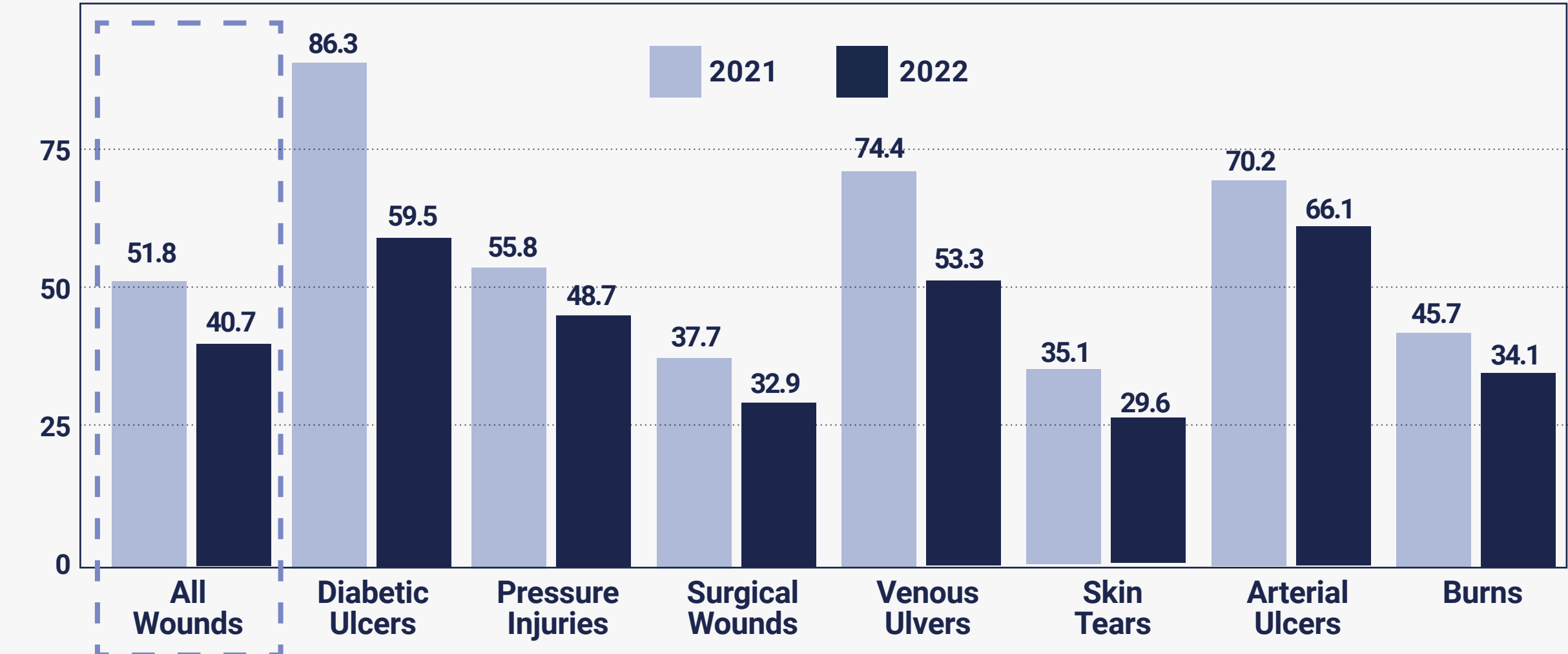
- We evaluated 32,101 wounds in 2021 and 31,822 in 2022.
- Included wounds were of different types and the most common were surgical wounds and pressure injuries.
- Overall 23% of wounds were acquired after admission to HH.

### Faster Healing Across +100,000 Wounds in Home Health



- Overall there was **13.6 fewer days to heal** a wound from 2020-2022
- This decrease represents a **22.2% faster healing**.
- Faster healing of diabetic, venous ulcers & pressure injuries, 31%, 28% and 13%, respectively were also recorded.

### Faster Healing Across +60,000 Wounds in Home Health



- Overall there was **11.1 fewer days to heal** a wound from 2021-2022
- This decrease represents a **21.4% faster healing**.
- Faster healing of diabetic, venous ulcers & pressure injuries, 31%, 28% & 13%, respectively were also recorded.

## DISCUSSION

- The recent initiatives to enhance wound care at home health, supported by adopting Swift Medical's solution, played a vital role in improving wound healing time.
- Overall, a downward trend in the average days to heal wounds was observed, with an overall reduction of 13.6 days- from 61.2 in 2020 to 47.6 days in 2022, resulting in a 22.2% faster healing.
- Using DWCS to support advanced wound care programs leads to faster average healing times of all wound types. Significant differences were detected for the average days saved for adopted branches, specifically the reduction in days to heal for diabetic ulcers, pressure injuries, venous ulcers, and surgical wounds (P<0.001, respectively).
- The significant decrease in healing time was consistent across the years 2020-2022 (P<0.001), showing the long-lasting effectiveness of adopting DWCS in improving wound care outcomes.
- With extended time to heal, there is a high chance of complications and hospitalization, adding more to the total cost of wound care.<sup>4,5,6,7</sup> As a result, time to heal could be the principal driver in reducing total wound care costs.

**Adopting an AI-powered wound care management solution optimizes wound healing.**

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