Bridging Gaps in Home Health: The Transformative Role of Wound Digital Technology in Empowering Clinicians and Improving Patient Outcomes

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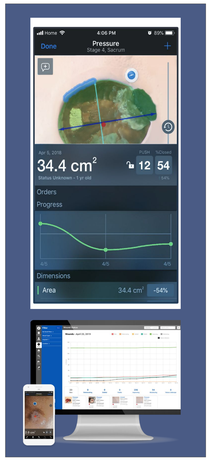
SWIFT

Introduction

- In clinical practices, the shortage of qualified nursing professionals and the complexities of wound care make it difficult for healthcare systems to maintain a skilled workforce, leading to increased workload and reduced quality of care.[1]
- Prioritizing the adoption of management technologies that can assist clinicians and facilitate a seamless workflow is crucial, particularly in the complex clinical domains like wound care.
- Healthcare settings have been implementing digital wound care solution (DWCS) at the point of care to improve staff productivity, and clinical efficiency [2,3] and empower licensed practical nurses (LPNs) to take a more active role in wound care during home visits, bridging the gap and optimizing nursing resources without compromising quality. [4]
- Swift Skin and Wound is an advanced AI-powered wound management solution that noninvasively captures precise wound images and measurements. It seamlessly integrates with electronic medical records (EMR) across diverse healthcare settings, allowing for automatic patient registration and direct data sharing, including PDF reports and discrete data, to be incorporated easily into patient records.



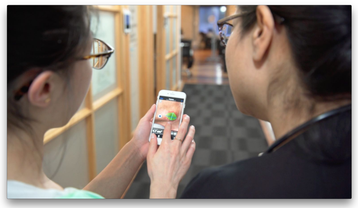
Objective

This quality improvement study aimed to:

- Evaluate the impact of DWCS on altering the proportion of LPNs conducting home care visits compared to registered nurses (RNs) at a cohort of Home Health Agencies (HHAs) that have adopted the solution since 2021.
- Explore the potential influence of the shift in the distribution of LPNs' and RNs' roles on clinical outcomes in the cohort of HHAs.

Methodology

- The retrospective study used the DWCS de-identified database from participating HHA to evaluate 243,745 wound care assessments for 20,733 wound patients assessed at a cohort of 29 HHAs from January 2021-Dec 2022.
- The roles of the clinicians who conducted the skilled nursing wound care evaluations using the technology recorded in the DWCS database were compared.
- The study also assessed clinical outcomes, defined as the average days to heal a wound (time between first and last evaluation for wound episodes marked as healed) and the rate of new wounds developed with patients under management for the same period.



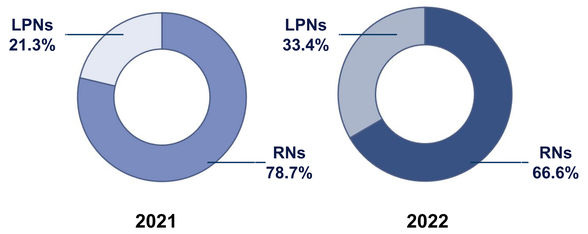
Results

Distribution of Wound Evaluations

29,121 patients
309,639 wound evaluations
67,861 wound episodes
Mean age **71.6** years
51.2% were females.

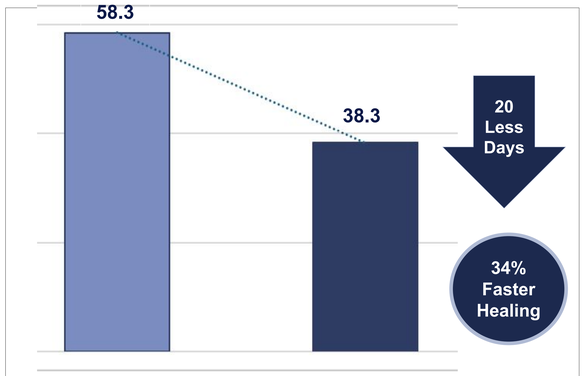
	Characteristics	Types of Wounds
2021	**14,163** Patients **135,606** Evaluations **29,416** Episodes	**18%** Pressure Injury **24%** Surgical **11%** Venous/Arterial Ulcer **8%** Diabetic Ulcer **39%** Other
2022	**17,955** Patients **174,033** Evaluations **38,445** Episodes	**15%** Pressure Injury **23%** Surgical **10%** Venous/Arterial Ulcer **6%** Diabetic Ulcer **46%** Other

Change in Nursing Roles Completing Wound Care Skilled Nursing Visits



- A favorable shift of **21.3%** in visit staffing was observed at the participating HHAs, increasing the utilization of LPNs in conducting home care visits.
- **The projected cost savings** from the shift in roles, based on an average of $78 for RN cost/visit and $49 for LPN/visit,[5] is estimated to be **$1,514,948**.

Average (Mean) Days to Heal a Wound at HHAs (2021-2022)



*Only wound indicated as healed, or completely epithelialize were include in the analysis. Wound with other dispitionions, such as, in progress were not included.

- The days to heal a wound were significantly reduced by an average of **20.3 days** from 2021-2022 (**P=0.007**),
- This decrease in the average days to heal represents a **34% faster healing time** for wounds.
- If the HHAs had not continued using the wound care management technology, they would have accrued a total of **768,900 extra days** for the 38,445 wound patients receiving wound management during the same period.

Discussion

- The use of a digital wound care management solution can lead to a more balanced distribution of responsibilities between RNs and LPNs, thereby enhancing overall efficiency while maintaining high-quality wound care.
- HHAs have observed a shift in staff assignment for home visits, with an increased utilization of LPNs. This shift demonstrates the value of using Swift to alleviate the workload on highly paid clinicians, allowing them to focus on caring for at-risk patients. RNs continue to be involved in the collaborative model and provide support as needed.
- For example, if the adoption of Swift had not continued and the decrease in RN visits had not been observed, RNs would have conducted an additional 21,058 visits in 2022.
- This shift did not compromise the quality of care, as agencies experienced a 34% decrease in the average days required to heal a wound.

References

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