

Key Findings

The implementation of an artificial intelligence-enabled digital wound care platform (AI-DWCP) has strengthened wound care assessments, enhanced documentation, and delivered measurable health system improvements. The technology has provided patients with a more informed and engaged wound care experience while improving provider workflows and tools.

41%
decrease



in wound-related emergency department visits by Diabetes Foot Ulcer Clinic patients since AI-DWCP implementation.

92%
of patients



surveyed felt that viewing their progress using the AI-DWCP made them more committed to following their care plan.

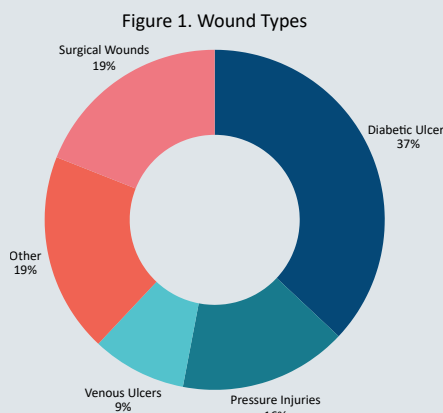
“ [The AI-DWCP] keeps me more informed about what’s happening with the condition of my leg. It’s always good to get the heads up that’s it’s getting better

- Patient Survey Respondent

Results

Utilization:

- 83 frontline providers were trained on the AI-DWCP
- The platform supported 1,800+ digital wound care assessments for 321 patients
- Various wound types were assessed (Figure 1)
- 118 wounds were tracked to closure
- Average healing time was 95 days
- 58% of all assessed wounds were stable or improving.



Surveys:

- 25 outpatients completed patient-experience surveys; 54% had diabetic ulcers; 78% were >60 years of age. Most respondents reported positive experiences (Figure 2).
- 30 health care providers completed pre-implementation surveys
- 11 completed post-implementation surveys; 91% reported a positive impact on their daily workflow. Staff also reported improvements in assessment reliability, documentation quality, and confidence assessing wounds (Figure 3).

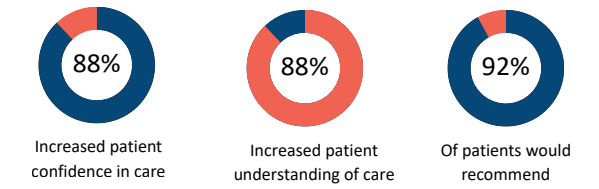


Figure 2. Patient experience survey results

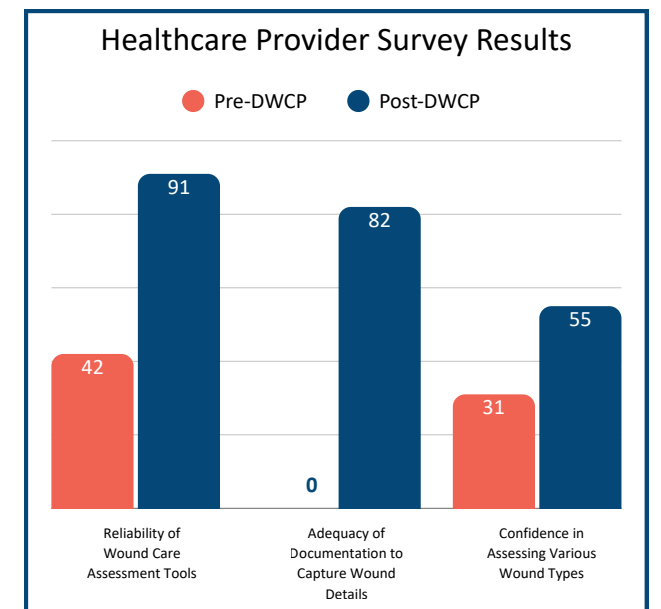


Figure 3. Healthcare provider pre- and post-implementation survey results

Background

Setting: This project takes place at Brightshores Health System (Brightshores), one of Ontario’s largest multi-site rural hospital networks. Brightshores serves 175,000 residents across 8,600 km² in Grey and Bruce Counties.

Rationale: Wound care places a significant and growing strain on Canada’s healthcare system, driven by rising chronic conditions and an aging population.^{1,2} The challenges are even greater in rural regions. Brightshores’ high proportion of older adults contributes to a substantial burden of chronic wounds, while limited assessment tools and specialist access, and wide geographic distances hinder timely, standardized care and comprehensive documentation. These barriers highlight the need for solutions that support standardization, continuity, and equitable service delivery. Digital wound care platforms help address these issues by enabling consistent assessments, improving communication, and supporting data-driven clinical decision-making.

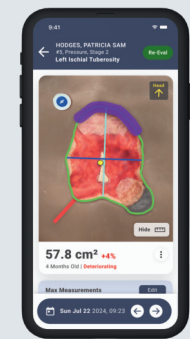


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Intervention: Brightshores implemented an AI-enabled digital wound care platform (AI-DWCP). The platform supports standardized assessments, non-invasive wound measurement, progress tracking, and a centralized dashboard for patient and population level reporting.

Objectives: This study evaluates the 22-month implementation of the AI-DWCP using the Quintuple Aim Framework³ to assess its impact on patient and provider experience, and population health outcomes.

Methods

AI-DWCP was implemented at Brightshores’ 6 hospital sites using a phased roll out approach. System-wide adoption was achieved by November 2024 across both inpatient and outpatient settings.

Stakeholder engagement guided the selection of evaluation metrics aligned with the Quintuple Aim Framework.³

A comprehensive, mixed-methods evaluation was used to assess the impact of the AI-DWCP on patient and healthcare provider experiences, and health system and clinical outcomes.

Data collection occurred between May 2024 to February 2026.

See Figure 4 for data sources.

Quantitative analyses were conducted using measures of central tendency and frequency distributions.

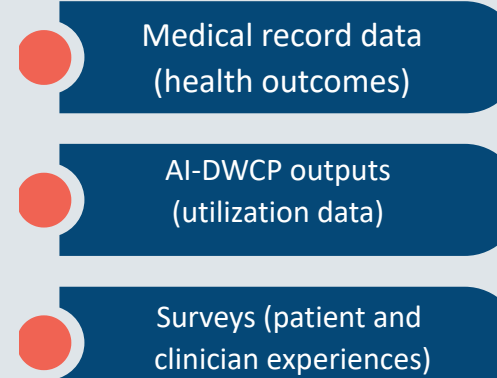


Figure 4. Evaluation Data Sources

Discussion

Implementation of an AI-DWCP across a rural health system was associated with meaningful improvements across multiple dimensions of care delivery, including:

- Increased standardization of wound assessments
- Improved quality of documentation
- Enhanced confidence of providers
- Reductions in wound-related acute-care utilization
- Positive patient, particularly regarding patient confidence in an understanding of their care, and engagement in their healing journey, and
- Positive provider experiences

Implications:

- These results suggest that AI-DWCP have the potential to empower and strengthen patient-centered care and may contribute to enhanced wound care practices across a geographically dispersed, resource constrained rural health system.
- With rising demand driven by aging populations and increasing chronic disease, these platforms may play a key role in improving care consistency, supporting data-informed decisions, and advancing equitable access to high-quality wound care.

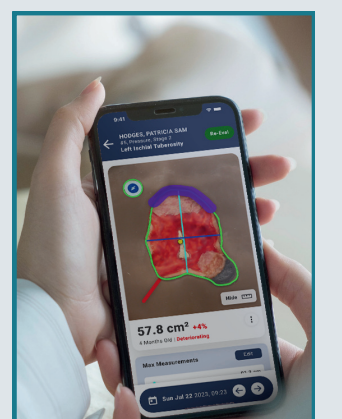


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References:

- D. Queen and M. Botros, “The True Cost of Wounds for Canadians,” Wound Care Canada 22, no. 1 (2024): 16–20, <https://doi.org/10.56885/NXMW2913>
- Statistics Canada, “Demographic Estimates by Age and Gender, Provinces and Territories: Interactive Dashboard,” Government of Canada (2025), <https://www150.statcan.gc.ca/n1/pub/71-607-x/71-607-x2020018-eng.htm>
- Farrell TW, Greer A, Bennie S, Hageman H, Pfeifle A. Academic health centers and the quintuple aim of health care. Acad Med. 2022;98(4):563-568.

This work was funded by:

