

An Executive Summary: Teach-Back Initiative for Diabetic Wound Care

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Main points

- **Target Population:** Patients with diabetic foot ulcers (DFUs) and post-amputation wounds receiving outpatient wound care.
- **Clinical Problem:** Baseline 30-day readmission rates ranged from 10% (DFU) to 25% (post-amputation), primarily driven by infection and inadequate patient comprehension during transitions of care (American Diabetes Association [ADA], 2024; Meloni et al., 2023).
- **Intervention:** The project implemented a standardized, nurse-led, three-step teach-back protocol designed to improve home management of both diabetic foot ulcers (DFUs) and post-amputation wounds. This intervention moved beyond traditional passive education by incorporating a structured verification process during clinical visits. First, the nurse provided verbal wound care instructions supplemented with an icon-based Signs and Symptoms of Infection magnet, which served as a permanent visual reference for patients at home. Second, patients were required to explain the care steps and identify “red flag” symptoms back to the nurse, allowing the clinician to immediately verify understanding and correct misconceptions. Finally, nurses documented the successful exchange using a standardized digital template in the electronic health record (EHR), ensuring consistent application of the protocol across all patient encounters, and supporting safer transitions of care for these high-risk populations.
- **Standardization & Fidelity:** To ensure every patient received consistent, high-quality instruction, the project utilized the WHCDRES (Wound Healing Center Dressing) Smart Phrase. A smart phrase is a digital documentation template within the electronic health record that functions as a standardized checklist for clinicians. In this project, the WHCDRES phrase prompted nurses to verify and record that they provided specific wound care instruction, performed a successful patient teach-back, and supplied the infection-awareness magnet. By using this structured tool, the initiative achieved 81.4% documentation fidelity, which

demonstrates that the teach-back protocol was successfully and reliably integrated into the routine clinical workflow rather than treated as an optional task.

- **Patient Confidence:** 100% of surveyed patients reported high confidence (ratings of four or five out of five) in performing wound care at home following the intervention.
- **Economic Value:** From a systems perspective, the intervention offers substantial strategic and financial value by aligning with the Centers for Medicare & Medicaid Services' Hospital Readmissions Reduction Program (HRRP), a core component of the federal value-based care framework aimed at reducing preventable readmissions and improving quality outcomes (Centers for Medicare & Medicaid Services, 2024).
- Preventing even a single readmission yields a significant return on investment, as a diabetic foot ulcer (DFU)-related admission costs between \$10,000 and \$25,000, and post-amputation readmissions may escalate to \$60,000 (Hicks et al., 2019). These costs stand in stark contrast to the intervention's minimal material expense of \$1.12 per magnet, which can be further reduced to less than \$0.50 through bulk procurement. By reducing preventable readmissions through improved health literacy, the protocol supports long-term financial sustainability and helps protect up to 3% of hospital revenue currently at risk for CMS penalties (Centers for Medicare and Medicaid Services, 2024).
- Furthermore, this model is highly transferable to other high-risk populations, providing a scalable blueprint for improving outcomes in heart failure and postoperative care transitions (Talevski et al., 2020).
- **Sustainability:** The workflow remained effective despite substantial operational challenges, including a clinic relocation.

Background and Purpose

Diabetic foot ulcers represent a major contributor to morbidity, mortality, and healthcare expenditures in the United States. Nationally, inpatient care for DFUs exceeds \$1.4 billion annually, with 30-day readmission rates ranging from 15% to 22% (ADA, 2024; Meloni et al., 2023). Readmissions are

most often associated with infection, inadequate self-care, and failure to recognize early warning signs after discharge (Hicks et al., 2019).

At the project site, discharge education practices were inconsistent and lacked a standardized mechanism to verify patient understanding. Baseline readmission rates were 10% for DFU patients and 25% for post-amputation patients, indicating a clear opportunity for quality improvement. Traditional patient education relied heavily on passive instruction, a method shown to be insufficient for patients managing complex chronic wounds (Office of Disease Prevention and Health Promotion [ODPHP], 2020).

The purpose of this nurse-led quality improvement project was to implement a standardized teach-back protocol in an outpatient wound care clinic to enhance patient health literacy, self-efficacy, and wound self-management. Intended audiences include outpatient clinicians, health system leadership, quality improvement teams, and advanced practice nurses. The results are intended to support ongoing workflow standardization and guide expansion into other high-risk patient populations.

Methodology

The project was guided by the RECIPE implementation framework (Reflection, Engagement, Choice, Intervention, Practice, and Evaluation) over a 12-week implementation period.

- **Reflection:** Review of clinic trends revealed patients often appeared to understand instructions but returned with preventable complications.
- **Engagement:** Collaboration with nursing staff and clinic leadership was essential to assess the operational feasibility of the new protocol within a high-volume outpatient environment. This phase specifically evaluated whether the three-step Teach-Back process—including physical demonstration of wound care, use of visual reinforcement tools, and required EHR documentation—could be completed without disrupting clinic flow, visit length, or staff efficiency. Early engagement of front-line nursing staff ensured that the additional steps fit within the existing time constraints of a standard patient encounter. This collaborative approach

confirmed that the intervention was practical, acceptable to staff, and sustainable during routine clinical operations, even amid the significant disruption associated with a clinic relocation.

- **Choice:** Teach-back was selected due to its robust evidence base in addressing health literacy and improving chronic disease outcomes (Hong et al., 2020; Talevski et al., 2020).
- **Intervention:**
 1. **Instruction & Visual Aid:** Use of an icon-based infection-awareness magnet highlighting fever, swelling, purulence, and erythematous streaking.
 2. **Verification:** Patients restated wound care instructions and appropriate responses to “red flag” symptoms.
 3. **Documentation:** Completion documented using the WHCDRES Smart Phrase within the electronic health record.
- **Practice:** Real-time coaching supported nursing staff adherence throughout implementation, even during clinic relocation.
- **Evaluation:** Outcomes included EHR documentation fidelity, patient confidence surveys, and comparison to baseline and regional readmission benchmarks.

Results

During the implementation period, 86 patients with DFUs or post-amputation wounds were treated.

- **Implementation Fidelity:**
 - The WHCDRES (Smart Phrase) was utilized in 70 of 86 encounters (81.4%), demonstrating consistent adoption of the protocol.
- **Patient Confidence:**
 - Survey response rate was 75.6% (n = 65).
 - Mean confidence score was 4.31 on a 5-point Likert scale.
 - 38% of respondents selected the top-box score of five.

- All respondents (100%) selected either four or five, indicating strong perceived self-efficacy in home wound management.
- **Readmission Indicators:**
 - Post-intervention readmission rates were unavailable due to organizational transitions; however, baseline rates exceeded or matched regional benchmarks (21%–26%).
 - High patient confidence and documentation fidelity are recognized as leading indicators of improved adherence and reduced complications (Talevski et al., 2020).

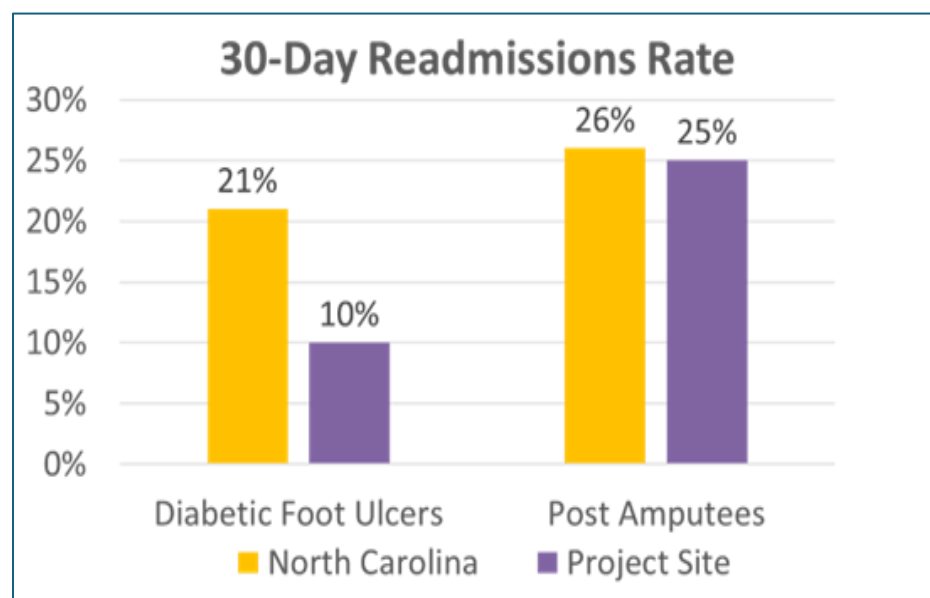


Figure 1. Regional benchmarking for pre-implementation data

Strengths and Limitations

Strengths: Key strengths included high nursing engagement, strong implementation fidelity, and the use of a low-cost, evidence-based intervention. Icon-based visual tools supported patients and caregivers with varying literacy levels, reinforcing education beyond the clinical encounter (ODPHP, 2020).

Limitations: The primary limitation was the absence of post-implementation readmission outcome data due to time constraints and organizational transitions. Readmissions outside the health system could not be captured. Additionally, social determinants of health and wound severity, which influence outcomes, were not controlled.

Implications

This project demonstrates that a standardized, nurse-led teach-back protocol is a feasible and sustainable approach to improving patient education in outpatient wound care. Integration of structured EHR documentation reduces educational variability and supports consistent, high-quality care delivery.

From a health system perspective, preventing even a single 30-day readmission for diabetic foot complications can offset the costs of preventive interventions, as readmissions represent a disproportionate share of total care expenditures (Hicks et al., 2019). The model is highly transferable to other high-risk populations, including heart failure management and postoperative care.

Conclusion

This quality improvement initiative confirms that a low-cost teach-back intervention can meaningfully enhance patient confidence and the quality of wound care education. Empowering patients to recognize early signs of infection and verify their understanding supports safer self-management, reduces preventable suffering, and advances patient-centered care. Permanent adoption and broader implementation of this protocol are recommended.

References

- American Diabetes Association Professional Practice Committee. (2024). 12. Retinopathy, Neuropathy, and Foot Care: Standards of Care in Diabetes—2025. *Diabetes Care*, 48(Supplement_1), S252–S265. <https://doi.org/10.2337/dc25-S012>
- Centers for Medicare and Medicaid Services. (2024). *Hospital value-based purchasing*. [Www.cms.gov. https://www.cms.gov/medicare/quality/value-based-programs/hospital-purchasing](https://www.cms.gov/medicare/quality/value-based-programs/hospital-purchasing)
- Hicks, C. W., Canner, J. K., Karagozlu, H., Mathioudakis, N., Sherman, R. L., Black, J. H., & Abularrage, C. J. (2019). Contribution of 30-day readmissions to the increasing costs of care for the diabetic foot. *Journal of Vascular Surgery*, 70(4), 1263–1270. <https://doi.org/10.1016/j.jvs.2018.12.028>
- Hong, Y.-R., Huo, J., Jo, A., Cardel, M., & Mainous, A. G. (2020). Association of Patient-Provider Teach-Back Communication with Diabetic Outcomes: A Cohort Study. *The Journal of the American Board of Family Medicine*, 33(6), 903–912. <https://doi.org/10.3122/jabfm.2020.06.200217>
- Meloni, L., & Lauro, D. (2023). Hospital Readmission in Patients With Diabetic Foot Ulcers: Prevalence, Causes, and Outcomes. *The International Journal of Lower Extremity Wounds*. <https://doi.org/10.1177/15347346231207747>
- Office of Disease Prevention and Health Promotion. (2020). *Health literacy in healthy people 2030 - healthy people 2030 | odphp.health.gov*. [Health.gov. https://odphp.health.gov/healthypeople/priority-areas/health-literacy-healthy-people-2030](https://odphp.health.gov/healthypeople/priority-areas/health-literacy-healthy-people-2030)
- Talevski, J., Wong Shee, A., Rasmussen, B., Kemp, G., & Beauchamp, A. (2020). Teach-back: a Systematic Review of Implementation and Impacts. *PLOS ONE*, 15(4), 1–18. <https://doi.org/10.1371/journal.pone.0231350>