# The Long Road to Limb Loss: Frequency, Duration, and Cost of Pre-Amputation Wound Care

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## Introduction

- Non-traumatic lower-limb amputations are a major public health issue, frequently linked to diabetes and peripheral artery disease. [1,2]
- Before amputation, patients often undergo prolonged wound-care courses that are both costly and time-intensive. [3-5]
- Utilization patterns—including visit frequency, treatment duration, and associated cost—remain poorly characterized, particularly within safety-net hospital populations.
- Better understanding of these patterns can help identify predictors of high-cost care, promote earlier interventions, and optimize resource allocation to prevent limb loss.

## Objective

**To quantify the frequency, duration, and cost of wound-care utilization preceding lower-limb amputation and to describe the overall treatment burden faced by these patients**

## Methods

- **Study Design:** Retrospective cohort study (2014-24).
- **Setting:** University Medical Center, New Orleans.
- **Inclusion Criteria:** Adults (≥18 yrs) who underwent major non-traumatic lower-extremity amputation.
- **Data Source:** Identified through *Epic SlicerDicer*; detailed chart abstraction in *REDCap* (HIPAA-compliant database).
- **Variables Collected:**
- Wound-care frequency (visits/week)
- Duration of wound-care episodes (weeks)
- Operative wound-care requirements
- Demographics, comorbidities, and etiology of amputation
- Estimated travel distance and cost of care

## Results

- 33 patients reviewed; mean age 50 yrs (range 24–65).
- 82% male, 70% African American.
- 61% of amputations were attributed to diabetes or vascular insufficiency.

**Average wound-care intensity:**

- 3.6 visits/week × 10.6 weeks ≈ 38 total sessions.
- 58% required operative wound care prior to amputation.

**Average travel burden**: ≈ 2,174 miles per patient for wound-care visits (round-trip estimate).

**Cost analysis:** In progress.

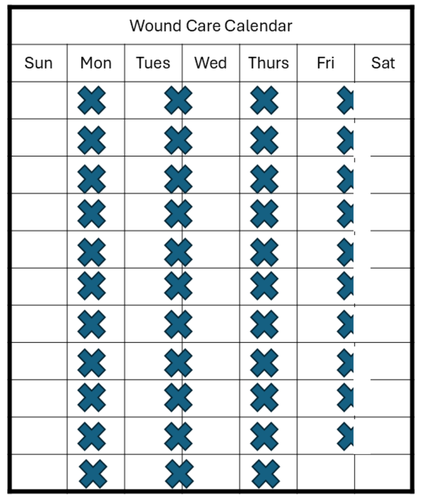


**Figure 1.** Average wound-care frequency and duration prior to major lower-extremity amputation. The calendar depicts an average schedule of 3.6 visits per week across a 10.6-week treatment period.

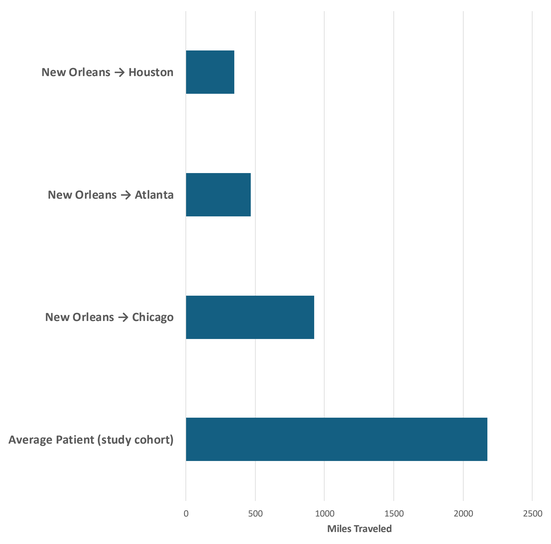


**Figure 2.** Estimated cumulative travel distance for wound-care visits prior to amputation (2,174 miles) compared with driving distances from New Orleans to major U.S. cities.

**Figure 3.** Clinical picture of an example of a diabetic foot wound. The clinical photo on the far left shows the erythematous, draining wound bed with exposed bone. The clinical photo on the right shows the wound with improved granulation after surgical debridement and multiple weeks with a negative pressure wound dressing provided by weekly wound care. This patient also required antibiotics and may require additional surgery to cover the wound with graft.

## Discussion and Limitations

- Patients with chronic wounds experience a high-intensity and prolonged course of wound care prior to amputation—averaging nearly four visits per week over ten weeks.
- Despite this extensive treatment, limb salvage is often unsuccessful, suggesting the need for earlier identification of patients unlikely to respond to conservative therapy.
- The substantial travel burden—averaging over 2,000 miles per patient—illustrates the time, financial, and logistical strain faced by individuals managing chronic wounds.
- Our current data are limited by a small sample size and limitations in assigning health care cost.
- Future analyses will explore cost data and subgroup predictors of prolonged utilization to guide resource optimization and limb-preservation strategies.

## Conclusion

- **Pre-amputation wound care is both resource-intensive and highly burdensome**
- **Quantifying the "long road to limb loss" underscores the real-world challenges faced by patients and highlights the importance of timely, multidisciplinary approaches to optimize treatment encounters**

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## References

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