

Optimizing DFU Management: Safety and Cost Outcomes of Early Discharge

Nihiladhithya Rajasekar^{*1}, Shenbaga Praveen Ramanathan^{2*}, Anushvar I.R.³

¹Department of General Surgery, Saveetha Medical College and Hospital (SIMATS), Chennai, India, naveen.nihil20@gmail.com; ORCID: 0009-0005-1963-389X

²Department of General Surgery, Saveetha Medical College and Hospital (SIMATS), Chennai, India, Sppraveen666@gmail.com; ORCID: 0009-0007-7149-8271.

³MBBS Graduate, SRM Medical College Hospital and Research Centre, Kattankulathur, Chengalpattu District, India, anushvar2611@gmail.com; ORCID: 0009-0003-6686-0329

Abstract:

Diabetic foot ulcers (DFUs) are a major cause of non-traumatic lower-limb amputation and prolonged hospitalisation. Early discharge may reduce cost and bed occupancy if safety is maintained. Methods: This prospective cohort study compared early discharge (within 5–7 days, with stable vital signs, a healing ulcer, and a home-based wound-care plan) with standard discharge after inpatient wound care and stabilisation. Results: As reported on the poster, early discharge was associated with a 41% reduction in mean treatment cost and an approximately 50% reduction in hospital stay, without a statistically significant difference in readmission or complication rates. Conclusion: With structured outpatient follow-up, early discharge may be a safe and cost-effective approach; the reported findings require confirmation using the complete dataset.

Keywords: Diabetic foot ulcer (DFU); Early discharge; Wound care; Hospital stay; Cost-effectiveness; Readmission; Diabetic foot management; Outpatient follow-up.

INTRODUCTION

DFUs are a leading cause of non-traumatic lower-limb amputation and prolonged hospitalisation [6]. Extended inpatient care increases healthcare costs and exposure to hospital-acquired infection [2]. Evidence supporting early-discharge strategies in DFU management remains limited, particularly in low- and middle-income settings, where the economic burden of DFU complications is substantial [3,4,5]. This study assessed whether early discharge can reduce resource use without increasing clinical risk [1].

OBJECTIVES

- ☐ Assess the clinical safety of early discharge among patients hospitalised for DFUs.
- ☐ Compare the cost-effectiveness of early and standard discharge protocols.
- ☐ Compare readmission, complication, and post-discharge wound-healing outcomes.

MATERIALS AND METHODS

A prospective cohort study was conducted at a tertiary-care centre from January 2024 to March 2025. Adults with DFUs requiring inpatient care were eligible. Patients with critical limb ischaemia, active sepsis, or a requirement for major amputation were excluded. The early-discharge group was discharged within 5–7 days after meeting clinical-stability criteria; the standard-discharge group remained in hospital until completion of inpatient wound care and stabilisation. Both groups received standardised DFU management and outpatient or telemedicine follow-up.

STATISTICAL ANALYSIS

Continuous variables were compared using the two-sample t test, or the Mann–Whitney U test where distributional assumptions were not met. Categorical variables were compared using the chi-square test, or the Fisher exact test for small expected counts. A two-sided p value < 0.05 was considered statistically significant. Analyses were performed using [statistical software and version — to be confirmed before submission].

RESULTS

The cohort showed lower mean treatment costs and shorter hospital stay in the early-discharge group, with readmission and complication rates that were not significantly different between groups. Because the source data do not yet provide sample size, event counts, numerical group means, or confidence intervals, these results are presented as preliminary until verified from the complete dataset (Tables 1–2).

Table 1. Reported outcomes and verification status.

Outcome	Reported early-discharge finding	Verification status
Mean treatment cost	41% reduction	Confirm currency, group means, sample size, and test
Hospital stay	Approximately 50% reduction	Confirm group means and dispersion
Readmission and complications	No statistically significant difference	Confirm event counts and p values
Wound healing and satisfaction	Comparable healing; high satisfaction	Confirm measures and scales

DISCUSSION

Early discharge may reduce inpatient resource use while maintaining comparable short-term outcomes when patients have stable clinical status and reliable outpatient wound care [1]. Cost-effective, structured wound care further supports ambulatory management pathways [7]. Interpretation should remain cautious because the available data do not yet permit assessment of precision, baseline comparability, or adjustment for clinical severity.

CONCLUSION

Early discharge for selected patients with DFUs may reduce hospital stay and treatment costs without an observed increase in short-term complications. A fully reported analysis with sample size, effect estimates, confidence intervals, and adjusted analyses is needed before definitive conclusions are drawn.

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