

Effectiveness of a Multidisciplinary Limb Preservation Program in Reducing Regional Hospitalization Rates for Patients With Diabetes-Related Foot Complications, Manji et al. *The International Journal of Lower Extremity Wounds*, 2024;1-7. Published 2024.

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Level of Evidence: 4

Reviewer:

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The study investigates the effectiveness of a multidisciplinary limb preservation program, specifically the toe and flow model (TFM – podiatric surgery + vascular surgery), in reducing hospitalization rates for patients with diabetes-related foot complications in Alberta, Canada. The research aims to evaluate the impact of TFM on hospitalization rates and length of stay (LOS) for individuals with diabetic foot complications, emphasizing the importance of comprehensive limb preservation services in managing diabetic foot ulcers (DFUs) and related complications.

Methodologically, the study analyzed Alberta's health database from 2007 to 2017, focusing on diabetes patients aged 20 and above hospitalized with diabetes-related foot complications. The data were compared between regions implementing the TFM program and those following the standard of care (SOC). The analysis included data normalization for the diabetic population and statistical evaluation using a standard Student's t-test to assess differences in hospitalization rates and LOS between the TFM and SOC regions.

The study's results demonstrated that regions with the TFM program showed significantly lower hospitalization rates compared to those following the SOC ($p = 1.22E-12$). Over the 11-year study period, the TFM regions maintained lower average and median LOS by 0.13 and 0.26 days, respectively. Access to TFM reduced the risk of hospitalization by up to 30%, with patients in TFM regions experiencing a 21% shorter LOS compared to SOC regions.

The study's findings highlight the effectiveness of the TFM program in reducing hospitalizations and LOS for patients with diabetes-related foot complications. Despite similar demographics and healthcare systems, the TFM region benefited from a dedicated multidisciplinary approach, emphasizing the importance of coordinated care and early detection of risk factors to achieve better outcomes in managing diabetic foot ulcers and related complications.

This research contributes valuable insights into the role of multidisciplinary limb preservation programs, such as TFM, in improving outcomes for individuals with diabetes-related foot complications. The study underscores the significance of comprehensive care and specialized services in reducing hospitalizations and enhancing patient management strategies for diabetic foot ulcers, emphasizing the potential benefits of dedicated limb preservation programs in healthcare settings.



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