Evaluating a Nurse-Led Intervention for Diabetic Foot Ulcers in Rural African Clinics: A 24-Month Outcomes Study from the Mopani District

F, a, t, i, m, a, M, o, h, a, m, e, d

DOI: https://doi.org/10.5281/zenodo.18539925

Abstract

Diabetic foot ulcers (DFUs) are a leading cause of morbidity and lower-limb amputation in sub-Saharan Africa. Rural clinics frequently experience severe resource constraints and a shortage of medical specialists, necessitating effective, decentralised models of care. This study evaluated the 24-month clinical outcomes of a structured, nurse-led wound care intervention for DFUs in rural primary healthcare clinics. A prospective cohort study was conducted across six nurse-led clinics in a rural district. Registered nurses received enhanced training in DFU assessment, debridement, offloading, and infection control. Adult patients presenting with a new DFU were enrolled and managed under a standardised protocol. Primary outcomes were ulcer healing, minor amputation, and major amputation rates over 24 months. The analysis included 127 patients. At 24 months, complete ulcer healing was achieved in 68% of participants. The major amputation rate was 7%. Qualitative feedback from nurses indicated the model was sustainable and improved patient engagement through regular follow-up. A nurse-led intervention for DFU care in resource-limited rural clinics is feasible and associated with favourable long-term outcomes, including a high rate of ulcer healing and a lower incidence of major amputation. Health policy should support scaling up trained nurse-led DFU management in comparable rural African settings. Further research should investigate cost-effectiveness and the

integration of structured preventative education. diabetic foot ulcer, nurse-led care, wound management, rural health, sub-Saharan Africa, amputation prevention This study provides long-term outcome data supporting the task-shifting of diabetic foot care to nurses within African primary healthcare, informing strategies to reduce amputations in under-resourced settings.