

Initiation of a Limb Preservation Service at a Tertiary Care Community Hospital Utilizing a Clinical Care Coordinator

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Introduction/Purpose: Lower extremity wounds and infections associated with diabetes result in significant use of health care resources and expenditures. Patients admitted to the hospital potentially require involvement of hospitalists and specialists from infectious diseases, orthopaedics, vascular and plastic surgery. Hospital services from the laboratory, radiology, and surgical departments may also be utilized, with case management for the complicated discharge planning of outpatient intravenous antibiotics and wound care. We hypothesized that utilization of a dedicated clinical care coordinator (CCC) would decrease patient length of stay and use of hospital resources for patients admitted to a tertiary care with a diabetes related lower extremity wound and/or infection.

Methods: We initiated a Limb Preservation Service (LPS) utilizing a nurse practitioner with advanced training in wound care to act as the CCC. The CCC evaluates patients with diabetic lower extremity wounds and/or infections and coordinates specialty and/or surgical consults, vascular studies and advanced imaging. The CCC also supervises and directs all wound care personnel. The CCC remains the patient liaison throughout the hospitalization, being the point of contact for all specialties and discharge planning. Orthopaedic and vascular surgeons are consulted based on patient need, with the goal of expediting surgical management. Patients were identified over a six-month period before and after initiation of the LPS. We included patients with diagnosis and procedure codes customarily seen in the LPS service. We excluded patients with missing procedure information and diagnosis codes unrelated to diabetes and diabetic foot and ankle wounds. Comparative evaluation regarding hospitalization cost, length of stay, and hospital resource utilization were evaluated.

Results: Sixty-six patients were identified for comparison after exclusion criteria. Overall length of stay (LOS) was shorter during the LPS period relative to the pre-LPS period (8.6 vs. 9.2 days). The LPS period was associated with a decreased LOS for patients with private insurance, self-pay, and workers compensation payment sources (6.3 vs 8.3 days). Greater numbers of orthopaedic and/or vascular consults were requested for patients during the LPS period (82 vs. 75%) and were associated with shorter LOS (8.1 vs. 10.4 days). Consults received in the pre-LPS period resulted in longer hospital stays. Patients discharged to home had shorter LOS after the LPS service was implemented relative to before the LPS was implemented (7.1 vs 7.7 days).

Conclusion: Initiation of a limb preservation service with utilization of a CCC having advanced training and experience in wound care demonstrated an improvement in patient care efficiency and hospital costs associated with the management of patients admitted to the hospital with diabetes-related lower extremity wounds and/or infections. The LPS, under the supervision of the CCC, demonstrated decreased hospital resource utilization, expedited referrals and surgical treatment, and facilitated disposition from the hospital.