Initiation of a Limb Preservation Service at a Tertiary Care Community Hospital

Snow B Daws, MD
Julie Smith Gagen, MPH, PhD
Meylynn Johnson, APN
Linda J Dunaway, APN
Gregory A Lundeen, MD, MPH

Reno Orthopaedic Clinic
University of Nevada, Reno

Reno, NV
Disclosures

• Snow B Daws, MD, Julie Smith Gagen, MPH, PhD, Meylynn Johnson, APN, Linda J Dunaway, APN
  • None

• Gregory A Lundeen, MD, MPH
  • or a member of his immediate family own stock options in any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier (excluding mutual funds)?
    Orthopaedic Implant Company
  • or a member of his immediate family member serve on the editorial or governing board of any medical and/or orthopaedic publication?
    Foot and Ankle International and Techniques in Foot and Ankle Surgery
  • or a member of his immediate family serve on the Board of Directors or a committee of any medical and/or orthopaedic professional society?
    Nevada Orthopaedic Society
Lower extremity wounds and infections associated with diabetes result in significant health care resources and expenditures.

- **Physician Involvement**
  - Hospitalists
  - Infectious Disease
  - Orthopaedic Surgery
  - Vascular Surgery

- **Hospital Resources**
  - Laboratory
  - Radiology
  - Surgical Services

- **Discharge Needs**
  - IV Antibiotics
  - Wound Care
We hypothesized that utilization of a clinical care coordinator (CCC) overseeing patients admitted to a tertiary care with a diabetic related lower extremity wound or infection would decrease:

- Patient Length of Stay (LOS)
- Hospital Resources
Methods

We initiated a limb preservation service (LPS) utilizing a nurse practitioner with advanced training in wound care to act as a CCC who:

- Evaluates patients with diabetic lower extremity wounds/infections
- Orders necessary labs, imaging, and vascular studies
- Determines/coordinates need for specialty/surgical consults, vascular studies and advanced imaging
- Remains the patient liaison during the hospitalization being the point of contact for all the specialties and discharge planning
- Orthopaedic and vascular surgeons are consulted based on patient needs and soonest availability
Methods

- Patients were identified over a six month period before and after initiation of the LPS
- Inclusion criteria were patients with diagnosis and procedure codes customarily seen in the LPS service
- Exclusion criteria were patients with missing procedure information
- Comparative evaluation regarding hospitalization cost, length of stay, and utilization were evaluated
Results

- Sixty-six patients were identified for comparison after exclusion criteria was met.
- 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, self-pay and workers compensation payment sources (6.3 vs 8.3 days).
- Greater numbers of orthopedic or vascular consults were received by patients using the LPS (82 vs 75%) and were associated with shorter LOS (8.1 vs 10.4 days). Consults received before the LPS resulted in longer stays.
- Patients discharged to home had shorter length of stay after the LPS service was implemented relative to before the LPS was implemented (7.1 vs 7.7 days).
Conclusion

• Utilization of a CCC with advanced training and experience in wound care demonstrated an improvement in the management of patients admitted to the hospital with diabetic related lower extremity wounds and infections.

• The CCC decreased hospital utilization, expedited referrals and surgical treatment, and facilitated the disposition from the hospital.