A RETROSPECTIVE TELEPHONE SURVEY DESCRIBING SELF-REPORTED MEASURES OF ADHERENCE TO OFF-LOADING DEVICES IN A CONVENIENCE SAMPLE OF PATIENTS WITH DIABETIC FOOT ULCERS IN SOUTHWESTERN ONTARIO DIABETES MANAGEMENT CLINIC

**Introduction**

The life-time risk for a patient with diabetes to develop a foot ulcer (DFU) is 15-25%. In 2016, Diabetes Canada estimated that up to 25,000 Ontarians with diabetes would develop a foot ulcer that year and approximately 2000 would have a lower leg amputation (Diabetes Canada, 2018). Knowing this, the Southwest Local Health Integrated Network (LHIN), with funding from the Ministry of Health, organized a pilot beginning in January 2018 for application of total contact casting (TCC) to eligible patients. These devices offer pressure offloading one hundred percent of the time, offering the best adherence and “gold standard treatment” for these wounds (Giacalone, Armstrong & Ashry, 1997). We describe the results of a 12-week pilot project where pressure offloading devices were made available to eligible patients with DFU being treated in an integrated diabetes management clinic in Southwestern Ontario.

**Methods**

A registry of patients (n57) with DFUs, managed in a DMC, seen during a 12-week pilot period was used to complete a chart audit describing patient demographics, duration/staging/location of DFU, offloading device prescribed, and wound status. To be included in the telephone survey, patient’s had to have an active offloading device prescribed during the pilot, which excluded custom shoes, orthotics or felt (n38). Patients prescribed offloading devices were telephoned and surveyed using the OAS, developed to capture self-reported adherence and “gold standard treatment” for these wounds (Giacalone, Armstrong & Ashry, 1997). We describe the results of a 12-week pilot project where pressure offloading devices were made available to eligible patients with DFU being treated in an integrated diabetes management clinic in Southwestern Ontario.

**Type of Offloading Device Prescribed at Baseline (n57)**

- None: 5%
- Total Contact Casting: 5%
- Other (Custom Shoes, Forefoot & Orthotics): 26%
- AirCasts: 25%
- Don Walkers: 12%
- CRW: 16%
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**Wound Profile (n57) with one wound during pilot**

- Wound Duration at Onset of Pilot (weeks) (n57)
  - <3 weeks: 37%
  - 3-6 weeks: 15%
  - >6 weeks: 15%
- Wound Closure During Pilot Period
  - Closed (n57): 13%
  - Reopened (n13): 4%
  - Remained Closed (n9): 6%
- Wound Infection at Baseline or During Pilot (n38)
  - Infection Present in Wound: 44
  - None Infected Wounds: 56

**Results**

The integrated, inter-professional, diabetes foot ulcer team includes:

- **Nurse Practitioner:**
  - Elizabeth Harvey, MScN, NP
- **Wound Care Specialists:**
  - Heidi Smith, BScN, RN GNC(c), OCC(c),
  - Mervat Bakeer, MD, CCFP,
  - Wilma Stirling, RN, WWC

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The convenience sample of patients (n57) included the following demographics: 79%(n45) males, 67%(n38) 60-70 years of age, 26%(n15) with >12 months duration of DFU, 44% had DFU > stage 1A (University of Texas classification system), 33%(n19) had DFU involving the plantar surface of the great toe and 67%(n38) were prescribed offloading devices. Of those devices prescribed, 5%(n2) were TCCs, 37%(n14) AirCasts, 24%(n9) CROWs, 18%(n7) DH walkers, and 39%(n15) custom footwear. All 38 patients who received offloading devices were contacted by telephone. 71%(n27) responded to the OAS, where 34%(n13) reported wearing their devices >50% of their waking hours. “Walking/balance issues” 18%(n7) and “social life due to their offloading device, 28%(n7) felt they were a burden to their

**Conclusions**

Foot ulcers precede 85 percent of all lower limb amputations and foot care and patient education programs can reduce these rates by forty to fifty percent (Nakra, n.d.; Vileikyte et al., 2003). The lack of publicly funded access to offloading devices may not be the only factor to be considered in efforts to close this care gap. By understanding the barriers to adherence and the ways in which a patient’s quality of life is affected, steps can be taken to ensure optimal utilization of these devices with the assistance of an integrated inter-professional support network. Further validation and reliability testing of the OAS is required to implement in clinical practice for use with telephone interviews, face-to-face interviews, pen and paper self-reports and kiosk quality assurance surveillance.

**Acknowledgements / References**

The integrated, inter-professional, diabetes foot ulcer team members