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A Telephone Survey Describing Self-Reported Adherence to Off-Loading Devices in Patients With Diabetic Foot Ulcers

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Abstract

Title: A telephone survey describing self-reported adherence to off-loading devices in patients with diabetic foot ulcers (DFU)
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Keywords: diabetic foot ulcer(s), offloading device(s), pressure offloading

Purpose:
1) To describe development of a tool to measure adherence to off-loading devices in patients with DFUs
2) To describe use of the tool in a convenience sample of patients with DFUs

Background:
The life-time risk for a patient with diabetes to develop a foot ulcer (DFU) is 15-25% (Iraj, Khorvash, Ebnesehahidi & Askari, 2013). 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). 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.
Knowing this, the Southwest Local Health Integrated Network (LHIN) in Ontario, with funding from the Ontario 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 where pressure offloading devices were made available to eligible patients with diabetic foot ulcers being treated in a diabetes
management clinic (DMC) in Southwestern Ontario. The novel Offloading Adherence Scale (OAS), developed from two previously validated instruments, was used to capture self-reported measures of adherence.

Methods:
A registry of patients (n=57) 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. Patients prescribed offloading (n=38) were telephoned and surveyed using the OAS, developed to capture self-reported measures of adherence. The OAS was adapted from existing validated tools (Diabetic Foot Ulcer Scale (DFS); Abetz, Sutton, Brady, McNulty & Gagnon, 2002; Predicting Patient Compliance with Medical Treatment; LaFountain, Taylor & Casten, 2008).

Results:
The convenience sample of patients (n=57) included: 79%(n=45) males, 67%(n=38) were 60-79 years. 26% (n=15) had >12 months duration of DFU, 44%(n=25) had DFU >1A (University of Texas classification system), 33%(n=19) had DFU involving the plantar surface of the great toe. Sixty seven percent (n=38) were prescribed offloading devices; of those, 5%(n=2) TCC, 37%(n=14) aircast, 24%(n=9) CROW, 18%(n=7) DH walker, and 39%(n=15) custom footwear). All 38 patients who received offloading devices were contacted by telephone, 71%(n=27) responded, 34%(n=13) reported wearing their devices >50% of their waking hours. “Walking/balance issues” 18%(n=7) and “discomfort” 11%(n=4) were the most consistently identified barriers to adherence.

Conclusion:
Once refined and validated, the OAS offers clinicians a tool to better understand barriers to offloading adherence and develop strategies to promote patient engagement. Further validity and reliability of the OAS is required to implement with other populations and explore other methods of administration (face-to-face interviews, pen and paper self-reports and kiosk quality assurance surveillance).

Title:
A Telephone Survey Describing Self-Reported Adherence to Off-Loading Devices in Patients With Diabetic Foot Ulcers

Abstract Describes:
Completed Work/Project

Applicable category:
Clinical, Students
Keywords:
diabetic foot ulcers, offloading devices and pressure offloading

References:

Abstract Summary:
We describe the results of a 12-week pilot where pressure offloading devices were made available to eligible patients with diabetic foot ulcers being treated in a diabetes management clinic. The novel Offloading Adherence Scale, developed from two previously validated instruments, was used to capture self-reported measures of adherence.

Content Outline:
I. Aims
A) To describe development of a tool to measure adherence to off-loading devices in patients with DFUs
B) To describe use of the tool in a convenience sample of patients with DFUs
II. Background
A) Total contact casting is a "gold standard treatment" for diabetic foot ulcers
B) The Southwestern Ontario Local Health Integration Network provided funding for a twelve week pilot project to eligible patients for offloading devices
C) The Offloading Adherence Scale was developed to describe barriers to adherence once cost was eliminated

III. Method
A) convenience sample from a diabetic management clinic roster of patient's seen during the twelve-week pilot period
B) telephone survey

IV. Findings
A) Describe devices prescribed for offloading
B) Describe patient's self-reported barriers to adherence
C) 71% response rate

V. Implications
A): Once refined and validated, the Offloading Adherence Scale offers clinicians a tool to better understand barriers to offloading adherence and develop strategies to promote patient engagement.