

Sigma Theta Tau International's 29th International Nursing Research Congress

Evaluation of the Best Foot Forward Health Service Model on Prevention of Leg Ulcers

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Purpose

Health systems are slow to embrace the long-term chronic disease management and health promotion approach needed for effective management of older adults with peripheral vascular disease, who experience years of leg ulceration and recurrence cycles. Leg ulcers are costly and slow to heal, frequently leading to prolonged ill-health and loss of independence for around 1% of adults, with incidence increasing with age (O'Meara, Cullum, Nelson, & Dumville, 2012). The average ulcer duration is over six months and up to 70% recur after healing (Edwards et al., 2013). The highest rates of recurrence are within three months of healing (Finlayson, Wu, & Edwards, 2015), suggesting that comprehensive assessment and tailored interventions around the time of healing is vital. In addition, the high rates of recurrence can result in significant health care expenditure to treat, prevent, or decelerate the progression of the disease (Kolluri, 2014; Spentzouris & Labropoulos, 2009; Weller, Buchbinder, & Johnston, 2013). The purpose of this study was to evaluate the outcomes from a 'Best Foot Forward' (BFF) program which aimed to increase client self-care knowledge of their underlying peripheral vascular disease, improve adherence to preventive activities, and prevent leg ulcer recurrence.

Methods

A longitudinal study was undertaken with clients who attended a community based wound clinic for care of a lower leg ulcer. All clients whose leg ulcer was healed between Oct 2012–Dec 2013 were invited to participate in the Best Foot Forward program and return to the follow-up clinic every three months. The Best Foot Forward program consisted of three aspects: regular 'well-leg' clinical assessments after healing; monthly workshops for clients and family for education and peer support; and provision of practical resources to prevent ulcer recurrence. Data were collected on demographic factors, medical history, health, lower limb clinical assessment, psychosocial variables, and client knowledge, self-management and satisfaction with the service. Kaplan-Meier survival curves and Cox proportional hazards regression were used to examine the time to ulcer recurrence and the influence of the BFF program, health service use, preventive treatments and psychosocial factors on recurrence.

Results

Of 93 eligible clients, 39 (42%) agreed to participate in the BFF program. There were no significant differences found in socio-demographic factors or ulcer duration in clients who attended the BFF program, compared to those who did not participate. However, being the primary caregiver for another family member was significantly associated with attending. Mean time to ulcer recurrence was 18.8 weeks (95% CI 9.2–28.4) for clients who did not attend the BFF program, compared to 63.2 weeks (95% CI 59.6–66.7) for those who attended the program (Log-rank test =38.58, $p<0.001$). Cox regression analysis found both the ulcer aetiology ($p=0.006$) and the BFF program ($p<0.001$) significantly influenced time to recurrence. Positive feedback and adherence to self-management activities were recorded at high rates (76%–91%).

Conclusions

This early work suggests that the triad of interventions have potential in reducing ulcer recurrence rates and promoting effective long term management of peripheral vascular disease.

Title:

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Keywords:

chronic disease management, chronic leg ulcers and preventing recurrence

References:

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Abstract Summary:

This presentation will outline the prevalence of leg ulcer recurrence, risk factors for recurrence, provide the structure of a health service program which aimed to improve management of peripheral vascular disease and provide results on the effectiveness of the program on prevention of leg ulcer recurrence.

Content Outline:

Background on chronic leg ulcers, prevalence and known risk factors for ulcer recurrence after healing, current evidence on strategies to prevent leg ulcer recurrence, the components of the Best Foot Forward Program, and results from evaluation of the Best Foot Forward Program on self-management of peripheral vascular disease and rates of ulcer recurrence.

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Professional Experience: Dr Kathleen Finlayson (RN, PhD) has a Masters in Primary Health Care and undertook her PhD in the area of chronic wound management. In 2013 she was awarded a National Health and Medical Research Council Early Career Research Fellowship and works in the Wound Healing Research Programme in the Institute of Health and Biomedical Innovation at Queensland University of Technology. Over the past 20 years Kathleen's research interests have been in wound management and prevention, primary health care, health service delivery, chronic disease management, aged care, and implementation science.

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Professional Experience: Prof. Helen Edwards, OAM is internationally recognised for her work in wound management, ageing and chronic disease. Her research is focused on evaluating models of care for people with chronic diseases, wounds and self-management. In 2012 she was inducted into the Sigma Theta Tau International Nurse Researcher Hall of Fame and in 2014 was inducted as a Fellow of the American Academy of Nursing.

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