

BETTS, A. ODEYEMI, I. FATOYE, F. YEOWELL, G. TADEJ, M. LANT, C.
Email: a.betts@mmu.ac.uk

Objective

To establish treatment pathways, incidence of treatment switching, patient outcomes and resource use of patients with a LU or DFU.

Background

Wounds are deemed chronic when they do not follow a normal healing pattern and can be perpetuated by having an underlying aetiology such as diabetes or venous insufficiency¹. The wounds can take a long time to heal, with dressings requiring frequent changes. This requires resources such as the dressings themselves but also the health care providers (HCP) time, such as community nurse visits which have been seen as key cost drivers in economic studies of DFU and LU^{2,3}.

Establishing current treatment pathways and the reasons for changing a care plan will provide real life understanding regarding the use of dressings and areas providing opportunity to improve patient outcomes and reduce the economic burden of these wounds.

Methods

A multi-centre, retrospective, chart examination study was performed in multiple care settings. The data was extracted by a nurse at the sites into an iPad data extraction application; after completing appropriate ethics and governance protocols. All data was anonymised at extraction. Approximately 100 patient records from the last 4 years were intended to be included, randomly selected from the participating centres.

The care settings included: at a clinic, at hospital, in their own home or in the practice. The HCPs captured included Community Nurses, Podiatrists and Practice Nurses. The data extracted included wound characteristics, each visit by the patient, and every intervention prescribed to the patient. Treatment notes, where changes to a care plan are meant to be recorded, were also extracted. Using the data, reasons for a change of treatment plan were captured. Using a thematic analysis, the reasons for changing treatment were coded and analysed.

Results

Seven UK centres provided data from 97 patients, totalling 107 wounds and 1050 visits. Treatment switching can be seen below in Figure 1. The reasons for treatment switches were coded into 4 main categories: clinical, patient, external or no reason. These contained several sub-categories as shown in Table 1.

The 107 wounds included 71 LUs and 36 DFUs. In terms of rates of wound closure, 20 LUs (28%) and 9 DFUs (25%) healed in less than 20 weeks. For the wounds that healed, the mean time to healing was 70 days for LUs and 69 days for DFUs.

Dressing related resource use was captured, collecting numbers used of primary and secondary dressings. In open wounds, 57% and 22% less secondary dressings were used for LU and DFU respectively, when considering infected wounds, 9% and 30% less secondary dressings were used for LU and DFU.

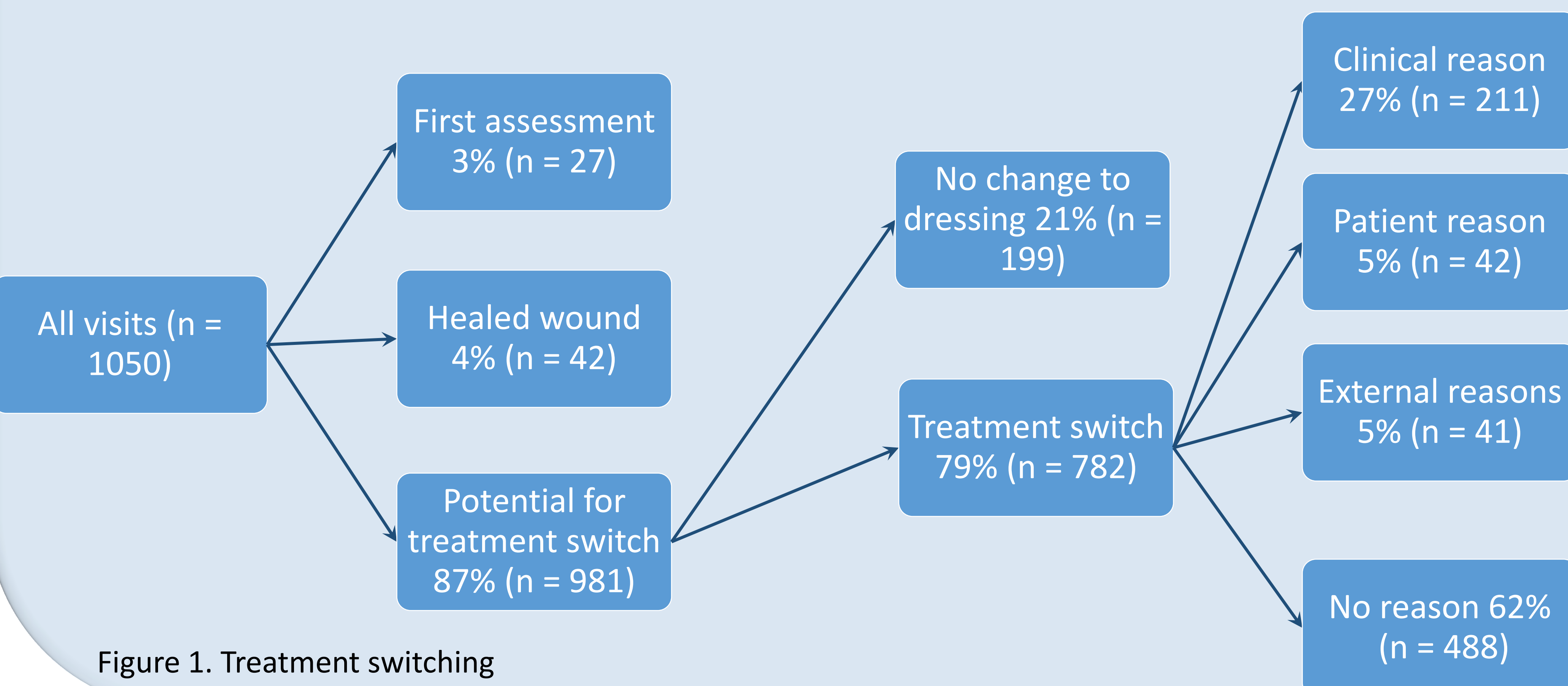


Figure 1. Treatment switching

Table 1. Treatment switching sub-categories

Switch	Sub-categories
Clinical (n = 211)	Wound environment- dry/exudate/sloughy (35%)
	Infection (19%)
	Wound deterioration/impaired healing (18%)
	Wound improvement (17%)
Patient (n = 42)	Dressing related (6%)
	Other (6%)
	Lifestyle (36%)
	Pain (24%)
External (n = 41)	Self-care (10%)
	Tolerance (31%)
	Information/direction from other HCPs (66%)
None (n = 488)	Stock availability (34%)
	Notes, but no reason (19%)
	Notes left blank (81%)

Conclusions

69% of visits resulted in a different type of dressing being applied, with 62% of these changes being made without a reason.

The data also suggests superior clinical outcomes are achieved in Randomised Clinical Trials compared to real life, a randomised clinical trial of neuroischaemic DFU patients found that 30% of patients using a neutral dressing achieved wound closure within 20 weeks⁴. In the active arm of the study, 48% of patients using UrgoStart had confirmed closure of their wound by 20 weeks. This is superior to the outcomes observed here, with only 25% of all DFUs healing by 20 weeks.

Patients in RCTs receive the same intervention for the trial duration; yet this study found a switch in nearly 80% of eligible visits. This lack of consistent care may be responsible for the discrepancy in healing rates observed. The current guidelines for wound dressings are not specific, with clinicians advised to use the 'least costly' dressing that is clinically indicated^{5,6}. It is theorised therefore that without mandated guidance regarding dressings, current treatment switching practices may continue as observed, with potential adverse outcomes on patient health and quality of life.

References:

- Russell, D. et al., 2018. Using a modified Delphi methodology to gain consensus on the use of dressings in chronic wounds management. *Journal of Wound Care*, 27(3).
- Guest, J., Fuller, G. & Vowden, P., 2018. Diabetic foot ulcer management in clinical practice in the UK: costs and outcomes. *International Wound Journal*, 15(1), pp. 43-52.
- Guest, J., Fuller, G. & Vowden, P., 2018. Venous leg ulcer management in clinical practice in the UK: costs and outcomes. *International Wound Journal*, Volume 15, pp. 29-37.
- Edmonds, M. et al., 2018. Sucrose octasulfate dressing versus control dressing in patients with neuroischaemic diabetic foot ulcers (Explorer): an international, multicentre, double-blind, randomised, controlled trial. *Lancet Diabetes Endocrinology*, 6(3), pp. 186-96.
- National Institute for Health and Care Excellence (NICE), 2015. NG19, Diabetic foot problems: prevention and management, National Institute for Health and Care Excellence.
- Scottish Intercollegiate Guidelines Network (SIGN), 2010. Management of chronic venous leg ulcers, Edinburgh: Healthcare Improvement Scotland.