

# Enhancing Quality of Life in Diabetic Foot Ulcer Patients Through Effective Wound Odour Management: A Case Study Using a Cinnamon-based Dressing

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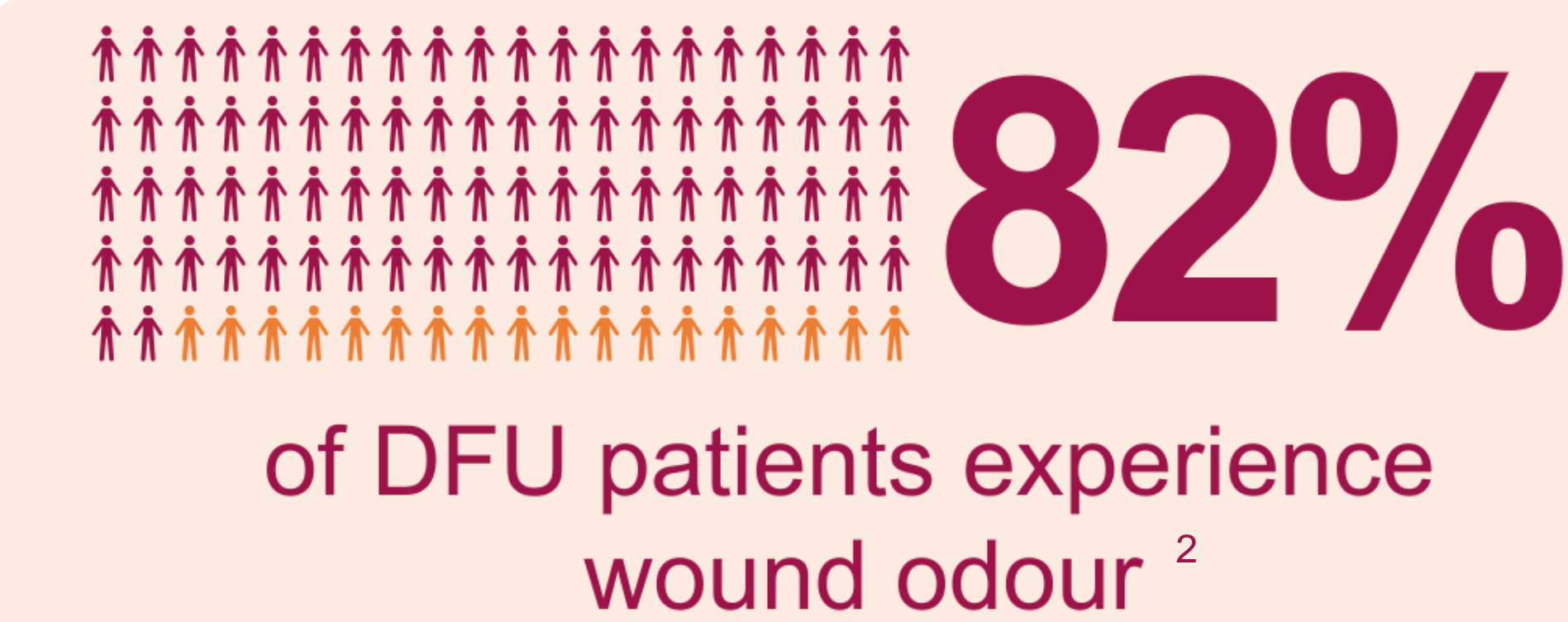
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## Introduction

Diabetic foot ulcers (DFUs) are a common complication in the UK, affecting approximately 25% of the diabetic population during their lifetime.<sup>1</sup> DFUs can be physically and psychologically debilitating, leading to a sense of powerlessness among patients.



Notably, 82% of DFU patients experience wound odour, which can cause significant emotional distress, depression, and revulsion.<sup>2</sup> This odour often leads to social isolation, as patients may avoid public places and social interactions, impacting their emotional well-being and potentially hindering adherence to treatment.



While clinicians naturally prioritise infection prevention and wound healing of a DFU, these processes are often prolonged and complex. Therefore, it is crucial to consider ways to improve patients' quality of life during this period.

This case study examines the effectiveness of Cinesteam®, a new, innovative odour-control dressing containing cinnamon in managing a malodorous DFU in a 59-year-old male patient.

## Method

A single-patient case study was conducted at a community high risk clinic in North Manchester. The patient, with type 2 diabetes, peripheral vascular disease, and stage 4 chronic kidney disease, had limited mobility and relied on a mobility scooter. He presented with a static DFU measuring 6cm x 4cm x 2cm, characterised by a 80% necrotic, and 20% sloughy wound bed and high levels of malodorous exudate, causing maceration of the surrounding skin.

The ulcer was managed following local protocols, using an enzyme alginogel as the primary dressing and a 7-day course of flucloxacillin for infection treatment. To address the odour, Cinesteam cinnamon odour-control dressing was applied as a secondary dressing.



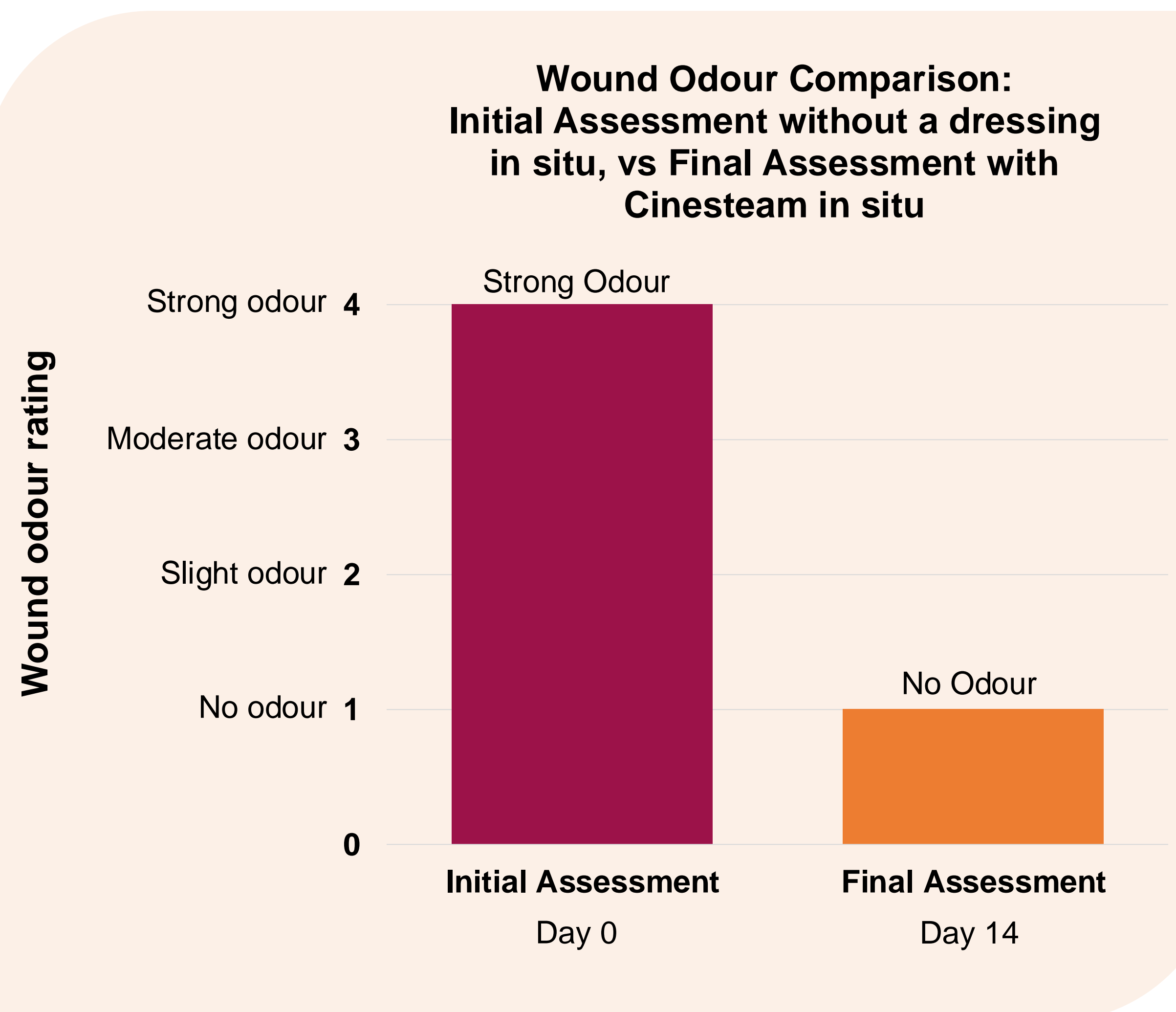
Initial Presentation (Day 0)

A wound odour rating scale was used with ratings of 'no odour' 'slight odour' 'moderate odour' and 'strong odour.' The patient was asked to rate the odour levels with the dressing in place, and the dressing removed. Odour levels were assessed at the start of the study (Day 0) and after two weeks of treatment (Day 14).

## Results

At initial assessment, the odour was rated by the patient as "strong" without any dressing in place and "moderate" with dressings in place (enzyme alginogel and superabsorbent). The treatment plan focused on debridement, odour reduction, and exudate management, using the enzyme alginogel as the primary dressing and Cinesteam as the secondary dressing.

After two weeks, the odour was reassessed. The patient reported that with the Cinesteam dressing in place, the odour had diminished from "moderate" to "none," and without the dressing in place, it had reduced from "strong" to "moderate."



The patient expressed increased confidence due to the odour reduction. His wife, who assisted with dressing changes, was impressed by the significant decrease in odour and its positive effect on her husband's emotional state. The effective odour control allowed the patient to resume social activities without concern.

## Discussion

Whilst the primary focus of clinicians is on debridement, infection control and healing of a diabetic foot ulcer, the healing time of these wounds is often prolonged, complicated by the disease.

During this time, the effects of living with wound odour can have a profound effect on a patient, from feelings of depression and social isolation to suppressing appetite and impacting treatment concordance.

Incorporating odour management into a holistic treatment approach is essential. Clinicians should assess wound odour from the patient's perspective and discuss its impact on their daily life.

The cinnamon odour control dressing, Cinesteam, consists of an absorbent layer together with a sealed sachet containing cinnamon. Cinnamon acts by adsorbing unpleasant volatile organic compounds released by the wound, and masking residual odour with the spice's natural pleasant fragrance.

Effective odour management not only enhances the patient's quality of life but also improves interactions with others, promoting acceptance and adherence to treatment plans.

## Conclusion

In my opinion, Cinesteam dressing is an effective tool for managing wound odour, easy to apply and supports patient self-care and adherence to treatment.

In this case, the patient appreciated the pleasant fragrance, and the control of odour allowed him to regain confidence in leaving the house and engaging socially.

**As an experienced wound care clinician, I have observed the significant impact that wound odour can have on patients' quality of life, often leading to embarrassment and social withdrawal. Introducing a dressing that can alleviate these concerns is invaluable in improving patient outcomes.**

## References

- (1) Singh N, Armstrong DA, Lipsky BA. Preventing foot ulcers in patients with diabetes. *JAMA* 2005; 293: 217-28.
- (2) Teresa M, Pereira DJ, Salome GM, Francisco A, Quintanilha DP. Feelings of powerlessness in patients with diabetic foot ulcers. *Wounds*. 2014;26:172-7