

Reassessment-Driven Dressing Rotation in Chronic Wound Care: A Brief Report

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Abstract

Introduction. Chronic wounds are a major clinical challenge because of delayed healing, recurrence risk, and reduced quality of life

Methods. A 90-year-old frail patient presented with a chronic venous-related ulcer of the right lateral malleolus persisting for 10 years.

Wound management followed CARE guidelines with repeated assessment using the TIME framework, Triangle of Wound. Assessment, and NERDS/STONEES criteria. Treatment included PHMB cleansing, medical-grade honey, and hydrogel dressings adjusted according to wound progression.

Results. Baseline wound size was 5 × 4.5 × 0.8 cm with moderate exudate, partial fibrin coverage, and pain intensity of 6/10 on the VAS scale. Progressive reduction in exudate and inflammation was observed, followed by granulation and epithelialization. Complete wound closure occurred after 15 weeks, with pain reduction to 0/10 and no adverse events.

Discussion. Reassessment-guided dressing rotation within an advanced home-care pathway was associated with healing of a long-standing chronic ulcer.

Keyword: Chronic Wounds, Wound Care, Advanced Wound Care

Introduction

Dressing selection in wound care is a dynamic process that should evolve through ongoing clinical reassessment.¹⁻³ Changes in topical treatment are sometimes interpreted as uncertainty; however, dressing "rotation" may represent a structured, assessment-driven strategy aligned with evolving wound needs and therapeutic objectives.^{2,3} As wound characteristics change over time,

adapting the dressing regimen supports wound bed preparation, prevents complications, and maintains a patient-centred approach.²⁻⁴ This paper explores dressing rotation as a purposeful clinical choice, supported by a case vignette illustrating reassessment-guided decision making.

Current international guidance frames dressing selection as a goal-oriented process guided by structured clinical reassessment rather than a fixed, product-based approach.²⁻⁴ Across the

healing trajectory, topical management should be aligned with evolving wound needs and clearly defined objectives, including microbial/inflammation control, effective exudate management, maintenance of an optimal moist environment, protection of the wound edges and periwound skin, and support for atraumatic removal.²⁻⁴ Regular re-evaluation is therefore essential to recognise changes in wound trajectory (e.g., increasing exudate, maceration, odour, pain, inflammatory signs, or lack of progression) and to adapt the dressing strategy accordingly.

Within this framework, widely used clinical models support a systematic reassessment of tissue status, inflammation/infection indicators, moisture balance, and epithelial advancement (TIME/Wound Bed Preparation).^{5,6} The Triangle of Wound Assessment further reinforces the need to evaluate not only the wound bed, but also the wound edge and surrounding skin, where early deterioration may first become evident.⁴ In routine practice, structured clinical cues can be used to screen for superficial critical colonisation versus deeper infection (e.g., NERDS and STONEES), supporting timely escalation of topical antimicrobial strategies, diagnostics, or systemic therapy when indicated.^{7,8} These models help define phase-appropriate “dressing aims” over time (e.g., absorption, antimicrobial control, protection of the margins/periwound, support to debridement, or epithelial protection), reinforcing dressing rotation as a purposeful reassessment-driven strategy rather than an inconsistent change of plan.^{2,3,5,6}

The following case vignette illustrates how structured reassessment guided dressing rotation over time, aligning topical choices with evolving wound needs and patient-centred goals.

Dressing “rotation” should not be interpreted as an improvised gesture or a decision driven by therapeutic uncertainty or economic logic. Rather, it represents a conscious and structured care intervention, grounded in updated clinical assessment and in the principle of adapting topical treatment to wound evolution and to the needs of the person receiving care.

The decision to change a dressing should be based on systematic observation of the wound and periwound skin, including the quantity and quality of exudate, the presence of devitalised tissue, local signs suggestive of infection, periwound integrity, and overall tolerability of the dressing – both physically and emotionally.²⁻⁶ Structured documentation through serial photography,

together with validated frameworks such as TIME, the Triangle of Wound Assessment, and practical clinical indicators such as NERDS/STONEES, can support continuity and clinical consistency in decision making.^{2-7,9} However, technical evaluation alone is rarely sufficient to optimise outcomes. Each dressing change should be accompanied by clear and reassuring communication, enabling patients to understand the rationale for treatment adaptation and to perceive it as an integral component of a coherent care pathway, thereby promoting trust and adherence.^{2,3} Practice-based reports and audits on structured wound-care pathways suggest that dynamic reassessment combined with shared explanation of therapeutic choices may contribute to improved outcomes and patient satisfaction. Overall, structured dressing rotation integrated with effective communication may represent a key element in optimising wound care and strengthening the therapeutic alliance.^{1,10}

Methods

Clinical approach and reporting framework

This case was managed in an advanced home-care setting by a wound care nurse specialist, adopting a continuous reassessment approach with therapeutic adaptation across healing phases. This manuscript reports a descriptive single-patient case report developed in accordance with the CARE guidelines, with the aim of illustrating the clinical-care pathway of a frail older adult with a ten-year chronic ulcer and highlighting how clinical nursing reasoning and targeted dressing rotation can support wound progression.

The case was selected based on predefined clinical criteria, including a chronic wound duration of at least ten years without complete healing, geriatric frailty, and full adherence to the agreed care plan. Wound assessment and decision making were supported by validated tools, including the TIME framework, the Triangle of Wound Assessment, and the NERDS/STONEES criteria for screening clinically relevant signs suggestive of biofilm involvement and infection risk.³⁻⁶ Clinical monitoring focused on wound closure status and the time course of healing (weeks). Additional monitoring domains included exudate evolution, pain intensity assessed using the Visual Analogue Scale (VAS), adherence to the proposed regimen, and patient-reported satisfaction documented during follow-up.

Case vignette

A 90-year-old patient with geriatric frailty and reduced mobility was referred for advanced management of a chronic ulcer located at the right lateral malleolus. Relevant comorbidities included hypertension, osteoarthritis, and mild cognitive decline, which increased vulnerability in daily wound care. The wound had been present for over ten years and had never achieved complete closure, alternating periods of stability with recurrent episodes of worsening.

According to family members, previous management relied on traditional dressings and non-structured topical interventions, without systematic reassessment or a dynamic therapeutic plan guided by wound evolution. Dressing choices frequently alternated between dry dressings and topical products without clearly defined phase-oriented aims, contributing to prolonged tissue stagnation and recurrent deterioration.

At first assessment, key issues included the absence of an advanced phase-oriented approach, lack of targeted dressing rotation, limited structured evaluation of bacterial burden, and suboptimal adherence to treatment, partly influenced by long-standing distrust associated with repeated unsuccessful care. A personalised care plan was therefore established to support wound bed preparation, control suspected biofilm, and promote epithelial progression through reassessment-guided dressing rotation and consistent therapeutic communication aimed at strengthening patient involvement and trust.

Devices and therapeutic rationale

Advanced topical interventions were selected and rotated according to wound phase and reassessment findings, with the aim of controlling

microbial burden, supporting removal of non-viable tissue, and promoting progression toward granulation and epithelialization.^{9,11} In the initial phase, a polyhexanide plus poloxamer solution (PHMB) was used for wound cleansing, supporting disruption of biofilm and reduction of bacterial load while preserving viable tissue.¹¹

Medical honey was subsequently introduced either as a direct topical application or via impregnated dressings. Its use was guided by its reported antimicrobial and anti-inflammatory activity and its osmotic mechanism, which may assist exudate management, support wound bed cleansing, and promote granulation and epithelial progression.¹²

During the phase requiring further hydration and facilitation of tissue cleansing, a sterile hydrogel was incorporated to maintain an optimal moist environment and support autolytic debridement of devitalised tissue. In addition, hydrogel-based management was used to support comfort and local pain reduction while promoting a wound microenvironment favourable to cellular migration¹³, as summarised in Table 1.

Product selection and rotation were guided by structured reassessment and phase-specific dressing aims, with treatment adjustments aligned to wound trajectory and patient-centred needs.

Ethical considerations

Written informed consent for publication of clinical information and images was obtained from the patient and/or legal representative. All images were de-identified.

Results

Following implementation of the advanced

Table 1. Key nursing interventions in the management of complex vulvoperineal wounds.

Device	Mechanism of action	Clinical rationale	Main objectives
PHMB (Polyhexanide + Poloxamer)	Broad-spectrum antiseptic with anti-biofilm activity; surfactant facilitating microbial detachment	Supports reduction of bacterial load while preserving viable tissue; useful in early phases when biofilm or increased bioburden is suspected	Bioburden control; infection prevention; wound bed preparation
Medical honey	Osmotic antimicrobial activity; acidic pH; modulation of local inflammation	Supports wound bed cleansing and exudate management; may promote granulation and epithelial progression through osmotic and antimicrobial effects	Exudate management; local infection control; wound bed cleansing
Sterile hydrogel	Maintains a moist environment; hydrates devitalised tissue; supports cell migration	Facilitates autolytic debridement and supports newly formed tissue; may improve comfort	Hydration; autolytic debridement; pain reduction; support to granulation/epithelialisation

care plan, progressive clinical improvement in the wound bed and periwound condition was documented through serial reassessment and photorecording (Figures 1-2). Early evolution was characterised by a reduction in visible inflammatory signs and exudate, with changes consistent with improved local control of the wound microenvironment during the sequential use of PHMB and medical honey (Figures 3-4).

Subsequently, the introduction of a hydrogel-based moist environment supported ongoing tissue cleansing, with progressive reduction of devitalised material and the development of viable granulation tissue, followed by gradual epithelial advancement (Figures 4-5). Over the weeks, a marked clinical improvement was observed in exudate level, pain, and malodour, alongside increased patient comfort and perceived quality of life.

Healing progressed steadily, culminating in complete wound closure within 15 weeks, representing a substantially shorter healing trajectory compared with the prolonged non-healing history reported in the patient's previous care pathway (Figure 6).

This case illustrates how structured reassessment and phase-oriented dressing aims can guide topical treatment adaptation over time within an advanced home-care pathway.

Advanced nursing intervention

The care pathway was delivered within an advanced home-care setting through structured reassessment guided by the TIME framework, regular photodocumentation, and continuous monitoring of wound bed and periwound evolution. Management was dynamic and phase-oriented, with dressing rotation guided by clinical findings and predefined therapeutic aims (e.g., exudate control, microbial burden management, wound bed preparation, and support to epithelial progression).^{4,5,10} Caregiver involvement was integrated through periwound protection measures and reinforcement of adherence to the agreed plan, with ongoing attention to local risk factors.¹⁴

Clinical decisions were reviewed on a weekly basis to ensure continuity of care and timely adaptation of topical management according to wound trajectory and patient-centred needs.

Treatment steps

Topical management was adapted over time through scheduled reassessment and dressing rotation aligned with the healing phase and evolving wound needs.

Initial phase: Exudate and suspected increased bacterial burden control

During the initial phase, characterised by high exudate and clinical features suggestive of increased local bacterial burden, the primary aims were to optimise the wound microenvironment and support wound bed preparation. Dressings were performed every 48 hours, including cleansing with a polyhexanide plus poloxamer solution (PHMB), application of medical honey, and periwound skin protection using a barrier product. A highly absorbent polyurethane foam dressing was used to manage exudate.

Intermediate phase: Wound bed hydration and granulation support

As the wound bed showed progressive improvement with emerging granulation tissue and reduced devitalised material, dressing frequency was extended to every 72 hours. A sterile hydrogel was introduced in combination with polyurethane foam to maintain a moist environment and support ongoing tissue cleansing, while continuing periwound protection and structured monitoring.

Final phase: Epithelial progression and consolidation

In the later phase, characterised by consolidation of granulation and epithelial advancement, dressings were maintained every 72 hours. PHMB was reintroduced as part of reassessment-guided topical management to support wound stability, in combination with a moderately absorbent foam and continued periwound protection.

Clinical evolution and dressing rotation steps are summarised in Table 2.

Complete wound closure was achieved within 15 weeks, a notable outcome considering the ten-year chronicity and the prolonged non-healing history reported during prior management.



Figure 1. Baseline appearance of the right lateral malleolar ulcer at initial assessment (day 0), with periwound erythema and clinical features suggestive of local inflammation and clinical features consistent with increased local bacterial burden.



Figure 2 (day 17). After wound bed cleansing wound appearance showing reduced fibrinous tissue and lower exudate level, with improved periwound condition and decreased lower-limb oedema.



Figure 3 (day 30). Wound appearance showing increased granulation tissue and reduced devitalised material following reassessment-guided adaptation of topical management, with subsequent introduction of a hydrogel-based approach.



Figure 4 (day 62). Wound appearance showing increased granulation tissue and reduced local inflammatory signs during ongoing reassessment-guided topical management.



Figure 5 (day 91). Stable wound appearance with ongoing re-epithelialisation after reassessment-guided transition to a medical honey-based dressing.



Figure 6. Wound closure at day 102 (week 15), showing a stable clinical appearance at follow-up.

Table 2. Timeline of reassessment-guided dressing rotation and clinical evolution over 15 weeks until wound closure.

Week	Clinical reassessment findings	Dressing aims	Topical intervention	Observed response
0	High exudate; periwound erythema; clinical features suggestive of increased local bacterial burden	Exudate control; wound bed preparation; microbial burden management	PHMB cleansing + medical honey + high-absorbency foam + periwound barrier	Reduced oedema; reduced exudate; improved periwound condition
3	Reduced exudate; reduced devitalised material; emerging granulation	Maintain moist environment; support tissue cleansing; protect periwound	Hydrogel + foam + periwound barrier	Increased granulation; ongoing reduction of non-viable tissue
8	Predominantly viable tissue; improving wound bed stability	Support epithelial progression; maintain protection	Reassessment-guided topical management (PHMB as indicated) + moderate-absorbency foam + periwound barrier	Continued epithelial advancement
15	Wound closed	Maintain skin integrity	No dressing required	Stable closure at follow-up

Discussion

Chronic wound management requires a multidimensional approach integrating structured clinical assessment, phase-oriented topical interventions, and an effective therapeutic relationship.^{1,10} In this case, reassessment-driven dressing rotation combined with consistent patient communication was associated with progressive wound improvement along the healing continuum.

Complete closure of a chronic ulcer with a ten-year history was achieved within 15 weeks, representing a notable outcome in the context of geriatric frailty and prolonged non-healing under previous management. The strategy adopted relied on systematic clinical reasoning supported by validated assessment frameworks, including TIMERS/Wound Bed Preparation^{5,9}, the Triangle of Wound Assessment⁴, and NERDS/STONEES criteria⁷, which guided reassessment and the definition of phase-specific dressing aims over time. The sequential use of PHMB, medical honey, and hydrogel was implemented to address evolving needs such as local microbial burden management, exudate control, wound bed hydration, and support to granulation and epithelial progression, within a dynamic and individualised care plan.

This approach aligns with contemporary wound care models that emphasise continual reassessment – namely, cyclical evaluation of wound status and treatment response with timely adaptation of the topical strategy.⁵ Frameworks

such as TIMERS and the Triangle of Wound Assessment reinforce the need to update clinical decisions based on wound trajectory, supporting dressing changes as a structured component of evidence-informed practice rather than a marker of therapeutic uncertainty.^{5,15} In this perspective, dressing rotation can be conceptualised as a planned reassessment-driven optimisation process, anchored to measurable clinical findings and predefined objectives.⁵

A further relevant element in this case was patient and caregiver engagement through clear, continuous communication. Explaining the rationale for dressing changes appeared to strengthen trust, improve adherence, and reduce uncertainty related to treatment variation. This is clinically relevant, as patients may interpret frequent changes as an indicator of failure, whereas reframing dressing adaptation as a planned component of care may support acceptance and continuity.¹⁶

Practice-based reports and clinical audits suggest that structured reassessment pathways and shared explanation of treatment decisions may contribute to improved care processes and patient experience in chronic wound management. Within this context, the relational dimension can be considered an integral component of advanced wound care delivery, complementing technical expertise and supporting sustained engagement with the treatment plan.^{15,17}

Overall, this case highlights the role of nurses with advanced competencies in the

management of complex wounds, where clinical reasoning, ongoing assessment, and therapeutic communication operate as interconnected elements of contemporary practice.¹⁸ While conclusions are inherently limited by the single-case design, this experience supports the clinical plausibility and feasibility of reassessment-driven dressing rotation as both a technical and relational strategy within advanced home care.

Although limited by the single-patient design, lack of microbiological biofilm quantification, and relatively short follow-up, this case highlights the potential value of reassessment-guided wound management in home care. The patient reported reduced pain during dressing procedures and expressed satisfaction and greater confidence in the care plan, particularly when the rationale for dressing changes was explained during follow-up visits.

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