

## Introduction

Polyhexamethylene biguanide (PHMB) is a broad-spectrum antimicrobial agent effective against a wide range of Gram-positive and Gram-negative microorganisms, including those frequently associated with wounds. It acts by disrupting microbial cell membranes while maintaining a favourable safety and tolerability profile. Growing clinical evidence indicates that PHMB can reduce wound bioburden, alleviate pain, promote improved healing outcomes, support antimicrobial stewardship, and enhance patient quality of life. Making PHMB a suitable option for both acute, and chronic/ non healing wounds especially those with persistent inflammation and stalled healing.

**Aim:** A Polyhexamethylene biguanide (PHMB) -impregnated fiber dressing has been developed to deliver rapid antimicrobial action, improved wound progression and patient comfort. The dressing is indicated for use

- Post-surgical incisions
- Venous stasis ulcers
- Donor sites
- Superficial and partial thickness burns
- Wounds inflicted by trauma
- Pressure ulcers
- Diabetic ulcers
- Abrasions and lacerations
- Dermatologic disorders

This evaluation reports real-world clinical feedback compared with dressings that would previously be used on the same type of wounds, predominantly silver fiber products.

## Methods

**Method:** A prospective clinical feedback programme was conducted across hospital and community wound care settings. Adult patients with acute or chronic wounds that had signs of or were high risk of infection requiring antimicrobial intervention were included. The wounds were managed with the PHMB Fiber dressing as part of routine care. Clinicians completed structured assessments via a clinical and product feedback form covering the following areas:

- evaluating antimicrobial response
- wound progression and peri-wound changes
- slough, and exudate management
- ease of dressing application and removal.

Patient-reported pain during wear and at dressing change was also collected. Clinicians also provided comparative feedback based on their experience using prior dressings on similar wound types.

## Results

A wide range of wound aetiologies were included in the evaluation (Figure 1), illustrating the versatility of the PHMB Fiber dressing across diverse clinical presentations. Clinician feedback observed (Figure 2) and highlighted:

### Rapid antimicrobial

Early visible reduction in local infection symptoms  
Faster stabilization of the wound environment, enabling earlier transition to granulation.

### Improved Wound progression

Earlier wound granulation frequently reported withing 48hours  
Marked improvement in peri-wound condition  
Accelerated reduction in slough, often attributed to the dressing's patented quilting construction, which enhances vertical exudate wicking and retention of devitalized tissue.

### Exudate Management and Patient Comfort

Clinicians consistently reported effective exudate control, even in moderate to highly exuding wounds.  
Patients described lower levels of pain both during wear and at dressing change.  
Improved comfort linked to atraumatic removal and maintenance of peri wound integrity.

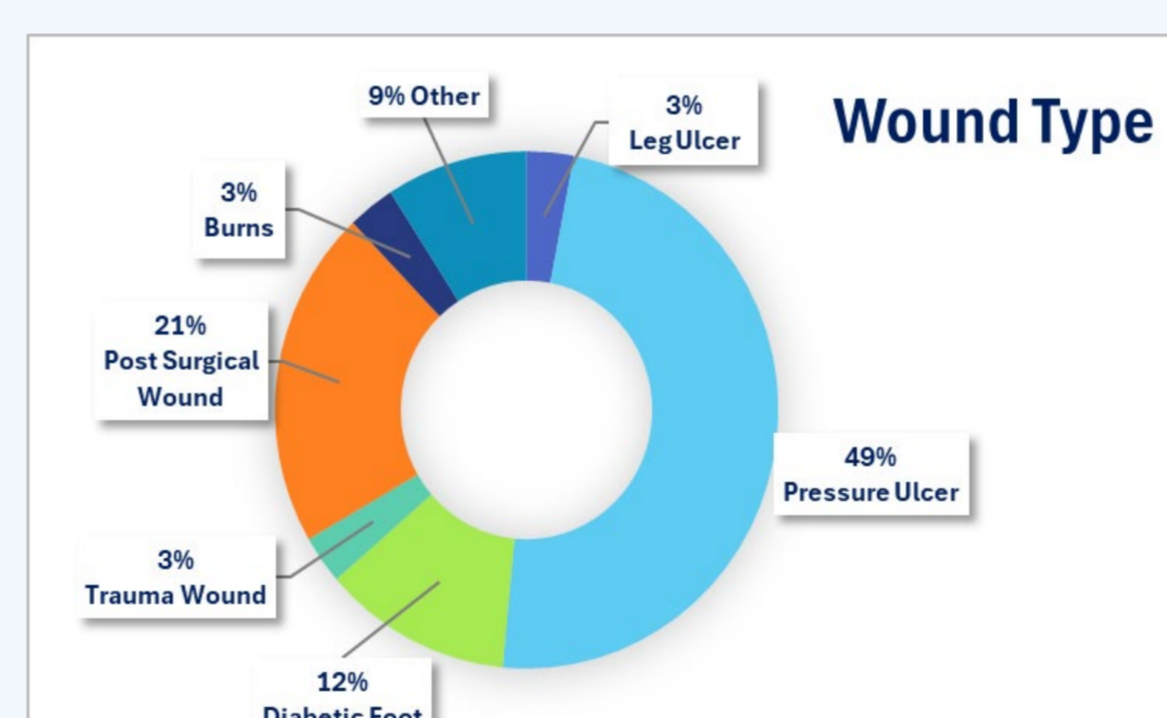


Figure 1

Overall clinical feedback was extremely positive as summarized in Figure 2.

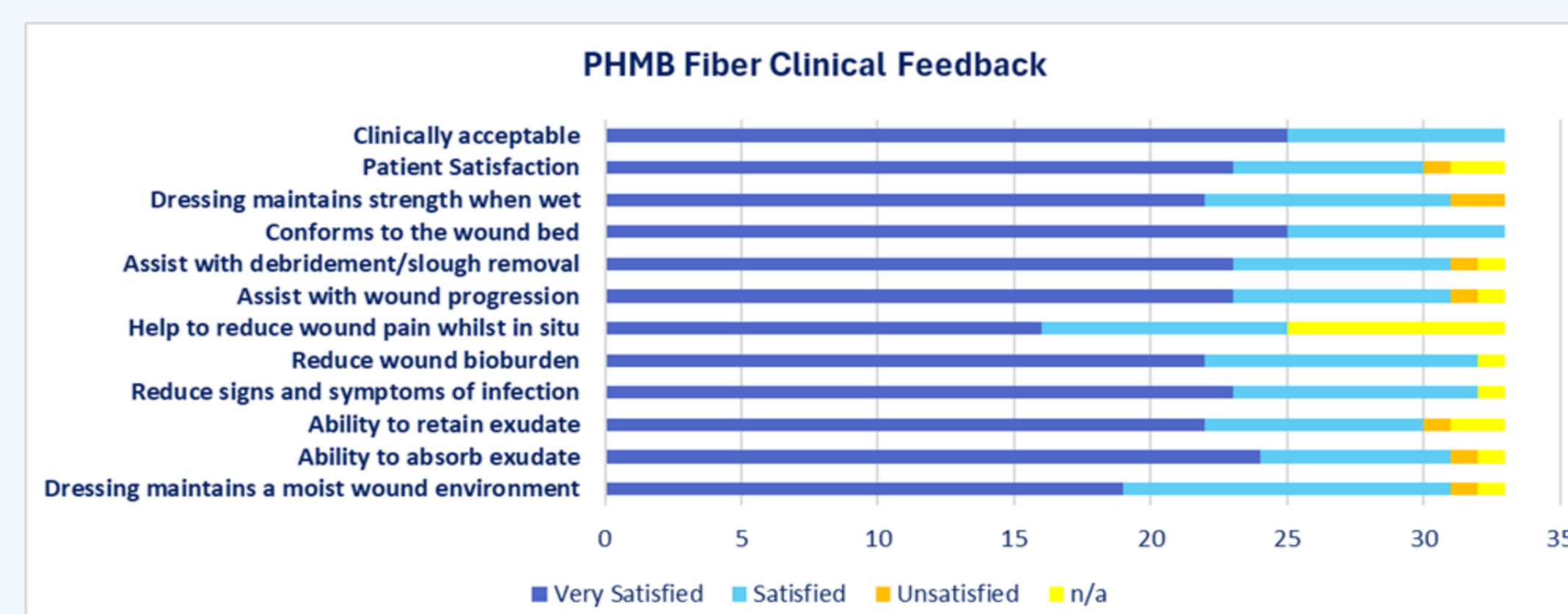


Figure 2

The expressed an 87% preference for the PHMB Fiber dressing over Silver Fiber dressings, attributing this to its optimal balance of antimicrobial performance, exudate management, patient comfort, and ease of application

## Results

A total of 33 responses were collated with only one unsatisfactory result. On further investigation although the PHMBCMC dressing was clinically indicated, the dressing was modified to a smaller-than-recommended size insufficient to cover the wound bed. The resulting performance limitations were attributed to user application technique rather than product functionality.



Clinician Comments

Figure 3

- PHMB Fiber is highly effective in managing wounds
- Good slough removal Wound progression visible with one use, in situ for 7 days
- PHMB Fiber increased the granulation of the wound bed. Exudate became less
- PHMB Fiber decreases the slough and necrotic tissue. Wound has improved a lot
- PHMB Fiber dressing is highly recommended for infected wounds
- Good antibacterial effect and reduces the signs and symptoms of infection
- PHMB Fiber decreases the slough and necrotic tissue. Wound has significantly improved
- PHMB Fiber is highly recommended in the hospital setting especially chronic wounds.

## Conclusion

Antimicrobial stewardship (AMS) remains fundamental in modern wound management, guiding the use of effective non-antibiotic interventions that limit the development of resistance while ensuring robust antimicrobial activity. Polyhexamethylene biguanide (PHMB) provides broad-spectrum efficacy, a strong safety profile, and a low propensity for inducing resistance, positioning it as a valuable agent within stewardship-aligned treatment pathways. Consistent with clinician feedback, PHMB Fiber dressing has emerged as an essential element of a comprehensive wound care portfolio, offering reliable antimicrobial protection and clinical versatility while fully supporting AMS principles.

The PHMB Fiber dressing supports AMS objectives by delivering rapid, effective antimicrobial activity without reliance on silver or antibiotic-based technologies. Clinicians reported reduced pain, improved patient comfort, and indications of enhanced healing. While further studies are warranted to strengthen the evidence base, the clinical feedback gathered clearly highlights the value of PHMB Fiber dressing as a strong alternative to silver fiber dressings

The author acknowledges that larger evaluations are warranted to strengthen the evidence base and refine best-practice guidelines.

## References

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