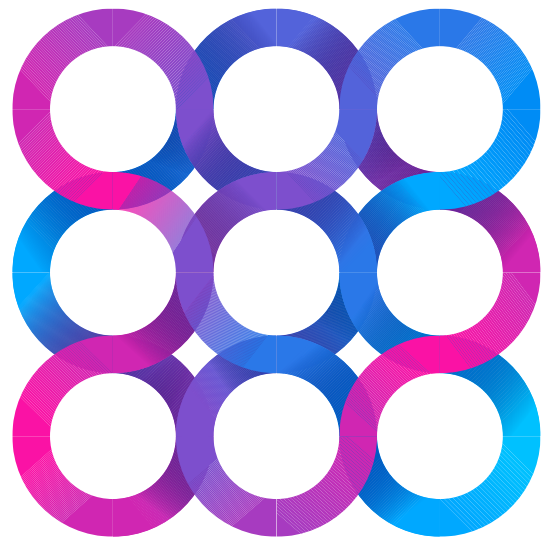


# Best Practice Statement

Implementation of a validated non-healing wounds pathway in practice: learning from UK healthcare settings

2025



PICO™ Single-Use Negative  
Pressure Wound Therapy  
System (sNPWT)

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Project overview: methods and  
results

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Pre- and post-implementation  
learnings

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Practical tips

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## BEST PRACTICE STATEMENT: IMPLEMENTATION OF A VALIDATED NON-HEALING WOUNDS PATHWAY IN PRACTICE: LEARNING FROM UK HEALTHCARE SETTINGS

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### GLOSSARY:

**Acute wounds:** wounds that have started to heal after approximately 2–4 weeks (Cullen and Gefen, 2023)

**Challenging/complex wounds:** a wound is considered complex if the patient has comorbidities or other risk factors that can affect wound healing (e.g. older age, smoking and medication), if the wound is in a challenging location, or if the clinician must manage the wound in a difficult environment or situation

**Granulation tissue:** a component of the wound healing process, it contains new connective tissues and blood vessels that form as the wound heals. May be red and bumpy in appearance

**Non-healing wounds:** wounds that have not started to heal after approximately 2–4 weeks. Different wound care guidelines may slightly vary on the exact duration for a wound to become non-healing and some guidelines may even consider 6 weeks or  $\leq 3$  months as the time point at which a wound should be considered non-healing (Cullen and Gefen, 2023; Wounds UK, 2022).

**NPWT:** Negative pressure wound therapy is a wound care system that uses suction to draw out wound exudate, compresses the wound and helps remove infectious materials. Altogether, these actions help promote wound healing

**sNPWT:** A single-use negative pressure wound therapy system, such as PICO™ sNPWT

**tNPWT:** traditional negative pressure wound therapy

**Wound:** an interruption in the continuity of the skin caused either intentionally (e.g. a surgical incision) or non-intentionally (e.g. trauma), or related to an underlying physiological process (e.g. diabetic foot ulcer)

**Wound aetiology:** causative factors for development of a wound

**Wound depth:** a measure of how deep the wound is. The depth may vary in different parts of the wound (Jørgensen et al, 2015)

**Wound exudate:** normally thin and pale red to pink, this exudate is a secretion from wounds in the inflammatory stage. Present in non-healing wounds because they are trapped in the inflammatory stage. Exudate type, colour and consistency (viscosity) can change at different stages of healing and if the wound is infected.

**Wound volume:** a three-dimensional measurement of wound size, including length, width and depth. Provides a more accurate measure of the wound progression/healing than just the surface-based measures, i.e. width and length (Jørgensen et al, 2015)

# Foreword

**N**on-healing wounds are a significant burden on patients, clinicians and healthcare systems worldwide. Although it is hard to estimate the exact cost of care for non-healing wounds, overall wound care estimates reach several billion pounds per year in developed countries (Queen and Harding, 2023). For the National Health Service (NHS), the majority of wound care costs – one of the top health expenditures of the NHS – are attributed to non-healing wounds in the UK population (Guest et al, 2020). This situation is only going to get worse as prevalence trends have shown a 71% increase in non-healing wounds from 2012/2013 to 2017/2018 (Guest et al, 2020).

Not only is there a need in the UK to accurately predict the future population needs for wound care, but it is also crucial to proactively and urgently tackle the projected rise in costs. Equally important is the need to enhance the patient experience, improve patients' quality of life (QoL), and support the health and wellbeing of frontline staff delivering care to this growing population. A comprehensive approach that focuses on improved outcomes and financial sustainability, alongside the wellbeing of both patients and healthcare professionals, is essential for ensuring high-quality, effective and safe wound care services.

PICO™ single-use negative pressure wound therapy (sNPWT) for non-healing wounds provides an opportunity to achieve improved outcomes and long-term cost-effectiveness (Kirsner et al, 2019; 2020; Dowsett et al, 2022). With a proven clinical efficacy over traditional NPWT (tNPWT), PICO™ sNPWT can help clinicians achieve better outcomes for their patients and reallocate crucial resources where most needed (Kirsner et al, 2019; 2020; Dowsett et al, 2022).

The PICO™ sNPWT pathway for non-healing wounds has been validated across a previously reported cohort of 323 patients

(Hampton et al, 2022). Measuring further outcomes across different wound aetiologies continues in the UK. The implementation of the PICO™ sNPWT pathway was presented in a Best Practice Statement document (BPS) released in 2022 (Dowsett et al, 2022). This current BPS is an evolution of that story of implementation. It is important to highlight that Jacqueline Dark and her team were instrumental in the launch of the 2022 BPS, and this statement stands true for this current document also. The evolution of these two BPS documents highlights the often-overlooked area of how clinicians can use a BPS to align to evidence-based clinical practice. This alignment can help achieve positive outcomes when a validated pathway, alongside robust data collection, is implemented across local populations of non-healing wound patients.

The objective of this publication is to share experiences and learnings from the PICO™ sNPWT roll-out and provide actionable insights. It shows the positive outcomes achieved and the practical lessons learned across the UK after implementation of the PICO™ sNPWT pathway. Therefore, clinicians can use this current BPS to align their clinical practices to this validated pathway for non-healing wounds. This BPS document summarises major outcomes, setting-specific challenges, and potential solutions. It also provides practical tips and notable patient experiences that reinforce best practice for the management of non-healing wounds.

This document does not provide conceptual background on sNPWT, except a brief introduction. For that purpose, references to relevant literature are provided throughout. It is not possible to overstate the importance of early identification and intervention for achieving optimal outcomes for people with non-healing wounds. This BPS document underlines this message.

**Jacqui Fletcher OBE, Chair**

# Introduction

All patients should be assessed and receive essential standard care by a registered healthcare practitioner who has the appropriate competence and capability.

## Best Practice Statement

It is important that clinicians are able to identify comorbidities and risk factors that can delay wound healing. This can ensure that all patients, especially those in the at-risk population, receive timely diagnosis and treatment.

## Best Practice Statement

### What are non-healing wounds?

Acute wounds start to heal after approximately 2–4 weeks (Cullen and Gefen, 2023). A wound becomes non-healing if it has failed to heal after 4–12 weeks of appropriate treatment (National Library of Medicine [NLM], 2022). Wounds that have failed to heal after this period are considered non-healing wounds and can last for months, years or even a lifetime (Cullen and Gefen, 2023).

### The prevalence and impact of non-healing wounds

In high-income countries, non-healing wounds occur in approximately 1–2% of the population (Nussbaum et al, 2018), and are on the rise (Guest et al, 2020).

Non-healing wounds significantly impact the QoL of individuals and their carers, healthcare systems, policy and planning, and overall care costs (Nussbaum et al, 2018; Sen, 2023). In this estimate, the cost of managing a non-healing wound was found to be 2.5 times higher than that of a healed wound (Guest et al, 2020; Legs Matter, 2023). Compared with healing wounds, this increased healthcare cost occurs due to longer hospital admissions and higher clinical care expenses. People with non-healing wounds are also at higher risk of infections and experience more frequent hospital readmissions (Dowsett et al, 2023).

People living with a non-healing wound sometimes also experience pain, significant discomfort, and social and financial hardships (Järbrink et al, 2017; Cullen and Gefen, 2023).

### Why do wounds become non-healing?

Wounds can become non-healing due to several pathological conditions involving the metabolic, immune and nervous systems (Nussbaum et al, 2018). The majority of people with non-healing wounds have a range of factors known to impede healing (Carter et al, 2023; Sen, 2023). Furthermore, an increasing number have one or more comorbidities (Carter et al, 2023; Sen, 2023). Due to this complex picture, the actual cost and impact of non-healing wounds for patients and healthcare systems is harder to measure and likely to be underestimated.

### Community care settings and the burden of care for non-healing wounds

The vast majority of care for patients with non-healing wounds in the UK is undertaken in community care (Dowsett et al, 2023). Non-healing wounds typically occur as a result of a failure of a normal bodily function (e.g. immune, metabolic or nervous systems), meaning care for people with non-healing wounds is complex. To ensure timely diagnosis and treatment of non-healing wounds in the at-risk population, clinicians should identify comorbidities and other associated risk factors that may delay healing (e.g. peripheral arterial disease). Clinicians need to be mindful of these risk factors and ensure subsequent support is in place for both the co-morbidities and the wound. They should be able to respond quickly to signs of lack of healing progression and complications, such as infection.

With the rising prevalence of non-healing wounds, it is important to improve the use of healthcare resources by using available wound care technology to its full potential. Combined with improvements in multidisciplinary wound care, this approach, and the use of validated pathways, can help optimise outcomes for people with non-healing wounds.

### Single-use negative pressure wound therapy (sNPWT)

Negative pressure wound therapy (NPWT) has been shown to provide great benefits for managing non-healing wounds (NLM, 2023). The principle behind NPWT is to apply sub-atmospheric levels of pressure to the wound bed area, which results in two major benefits (NLM, 2023). Firstly, it decreases levels of inflammatory wound exudate and, secondly, it promotes the formation of granulation tissue. Overall, this helps reduce the wound volume and oedema, and promotes cell growth and tissue perfusion (World Union of Wound Healing Societies [WUWHS], 2018).

Due to these benefits, NPWT has shown significant efficacy in improving outcomes for a large variety of wounds, including non-healing wounds. In summary, due to the positive impact reported when managing

non-healing wounds and incisions, respectively, NPWT is recommended by the WUWHS (2019) and the National Institute for Health and Care Excellence (2019).

Compared to traditional NPWT, which allows for greater fluid handling and can often require more frequent, time-consuming dressing changes, the unique technology of PICO™ single-use NPWT (sNPWT) has shown promising results (Hampton et al, 2022; Hughes et al, 2021; Kirsner et al, 2020; McCluskey et al, 2020; Kirsner et al, 2019; Dowsett et al, 2017). PICO™ sNPWT contains a unique air lock layer that enables consistent NPWT across the full surface of the dressing. This provides NPWT to the surrounding periwound skin in addition to the wound itself, further improving outcomes (Kirsner et al, 2019; 2020). In the experience of the expert panel, depending on the exudate level, dressings with sNPWT can stay in place for 7 days when used without filler. This can provide significant savings of clinicians' time and healthcare resources. With sNPWT, the earlier the intervention for non-healing wounds, the better the outcomes will be (McCluskey et al, 2020).

The mode of action of NPWT requires the creation of a sealed wound dressing to apply sub-atmospheric pressure to the wound area. This dressing is attached to a pump, which, for traditional NPWT, can be a heavy and cumbersome device for the patient to carry. In contrast, PICO™ sNPWT is smaller, lightweight, portable and battery-operated. This significantly improves patient experience, as sNPWT devices can be discreetly worn and carried around (Wounds UK, 2022).

### **PICO™ sNPWT pathway**

The PICO™ sNPWT pathway can be used by clinicians for patients with non-healing wounds when the decision has been made to start active treatment and sNPWT is considered an appropriate choice of treatment. A visual representation of the PICO™ sNPWT pathway can be found in [Appendix 1 \(page 20\)](#).

### **Background to the PICO™ sNPWT pathway implementation**

Doswett et al (2017) were the first to report positive outcomes achieved using the PICO™ sNPWT pathway with a cohort of patients with non-healing wounds. Since 2016, data have been systematically collected from 26 clinical sites, building a robust dataset that supports the application of the pathway in clinical practice. Studies have shown that compared to standard care, the PICO™ sNPWT pathway reduced overall treatment costs by approximately one-third and nursing costs by 49.7% (Dowsett et al, 2017; Dowsett et al, 2022).

Building on the findings of Dowsett et al (2017), Hampton et al (2022) and Wounds UK (2022), this current document explores the real-world application of the PICO™ sNPWT pathway across a range of NHS Trusts.

The objectives of implementing this validated pathway for managing non-healing wounds was to:

- provide a structured real-world product evaluation to appraise the PICO™ sNPWT device
- demonstrate the impact of PICO™ sNPWT on healing rates, dressing change frequency and nursing visits for non-healing wounds
- record clinician feedback on the features and benefits of the PICO™ sNPWT device in the treatment of non-healing wounds.

During an assessment with a clinician, you should expect the person caring for you and your wound to examine your wound and ask questions about its impact on your life to identify your goals of care. This could be a nurse, podiatrist or doctor.

### **Patient expectation**



## Project overview: methods and results

### MYTH

sNPWT is a complicated method to use in routine practice.

### TRUTH

sNPWT is easy to use, and even patients and carers have been trained to use it routinely.

#### Pre-implementation clinical challenges

Before implementation of the PICO™ sNPWT pathway in this project, several obstacles were identified, including:

- **Impact of the COVID-19 pandemic:** The pandemic created significant challenges, including restricted patient access and delays in improving wound care pathways
- **Clinician anxiety around sNPWT:** Many community clinicians experienced anxiety and even fear about using PICO™ sNPWT. The device and its mode of action was perceived as complex to novice clinicians until they had hands-on experience to build confidence
- **Lack of defined care pathways in the community:** PICO™ sNPWT was not included in standard formularies, making access to the device difficult
- **Reluctance from physicians:** Some general physicians were reluctant to prescribe PICO™ sNPWT, due to perceived high unit costs without considering long-term cost savings
- **Failure to communicate value vs cost:** The lack of clarity in presenting the cost versus value of sNPWT may have contributed to the initial failure to establish a successful case for the PICO™ sNPWT pathway
- **Clinician hesitation to try new approaches:** When clinicians saw slight

improvement in slow-healing wounds, they often hesitated to try new interventions like sNPWT, which could lead to sub-optimal patient outcomes and delayed escalation to the PICO™ sNPWT pathway.

#### Methods

An evaluation survey of PICO™ sNPWT implementation was undertaken by clinicians across a range of NHS trusts. Using a bespoke survey form, data were collected on wound aetiologies, wound progression and changes in wound dressing frequency. One form was completed per wound treated. The data were analysed using Snap Surveys software (a data collection and analysis tool). A total of 102 wounds were included in the study; of these, 23 wounds were clinically assessed as 'delayed', 48 'static' and 28 'deteriorating'. Data for the remaining wounds could not be obtained.

Data for this in-service evaluation were gathered from 7 sites across Mid and West England [Figure 1]. Patients were selected based on specific inclusion criteria as seen on the PICO™ sNPWT non-healing pathway [Appendix 1, page 20]. Data collection was conducted to capture baseline and longitudinal data for prospective analysis following standard quality improvement methodology. Data were stored in a secure

There is a need to improve awareness among community clinicians about sNPWT so clinical decisions can be made around the initiation of PICO™ sNPWT, utilising the validated non-healing wounds pathway, and ultimately improving wound healing. This, in turn, can have a positive impact on the patients' QoL.

### Best Practice Statement

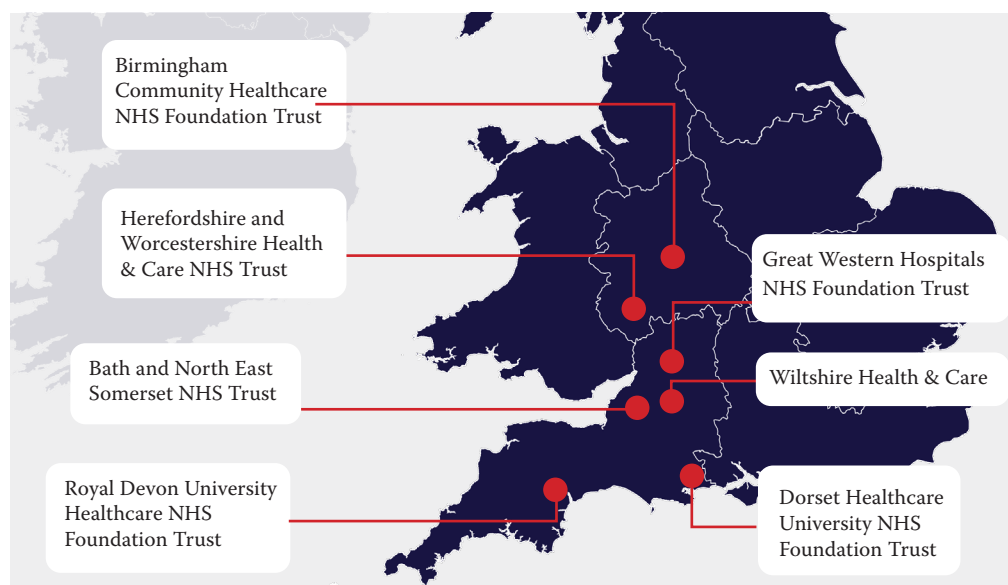


Figure 1. NHS trusts where the PICO™ sNPWT pathway was implemented.

environment, compliant with ISO27001. No patient-identifiable variables were used. Wound-related data were collected weekly until the wound healed, or for a maximum of 12 weeks, whichever came first (healing was defined as 0cm<sup>2</sup> using the ellipse formula). All data were analysed using Microsoft Excel.

Data were collected on the wound aetiologies listed in Figure 2. The 7 sites across Mid and West England adhered to the following inclusion criteria:

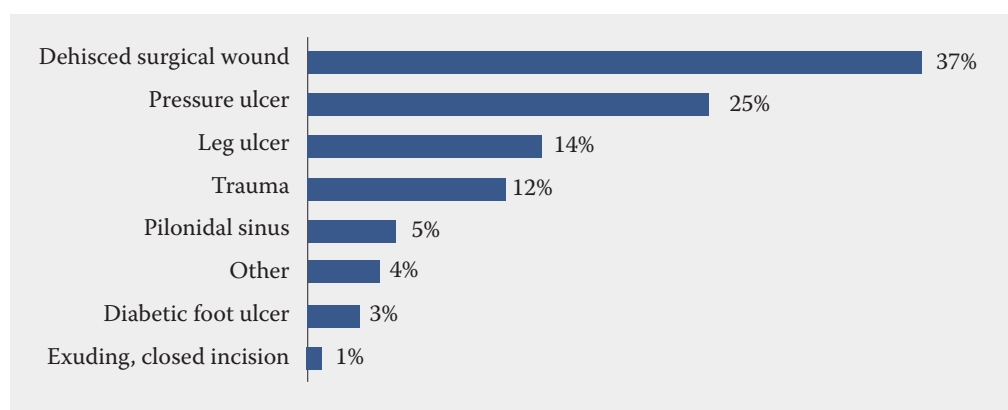
- Use of PICO™ sNPWT as a first-line treatment for a variety of non-healing wounds
- Use of PICO™ sNPWT as an adjunct to

other treatments, such as compression therapy, which was generally found to have excellent results

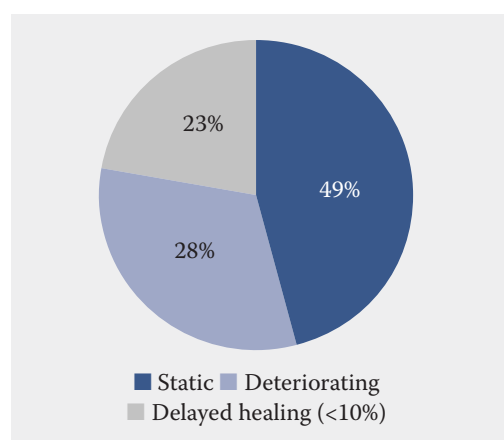
- Category 3 pressure ulcers/injuries.

Some cases highlighted where the adjunct therapy with PICO™ sNPWT was stopped too early, while compression therapy was continued; in retrospect, and based on the outcomes of this decision, these clinicians now recommend continuing with sNPWT until healing is achieved.

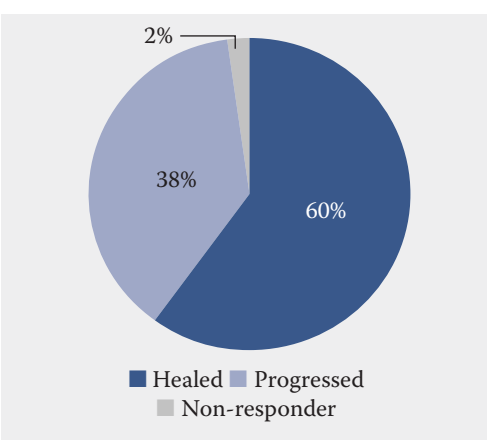
Baseline wound characteristics can be seen in Figures 2 and 3; while pre- and post-PICO™ sNPWT healing outcomes are shown in Figures 4–9.



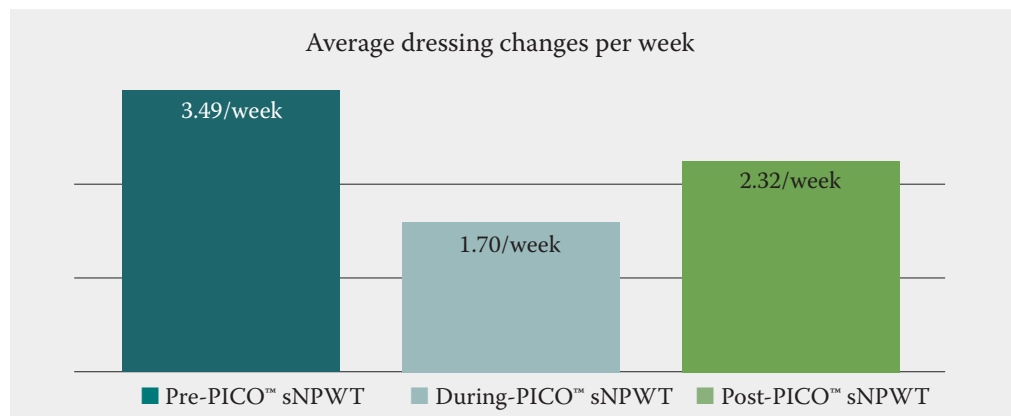
**Figure 2.** Wound aetiologies included in the study evaluation (n=102).



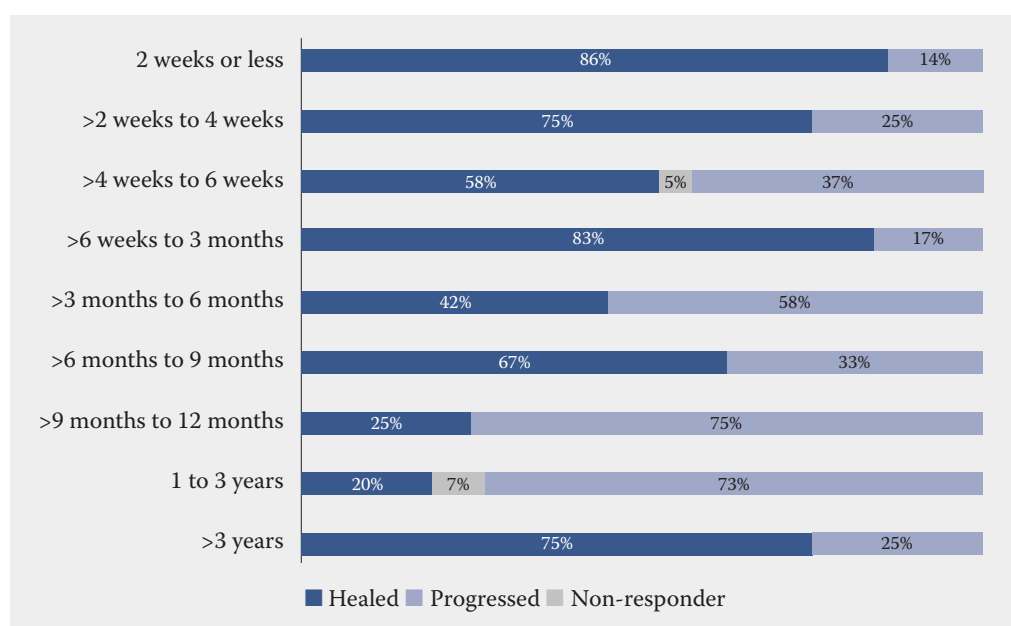
**Figure 3.** Pre-PICO™ sNPWT wound progress (n=99). Delayed healing was defined as '<10%' healing progression.



**Figure 4.** Impact of the PICO™ sNPWT pathway on wound healing (n=102).



**Figure 5.** Frequency of dressing changes prior to, with and post-PICO™ sNPWT implementation. The 'Post-PICO™ sNPWT' frequencies depict the treatment stage when the wound returned to standard care.



**Figure 6.** Post-PICO™ sNPWT wound progression by duration.

#### Post-implementation evaluation

Following implementation of the PICO™ sNPWT pathway, an evaluation was conducted to identify areas where further support or clarification was needed for clinicians. Key themes included:

- **Lack of understanding of PICO™ sNPWT mechanism:** Some clinicians did not fully understand the mechanism of the device and needed clarification that the PICO™ sNPWT unit still functions as a dressing even if the pump stops
- **PICO™ sNPWT duration of use:** Some clinicians required reminders on

how long the PICO™ sNPWT remains functional (up to 7 days for PICO™ 7 sNPWT or 14 days for PICO™ 14 sNPWT, in line with Instructions For Use [IFU]) and when it should be disposed of, as traditional wound dressings require more frequent changes

- **Fluid management with PICO™ sNPWT:** Where PICO™ sNPWT was implemented for leg ulcer patients, it was important to ensure that staff understood the fluid capacity of the sNPWT dressing

For a slow-healing leg ulcer, consider using PICO™ sNPWT as an adjunct to compression therapy.

#### Best Practice Statement



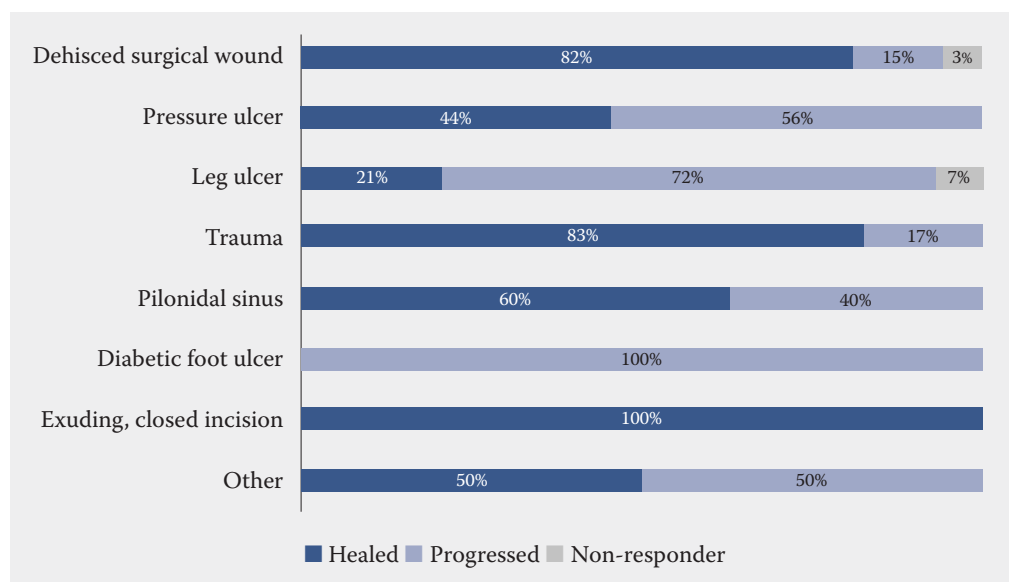


Figure 7. Post-PICO™ sNPWT wound progression by wound aetiology.

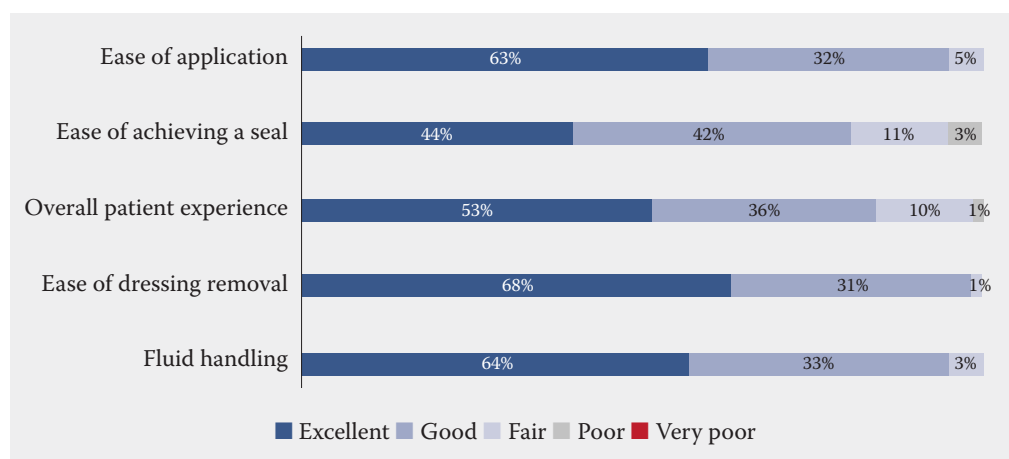


Figure 8. Clinician feedback on the clinician and patient experience with PICO™ sNPWT.

- **Tailoring PICO™ sNPWT to patient needs:** Some clinicians found it difficult to judge how best to choose and position PICO™ sNPWT. There was a concern among some clinicians about the size of the PICO™ sNPWT dressing and its border. To them, it appeared to be larger than they initially expected, causing confusion as to whether any size-related adjustments were needed before its application
- **Responsibility and accountability when using the non-healing pathway:** Some clinicians were unsure about their

place and duties in the PICO™ sNPWT pathway. This lack of ownership can result in delays in case escalation, if a non-healing wound deteriorates or any troubleshooting is required for the PICO™ sNPWT device

- **Troubleshooting:** A consistent need was identified in disseminating troubleshooting information to both clinicians and patients. When issues arise, troubleshooting instructions should be well-understood and easily accessible to both patients and clinicians
- **Reduction in patient visits:** Some clinicians were concerned that patients

## MYTH

PICO™ sNPWT is the last-resort option for non-healing wounds.

## TRUTH

PICO™ sNPWT should be actively used in people with or at risk of developing non-healing wounds, especially as this approach can help maintain QoL for this population and save resources in the long-term. Wounds also become more difficult to heal over time so earlier active sNPWT treatment increases healing rates.

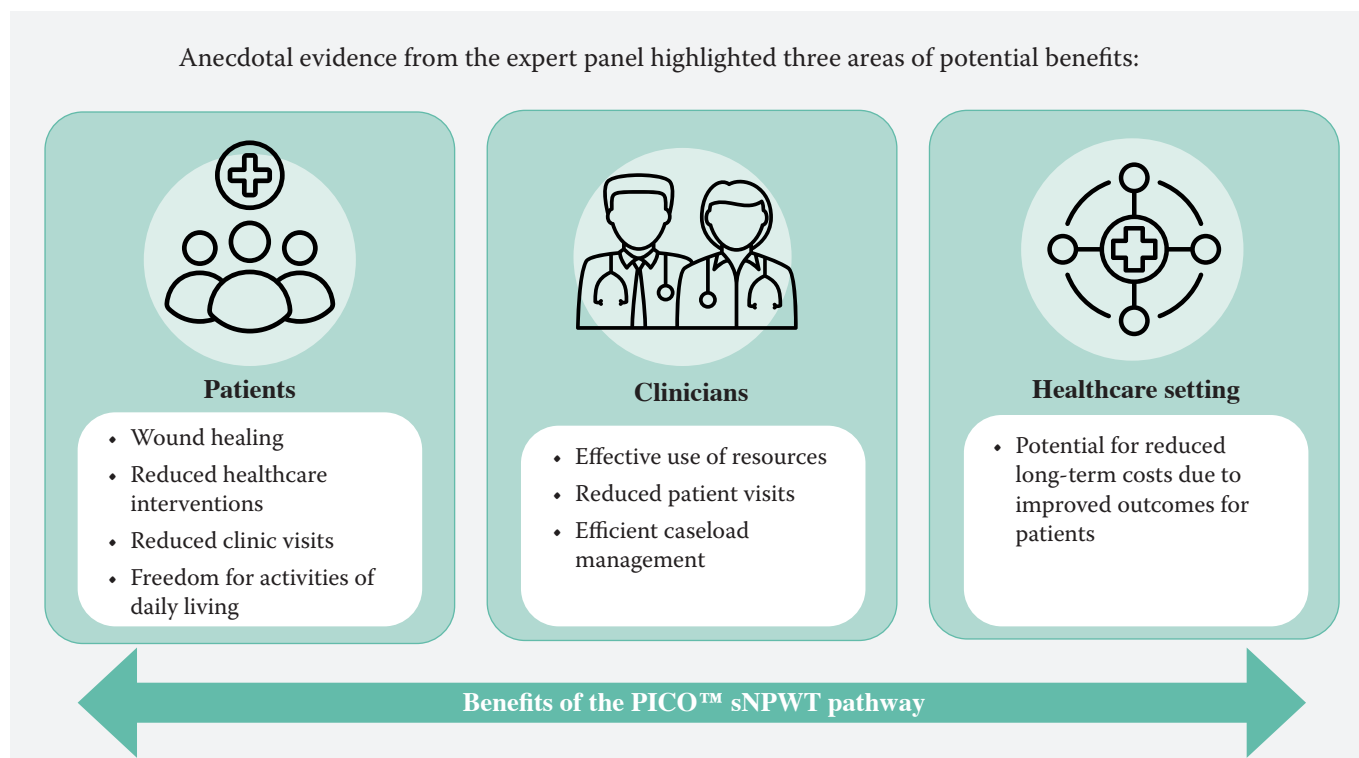


Figure 9. Overall benefits of the PICO™ sNPWT non-healing wounds pathway highlighted by the expert panel.

would not be seen as often as they would have if a traditional dressing were used.

had to work with the local data teams to create new coding systems for PICO™ sNPWT-specific data.

#### Data-related learnings

In addition to clinical and implementation challenges, the evaluation highlighted key data-related learnings that impacted the effective use of the PICO™ sNPWT pathway, including gaps in existing electronic records systems. In some instances, standard electronic records systems were not always equipped to handle the type of data generated to track wound healing with PICO™ sNPWT. Challenges identified included:

- **Limited search functionality:** There were several instances where, despite the data being present and recorded in the system, a search failed to return results for crucial wound healing parameters (e.g. wound volume). This was significant because wound volume is one of the most important measures of assessing a wound's healing trajectory. In these cases, notes had to be copied manually to access crucial wound measurement information
- **Lack of standardised coding:** Several instances were identified where clinicians

#### Staffing or care setting

Recruitment and retention of clinical staff is currently a UK-wide issue and community clinicians are typically short-staffed (The King's Fund, 2024). There is a need to provide adequate, tailored training in order to build and sustain the confidence of clinicians, and to support newly registered clinicians who may be unfamiliar with PICO™ sNPWT.

The panel debated lack of continuity in staff allocation and shift patterns, where it may not always be the same team of clinicians who reviews the wound. In some settings, the system for patient triage is based on the urgency of care they require, which can result in some patients not being reviewed in a timely manner. This deferring of care or escalation can have a negative impact on the quality of care for people with non-healing wounds.

Using the PICO™ sNPWT pathway can provide clarity for clinical staff as to when

they need to escalate any concerns they may have in a timely manner.

### Misconceptions about the PICO™ sNPWT non-healing wounds pathway

Several misconceptions were identified around the concept and implementation of PICO™ sNPWT:

1. It was assumed that PICO™ sNPWT is *only* effective for non-healing wounds and should *only* be implemented if the wound is not showing signs of healing despite optimised wound care
2. Some clinicians assumed that younger, healthier patients (e.g. women who have undergone c-sections and are 'on their feet' looking after a young baby) would not benefit significantly from PICO™ sNPWT, when in fact it may still play a role in optimising healing
3. There was confusion about the structure of the PICO™ sNPWT device and its filler components. It is important to remember that, when using PICO™ sNPWT:
  - Wounds with a depth of >0.5cm are likely to require a foam or gauze filler
  - Wounds >2cm in depth must be treated with a foam or gauze filler
4. For clinicians using a PHMB (polyhexamethylene biguanide) gauze as a filler, it can be difficult to adapt the gauze to the size of the wound. This is a problem if the wound or cavity is smaller. The need to adapt the size of the gauze can make clinicians concerned about issues such as wound fit and fibre shed
5. Some clinicians believe that, for small wounds, using a treatment as apparently expensive as PICO™ sNPWT is not cost-effective. This perception likely exists due to a lack of information on long-term cost when PICO™ sNPWT is not used as part of an early intervention strategy
6. Some clinicians perceive PICO™ sNPWT to be only an adjunct therapy and not an active, stand-alone treatment in itself
7. Some confusion also exists about the differentiation between a filler and a lining when using traditional therapy versus PICO™ sNPWT
8. There is a misconception that, for a wound dressing to work efficiently, it

needs to be in contact with the surface of the wound. This leads to confusion about the mechanism of action and effectiveness of PICO™ sNPWT, which can be used:

- as a contact dressing for wounds <2cm
  - with a filler for wounds >2cm deep, or for wounds where a filler may be needed to 'even-out' a creased area.
9. Some clinicians worry about the length of time that the PICO™ sNPWT dressing is left in place for, and that an infection or deterioration can be missed during this time. This sometimes results in unnecessary antimicrobial use as a preventative measure. However, antimicrobials should only be used where there is clinical evidence of infection or a high risk due to patient comorbidities. When necessary, an antimicrobial contact layer, such as ACTICOAT™ FLEX 3 Antimicrobial Barrier Dressing, can be used alongside PICO™ sNPWT.

There is a need to address these misconceptions amongst patients and clinicians. This can be achieved by providing clear education and guidance surrounding the importance of the PICO™ sNPWT pathway. This education should include clear safety guidance for clinicians and patients.

### Cost-effectiveness data

Effective data keeping and auditing can help understand the impact of, and build a case for, the PICO™ sNPWT pathway. The expert panel reported an overall reduction in cost and clinician visits. On the whole, the data capture and audit process helped improve governance within the wound management clinical settings. These observations are consistent with a previous report from Hampton et al (2022): in a comparative cost assessment of PICO™ sNPWT versus standard care for 323 wounds, an estimated savings of £651 per patient were recorded.

# Pre- and post-implementation learnings



Scan the QR code above to access the Best Practice Statement 'Active treatment of non-healing wounds in the community' (Wounds UK, 2022)

Clinical settings vary where wound care is managed. Clinicians may face unique challenges when implementing new practices. Below are a set of general principles that can help create a solid foundation for implementing the PICO™ sNPWT pathway in new clinical settings.

## Identifying local population and clinical needs

Clinicians in the multidisciplinary team should ensure they are aware of local needs and how to address them. For example, working closely with the local diabetic foot care or podiatry team can help identify population needs for people with lower-limb wounds. Undertaking regular audits will allow for an understanding of the prevalence and incidence of non-healing wounds. The decision to use sNPWT is often based on cost. It is important clinicians are aware of the cost of using the therapy compared to traditional dressings and base the total costs around clinician visits, amount of dressings changes etc. rather than unit cost.

## Defining the objectives as per local clinical settings

Setting clear objectives can help establish a pre- and post-implementation framework for PICO™ sNPWT. This allows the pathway to be tailored to each clinical setting. The BPS document 'Active Treatment of Non-Healing Wounds in the Community' (Wounds UK, 2022) provides detailed guidance on implementing this pathway in community care.

## Patient and clinician objectives

Objectives for implementing the PICO™ sNPWT pathway can initially be defined as:

- helping improve healing rates for people already living with non-healing wounds
- helping reduce clinicians' visits.

It is essential to review progression of the wound and be able to stop the pathway if the wound is not progressing despite treatment or when the wound has healed.

At each step of the pathway, clinicians can ask questions [see [Table 1](#)] that can help set objectives and assess whether the wound management is going as planned.

## PICO™ sNPWT availability objectives

Availability of PICO™ sNPWT will be dependent on a range of factors. For example, it may be that a local Integrated Care Board (ICB) only allows PICO™ sNPWT availability through the formulary when specialist services request it. Link nurses can act as a liaison between community care and specialist services, providing significant tissue viability knowledge to the community care team they are integrated with. For any non-healing wounds and for people at risk of developing them, these clinicians can escalate the case to their speciality. Link staff can help save time for the speciality, reducing unnecessary dressing changes and improving access to PICO™ sNPWT.

## Timeline objectives

The timeline for wound review depends on the outcomes of the wound and patient assessment. Registered clinicians should review each case as per their local guidelines. This timeline should also match the life cycle of the PICO™ sNPWT device.

## Improving perceptions and awareness in practice

It is important to demystify perceived challenges associated with the PICO™ sNPWT pathway. To achieve this goal, it is useful to list and communicate potential benefits of the proven and validated PICO™ sNPWT pathway. See [Figure 9 \(page 10\)](#) for a summary of the observed benefits.

It is equally important to improve timely intervention. In addition to people with or at risk of developing non-healing wound, several other patient groups may be suitable for the PICO™ sNPWT pathway (e.g. patients transferring to community care from acute settings may still benefit from PICO™ sNPWT).

When implementing the PICO™ sNPWT non-healing wound pathway, ensure that troubleshooting advice and guides are accessible to all clinicians who can potentially be in contact with a person with a non-healing wound. This includes all emergency care and NHS-111 service staff.

### Best Practice Statement

**Table 1. Questions that can help clinicians set objectives throughout the PICO™ sNPWT pathway.**

Questions to ask when assessing a wound	
1	Have wound measurements been recorded and wound volume calculated? Are these measurements accurate?
2	Looking at the patient's history, are there any red flags that can indicate the wound is at risk of becoming non-healing (e.g. diabetes, impaired immune system)?
3	What is the outcome of skin assessment? Are there any red flags?
4	What are the overall patient risks and how can they be managed?
5	Has all these data been recorded promptly and made accessible to the whole care team?
6	What is the timeline of the wound management pathway for this patient? What does this timeline achieve for the patient? What is the current wound duration and status?
7	Has each patient received adequate education about their care plan? Do they understand their journey and have been provided knowledge about their care?
8	What does the patient wish to achieve from their wound care plan? Do their objectives match their clinician's objectives? For example, do they have an active lifestyle and wish to travel, or is achieving wound healing and symptom control their only goal? Have they consented to use PICO™ sNPWT?
Questions to ask at each assessment once the PICO™ sNPWT pathway has been implemented	
1	Have wound measurements and volume changed? What is the percentage change in the wound volume? What does the wound bed look like? Has the patient experienced any improvement or deterioration in their pain?
2	Is there a change in the patient's health and other clinical parameters that can change their risk profile?
3	Have all these updates been promptly recorded and uploaded to the patient's records?
4	Does the overall picture indicate that the wound is on a healing trajectory? Have all these data been recorded promptly and accurately?
5	If not, the case should be escalated and the patient referred to the appropriate speciality as per the local care pathway (e.g. the PICO™ sNPWT pathway)
Questions to ask once PICO™ sNPWT has been completed successfully	
1	Does the patient follow-up align with local guidelines and individual needs?
2	Is the wound at risk of recurring and re-entering a non-healing trajectory?
3	How is the patient feeling overall? Are there any improvements that can be made to their overall treatment and lifestyle that can help maintain the improved outcome?

### Improving education and awareness about patient safety and protection

Perceived difficulties with PICO™ sNPWT may delay its implementation and hinder improvements. To enhance awareness and address safety concerns, considering the following actions can improve adoption and effectiveness of PICO™ sNPWT:

- **Educate clinicians:** Provide training to boost confidence among all care staff
- **Review competency frameworks:** Identify and address skill gaps promptly
- **Adapt wound review timeframes:** Adjust timeframes, based on wound types, deterioration rates, and patient factors



- **Align review frequency:** Schedule wound assessments with dressing changes, typically every 7 to 14 days (depending on exudate levels), and evaluate PICO™ sNPWT continuation biweekly
- **Establish escalation pathways:** If red flags arise, escalate to the case manager or tissue viability nurse
- **Maximise workforce potential:** Ensure all staff are adequately educated and skilled to be able to manage PICO™ sNPWT dressing changes and understand when to escalate concerns in a timely manner
- **Encourage shared management:** Engage patients and carers in using PICO™ sNPWT, which is user-friendly (it is important for clinicians to adhere to information provided in the IFU). Patients can remove the PICO™ sNPWT dressing but cannot re-apply. Therefore, clear advice should be provided to patients, in line with the IFU. It is important that a clinician is informed as soon as possible that the PICO™ sNPWT unit has been removed
- **Provide educational resources:** Distribute patient leaflets to enhance confidence and enable troubleshooting without clinic visits
- **Ensure informed consent:** Inform patients about shared care decisions regarding PICO™ sNPWT and allow time for consideration (see [Figure 10](#) to access a leaflet that can help patient conversations before pathway initiation)
- **Improve stakeholder awareness:** Provide educational materials and troubleshooting guides.

## MYTH

PICO™ sNPWT can only be used once in a wound's pathway.

## TRUTH

Despite showing improvement or healing, some wounds may deteriorate again over time. It would be appropriate to consider restarting PICO™ sNPWT as soon as deterioration is suspected.

### Considerations for specific groups of patients

The following patient groups may require specific considerations:

#### Care homes

Patient comfort should be at the forefront of clinical decisions for people living in care homes. For example, people with dementia or neurodegenerative disorders (e.g. Alzheimer's disease) may feel comfortable with a quicker, easier

dressing, such as PICO™ sNPWT. It is also important to remember safety concerns when changing dressings. This patient population is more likely to accidentally damage, pull off their dressing, or even hurt themselves with their dressing components, particularly patients who have dementia (e.g. a person with dementia may attempt to pull off and swallow elements of PICO™ sNPWT).

#### Palliative care

It is important to ensure that patient dignity and comfort are the main objectives of wound management in palliative care.

When implementing the PICO™ sNPWT pathway for palliative care, it is important to remember the following principles:

- Patient preference and their family's wishes must be respected
- The patient should be made comfortable. The main objective of wound care should be pain management, and not necessarily healing
  - Palliative care does not always mean end-of-life care. In some instances, a person with a wound eligible for PICO™ sNPWT may only receive the treatment for symptom control until their scheduled surgery takes place to improve their main ailment
- It is crucial to consider the impact of positioning on the patient's body to ensure it is comfortable
- Temperature and environment of the room should be considered when dressing a wound.

#### People with learning disabilities and mental health disorders

Safety is a major concern in this patient population. People with learning disabilities or mental health disorders may notice their wound more if a daily dressing change is undertaken. They may even be fixated on their dressing and/or their wound. PICO™ sNPWT may be considered to improve outcomes, as it requires less frequent changes.

#### People with pressure ulcers

It is important to remember that the

position of pressure ulcers may determine the dressing choice. For example, in people with pressure ulcers on their buttocks, offloading and/or patient comfort may take priority over the effectiveness that PICO™ sNPWT can provide.

### Initiating conversations with patients about PICO™ sNPWT

When a patient with a non-healing wound is selected for PICO™ sNPWT, it is crucial to engage and inform them in advance. During the initial visit, clinicians should provide an educational leaflet

about the PICO™ sNPWT pathway (see **Figure 10**) and discuss the treatment plan. This engagement helps patients make informed choices and understand the benefits of the therapy. Effective information delivery ensures the patient understands the therapy and, if self-caring, knows when to seek help and advice.

If your wound is healing slower than expected, your care plan should be reviewed, and you may be offered a change of treatment.

### Patient expectation

**+ Patient guide**

Back at home, not back in hospital

PICO® Single Use Negative Pressure Wound Therapy (sNPWT) System

**Smith+Nephew**  
Shaping what's possible in wound care

Scan to access the patient guide

**Figure 10.** An example of a patient leaflet that has proved helpful for patients when PICO™ sNPWT was implemented during this pilot programme (use the QR code to download the leaflet).

## Practical tips

Some practical tips can help achieve successful outcomes when implementing the PICO™ sNPWT pathway for non-healing wounds. **Boxes 1–2** and **tables 2–3** outline these tips and recommendations.

### Box 1. Tips for improving staff and patient engagement and education.

In addition to setting clear, achievable objectives, some practical tips can also help improve ease of use of the PICO™ sNPWT pathway:

- Improve awareness of the normal signs of wound healing and stages of wound healing
- For clinicians who prefer to work with printed material, ensure sufficient printed material are available
- Always ensure conventional dressings have been assessed for and are available, in case there is a need to manage and troubleshoot any potential issues during the pathway and PICO™ sNPWT has to be discontinued
- Always use the PICO™ sNPWT Instructions For Use (IFU) to ensure safe, effective treatment
- Identify and address educational gaps and/or language barriers in each of your local settings where PICO™ sNPWT may be in use (e.g. nursing homes or community care). Provide translated educational materials and access to translators as per local guidelines
- Labelling a wound as ‘better’ is not enough. Ensure wound volume measurements are recorded promptly and accurately; provide prompt feedback with clear, actionable points. For example, record the wound dimensions and volume, and not just photograph the wound
- Add wound volume measurement to the referral criteria list. This action has provided successful outcomes in data recording
- With both clinicians and patients, communicate wound improvement as a percentage of wound volume decrease. For example, it is easier to understand the improvement with ‘the wound has improved by 20% this week’ than ‘the wound has decreased by 1.1mm’. Ensure that clinicians understand the concept of percentage improvement in wound
- Educate staff on the signs of infection. For example, infection progression may be indicated by redness around/outside the dressing area, which should be an immediate red flag. The dressing may potentially obscure initial visual indicators of infection progression until the infected area spreads outside the dressing. Similarly, changes in pain level should be monitored and recorded; an increase in pain may be indicative of wound infection. In people with dark skin tones, a change in colour (a change in their normal skin colour or change in pigmentation) or feeling of heat or pain in the affected area should be considered urgent red flags
- For patient communication, avoid using language with negative descriptors. It is important to use empowering and positive language when communicating with people with a serious condition such as a non-healing wound. **Table 2** lists a set of terminologies that are still used in routine wound care practice, despite having a negative connotation and message attached to them.

**Table 2. A list of negative terminologies used for ‘non-healing wounds.’ These terminologies should be avoided to ensure that healing does not appear an unlikely outcome to patients, even before the start of treatment. ‘Non-healing wounds’ should be the preferred terminology.**

Terminology used to describe non-healing wounds	Negative impact
Chronic	suggests the wound will remain unhealed for a long time
Complex	suggests the wound will be too difficult to heal
Hard-to-heal	suggests that healing is not possible or difficult
Long-standing	suggests the wound will be present for a long time
Static	suggests the wound will not progress

**Table 3. Tips for improving implementation of the PICO™ sNPWT pathway.**

<b>1</b>	Patient stories can be used to increase clinician motivation and adherence to best practice principles. These stories, or case studies, can be used to improve implementation.
<b>2</b>	<ul style="list-style-type: none"> <li>• Matching the most appropriate PICO™ sNPWT pathway format to the clinician can improve engagement. Some clinicians may prefer digital, downloadable versions of the pathway and may be more at ease using their phone/other digital technology to record patient data</li> <li>• Data recording is also setting-dependent. For example, community or podiatry clinicians and hospice support staff may record in and rely on paper case notes. Community nurses may be the only clinicians with access to electronic records. Streamlining patient records across health settings can help collect audit data in an effective manner</li> </ul>
<b>3</b>	Develop and deploy ‘PICO™ sNPWT champions’ to increase awareness of improving patient outcomes. These champions can be the clinicians who have worked with people with complex comorbidities and non-healing wounds. The champions should be given clear objectives and should be strong communicators
<b>4</b>	Highlight incentives. Recording and uploading adequate and timely wound measurements is an important part of the PICO™ sNPWT pathway. The ease of use of the pathway may incentivise all clinicians to promptly perform and record wound measurements

A call-and-see policy, where a clinician calls the patient before a visit for a triage of wound, can reduce unnecessary dressing changes. See [Box 2](#) to find out what questions may be asked during this triage call.

### Best Practice Statement

#### Box 2. Questions to ask when using a phone call to triage a patient with a non-healing wound\*.

A call-and-see policy for management of uncomplicated wounds may help prevent unnecessary dressing changes\* and save resources. The following questions may be helpful in wound triage before a visit to the patient with a non-healing wound:

- » For people unable to perform self-care: what does the dressing look like?
- » Can you see any changes? If yes, what are they?
- » Is there any exudate around the wound? Has the dressing leaked?
- » Are there any flashing lights on the PICO™ sNPWT unit that are not green?

If no concerns are raised during this call, an immediate dressing change or visit may not be necessary.

*\* The indicator on the PICO™ sNPWT device shows when the dressing is full and needs to be changed (when used without filler). When used with filler, the dressing and filler need to be changed every 2 to 3 days.*

## Conclusions

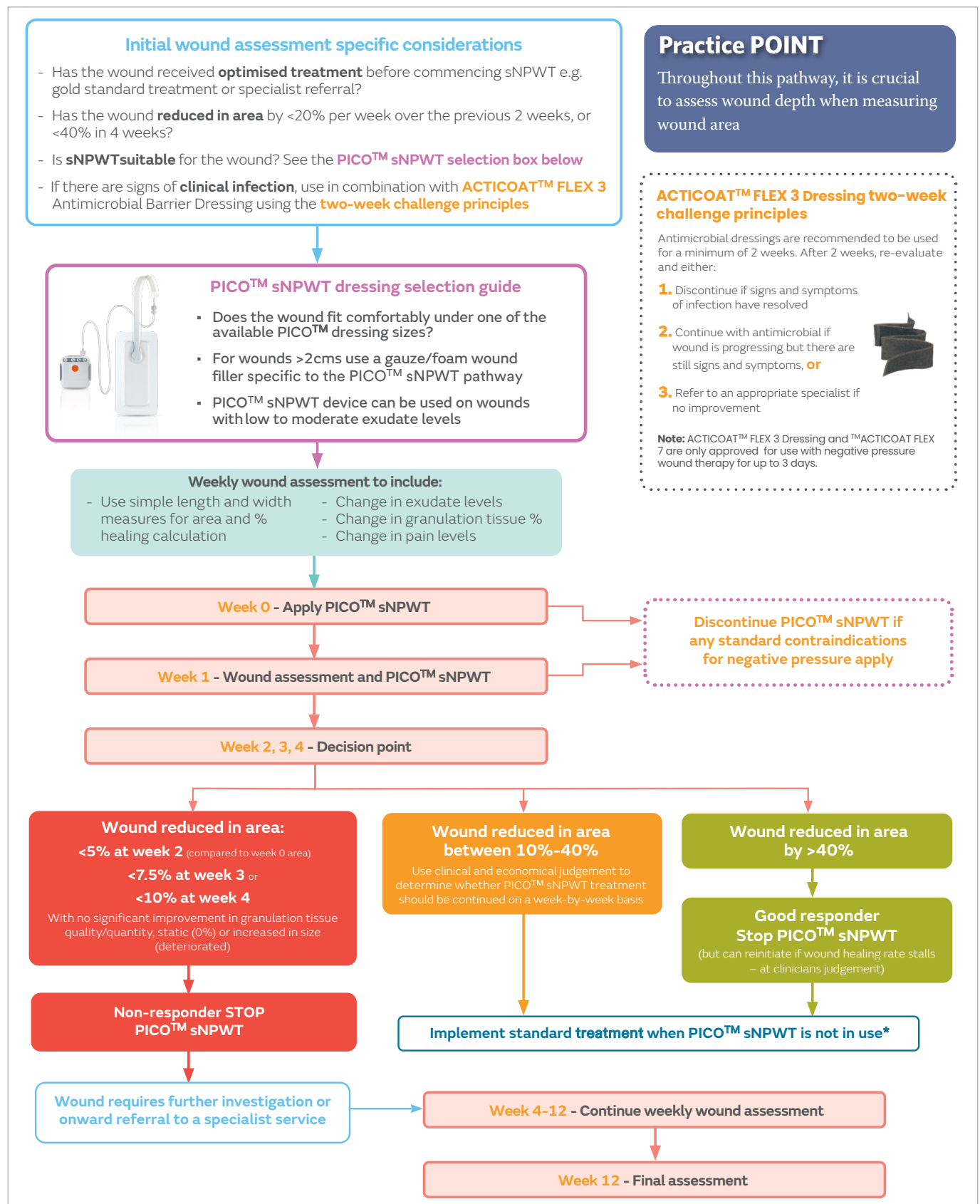
This BPS document outlines the benefits of the PICO™ sNPWT validated pathway for non-healing wounds. It provides examples from clinicians when implementing clinical practice change. Likewise, it stresses the importance of enhancing education and awareness among clinicians and patients. The PICO™ sNPWT pathway was applied to various wound types and local patient

populations, providing valuable insights for future guidelines. Data collection results should help to drive confidence that PICO™ sNPWT can be adopted as part of early intervention strategies for patients with a wound. While challenges in implementation exist, they offer opportunities for optimisation.



# References

- Carter MJ, DaVanzo J, Haught R et al (2023) Chronic wound prevalence and the associated cost of treatment in Medicare beneficiaries: Changes between 2014 and 2019. *J Med Econ* 26(1): 894–901
- Cullen B, Gefen A (2023) The biological and physiological impact of the performance of wound dressings. *Int Wound J* 20(4): 1292–1303
- Dowsett C, Hampton J, Myers D et al (2017) Use of PICO™ to improve clinical and economic outcomes in hard-to-heal wounds. *Wounds International* 8(2): 52–8
- Dowsett C, Milne J, Sharpe A (2023) Active treatment of non-healing wounds in the community: Why language matters. *Wounds UK* 19(1): 64–7
- Guest JF, Fuller GW, Vowden P (2020) Cohort study evaluating the burden of wounds to the UK's National Health Service in 2017/2018: update from 2012/2013. *BMJ Open* 10: e045253
- Hampton J, Meagher H, Sharpe A et al (2022) Multi-centre, international practice-based evidence using PICO™ single-use negative pressure wound therapy: challenging current behaviours in wound care practice. *Wounds International* 13(2): 46–53
- Hughes J, Costello M, Belshaw M et al (2021) The burden of dehiscent wounds in the community: using early results from a multi-centre service evaluation to propose a standard of care to improve patient outcomes and safeguard woundcare budgets. *Br J Healthcare Management* 27: 16–25
- Järbrink K, Ni G, Sönnnergren H et al (2017) The humanistic and economic burden of chronic wounds: a protocol for a systematic review. *Syst Rev* 6(1): 15
- Jørgensen LB, Sørensen JA, Jemec GB et al (2015) Methods to assess area and volume of wounds - a systematic review. *Int Wound J* 13(4): 540–53
- Kirsner R, Dove C, Reyzelman A et al (2019) A prospective, randomized, controlled clinical trial on the efficacy of a single-use negative pressure wound therapy system, compared to traditional negative pressure wound therapy in the treatment of chronic ulcers of the lower extremities. *Wound Repair Regen* 27(5): 519–29
- Kirsner RS, Delhougne G, Searle RJ (2020) Effectiveness analysis comparing single-use and traditional negative pressure wound therapy to treat chronic venous and diabetic foot ulcers. *Wound Manag Prev* 66(3): 30–8
- Legs Matter (2023) The cost of care. Available at: <https://tinyurl.com/583jn9xh> (accessed 01.10.2025)
- McCluskey P, Brennan K, Mullan J et al (2020) Impact of a single-use negative pressure wound therapy system on healing. *JCN* 34: 36–43
- National Institute for Health and Care Excellence (2019) PICO™ negative pressure wound dressings for closed surgical incisions. MTG43. Available at: <https://www.nice.org.uk/guidance/mtg43> (accessed 01.10.2025)
- National Library of Medicine (2022) Chronic wounds: Learn More – What are the treatment options for chronic wounds? Available at: <https://www.ncbi.nlm.nih.gov/books/NBK326436/> (accessed 01.10.2025)
- National Library of Medicine (2023) Negative pressure wound therapy. Available at: [https://www.ncbi.nlm.nih.gov/books/NBK576388/#:~:text=Negative%20pressure%20wound%20therapy%20\(NPWT,exudate%20and%20promote%20granulation%20tissue](https://www.ncbi.nlm.nih.gov/books/NBK576388/#:~:text=Negative%20pressure%20wound%20therapy%20(NPWT,exudate%20and%20promote%20granulation%20tissue) (accessed 01.10.2025)
- Queen D, Harding K (2023) What's the true costs of wounds faced by different healthcare systems around the world? *Int Wound J* 20(10): 3935–38
- Sen CK (2023) Human Wound and Its Burden: Updated 2022 Compendium of Estimates. *Adv Wound Care (New Rochelle)* 12(12): 657–70
- Smith+Nephew (2020) Evidence in focus Compendium of evidence, September 2020. Available at: <https://smith-nephew.stylelabs.cloud/api/public/content/0a77f678d1044525bb6606e858efe6e2?v=8fe4cfef> (accessed 01.10.2025)
- The King's Fund (2024) Staff shortages. Available at: <https://www.kingsfund.org.uk/insight-and-analysis/data-and-charts/staff-shortages> (accessed 24.02.2025)
- World Union of Wound Healing Societies (2019) *Wound exudate: effective assessment and management*. Wounds International
- Wounds UK (2022) *Best Practice Statement: Active treatment of non-healing wounds in the community*. Wounds UK, London. Available to download from: [www.wounds-uk.com](http://www.wounds-uk.com)



Appendix 1. The PICO™ sNPWT pathway (adapted from Wounds UK, 2022; see also Smith+Nephew, 2022).

\* Wound depth needs to be assessed and considered throughout this pathway to ensure accurate wound assessment.









