# Best Practice Statement

## Gauze-based negative pressure wound therapy

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# Foreword

This Best Practice Statement has been developed in an attempt to take the first steps towards reaching a consensus on the use of gauze-based negative pressure wound therapy (NPWT). This technique, also known as the Chariker-Jeter method, was first published almost 20 years ago (Chariker et al, 1989), but it has only recently been acknowledged and used as a wound healing modality. The recent availability of gauze-based NPWT systems has sparked interest in the technique and it is now being used more frequently in clinical practice. As a result, it is expected that more evidence to support its use in a variety of wound types will become available in the near future. However, until such evidence is available, there is a need to provide clear and concise guidance to clinicians wishing to use this technique in order to enable them to deliver optimal care to their patients. One way of providing such guidance is through the development of a best practice statement, in which expert opinion is sought and used to generate guidelines that are based upon practical experience.

The key principles of best practice (listed below) help to ensure that the highest standards of care are delivered across all care settings, and by all care professionals:

- Best Practice Statements (BPSs) are intended to guide practice and promote a consistent and cohesive approach to care.

- Statements are derived from the best available evidence, including expert opinion, at the time they are produced, recognising that levels and types of evidence vary.

- Information is gathered from a broad range of sources to identify existing or previous initiatives at a local, national or international level, incorporate work of a qualitative and quantitative nature, and establish consensus.

- Statements are targeted at practitioners, using language that is both accessible and meaningful, and are presented in a clear, accessible table format.

This document has been developed and reviewed by specialists from across the UK and US who have a wealth of experience in the use of gauze-based NPWT in a variety of wound types. It aims to provide practitioners with an internationally-relevant framework upon which they can base their practice without seeking to restrict or dictate decisions best left to the bedside.

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# Introduction

The use of negative pressure wound therapy (NPWT) in wound care is one of the most important technological advancements in recent times, as it has the potential to promote wound healing, alleviate wound symptoms and improve quality of life for patients with wounds. This therapy has been in common use in the acute care setting for at least 10 years, and is used less often in the community setting for the treatment of both acute and chronic wounds with delayed or difficult healing (Beldon, 2005).

## Understanding negative pressure wound therapy (NPWT)

NPWT is a non-invasive technique entailing exposure, either continuously or intermittently, of a wound to sub-atmospheric pressure (Morykwas and Argenta, 1997). Sub-atmospheric pressure is achieved by removing gas particles (air) from a sealed area (the wound site) using a suction pump.

Historically, the clinical benefits of NPWT have been acknowledged through the use of a technique known as cupping in which warm glass cups were applied to the skin, and upon cooling, resulted in suction on the skin's surface which was thought to improve the local blood supply. This therapy is still in use, however, there is no perceived link between this therapy and negative pressure as it exists today (Sagi et al, 1988; Cassileth, 1998).

NPWT was first used successfully in the early 1950s to manage exudate and accelerate wound healing (Raffel, 1952; Silvis et al, 1955). A number of NPWT systems were then tried in the late 1980s, most of which used basic wound contact technology and uncomplicated suction pumps. Many of the pioneering studies in NPWT emanated from Russian surgeons and researchers.

Kostiuchenok et al (1986) investigated the role of negative pressure in surgical wounds that required debridement. A non-patented suction device was applied to the wound to remove necrotic and loose tissue and blood clots. The findings indicated that NPWT resulted in a significant reduction in microbes in the wounds studied and generally improved tissue growth compared with the control group. The study also showed that the suction therapy was not an effective means of surgical debridement but was useful as an adjunct.

Davydov et al (1986) studied 744 patients with purulent wounds (control group, n= 338; vacuum therapy group, n=406). The patients were studied following incision and drainage, with the subjects in the vacuum therapy arm receiving treatment for a maximum of 6 days. The findings revealed a decrease in infection rates and an increase in granulation tissue formation in the treatment cohort, compared to the control group. Examination of the wound fluid during this study uncovered an increase in the number of white cells in the wounds of patients treated with vacuum therapy, along with decreased bacterial counts.

Davydov et al (1988) studied the use of vacuum therapy in the treatment of 106 patients with purulent lactation mastitis. They compared two groups of patients; one cohort was treated with standard incision and drainage, and the other group received incision, drainage and vacuum therapy, using a hemispherical glass chamber, for 20 minutes post-surgery, then for 2–3 hours per day for a maximum of six days. The results of the study showed that the treatment was effective in reducing time to healing and inflammation in the wound and assisted in the removal of slough and debris when compared to the control group. Incidental findings included a reduction in pain and improved granulation tissue formation.

Fleischmann et al (1993) carried out one of the first investigative studies into NPWT using foam as a wound contact layer. In

patients with open fractures, the authors found that the wounds healed rapidly, with no bone infection recorded, compared with patients treated with the standard therapy of saline-soaked gauze.

Argenta and Morykwas (1997) also carried out early work on the use of foam contact layers in animals and found that the use of NPWT was likely to reduce healing time, reduce local oedema and manage wound exudate. This work lead to the development of the earliest commercialized system known as vacuum-assisted closure (VAC; KCI, Oxford).

At this time, other clinicians were simultaneously developing alternative negative pressure systems, based on the work carried out by the Russian surgeons. These early systems were cumbersome and difficult to use, however, so attention turned to an article by Chariker et al (1989) which described a simple but unique technique in which a drain tube wrapped in gauze was used to assist in the treatment of wounds complicated by draining enterocutaneous fistulae. The potential of this technique was noted and over time, the use of this method evolved from simply removing drainage to its current form, in which it can be used to promote granulation tissue formation and wound healing. Several publications have since provided further evidence of the positive effect of this variation on wound healing (Miller 2005a,b,c; Miller and Serena, 2006).

There are now currently two forms of NPWT systems in use in wound management, with the main difference between them being in the type of dressing used to fill the wound. The foam-based technique, originally developed by Argenta and Morykwas (1997), uses a sealed polyurethane foam dressing attached by a tube to a vacuum pump, while the more recently developed NPWT systems utilise flexible drains and gauze and are based on the Chariker-Jeter technique.

## The Chariker-Jeter method of NPWT

The Chariker-Jeter method is now increasingly used in the application of NPWT. The commercially available gauze-based systems involve the application of moistened anti-microbial dressing (AMD) gauze (Covidien, Hampshire) and a silicone drain to the wound. Different drains can be utilised depending on the wound site, depth and status. The flatbed drain is the most common, with channel and round drains available for the treatment of fistulae or sinuses.

The AMD gauze is impregnated with polyhexamethylene biguamide (PHMB) and this combination has been used as a therapeutic medium in wound care for many years. The gauze is used as a space filler to facilitate wound drainage, while the PHMB exerts an antimicrobial effect on the wound environment.

Once filled, the wound is then covered with a transparent film, ensuring that an air-tight seal and a moist wound healing environment are maintained. The drain is then connected to a canister and suction pump where the pressure is regulated. Once the prescribed pressure is set, negative pressure is delivered to the wound.

## Pressure intensity and duration of NPWT

Exposing wounds to NPWT has been studied for at least half a century, but defining pressure intensity, duration of treatment and intervals between treatments is still a subject of debate for all NPWT systems. In 1997, Morykwas et al showed that microvascular blood flow increased above baseline values with negative pressures of -125mmHg. However, the Russian physicians had earlier concluded that to avoid tissue damage, pressures in active drainage systems should not exceed -80mmHg and that lower pressures were less likely to result in postoperative hemorrhage.

In 2004, a Swedish study by Wackenfors et al was published in which the microvascular blood flow in porcine wounds was observed during the application of pressures ranging from -50mmHg to -200mmHg. They concluded that when treating stiff tissue such as muscle, a negative pressure of -100mmHg was reasonable. When treating softer tissue, such as fat and subcutaneous tissue, which is more vulnerable to hypoperfusion, the application of a lower negative pressure, such as -75mmHg, was considered to be more beneficial.

## Clinical benefits of NPWT

From the studies outlined, along with observations in clinical practice, there are many benefits associated with the use of NPWT, including:

- Increased local blood flow to the wound, by dilation of arterioles
- Reduced tissue oedema through the removal of excess fluid
- Stimulation of granulation tissue, resulting in progressive wound closure
- Stimulation of cell proliferation
- Removal of free radicals from the wound
- Removal of slough
- Reduction in wound volume
- Protection from outside contaminants
- Decrease in wound bioburden
- Maintenance of a moist wound healing environment.

NPWT can be used to deliver optimal care to many patients with complex wounds. The therapy not only offers rapid healing but more importantly can improve quality of life by removing exudate and reducing odour, minimising the need for dressing changes. Wound symptoms often cause more anxiety to the patient than the wound itself and it is recognised that wound-related problems such as pain, exudate, and odour may cause patients to make lifestyle changes (Jones et al, 2006). Patients' beliefs and attitudes about their condition, coupled with uncontrolled symptoms, are perhaps among the most important factors to influence their ability to adhere to treatment and may increase the risk of delayed healing and development of psychological problems such as depression and anxiety (Moffatt et al, 2008).

## Indications and contraindications

NPWT may be used for the management of:

- Partial/full thickness pressure ulcers
- Dehisced surgical wounds
- Diabetic/neuropathic ulcers
- Venous leg ulcers
- Post-surgical wounds
- Sinus drainage and management
- Traumatic wounds
- Pre-op flap/grafts
- Post-op surgical flap/grafts
- Necrotising fasciitis
- Burns.

As with all treatments, NPWT should only be used on wounds which have been thoroughly and accurately assessed. Its use is contraindicated if:

- Necrotic tissue/eschar is present
- Dressings are placed directly over exposed vital structures (i.e. tendons, ligaments, blood vessels, anastomotic sites, organs and/or nerves)
- Untreated osteomyelitis is noted
- Non-enterocutaneous or unexplored fistulae are present
- There is malignancy in the wound
- The patient is being treated with systemic steroids
- The patient is unable to understand what the therapy entails, or comply with the treatment.

## Cost effectiveness

There are a growing number of patients with complex wounds that are hard to heal, making treatment difficult and costly. In the UK alone, there are approximately 200,000 people suffering at any time from venous leg ulcers (70,000–100,000), pressure ulcers (20,000) and diabetic foot ulcers (64,000). It has been estimated that the financial cost of

these chronic wounds to the health service is £2.3–3.1 billion per annum (Bottomley, 2007). These costs are reflective of the value of goods and services used in the diagnosis or treatment of patients with chronic wounds, the main components of which are dressings and other materials, medical and nursing time and hospital resources (Posnett and Franks, 2007). This cost could increase in real terms by at least one third in the next 20 years, solely as a result of ageing of the UK population (Posnett and Franks, 2007). The direct cost to the health service of other wound types such as traumatic and non-healing surgical wounds have never been systematically estimated.

Despite the use of modern dressings, many wounds take a long time to heal, fail to heal, or recur, causing significant pain and discomfort to the individual, resulting in a human cost in terms of carer burden and patient quality of life (Bottomley, 2007). Many of these patients with complex wounds benefit from NPWT which can be used to promote wound healing and/or the alleviation of symptoms. The reduced cost of the new gauze-based NPWT systems that are now available means that there is the potential for more patients to have access to, and benefit from, this mode of care.

## Conclusions

Currently, clinical evidence is being compiled to reinforce the value of the gauze-based NPWT system in practice. Based on all of the available research to date, it is expected that findings will support the use of the system across a broad range of wound types. As more systems become available, it is expected that the use of gauze-based NPWT will rapidly increase. In the meantime, a wealth of clinical experience suggests that NPWT is a clinically- and cost-effective treatment that can be used to provide maximum therapeutic benefits to the patient with complex wounds, and cost-effective care for the health service.

## SECTION 1. ROLE OF THE PRESCRIBER

| Statement | Reason for statement | How to demonstrate statement is being achieved |
|---|---|---|
| ❖ The prescriber will have sufficient training, knowledge and expertise to undertake a competent, holistic assessment of the patient and their wound referring to the relevant wound-appropriate guidelines, best practice statements and local organisational policy and procedures, before commencing negative pressure wound therapy (NPWT) | ❖ Inappropriate assessment of the patient and/or their wound can lead to the development of an inappropriate treatment plan and result in sub-optimal care. The use of relevant national/locally accepted guidelines protects both the patient and the prescriber | ❖ The prescriber will be able to demonstrate a level of expertise via formal education and measured competency relevant to wound type |
| ❖ The prescriber will undertake or request further clinical investigation where appropriate, the findings of which may affect the patient's suitability for NPWT | ❖ Due to underlying aetiology or concomitant disorders, or factors such as depth or anatomical position of the wound, further investigation may be required to determine if NPWT is indicated. For example, a sinus of unknown depth should be investigated fully | ❖ Documentation and interpretation of the results will be present in the patient's notes and an appropriate plan of action and specialist referral initiated and documented if findings are outside of the normal range |
| ❖ Before initiating NPWT, any potential barriers to wound healing should be identified by full holistic patient assessment and addressed where possible, e.g. patients should have appropriate repositioning, pressure reducing/relieving surfaces, nutritional screening, referral to dietetics, management of systemic conditions and incontinence, and advice on smoking cessation and the importance of wearing appropriate correctly fitting footwear | ❖ There are a number of factors which can impact on wound healing (and contribute to wound development) and which can be identified and addressed, to maximize the impact of NPWT on the wound | ❖ Identified factors are documented in the patient's notes along with evidence that appropriate action has been taken |
| ❖ Before prescribing NPWT, the prescriber should be sure that there is sufficient provision of care and support available to safely administer the therapy | ❖ To protect the patient and ensure that care is of the highest quality. Where staff are unfamiliar with, or have not received support in, the use of NPWT there is the potential for sub-optimal wound management | ❖ The practitioner(s) required to deliver NPWT will be able to demonstrate their knowledge and skills and will have access to training resources to ensure safe administration and monitoring of therapy |

| Statement | Reason for statement | How to demonstrate statement is being achieved |
|---|---|---|
| ❖ NPWT can be delivered via a wide variety of specifically designed pump systems and the prescriber should be familiar with the operation of the system prescribed | ❖ The instructions for the use of each system will vary and this fact should be known to the prescriber and acknowledged when prescribing NPWT | ❖ Failure to recognise the differences between the various operating systems could lead to sub-optimal care |
| ❖ The prescriber should set clear and measurable NPWT-related treatment goals, which should be communicated and negotiated with the patient where appropriate | ❖ Clear and measurable goals allow for effective assessment or measurement of the treatment's success | ❖ The patient's health records will contain a clear plan of care and treatment goals |
| ❖ The prescriber should be able to recognise when NPWT can be appropriately discontinued and replaced by another form of wound management based on accurate assessment and evaluation and achievement of stated goals. If any adverse events occur, such as skin reactions, pain, or haemorrhage, therapy should be stopped | ❖ NPWT usually forms part of the treatment pathway and failure to recognise when the NPWT can or should be stopped could lead to sub-optimal care | ❖ The patient's health records will contain a clear plan of care and treatment goals which indicate NPWT is the treatment of choice |

## SECTION 2. ROLE OF THE PRACTITIONER

| Statement | Reason for statement | How to demonstrate statement is being achieved |
|---|---|---|
| ❖ Before commencing NPWT the practitioner should be aware of their responsibilities in the health education of the patient/carer and should communicate the details of the therapy, at a level appropriate for the patient/carer | ❖ The patient will know their wound is making progress as treatment goals are met and information given and received engenders trust and respect and assists in achieving concordance with the treatment plan | ❖ When asked by the practitioner, the patient and/or carer is able to demonstrate their understanding of their disease, fully participate in the care and comply with their treatment |
| ❖ The practitioner caring for the patient will ensure that adequate provision is made for monitoring of the therapy, including an understanding of the alarms of the pump | ❖ Failure to accurately monitor therapy can lead to sub-optimal care | ❖ The patient's health records will record a detailed monitoring plan |
| ❖ It is the responsibility of the practitioner to ensure that the sterility of the components of the NPWT pack have not been compromised and to work using an aseptic technique | ❖ The aseptic technique and sterile products are used to reduce the risk of inoculation of the wound with pathogens | ❖ Pack components will be stored and used appropriately, will not have had their sterility compromised and will be in date |
| ❖ The practitioner will establish that the patient consents to treatment with NPWT | ❖ To establish a therapeutic partnership that will lead to the development of concordance during treatment | ❖ The patient gives verbal and/or written consent to treatment and this is recorded in the patient's records |

## Section 3. Lining the wound bed

| Statement | Reason for statement | How to demonstrate statement is being achieved |
|---|---|---|
| ❖ If there are underlying structures exposed in the wound bed, e.g. bowel in open abdominal wounds or exposed bone in diabetic foot ulcers, a liner (a porous, non-adherent wound contact layer*) should be used between the AMD gauze and the structure | ❖ Lining the wound bed where underlying structures are visible reduces the potential risk of damage to the structures caused by adherence of gauze or pressure on the initiation of therapy | ❖ Patients with vulnerable underlying structures in the wound will have their wound bed lined before the application of NPWT and this will be recorded in the patient's notes |
| ❖ Where there are no underlying structures visible in the wound bed, it may be possible to apply the AMD gauze without lining the wound bed | ❖ Large volumes of exudate passing through the AMD gauze make it unlikely that the gauze will dry out and adhere to the wound | ❖ The patient's health records will recognise that the removal of the dressing is atraumatic |

*While this document is primarily concerned with gauze-based NPWT, it recognizes that many clinicians have used a variety of materials which fulfill the criteria of a 'porous, non-adherent wound contact layer' in conjunction with the Chariker-Jeter method and there is likely to be further development in this area in the future

## SECTION 4. DRAIN TYPE

| Statement | Reason for statement | How to demonstrate statement is being achieved |
|---|---|---|
| ❖ A flatbed drain is suitable for use in the majority of wound types | ❖ A single type of drain used in the majority of cases reduces the likelihood of inappropriate drain selection | ❖ Unless otherwise clinically indicated a flatbed drain will be used |
| ❖ In some wounds, namely sinuses and fistulae, where a flat bed drain is too wide in diameter to be inserted into the cavity without causing damage to the surrounding tissues, a modified flatbed drain, channel or round drain can be considered. However, a drain should only be inserted and therapy commenced once the sinus or fistula has been examined via x-ray or ultrasound | ❖ Some sinus or narrow wounds may be too small in diameter to accommodate a flatbed drain. Modified flatbed, round or channel drains are much smaller and therefore more suitable for wounds with a narrow diameter. Examination will minimise the risk to internal structures within or adjacent to the tract on application of the drain | ❖ Where a wound is too narrow to accommodate a flatbed drain, a channel drain will be considered. Documentation in the patient's health records will state that investigations have been undertaken and the results interpreted and indicate that NPWT can be safely initiated/administered |
| ❖ The flatbed or channel drain should be cut to the appropriate length as recommended in the manufacturer's instructions, to meet the needs of the wound | ❖ The drains are designed to be cut to size in all but the biggest of wounds | ❖ The drain will not protrude from the wound edges |
| ❖ The flatbed or channel drain should be placed in between layers of gauze with the tip placed 1cm away from the edge of the wound, and not in direct contact with the wound bed or wound sides. However, if a sinus is present in the wound, the tip of the channel drain can be placed directly into the sinus and the wound filled with AMD gauze | ❖ Enclosing the drain in gauze will ensure the drain does not adhere to any granulation tissue which may be formed. Correct positioning of the drain tip will aid wound contraction and ensure an even distribution of pressure | ❖ The drain will not be in contact with the granulation tissue, unless the tip of the channel drain is placed in the sinus, and will be positioned appropriately |
| ❖ In wounds of particularly large volume, or which produce a large volume of exudate, more than one drain can be used and connected to the canister/pump using a Y-connector | ❖ This will ensure effect removal of exudate from the wound bed and an even distribution of pressure throughout the wound | ❖ Where required two drains will be used and the method of application, e.g. Y connector, will be documented in the patient's health records |

## Section 5. Wound packing/filling material

| Statement | Reason for statement | How to demonstrate statement is being achieved |
|---|---|---|
| ❖ Clinical experience and expert opinion to date suggests that AMD gauze (which is coated in the antimicrobial agent poly-hexamethylenebiguanide [PHMB]) is superior to traditional gauze when used as a wound filler | ❖ The majority of practitioners have to date used AMD gauze to achieve positive outcomes with NPWT | ❖ The patient's health records will reflect the use of AMD gauze as the wound filler |
| ❖ AMD gauze should be moistened to facilitate application | ❖ Moistening the AMD gauze before application prevents adherence to the wound bed, facilitating ease of application to all wound areas and maintains a moist wound healing environment | ❖ The application of moistened gauze will be recorded in the patient's notes |
| ❖ The amount of AMD gauze applied will depend on the size of the wound and, where multiple pieces are used, this should be recorded | ❖ It is important to ensure the wound bed is covered with AMD gauze and to ensure that all pieces of dressing material are removed from the wound at each dressing change | ❖ The patient's health care records will have details of the amount of AMD gauze used in the wound |
| ❖ AMD gauze should not overlap onto, or make contact with, the surrounding skin | ❖ If AMD gauze is in contact with the peri-wound area and negative pressure is applied, skin damage or 'gauze burn' may occur | ❖ Surrounding skin is checked before applying negative pressure and at each dressing change |
| ❖ All areas of the wound including undermining should have AMD gauze inserted loosely | ❖ To encourage wound closure from the wound bed upwards, to promote healing of the whole wound and to avoid bridging of granulation tissue | ❖ The patient's health records reflect the correct placement of the gauze within the wound |
| ❖ Gauze should be applied so it is level with the peri-wound area upon application of negative pressure | ❖ If too much gauze is placed into the wound, it may make it difficult to seal | ❖ Patient's health records show that the wound was successfully sealed |

## SECTION 6. DRAIN/WOUND SEALING

| Statement | Reason for statement | How to demonstrate statement is being achieved |
|---|---|---|
| ❖ A transparent adhesive film dressing is applied to seal the drain and AMD gauze into the wound | ❖ Sealing the wound produces a contained environment that enables the creation of sub-atmospheric pressure when the pump is switched on | ❖ The patient's health records state that a seal was achieved and the desired pressure obtained |
| ❖ Adhesive gel strips and/or patches and/or hydrocolloid paste and/or hydrocolloid dressings can be used to create an airtight seal around the drain | ❖ The area where the drain leaves the wound is sometimes difficult to make airtight. Adhesive gel strips and/or patches and/or hydrocolloid paste and/or dressings can be used to make the film seal airtight | ❖ The patient's health records state that a seal was achieved and the desired pressure obtained |
| ❖ Regular monitoring of the drain and wound seal is required, the frequency of which will vary depending on the type of wound, the patient's overall clinical condition, and the care setting | ❖ Over time it is possible that the airtight seal achieved at dressing change can be lost due to issues such as patient movement | ❖ The patient's health records indicate the frequency of monitoring required |
| ❖ It may be necessary to track the drain away from vulnerable areas where it may cause pressure damage to the surrounding skin, e.g. in patients with diabetic foot ulcers or sacral/buttock wounds | ❖ Patients with neuropathy are unaware of pressure on the foot which may lead to tissue damage, similarly patients with sacral ulcers could be at risk if the drain is not positioned appropriately | ❖ The patient's health records describe the technique used |
| ❖ The practitioner should consider the careful placement of the drain when sealing the wound since its position can assist in aiding the patient's mobility and independence | ❖ Location of the drain can impact on the patient's mobility. Careful consideration of this can help to maximize the patient's independence | ❖ The optimal location for the drain is documented in the patient's health records, and the information passed on to all staff responsible for changing the dressing |

## Section 7. Peri-wound management

| Statement | Reason for statement | How to demonstrate statement is being achieved |
|---|---|---|
| ❖ The practitioner should be aware of the need to protect the peri-wound skin, particularly if large volumes of exudate are being produced or if the skin is fragile | ❖ The use of adhesive film dressings and/or the presence of wound exudate can cause skin stripping of the peri-wound area | ❖ The patient's healthcare records should include a comprehensive wound assessment which includes the condition of the surrounding skin |
| ❖ The application of adhesive gel strips or thin strips of hydrocolloid dressings to the skin surrounding the wound can provide protection and promote adhesion of the film dressing | ❖ This creates a barrier against the effects of exudate and also against the adhesive in the film dressing | ❖ Any use of adhesive gel strips or hydrocolloid is documented in the patient's health records and the state of the surrounding skin is assessed at each dressing change |
| ❖ Barrier preparations can be used to avoid skin damage caused by dressing adhesive | ❖ Barrier preparations protect the skin from exudate and also from the adhesive in the film dressing | ❖ The use of a barrier preparation is documented in the patient's health records and the state of the surrounding skin is assessed at each dressing change |
| ❖ Regular monitoring of the wound seal is required to prevent leakage of fluid onto the peri-wound area. Frequency of monitoring will vary depending on the type of wound and the patient's overall condition and care setting | ❖ Over time it is possible the airtight seal achieved at dressing change can be lost due to issues such as patient movement and this could result in exudate damaging the peri-wound area | ❖ The patient's health records will indicate the degree of monitoring required and the peri-wound skin condition checked at each dressing change |

## SECTION 8. FREQUENCY OF DRESSING CHANGE

| Statement | Reason for statement | How to demonstrate statement is being achieved |
|---|---|---|
| ❖ The practitioner should only conduct a dressing change following the completion of an assessment of the wound and surrounding skin for any changes in condition | ❖ Between dressing changes the wound and skin condition could have altered to contraindicate NPWT, e.g. bleeding, pain and general deterioration of the patient's condition | ❖ Patient's health records will record that an assessment of the wound has taken place |
| ❖ It is recommended that dressing changes should take place every 48–72 hours | ❖ Clinical experience and expert opinion to date has indicated this to be a reasonable period between dressing changes | ❖ Dressing changes as well as the recommended frequency are recorded and documented in the patient's healthcare records |
| ❖ Frequency of dressing change is dependent on the volume of exudate, wound size and the patient's overall condition, and issues such as incontinence or infection | ❖ Dressing changes need to be adjusted to take into account the individual patient and wound | ❖ Dressing changes are documented in the patient's healthcare records and rationale given for adjusting the frequency |

## SECTION 9. PRESSURE SETTING

| Statement | Reason for statement | How to demonstrate statement is being achieved |
|---|---|---|
| ❖ Clinical practice to date suggests that pressure ranging from 75mmHg to 100mmHg are effective in the majority of cases. However, the clinician should follow manufacturer's instructions and apply according to the individual patient and clinical setting | ❖ To date clinical experience has not identified any particular pressure as being of greater benefit than another. Similarly, the use of continuous or intermittent pressure does not appear to influence outcome | ❖ The patient's healthcare records will clearly state the pressure the pump has been set at, and the frequency and duration of application |

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