Royal Cornwall Hospitals
NHS Trust

Negative Pressure Wound Therapy Procedures

V5.0

November 2023

Table of Content

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Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

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Royal Cornwall Hospital Trust rch-tr.infogov@nhs.net

1. Introduction

1.1. Negative pressure wound therapy (NPWT) is a broad term used to describe a unique and versatile system that aids the optimization of wound healing through the application of sub-atmospheric pressure to help reduce inflammatory exudate and promote granulation tissue. It can be utilized to manage acute and chronic wounds, ranging from open fasciotomy wounds and diabetic foot ulcers to closed surgical incisions. (Vasudev Zaver, Pradeep Kankanalu 2022)

1.2. Due to its specific mode of action, practitioners require training and must follow the recommended guidelines to reduce risk and achieve the best outcomes for the patient. In addition to a wound assessment, practitioners must also assess the patient's suitability to be able to manage the device on discharge.

1.3. At RCHT the negative pressure therapy of choice is V.A.C.® therapy. For single use negative pressure therapy, the choice is PICO 7.

1.4. This version supersedes any previous versions of this document.

2. Purpose of this Policy/Procedure

This purpose of this policy is to ensure all staff have the best practice guidance to assess patients for their suitability for NPWT therapy, apply the therapy and discharge patients safely according to International, National, and local best practice guidelines.

3. Scope

This document is applicable to all staff who are competent in NPWT, work within a clinical setting, and participate in the care of patients with Negative pressure wound therapy (NPWT). This includes the use of VAC therapy and single use devices- PICO 7 NPWT.

4. Definitions / Glossary

- NPWT - Negative Pressure Wound Therapy.
- VAC – Vacuum Assisted Closure.
- PICO 7– Name of pump (not abbreviated).

5. Ownership and Responsibilities

5.1. Role of the Registered Practitioners

Registered practitioners have a duty of care, which cannot be delegated. They are responsible for individual patient assessment and implementation and evaluation of the strategies to ensure appropriate use of NPWT therapy outlined in this policy.

5.2. Role of Individual Staff

This intervention must be undertaken by staff competent to perform NPWT therapy therefore the placement of patients' needs to consider these requirements.

5.3. Role of All Staff

All staff using the equipment must be able to do so in accordance with the manufacturer's instructions.

5.4. Role of Ward/Clinical Area Manager

The ward/clinical area manager is responsible for ensuring staff can access theoretical and practical training.

5.5. Role of Tissue Viability Service

The tissue viability service and the company will provide training in the form of study days, learning resources, and practical workshops.

5.6. Role of Equipment Library Staff

The Equipment library staff will ensure appropriate distribution of equipment and consumables. They also facilitate the ordering and distribution of the individual pump units and the consumables as well as support the discharge process.

6. Standards and Practice

6.1. Mechanisms of Action of V.A.C.® Therapy

- V.A.C.® therapy applies controlled topical negative pressure uniformly across the surface of a wound.
- It works through the application of open pore foam dressing or gauze either in or over the wound, which is then sealed and attached to a therapy pump unit.
- Once set at the required pressure level it provides negative pressure within the wound bed to aid wound closure.
- The occlusive protective covering applied reduces the risk of bacterial contamination and risk of infection whilst ensuring that a vacuum is maintained.
- V.A.C.® therapy improves tissue perfusion, removes excess exudate, and facilitates granulation of the wound bed through the application of topical negative pressure.

6.2. **Therapeutic Effects of Topical Negative Pressure**

6.2.1. Reduction of the wound area due to negative pressure acting on the foam, pulls together the edges of the wound (wound retraction) (EWMA 2017).

6.2.2. It promotes wound healing through several actions:

- Actively controls and removes excess interstitial fluid which in turn reduces oedema.
- Controls exudate.
- Stimulates the formation of granulation tissue.
- Improves micro vascular blood flow.
- Reduces wound size by assisting with wound contraction.

6.2.3. EWMA (2007) acknowledge that there is a potential to decrease bacterial load and stimulate cell proliferation.

6.3. **Clinical Indications for Use**

V.A.C.® therapy can be used in acute or chronic wound management and is particularly beneficial in the following wound types:

- Dehisced surgical wounds.
- Wounds healing by secondary intention where healing potential is compromised i.e., by reduced blood flow, oedema.
- Diabetic ulcers.
- Extensive pressure ulcers.
- Wounds where exudate and odour cannot be controlled by routine wound management dressings.
- Closed surgical wounds which are exuding.
- Wounds where the wound bed needs to be prepared prior to skin grafting or post graft application.
- Over infected prosthetic joints or where the infected prosthesis has been removed. (Evidence for this indication is not well documented however it is common practice in orthopaedic speciality).
- Open abdominal wounds.
- Infected wounds.

6.4. **Treatment Objectives**

6.4.1. To manage excess exudate particularly if it is affecting skin integrity, clinical care, and quality of life.

6.4.2. To promote rapid improvement in the characteristics of the wound bed particularly before surgical closure in skin graft.

6.4.3. To improve the vascularity of the wound bed and / or promotion of granulation tissue.

6.4.4. To stabilise the wound graft or flap.

6.4.5. To promote healing when healing is not progressing with conventional dressings. Vowden et al (2007).

6.5. Contraindications

- If the patient declines the therapy or is unable to manage the device.
- Necrotic tissue with eschar present.
- Presence of thick, adhered slough.
- Known malignancy in the wound or near the wound site.
- Untreated osteomyelitis.
- Direct placement of V.A.C.® dressing over exposed blood vessels or organs.
- Unexplored fistulae to organs or body cavities.
- Wounds which are actively bleeding.

6.6. Precautions

- Wounds near major blood vessels or vulnerable structures such as tendons.
- Patients taking anti-coagulant medication.
- Enteric fistulae and or sinuses.
- Presence of bone fragments which could puncture protective vessels / organs.

6.7. Decision Making Process for V.A.C.® Use.

6.7.1. Prior to using V.A.C.® therapy communication between the medical and nursing teams is essential to ensure there are no delays in initiating therapy. There should be clear documentation in the patient records of the rationale for using the therapy and for the proposed length of time. Discharge planning should be initiated as early as possible.

6.7.2. The following steps should be followed:

1. All staff initiating and using V.A.C.® therapy must be competent in its use. Consideration must be given to subsequent dressing changes and availability of competent staff to ensure continuity of therapy. Training is available through the 3M representative and training dates are available through the Trusts practice educators or TV specialists. The helpline number 0800 980 8880 is for additional 24-hour support.

2. The wounds are assessed to ensure that V.A.C.® therapy is indicated. Contraindications to therapy must be noted in the patient record if VAC not suitable.

3. Wherever possible the patient should be involved in the decision-making process and understand the reason for using V.A.C.® therapy.

4. The type of pump unit either Acti V.A.C (Image 1) or ULTA (Image 2) and sponge type (either black or white) or Gauze is identified.

   ActiV.A.C. is a portable machine if the patient wishes to be mobile. They are more suited for patients on discharge to encourage independent living. Black foam is the most effective at stimulating granulation, aiding wound contraction and enhance exudate removal. White foam is indicated where the growth of granulation tissue needs to be controlled and for sinuses and undermined areas or where the patient cannot tolerate the black foam due to discomfort. Gauze dressings are used for the same indications as black foam however they are particularly useful where there is an element of undermining of tissue and/ or where pain levels and tolerance of the VAC therapy is affected. It should be noted that gauze is believed to have a slower rate of granulation as the pressure is lower than for foam. (See Appendix 6 for dressing selection chart).

   The ULTA is used where the level of exudate is high as the canister capacity is larger. **Patients are not to be discharged from RCHT with an ULTA**.

5. The pumps and consumables can be obtained through the RCHT Equipment Library. Please follow pathway (Appendix 1) to obtain the appropriate pump and consumables.

6. The Equipment Library staff must be informed when a patient is to commence VAC therapy to ensure the correct pump and consumables are supplied and that the pump location is tracked.

7. Once the pump, dressings and canisters are available the therapy is applied according to recommended application guidelines (Refer to V.A.C.® therapy clinical guidelines produced by 3M).

Image 1. 3M™ ActiV.A.C.™ unit

Image 2. 3M™ V.A.C.® Ulta unit

Images provided with permissions from 3M.

6.8. Procedure for the Application of V.A.C.® Therapy

6.8.1. **Equipment**

- V.A.C.® therapy pump unit. Obtain through RCHT equipment library (see Appendix 1).
- Canister (Available from RCHT equipment library).
- Foam and Film dressing or gauze (size and type depends on the wound, available from RCHT equipment library).
- Dressing procedure pack, normal saline, scissors, non-adherent dressing such as Adaptic touch, hydrocolloid or V.A.C.® gel strips to aid application and for skin protection.

6.8.2. **Application**

6.8.2.1. Please refer to the V.A.C.® Therapy Clinical guidelines reference source for clinician's guide' for specific instructions on the use of the pump and application, as there are several techniques depending on the type and position of the wound.

6.8.2.2. The following tips will assist in the successful application and removal of the therapy:

- No black or white foam or gauze should touch healthy peri wound skin as this can cause further skin breakdown. Vulnerable skin can be protected with a hydrocolloid dressing, VAC gel strips or barrier film can help with the seal.
- Do not overpack the wound space with foam or gauze as this could lead to difficulty approximating the wound edges and a delay in wound healing.
- Cut film drape into small sections to hold foam in place. There is no need to use large amounts of the drape. A border of 3-5cms should be adequate.

- Non adherent silicone dressings such as Adaptic touch should only be used to line the wound where there is a high risk of foam adherence, where wound tissue is vulnerable or to protect underlying structures visible in the wound. Apply in one layer only as this can alter the effectiveness of the therapy unless protecting major structures.

- More than one wound can be treated at the same time with the same pump. See page 15 of the V.A.C.® Therapy Clinical guidelines reference source for clinician's guide for technique and considerations prior to therapy such as wound aetiology and infection.

- To aid dressing removal, turn the pump off for at least 20mins prior to removing the foam. For deep wounds the administration of 20mls of normal saline down the suction tubing may facilitate easier dressing removal.

- Dressings and canisters should be disposed of as clinical waste.

- During dressing changes if the canister is not full a bung can be used on the end of the canister tubing to reduce risk of infection.

- Patients may walk around with the pump unit disconnected from the mains, as there is a battery facility, which will last approx. 6-8 hours if fully charged.

6.8.3. **Other Considerations**

6.8.3.1. Therapy must stay in place for 24 hours a day. Patients can be transported with the pump unit in place using the battery back-up facility. Disconnect unit from the mains supply but do not turn off the unit. The battery will last up to 6-8 hours if fully charged however early re connection to the mains supply is recommended.

6.8.3.2. Wounds should be reviewed every 2 – 3 days regardless of the type of dressing. If dressings are left for longer there is a potential for the wound to granulate into the sponge or gauze and removal may be traumatic.

6.8.3.3. Recommended therapy levels

- -125mmHg if using black foam and for abdominal wounds where fascia is intact. If there are concerns regarding the condition of the fascia or the significant risk of fistulation, then the surgeon or experienced clinician may choose to reduce the therapy settings accordingly. Adaptic Touch dressings to line the base of these wound types should also be considered to reduce the potential risk of complications.

- -125mmHg if using gauze – previously 100mmHg was used however evidence suggests a range from -80mmHg to -200mHg for gauze depending on exudate levels.

- -150mmHg if using white foam.

- Abthera dressings 125mmHg is the recommended setting as the design of the system requires this level of negative pressure to work and distribute pressure across the dressing.

- For most of the wounds continuous therapy is indicated. See V.A.C.® Therapy Clinical guidelines reference source for more information regarding pressure settings.

6.8.3.4. Wound size should be recorded at the start of therapy and at least weekly to measure treatment effectiveness.

6.8.3.5. A care plan should be written to reflect the specific therapy settings and the type of pump and sponge being used. Review time frames should also be included.

6.8.3.6. An estimated length of use should be documented to enable early discharge planning.

6.8.3.7. There is a 24-hour help line available both for clinical and technical support. HELP LINE NUMBER - 0800 9808880

6.8.4. **Completion Of V.A.C. ® Therapy in Hospital**

When V.A.C.® therapy is no longer required it is the wards responsibility to inform the Equipment library Ext 3049 that the pump is no longer required and is ready for collection. Pumps must be cleaned prior to removal from the wards. Pumps are single patient use only.

6.8.5. **Discharge Of Patients with V.A.C.® Therapy**

Discharge planning needs to be commenced as soon as possible as many factors need to be considered if a patient is to be discharged with V.A.C. ® therapy. All staff need to be aware of their accountability within the discharge process and to ensure that a safe discharge is planned according to the policy.

6.8.6. **The following key questions must be considered prior to discharge:**

- Does the wound still require V.A.C. ® therapy or can it be managed by conventional wound dressings?

- Is the patient able to manage with the therapy at home?

- Are the community staff competent in the application and management of patients with VAC therapy?

- If sending out of county has there been communication with the RCHT library team to ensure the pump unit details are transferred?

6.8.7. Pumps must not leave the hospital site unless the process outlined in Appendix 2 has been followed.

6.8.8. Patients must be discharged with 7 days' worth of dressings and canisters. The Community TV team need to be informed by completing the TNP on Discharge Maxims form in Appendix 3 and emailed to Tissue Viability via tissue.viabilitycornwall@nhs.net and also to the RCHT Equipment Library team on rch-tr.MedicalEquipmentLibrary@nhs.net.

6.8.9. **Vac Therapy in The Open Abdomen**

6.8.9.1. The Abthera Open Abdomen Management system can be applied to patients who have open abdominal cavities where the viscera is exposed. It is efficacious for the reduction of exudate from the open abdomen, early fascial closure, shorter length of hospital stay. lower mortality and improvements in patient's quality of life. NICE (2013) Caution is required in patients, who are at high risk of fistulation or of further bowel injury. The decision to use VAC therapy in this clinical situation should be made by the Consultant in charge, Senior medical staff who are familiar with this therapy and Tissue Viability nurses.

6.8.9.2. The abdominal VAC dressing should be applied by staff that have been trained in this specific technique.

6.8.9.3. A visceral protective layer is applied directly onto the open abdomen and tucked down the sides of the abdominal wall. It can be adjusted in size. Blue foam is then applied on top of the visceral protective layer. Instructions must be followed to ensure the blue foam does not come into contact with abdominal organs. Seal with V.A.C.® drape.

6.8.10. **V.A.C.® Veraflo**

6.8.10.1. V.A.C.® Veraflo combines the benefits of V.A.C.® therapy with topical wound solution installation. This system is indicated where debris in the wound is not removed by conventional therapy or treatments. It can be effective in softening and removing wound debris and can help to reduce the bacterial population by providing controlled wound irrigation. It can also speed up the formation of new granulation tissue in preparation for further intervention.

6.8.10.2. The soak times can be adjusted as can the therapy hours.

6.8.10.3. There is a choice of dressing types which can be accessed via the RCHT Equipment library and Tissue Viability team. Staff must be competent to use this system.

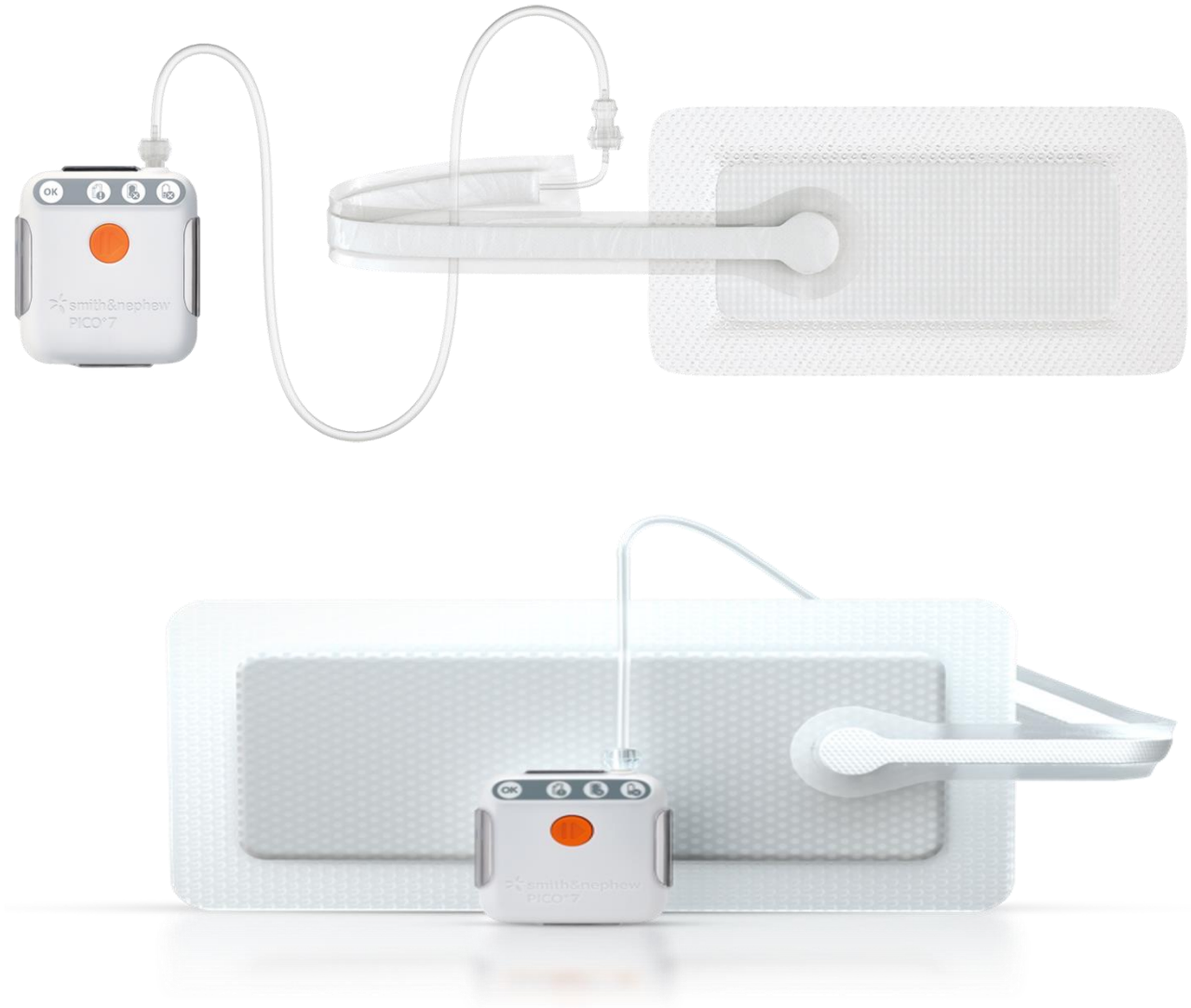
6.9. PICO 7 Negative Pressure Wound Therapy

6.9.1. The PICO 7 is a small lightweight portable negative pressure system which consists of a dressing supplied with a small negative pressure pump powered by 2 AA batteries. (Image 3) The device has a 7-day life.

6.9.2. The PICO 7 pump produces negative pressure at 80mmHg continuous therapy and has a simple to use on/off switch to control the pressure.

6.9.3. The PICO 7 is designed specifically for use on low exuding wounds and is very portable compared to the larger devices available on the market.

IMAGE 3. PICO™ Single Use Negative Pressure Therapy (sNPWT) - **PICO 7**



Images provided with permissions:

6.9.4. Mechanisms of Action of PICO 7 Therapy

- The wound dressing consists of a silicone wound contact layer, an airlock layer, a super-absorbent layer, and high moisture vapour transmission rate foam.
- The airlock layer allows negative pressure to be evenly distributed evenly across the dressing with the absorb layer absorbing the exudate.
- The pump unit connects to the dressing via a port which is already attached to the dressing.
- The PICO 7 can manage up to 300ml of exudate per week.
- PICO 7 can also be used with a filler material such as PHMB gauze or foam to treat deeper wounds.

6.9.5. Indications for Use of the PICO 7

Clinical indications are as follows:

- Low to moderately exuding wounds.
- Pressure ulcers.
- Leg ulcers.
- Closed surgical wounds – should ideally be applied in theatre at the time of surgery.
- Fasciotomy wounds.
- Cavity wounds (Filler required).
- Skin grafts.

6.9.6. Contraindications of PICO

- Highly exuding wounds.
- Bleeding wounds.
- Necrotic tissue with eschar.
- Untreated Osteomyelitis.
- Malignancy in the wound.
- Exposed arteries, veins, or organs.
- Non enteric and unexplored fistulae.

Not to be use on children under the age of 18 months.

6.9.7. **Decision Making Process for the Use of PICO 7**

The decision to use a PICO dressing lies with the Consultant managing the patient, the Tissue Viability team and staff who are competent in the use of the device. **PICO are not suitable for highly exuding wounds.**

6.9.8. **Obtaining the PICO 7**

6.9.8.1. The PICO 7 dressing kit is available from the RCHT Equipment Library where 3 sizes of dressing are kept as standard:

- 10 x 20cm.
- 10 x 30cm.
- 10 x 40cm.

6.9.8.2. During normal working hours the Equipment Library staff will deliver the PICO 7 kit to the clinical areas. The patient CR number and the ward name is required for recharging purposes.

6.9.8.3. There is 1 dressing in the box which should be sufficient for 7 days. At the end of the 7 days a new kit may be required. This is due to the 7-day life of the pump unit.

6.9.9. **Procedure for the Application of the PICO 7**

1) Ensure that the PICO 7 dressing is the correct size for the wound. Allow at least 1cm overlap.

2) Open the box and prepare the pump unit by inserting 2 AA lithium batteries into the unit.

3) Clean and prepare the wound ensuring that the wound edges are dry.

4) If a wound filler is required apply it at this stage.

5) Open the dressing pack and remove the wound dressing. Peel off the central section and place the dressing central over the wound. Place the port at the uppermost point of the wound. Do not position over anatomical areas of high pressure.

6) Remove the other 2 sections of the dressing and smooth the dressing gently around the wound. Do not cut the dressing.

7) Connect the pump unit to the dressing by twisting together the tubing connectors.

8) Press the Orange button to start the negative pressure process. The Green light will flash to indicate that the system is working correctly.

9) If Red-light flashes check the seal and / or the connection.

10) Finally apply the fixation strips to all 4 edges of the dressing.

11) Do not cover the dressing with an occlusive film dressing.

Warning Note: THE PICO 7 UNIT CONTAINS A MAGNET AND THEREFORE THE PUMP UNIT MUST BE KEPT AT LEAST 10CMS AWAY FROM IMPLANTABLE DEVICES SUCH AS PACEMAKERS, DEFIBRILLATORS and MRI SCANNERS.

6.9.10. **Discharge of Patients with PICO 7**

6.9.10.1. One of the benefits of using the PICO 7 is that it can enable early discharge of patients.

6.9.10.2. It is important to acknowledge the discharge requirements of the patient prior to application. Considerations should be given to the following:

- The ability of the patient to manage the device at home.
- The ability of the community nursing team to continue the management of the PICO following discharge. If support is required, please contact the Smith and Nephew clinical support team on **0800 915 5394.**
- The date when the PICO 7 should be removed. There must be a plan as to whom by and where the PICO 7 will be removed.
- The need for ongoing supply by the GP if required. PICO dressings are available on prescription and are on the Local Wound dressing's formulary for Cornwall.

6.9.11. **Educational / Clinical Support**

6.9.11.1. Within the RCHT, educational support for the use of V.A.C. ® therapy is available for multi professional staff through the Tissue Viability team and the VAC and PICO clinical support staff.

6.9.11.2. A Competency descriptor is available to support learning. (Appendix 7).

6.9.11.3. Please contact Tissue Viability on Ext 2673 or 07909930765 if training is required.

6.9.11.4. Training is also available for PICO 7 – contact the Smith and Nephew Representative on 07956 147438 or the RCHT Tissue Viability team as above.

7. Dissemination and Implementation

7.1. This document is an updated version of an existing policy that has been in pace for many years. Ward managers will be made aware via email of the updated policy, and this will be included in the training.

7.2. Training is provided by the respective companies and organised by the Trust practice educators along with the Tissue Viability team.

8. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	Quarterly meetings are held with the company, TV team and the Equipment library team to monitor activity, exception reporting and training outcomes.
Lead	Tissue Viability lead.
Tool	No specific tool required to measure this output.
Frequency	Quarterly.
Reporting arrangements	Exception reporting with concerns would be sent back to the relevant care groups.
Acting on recommendations and Lead(s)	This will be signed off at the Clinical Cabinet.
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned via the regular training and feedback provided by the company representatives. The lead member of the TV team will report back any concerns and together with the Equipment library manager will address practice and supply issues which will be shared with all the relevant stakeholders.

9. Updating and Review

9.1. This section covers information regarding the review process. All policy documents should be reviewed no less than every three years. Where appropriate, the author may set a shorter review date.

9.2. Revisions can be made ahead of the review date when the procedural document requires updating. Where the revisions are significant and the overall policy is changed, the author should ensure the revised document is taken through the standard consultation, approval, and dissemination processes.

9.3. Where the revisions are minor, e.g., amended job titles or changes in the organisational structure, approval can be sought from the Executive Director responsible for signatory approval, and can be re-published accordingly without having gone through the full consultation and ratification process.

9.4. Any revision activity is to be recorded in the Version Control Table as part of the document control process.

10. Equality and Diversity

10.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the Equality Diversity And Inclusion Policy or the Equality and Diversity website.

10.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Negative Pressure Wound Therapy Procedures V5.0
This document replaces (exact title of previous version):	Negative Pressure Wound Therapy Procedures V4.0
Date Issued / Approved:	25 October 2023
Date Valid From:	November 2023
Date Valid To:	November 2026
Author / Owner:	Heather Newton RGN MSc, Consultant Nurse Tissue Viability – Corporate
Contact details:	01872 252673
Brief summary of contents:	This document is applicable to all staff who: are competent in negative pressure therapy, work within a clinical setting, participate in the care of patients with VAC therapy.
Suggested Keywords:	Topical Negative pressure, Negative pressure wound therapy, VAC, PICO 7.
Target Audience:	**RCHT:** Yes **CFT:** No **CIOS ICB:** No
Executive Director responsible for Policy:	Chief Nurse
Approval route for consultation and ratification:	RCHT Clinical Cabinet
Manager confirming approval processes:	Louise Dickinson, Director of Nursing
Name of Governance Lead confirming consultation and ratification:	Louise Dickinson, Director of Nursing

Information Category	Detailed Information
Links to key external standards:	**References:** European Wound Management Association EWMA (2007) Topical Negative Pressure in Wound Management. EWMA position document. www.ewma.org NICE (2013) Negative pressure wound therapy for the open abdomen. NICE interventional procedure guidance 467. National Institute for Health and Care Excellence. London. Vasudev Zaner and Pradeep Kankanula (2022) Negative Pressure Wound Therapy - PubMed (nih.gov) Vowden K, Teot L, Vowden P. (2007) Selecting Topical Negative Pressure Therapy in practice. In European Wound Management Association EWMA (2007) Topical Negative Pressure in Wound Management. EWMA position document. www.ewma.org
Related Documents:	• EWMA position document. Topical Negative Pressure in Wound Management. (2007). www.ewma.org • NICE (2013) Negative pressure wound therapy for the open abdomen. NICE interventional procedure guidance 467. • Wounds UK (2014) Quick Guide Portable Single-Use Negative Pressure Wound Therapy. PICO in practice. http://www.wounds-uk.com/pdf/content_11332.pdf • RCHT Consent to Examination or Treatment Policy • RCHT Positive Patient Identification Policy and Procedures. • RCHT Management of Information, Records and Data Quality Policy. • RCHT Infection Prevention and Control Roles and Responsibilities Policy. • RCHT Wound Care Clinical Guideline.
Training Need Identified:	Yes – monthly training with 3M representative. Organised via the practice educators and the TV team.

Information Category	Detailed Information
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Clinical / Corporate Clinical

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
29 March 2009	V1.0	New guidelines.	Heather Newton Tissue Viability Consultant Nurse
28 November 2011	V2.0	Management of the open abdomen added to an otherwise unchanged document.	Heather Newton Tissue Viability Consultant Nurse
April 2016	V3.0	Guidelines updated to include new technologies. Title of guidance changed to reflect this. New product selection chart added.	Heather Newton Tissue Viability Consultant Nurse
December 2019	V4.0	Removal of page 20 Nanova as no longer used. PICO safety update. Inclusion of VAC Veraflo indications for use and guidance.	Heather Newton Tissue Viability Consultant Nurse
August 2023	V5.0	Updated information regarding evidence base for use of the therapy and associated references updated. Gauze pressure increased. Contact details confirmed. PICO 7 information updated with new photo. Gauze therapy pressures changed.	Heather Newton Tissue Viability Consultant Nurse

All or part of this document can be released under the Freedom of Information Act 2000.

All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus 6 years.

This document is only valid on the day of printing.

Controlled Document.

This document has been created following the Royal Cornwall Hospitals NHS Trust The Policy on Policies (Development and Management of Knowledge Procedural and Web Documents Policy). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity, and Inclusion Team rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy / policy / proposal / service function to be assessed:	Negative Pressure Wound Therapy Procedures V5.0
Department and Service Area:	Corporate Clinical
Is this a new or existing document?	Existing
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Heather Newton RGN MSc, Consultant Nurse Tissue Viability
Contact details:	01872 252673

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	All clinical staff involved in the assessment, application and management of patients requiring topical negative pressure therapy.
2. Policy Objectives	The objectives are to ensure that staff have access to up-to-date evidence-based information to ensure safe and best practice.
3. Policy Intended Outcomes	The outcomes of the policy are to provided safe and effective therapy.
4. How will you measure each outcome?	If the therapy causes harm this will be reported under the incident reporting framework via Datix and Patient safety review process. Contract meetings quarterly will identify any supply and demand concerns and training requirements.

Information Category	Detailed Information
5. Who is intended to benefit from the policy?	All clinical staff involved in caring for patients with topical negative pressure therapy and non-clinical staff who support the ordering and supply of the devices and consumables.
6a. Who did you consult with? (Please select Yes or No for each category)	• Workforce: Yes • Patients/ visitors: No • Local groups/ system partners: No • External organisations: No • Other: No
6b. Please list the individuals/groups who have been consulted about this policy.	**Please record specific names of individuals/ groups:** Equipment library staff. Clinical practice educators. Surgical practitioners /General surgeons. Company representatives. Tissue Viability team.
6c. What was the outcome of the consultation?	Amendments made to the policy with regards to evidence base, therapy settings and technique.
6d. Have you used any of the following to assist your assessment?	**National or local statistics, audits, activity reports, process maps, complaints, staff, or patient surveys:** No.

7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	

Protected Characteristic	(Yes or No)	Rationale
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	Inability to manage the device unless carers present 24/7. Inability to understand the therapy.
Religion or belief	No	
Marriage and civil partnership	No	
Pregnancy and maternity	No	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	No	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Heather Newton RGN MSc, Consultant Nurse Tissue Viability.

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:
Section 2. Full Equality Analysis

Appendix 3. Process for Ordering Vac Pumps and Consumables

VAC pump required.

Phone 3049 to request equipment and consumables.

The Tissue Viability team are available on 07909930765 to assist in decision making.

The following details are required prior to authorising a VAC pump:

- Ward / Dept.
- Patients CR number
- Consultant requesting therapy.
- Type of pump required.
- Size of dressings required.
- Any extra consumables required.
- Type and size of wound.

The pump and consumables will be delivered to the ward / dept. as soon as practicable during working hours. Units can be obtained out of hours via the Porters.

Additional consumables can be requested from the Equipment library as required however a top up service will be provided.

Out of hours there will be a spare pump and consumables in the library. The porters will check the library and deliver if available. The library should be notified via a voicemail message on 3049 as to the location of the pump.

Appendix 4. VAC / PICO 7 Therapy – Discharge Planning

If a decision is made that a patient can be discharged with VAC /PICO therapy the following stages need to be followed to ensure appropriate and safe ongoing management:

STAGES	ACTIONS
1	Is VAC / PICO 7 therapy still indicated? Assess the wound to determine if an alternative-dressing product can be used on discharge.
2	Discuss with the patient if they are happy to continue to use VAC / PICO 7 therapy at home. If the patient is unhappy then an alternative product needs to be used or the patient remains in hospital. If happy an information leaflet must be given, and assurance documented that the patient could manage the medical device.
3	The Community Nursing team may require training in the use of the VAC / PICO 7. This needs to be discussed with the specific teams prior to discharge. Education can be provided by the 3M or Smith and Nephew representatives via the helpline numbers. When completing the discharge form the name of the competent community nurse needs to be recorded.
4	Complete the TNP discharge form on Maxims with relevant clinical information (Appendix 5) and email it to the Community TV team on tissue.viabilitycornwall@nhs.net and the RCHT Equipment Library. rch-tr.MedicalEquipmentLibrary@nhs.net Without this form ongoing responsibility by the community will not be accepted
5	There needs to be a follow up plan in place prior to discharge. It is important to identify when and who will be monitoring progress and use of the VAC or PICO 7and when the patient is being followed up.

Appendix 5. Procedure for Completing and Sending TNP Forms on Patient Discharge

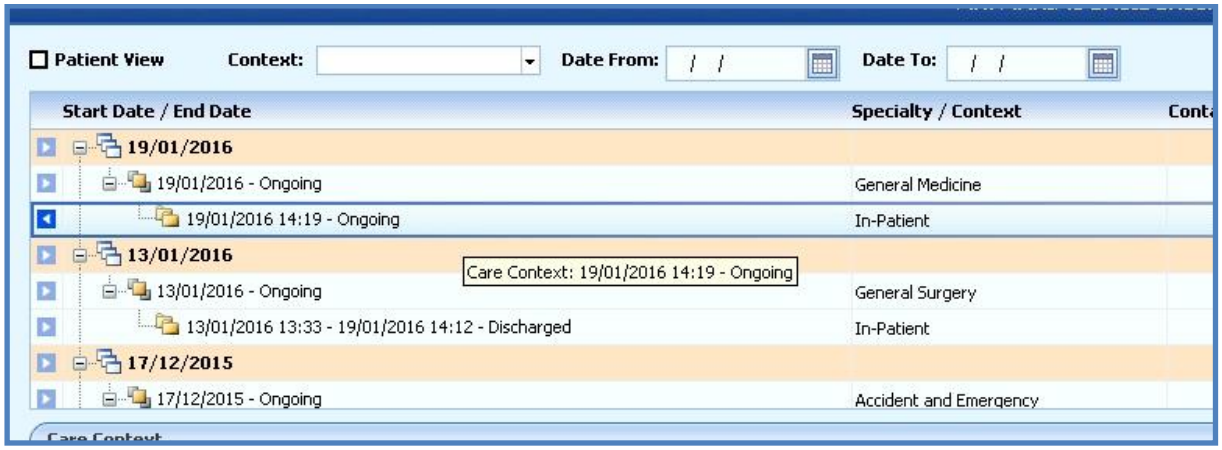
This is a two-part process, involving completing an electronic form in Maxims, then sending the document to Community Services by email.

It is recommended that this procedure is carried out on the day the patient is discharged from hospital.

1. Completing the form

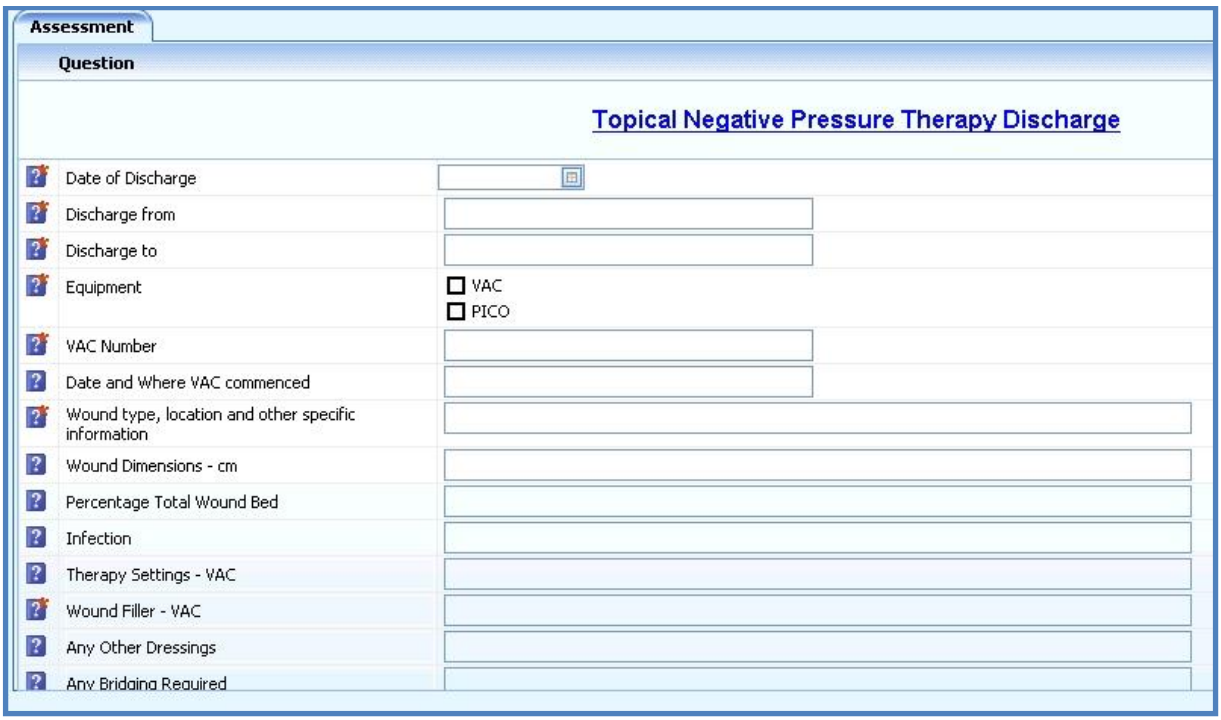
- Open Maxims (This must be the **'Prescribers'** version) and open the patients record.

- Open the '**Patient Summary'**.
- Select the relevant episode of care and make sure it is highlighted in grey.



- Click on the '**Assessments**' tab, then click 'Tissue Viability' and choose 'TNP Therapy'.
- At the bottom of the page, click '**New**'.

- Fill in the relevant details on the assessment form, then tick the '**Complete**' box, and **save** the form.



2. Sending the form.

- After saving the form, click on the '**Patient Details**' tab, then '**Patient Documents'**.

- Right-click on the saved document and click '**View**'. This will open a copy of the completed form.
- To send the form, click the mail button.

- This will open the email programme with your document attached to a new email.

Enter the recipient's addresses, tissue.viabilitycornwall@nhs.net and rch-tr.MedicalEquipmentLibrary@nhs.net , subject (**TNP Form**), and add [SECURE] including the square brackets in the subject line to encrypt the email.

- Send.

Appendix 6. NPWT Dressing Selection Guide

Wound Presentation	Dressing Type	Pressure	Other Considerations	Rationale
Clean granulation tissue with defined edges or slight undermining	Black foam	125mm Hg	Use a silicone tulle liner when necessary to prevent adhesion change every 2-3 days.	Optimise granulation tissue.
Clean granulation tissue with slight undermining	Black foam	125mm Hg	Use a silicone tulle liner. Change every 2-3 days.	Optimise granulation tissue.
Optimum healing required and rapid formation of granulation tissue	Black foam	125mm Hg	Use a silicone tulle liner. Change every 2-3 days.	
Stapled or sutured wound exuding heavily and at risk of dehiscence	Black foam Gauze	125mm Hg 100mm Hg	Cover the skin close to the staples or sutures with drape to protect from maceration or apply a silicone tulle and place foam or gauze across the top.	To prevent wound dehiscence.
Clean granulation tissue undermining or tunnelling with difficult to reach edges	Gauze	100mm Hg	Moisten gauze with warm sterile saline.	To ensure negative pressure is applied to all aspects of the cavity.
Greater than 30% fixed slough on the wound surface	Gauze	125mm Hg	Moisten gauze with warm sterile saline.	
Open abdomen	Abdominal dressing kit	125mm Hg	Must have input from tissue viability and surgical teams.	Risk of fistula if the bowel is infected, damaged, or inflamed.
Tunnelling or sinus	White foam Gauze	150mm Hg 100mm Hg	Apply white foam or gauze into sinus.	To promote closure.
Infected wounds with Debris	Veraflo Veraflo Cleanse	125mmHg	Must have input from the Tissue Viability team and surgical teams.	To remove debris and bacteria.

Appendix 7. Competency Descriptor - Vacuum Assisted Closure

Competency Level	Level 1	Level 2	Level 3	Level 4
Competency	• Understands the principles behind VAC therapy for wound healing. • Is able to connect and disconnect the pump unit from the mains supply. • Is aware of how to change the canister when full. • Can respond to the pump alarm and seek appropriate level of assistance.	• Can assess wounds and their suitability for VAC therapy. • Is aware of the range of foam dressings available. • Is aware of the ordering process and financial arrangements for VAC therapy. • Can apply VAC therapy to noncomplex wounds. • Can provide ongoing assessment and monitoring of wound healing. • Is aware of the discharge process for VAC therapy.	• Can assess and apply VAC therapy to more complex wounds using additional aids such as gel strips, y connectors. • Is able to make decisions regarding the continuing use of VAC therapy. • Makes decisions regarding the discharge of patients with VAC therapy. • Educates others in the use of VAC therapy.	• Can assess highly complex wounds and determine the suitability for VAC therapy. • Participates and organises training of staff trust wide in the use of VAC therapy. • Makes decisions regarding procurement of VAC pumps and consumables at a trust wide level. • Is responsible for ensuring protocols and policies are up to date and accessible for all staff.