

# Guideline for the Use of Negative Pressure Wound Therapy (NPWT)

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

## Introduction

This guideline ensures core standards of good practice for the application and use of NPWT

### This guideline is for use by the following staff groups:

WAHT Staff who are involved in any way in the use of NPWT

### Lead Clinician(s)

Elaine Bethell

Lead Tissue Viability Nurse

Adele Linthwaite

Tissue Viability Nurse

Approved by Clinical Policies Group, SKIN Matters Group on:

22<sup>nd</sup> June 2015

Review Date:

10<sup>th</sup> December 2020

This is the most current document and is to be used until a revised version is available

### Key amendments to this guideline

Date	Amendment	Approved By:
August 2017	Document extended for 6 months as per TMC paper	TMC
December 2017	Sentence added in at the request of the Coroner	
December 2017	Document extended for 3 months as per TLG recommendation	TLG
March 2018	Document extended for 3 months as approved by TLG	TLG
June 2018	Document extended for 3 months as per TLG recommendation	TLG
April 2019	Document extended for 6 months whilst review process is undertaken	Lisa Hill
March 2020	Document extended for 3 months whilst review is completed	Lisa Hill
June 2020	Document extended for 6 months during COVID-19 period	

## Training and Development

Worcestershire Health and Care NHS Trust and Worcester Acute NHS Trust recognise the importance of ensuring that its workforce has every opportunity to access relevant training. The Trust is committed to the provision of training and development opportunities that are in support of service needs and meet responsibilities for the provision of mandatory and statutory training.

All staff employed by the Trusts are required to attend the mandatory and statutory training that is relevant to their role and to ensure they meet their own continuous professional development.

### Contents

1. Introduction	3
2. Purpose	3
3. Definitions	3
4. Scope	4
5. Training /competencies	4
6. Responsibilities & duties	4
7. Indications for NPWT	5
8. Contra-indications for NPWT	5
9. Precautions	6
10. Treatment Objective	6
11. Assessment	6
12. NPWT application process	7
13. When to discontinue NPWT	9
14. NPWT dressing removal	10
15. Changing NPWT canisters	10
16. The procedure for obtaining returning the NPWT pump	11
17. Discharging into the Community on NPWT	11
18. Pressure, cycle and duration guide	13
19. Monitoring tool	14

20. References	15
Appendix 1 Competency assessment for the use of topical negative pressure	17
Appendix 2 Flowchart for the use of NPWT	19
Appendix 3 Referral and audit form for NPWT funding	20
Appendix 4 NPWT Care Plan	21
Appendix 5 Equality Impact Assessment Tool	22
Appendix 6 Financial Impact Assessment Tool	23

## 1. Introduction

- a. Negative Pressure Wound Therapy (NPWT) also known as Topical Negative Pressure (TNP) or Vacuum Assisted Closure (V.A.C) is a medical device that is being increasingly used by Registered Healthcare Professionals in the management of acute and chronic wounds (Beldon, 2005).
- b. Publication of NICE evidence (IPG322 - 2009), a FDA alert (Preliminary Public Health Notification: Serious Complications Associated with Negative Wound Therapy Systems, 2011) and the Health Technology Assessment Report 12: Topical Negative Pressure Therapy for wounds (Ritchie et al,2010) have raised issues which need to be considered by Healthcare Professionals when considering NPWT for patients.
- c. 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 (Wounds UK, 2008).

## 2. Purpose

- a. This document has been produced to support Registered Healthcare Professionals working within Worcestershire Health & Care NHS Trust and Worcester Acute NHS Trust; it should be referred to for the recommended best practice for managing a patient with NPWT.
- b. The guideline will reduce potential risk and harm to patients receiving NPWT.
- c. The role of the Registered Healthcare Professional will be defined in this guideline, outlining their responsibility and accountability for the patient receiving NPWT.

## 3. Definitions

- a. NPWT comprises of a sealed dressing over a wound, a suction pump and a drainage tube going from inside the dressing or its surface to a canister within the pump unit (Ritchie et al, 2010).
- b. NPWT progresses a wound towards healing by maintaining a moist wound environment, improving micro-vascular blood flow, controlling exudate, stimulating tissue formation and reducing wound size by pulling the wound edges together

(Abbots ,2010). Additionally NPWT can reduce bacterial load, eliminate wound odour and improve quality of life for patients (Stephen-Haynes et al, 2011a & EWMA, 2007).

- c. The Acelity (K.C.I) V.A.C Therapy system is the Trust's chosen NPWT device. It is the most established NPWT system and uses a vacuum assisted method to create intermittent or continuous negative pressure at the wound bed (Stephen-Haynes et al, 2011a).
- d. There are two types of foam dressings available to use with the V.A.C® Therapy. The Granufoam is a black, polyurethane (PU) foam dressing with reticulated (open) pores to help evenly distribute negative pressure across the wound bed, assisting in tissue granulation formation in wounds and aiding wound contraction. It is hydrophobic (or moisture repelling), which enhances exudate removal (Banwell, 2007). There is also an antimicrobial option, which includes 10% silver for the use of infected wounds.

The white polyvinyl alcohol foam is dense, open-pore foam with a higher tensile strength for use in tunnels and undermining. It is hydrophilic (or moisture retaining) and is packaged pre-moistened with sterile water. Its characteristics help to reduce the likelihood of adherence to the wound bed. V.A.C.® White Foam Dressing may be used to assist in minimizing discomfort or in situations where over granulation responses are likely (Banwell, 2007).

- e. There is a gauze antimicrobial roll dressing that can be used with the NPWT as an alternative to foam dressings.

#### **4. Scope**

- a. This document is intended to support Registered Healthcare Professionals working within Worcestershire Acute NHS Trust who are trained and competent in applying NPWT to patients.

#### **5. Training/Competencies**

- a. All Registered Healthcare Professionals caring for patients receiving NPWT must be deemed competent to apply, monitor and evaluate the therapy. It is essential that every Registered Healthcare Professional caring for patients receiving NPWT completes the competencies (see Appendix 1) to ensure that the therapy is delivered safely by knowledgeable and experienced professionals.
- b. The Tissue Viability Service will provide training courses on delivering NPWT in the Acute. Additionally the K.C.I representatives provide training on applying the V.A.C therapy to the patient. Within the Acute trust the training will be undertaken on the wards with support from Tissue Viability Department and KCI as required. The ward manager should be responsible for ensuring all staff using TNP receive the training whether on the ward or at official study events.

#### **6. Responsibilities and Duties**

- a. The Registered Healthcare Professional will ensure that the application form for NPWT funding is fully completed and sends to the community Tissue Viability Team ensures the patient fulfils the criteria for funding prior to discharge.
- b. The Registered Healthcare Professional should ensure that the patient is suitable for NPWT prior to discharge from the Acute Hospital Trust and prior to application.

- c. The Registered Healthcare Professional should ensure that further clinical investigations where appropriate are carried out (as indicated in the Worcestershire Acute NHS Trust Wound Management policy, 2015) before NPWT is commenced.
- d. The Registered Healthcare Professional should decide the appropriate level of negative pressure needed for treatment (refer to Pressure, Cycle and Duration guide below).
- e. The Registered Healthcare Professional is responsible and accountable for the patient receiving NPWT.
- f. The Registered Healthcare Professional is responsible for returning all NPWT equipment back to the correct ward and cleaned following discontinuation of therapy. If being discharged on NPWT a community pump should be delivered and implemented on the ward or a standby unit should be activated and implemented on the ward prior to discharge.
- g. The Registered Healthcare Professional following the first application of NPWT will be responsible for ensuring that there is sufficient stock available for future dressing and canister changes, that competent staff are present for each dressing change.

**7. Indications for NPWT**

- a. NPWT should be considered for the management of the following wounds (Wounds UK, 2008):
  - i. Dehisced surgical wounds
  - ii. Diabetic/neuropathic ulcers
  - iii. Chronic wounds
  - iv. Partial/full thickness pressure ulcers (EPUAP, 2009 & NICE, 2005)

**8. Contra-indications for NPWT**

- a. Research has highlighted that NPWT is not suitable for all patients with wounds (EWMA, 2007, Benbow, 2008, Thompson , 2008, & Malahias, 2012) and to ensure the safe, effective and appropriate use of NPWT the following contra – indications and precautions need to be considered:
  - i. Patient non-concordance (Thompson, 2008)
  - ii. Malignancy within the wound, known or suspected
  - iii. Osteomyelitis, untreated by appropriate antibiotic therapy
  - iv. Necrotic tissue, hard eschar
  - v. Exposed blood vessels, nerves, anastomotic sites or organs
  - vi. Wounds with fistulas opening into a body cavity
  - vii. Wounds where acute or chronic enteric fistulas are present
  - viii. Wounds with sharp edges or where bone fragments are present

- ix. Non enteric and unexplored fistula
- x. Impaired mental capacity (refer to Mental Capacity Act, 2005)
- xi. Patients must be able to carry the NPWT device safely and not be considered a falls risk
- xii. Unsuitable home environment and/or social circumstances
- xiii. The gauze contains Polyhexamethylene Biguanide (PHMB) antiseptic, which may present a risk of an adverse reaction to patients who are allergic or have a known hypersensitivity to PHMB. If a patient has a known allergy or hypersensitivity to PHMB, do not use K.C.I's NPWT Gauze dressings.

## 9. Precautions

- i. Difficult wound haemostasis/active bleeding, ensure that the patients International Normalised Ratio (INR) is within a safe range to consider NPWT (0.8-1.2)
- ii. Patients who have been administered anticoagulants or platelet aggregation inhibitors
- iii. Patients who do not have adequate tissue coverage over vascular structures
- iv. Any exposed bone or tendon needs to be protected with a liner prior to application of the foam e.g atruman.

## 10. Treatment objective

- a. To achieve the optimum outcome from NPWT it is important that treatment objectives are determined between the Registered Healthcare Professional and the patient. These same treatment objectives should be reassessed weekly to ensure that NPWT continues to be the most appropriate treatment for the patient (Milne, 2013).
- b. Examples of treatment objectives for patients suitable for NPWT are (Abbots, 2010):
  - i. To improve the patients quality of life
  - ii. To manage the amount of exudate
  - iii. To promote improvement in the wound bed by improving vascularity and the production of granulation tissue
  - iv. Reduce bacterial bio-burden

## 11. Assessment

- a. To determine whether NPWT is suitable for a patient it is vital that a full holistic assessment is completed, considering nutritional risk, pressure ulcer risk, cognitive ability and mobility. Additionally it is important that the patient's home environment and social circumstances are assessed and considered to be safe for NPWT (Milne,

2013). Mental capacity needs to be considered when assessing a patient for NPWT to ensure safe and effective use of the treatment.

- b. A wound assessment must be completed including size, depth, type of tissue, exudate, presence of infection, condition of surrounding skin and a photograph as per Worcestershire Acute NHS Trust Wound Management policy (2007). For a wound to be suitable for NPWT there should be at least 2cm of skin surrounding the wound to enable a seal to be maintained. Additional help may be needed if less than a 2 cm area of intact skin surrounds the wound and the use of Gel Strips should be considered.
- c. The patient must have a pain assessment completed to ensure that the patient's pain is adequately managed and that they remain comfortable during NPWT, dressing changes and post dressing change.
- d. Patients with a chronic wound should have a Full Blood Count test and any anaemia treated.
- e. Where a wound is identified as being delayed in healing a blood glucose test should be taken to assess for diabetes. Additionally good glycaemic control should be attained for patients with diabetes.
- f. Patients who require NPWT on the lower limbs must have an differential diagnosis including a Doppler ultrasound assessment if the wound is over 2 weeks old and classified as a leg ulcer
- g. Tissue Viability specialist advice **MUST** be sought when considering NPWT for paediatric patients.
- h. Patients need to be educated about how the NPWT system works and what to do if a technical problem occurs. Patients also need to be able to recognise any signs and symptoms of complications and technical problems. Registered Healthcare Professionals need to ensure that patients are aware of what to do and who to contact in the event of a problem occurring during NPWT. If there is any concern regarding a patient managing in the event of a problem occurring then the patient should be deemed as unsuitable for NPWT and alternative treatments should be sought. Acelyty have a 24hr free helpline clinical helpline 08009808880.
- i. The patient must be given information about NPWT to allow them to make informed consent. Patients must understand the rationale for treatment, the interventions required to apply and maintain the therapy. Registered Healthcare Professionals must obtain verbal consent from the patient and this must be documented in the patient's notes.

## **12.NPWT application process**

- a. NPWT will be administered in accordance with the manufacturer's application guidelines. NPWT will only be applied by a Registered Healthcare Professional who has gained experience of NPWT through completing relevant training and competencies.
- b. Aseptic technique must be adhered to. All disposable components (including the foam dressing, canister, and tubing) are packaged sterile.
- c. The following must be available for the application of NPWT:

<b>Guideline for the Use of Negative Pressure Wound Therapy (NPWT)</b>		
<b>WAHT-NUR-091</b>	Page 7 of 23	<b>Version 1.8</b>

- i. Sterile and non-sterile gloves
  - ii. Sterile scissors
  - iii. Dressing pack
  - iv. Sterile Normal Saline 0.9% solution
  - v. Disposable bag
  - vi. Sterile forceps may be required if the wound undermines/tracks
  - vii. Gel strips if needed
  - viii. NPWT device
  - ix. Appropriate size NPWT foam or gauze dressing
  - x. Appropriate size NPWT canister
  - xi. NPWT connection tubing
  - xii. A moist wound healing non-adherent contact layer as per Worcestershire NHS Wound Management Formulary (Stephen-Haynes et al, 2011b).
- d. Prior to commencement of procedure hands should be thoroughly washed and dried. Following cleansing a protective disposable apron should be donned.
- e. The wound and surrounding area should be cleansed at each dressing change to maintain good skin integrity and reduce odour.
- f. A non-adherent wound contact layer (as per the Worcestershire NHS Wound Management Formulary, Stephen-Haynes 2011b) may be placed between the wound bed and the foam to prevent the NPWT dressings adhering to the wound bed.
- g. If the wound is to be dressed using a foam dressing a sterile open pore foam designed for use with NPWT therapy is placed in the wound. The foam needs to be cut to a slightly smaller size than the actual wound. No foam should extend the wound margin as this can damage the edges of the wound. More than one piece of Foam may be placed in the wound and a record of the number of pieces used made.
- h. If the wound is to be dressed using a gauze dressing then a gauze dressing that can be used with the NPWT is placed in the wound. More than one piece of gauze may be placed in the wound and a record of the number of pieces used made.
- i. The clear plastic sterile seal is then applied to cover all of the foam and at least 2cm of intact skin around the foam. **DO NOT APPLY STRETCHED OR TAUT AS THIS MAY CAUSE DAMAGE TO THE SURROUNDING SKIN AND WOUND MARGINS.** Skin barrier protection as per Worcestershire NHS Wound Management Formulary (Stephen-Haynes et al, 2011b) can be used at this point to protect fragile surrounding skin.
- j. A minimum of 2cm diameter hole is made in the transparent drape covering the foam and the sterile suction tubing applied over the opening.

- k. The sterile suction tubing is then applied to the negative pressure suction device, via a collection canister.
- l. Pressure settings applied are dependent on the type of wound, see Pressure, Cycle and Duration guide below.
- m. The foam and gauze can potentially adhere to the wound base. If this occurs it is advised to apply sterile 0.9% Sodium Chloride into the tube and leave the foam or gauze to soak for 20 minutes prior to removal (the amount needed will depend on the size of the wound and the foam used).
- n. An odour can occur with some wounds, the Healthcare Professional needs to consider the cause of the odour.
- o. Canisters should be monitored daily for exudate quantity and type. It is recommended that canisters are replaced when full (an alarm will sound) and at least once a week to control odour.
- p. It is recommended that dressings are changed every 48 – 72 hours but no less than 2 times per week, based on individual assessment. Infected wounds may need to be changed more frequently.
- q. The patient should be advised to contact a Healthcare Professional if they experience severe pain or acute bleeding. It is important to inform the patient of any adverse reactions so to ensure that they are prepared for such occurring. The patient must be aware of who to contact in the event of an adverse reaction occurring, buzzer should be near patient at all times.
- r. Any pain or acute bleeding the pump must be turned off and contact the Tissue Viability Team, doctor on call or the Acelity helpline on 08009809808880
- s. The therapy must not be switched off for longer than 30 minutes and a maximum of 4 times in each 24-hour period. If a seal cannot be achieved and maintained the dressing is to be removed and the therapy should be discontinued. The patient should then be re-assessed, an alternative treatment sought and the NPWT device returned to the supplier.
- t. Full documentation of the therapy should be recorded in the patient's notes.
- u. It is recognised that waste generated during canister changes should be disposed of through the Trust's yellow disposal bins.

### **13. When to discontinue NPWT**

- a. NPWT should be discontinued after a Registered Healthcare Professional has assessed the wound and concluded that the treatment objective has been achieved (Bondokji et al 2011 & Milne, 2013). Alternatively, NPWT should be stopped when a patient is assessed by a Registered Healthcare Professional as not being suitable to continue with the treatment. Considerations for stopping NPWT include:
  - i. At the patient's informed request
  - ii. When granulation tissue is level with the surrounding skin
  - iii. When exudate level is less than 20 ml per day

- iv. There is no improvement/reduction in wound size over 2 week period or at two consecutive dressing changes
  - v. Patient is experiencing pain
  - vi. There is a change in the patient's health, home environment or social circumstance that affects the safe and effective use of NPWT.
  - vii. If any signs of systemic infection of localised cellulitis.
- b. On discontinuing NPWT the patients wound should be re-assessed and a new treatment objective and care plan should be devised. Advice and support should be sought from the Tissue Viability Service to help the Registered Healthcare Professional with any wound management issues.
- c. Where applicable the Registered Healthcare Professionals must inform the Hospital Consultant when NPWT is discontinued.

#### **14. NPWT dressing removal**

- a. Gently remove an existing NPWT dressing according to the following procedure:
- i. Raise the tubing connectors above the level of the therapy unit.
  - ii. Close clamp on the dressing tubing.
  - iii. Separate canister tubing and dressing tubing by disconnecting the connector.
  - iv. Allow the therapy unit to pull the exudate in the canister tube into the canister, and then close the clamp on the canister tubing.
  - v. Press THERAPY ON/OFF to deactivate the NPWT device.
  - vi. Wait for 2-3 minutes to allow for foam or gauze to decompress. To remove the drape from the skin, gently stretch the drape horizontally to release adhesive from the skin.
  - vii. Do not peel vertically. Gently remove foam or gauze from the wound.
  - viii. If the foam or gauze has adhered to the wound base apply sterile 0.9% Sodium Chloride into the tube and leave to soak for 15-30 minutes prior to removal.
  - ix. Discard disposables in to the Trust's yellow waste bins.

#### **15. Changing NPWT canisters**

- a. Change the NPWT canisters according to the following procedure:
- i. Raise the tubing connectors above the level of the therapy unit.
  - ii. Close clamp on the dressing tubing.
  - iii. Separate canister tubing and dressing tubing by disconnecting the connector.

- iv. Allow the therapy unit to pull the exudate in the canister tube into the canister, then close the clamp on the canister tubing.
- v. Release canister by either pushing the white arrow button to release or depressing lever on the side of the canister to pull it off.
- vi. Record exudate levels, type and colour on assessment chart.
- vii. Dispose of as clinical waste into the Trust yellow waste bins.
- viii. Ensure the gel in the new canister is lying flat.
- ix. Connect new canister to tubing.
- x. Place canister into pump until it clicks.

## 16. The procedure for obtaining and returning the NPWT pumps

- a) Pumps are kept on Severn unit (WRH) or ward 17 (ALEX). Please fill in the book on obtaining a pump, stating the pump number, ward, date and patients name.
- b) Stock is also available on these wards. The removal of stock should also be documented in the book for cross charging purposes.
- c) Long term rental pumps should never leave the hospital.
- d) On discontinuation of NPWT or prior to discharge the long term rental pump should be wiped down and returned to the ward along with the charger and carry case, return date to be entered into the book.
- e) Prior to discharge a community rental pump or a standby pump is to be delivered and implemented on the ward.
- f) If no long term rental pumps are available on the wards a rental unit can be ordered with a purchase order number via IProc.

## 17. Discharging into the community on NPWT

- a. As soon as the patient is medically fit for discharge the discharge process should begin, funding should be applied for. The patient must not be discharged until funding has been agreed and District nurses are aware.
- b. All referrals for NPWT treatment funding need to be completed by a Registered Healthcare Professional and sent to Jayne Allchurch, Tissue Viability Secretary via email : [Jayne.Allchurch@hacw.nhs.uk](mailto:Jayne.Allchurch@hacw.nhs.uk). In the event of receiving an out of office reply from Jayne Allchurch, email the Tissue Viability Specialist Nurses directly [j.stephen-haynes@nhs.net](mailto:j.stephen-haynes@nhs.net) or [rosiecallaghan@nhs.net](mailto:rosiecallaghan@nhs.net) and [tissue.viability@worcsacute.nhs.uk](mailto:tissue.viability@worcsacute.nhs.uk).
- c. Each referral for NPWT is assessed by a Community Tissue Viability Specialist Nurse who considers each individual's suitability for NPWT and decides if the patient meets the funding criteria for treatment.

- d. Please ensure that all the required information of the wound is provided on the referral form so an informed decision on treatment can be provided promptly. If the form is incomplete it will be returned for further information and may lead to a delayed decision.
- e. On confirmation of funding the Tissue Viability Service will contact the local K.C.I representative to arrange the hire of the NPWT equipment.
- f. The K.C.I representative will contact the Registered Healthcare Professionals whose patient requires NPWT to arrange the first application and provide any guidance on the application process if needed.
- g. The responsibility for the patient remains with the Registered Healthcare Professional.
- h. The Registered Healthcare Professional will be responsible for ensuring that there is sufficient stock available for 1 dressing and canister change. KCI will send out further dressing to patients home.
- i. When patients receiving NPWT are transferred to other care settings, Registered Healthcare Professionals must ensure the receiving staff are informed that the therapy is being used, the date the patient commenced therapy and the effects of therapy. Hospital Healthcare Professionals must ensure receiving staff are familiar with the use of NPWT therapy. Levels of competence are described in the guideline and in Appendix 1. Arrangements for receiving healthcare staff to assess the wound and observe the therapy being applied and used must be considered. Healthcare professionals must ensure the patient is supplied with sufficient consumables to last the patient for a week and that they are discharged with the appropriate NPWT system. The supplier (K.C.I) and the Tissue Viability Service must be informed if a rental system is transferred to another care setting, including date of transfer and location. The Registered Healthcare Professionals must inform the Hospital Consultant when therapy is discontinued.
- j. No hospital pumps should leave the setting, on discharge return all NPWT equipment back to the correct ward and cleaned following discontinuation of therapy. A community pump should be delivered and implemented on the ward or a standby unit should be activated and implemented on the ward prior to discharge

**The Trust will be charged for the rental of a NPWT device from the supplier until the supplier is informed that the patient no longer requires it. Therefore it is important to return the NPWT device to the supplier promptly after use.**

**WHAT-NUR-091**

It is the responsibility of every individual to ensure this is the latest version as published on the Trust Intranet

**18. Pressure, cycle and duration guide**

a. The table provides a guide and should not replace clinical assessment or judgement.

Type Of Wound	Indication For Use	Target Pressure Using V.A.C Granu Foam Dressing	Target Pressure Using V.A.C White Foam Dressing	Cycle	Dressing Changes
<b>Pressure Ulcer</b>	Chronic- non responding or preparing site for surgical intervention	125 mmHg	150 mmHg	Continuous for first 48 hours, then consider intermittent	Every 48-72 hours, no less than 3 times week
<b>Diabetic Foot Ulcer</b>	Non responding poor circulation	50-125 mmHg	75-150 mmHg	Continuous for first 48 hours and then consider intermittent	Every 48-72 hours, no less than 3 times week
<b>Dehisced Surgical Wound</b>	To promote wound closure Non-responding	125mmHg	150 mmHg	Continuous	Every 48-72 hours, no less than 3 times week
<b>Chronic Wounds</b>	To promote granulation tissue, wound closure, promote perfusion	50-125mmHg	75-150mmHg	Continuous for first 48 hours and then consider intermittent	Every 48-72 hours, no less than 3 times week
<b>Grafts and Flaps</b>	To remove excess fluid and promote perfusion	50-75 mmHg	50-75 mmHg	Continuous	Twice a week

**WHAT-NUR-091**

It is the responsibility of every individual to ensure this is the latest version as published on the Trust Intranet

**19. Monitoring Tool**

Page/ Section of Key Document	Key control:	Checks to be carried out to confirm compliance with the policy:	How often the check will be carried out:	Responsible for carrying out the check:	Results of check reported to: <i>(Responsible for also ensuring actions are developed to address any areas of non-compliance)</i>	Frequency of reporting:
	<b>WHAT?</b>	<b>HOW?</b>	<b>WHEN?</b>	<b>WHO?</b>	<b>WHERE?</b>	<b>WHEN?</b>
5	All staff undertaking TNP therapy will have competencies completed	Ward manager to ensure that staff do not apply TNP until trained and competent	Each time TNP is applied to a patient, we must ensure that competencies are completed	Ward manager	Ward manager will instigate TNP pressure training for any staff not competent and allow time to complete those competencies	NA
12	WAHT LTR TNP machines are not sent out to the community	Staff are to follow the flow chart in the guidelines for discharge process	Ongoing	The TNP provider will inform WAHT TV team of any concerns around funding following discharge	TV team will follow up with any ward where the process has not been followed .	On going

## WHAT-NUR-091

It is the responsibility of every individual to ensure this is the latest version as published on the Trust Intranet

## 20. References

Abbotts, J. (2010) Patients Views On Topical Negative Pressure: 'Effective But Smelly'. *British Journal of Nursing*, 19 (20), 37-41.

Banwell, P. (2007) *V.A.C. therapy clinical guidelines: a reference source for clinicians*. London, KCI Medical Ltd.

Beldon, P. (2005) Topical negative pressure dressings and vacuum assisted closure. *Wound Essentials*, 1, 110–14.

Benbow, M. (2008) Modern Wound Therapies. *Journal Of Community Nursing*, 22 (2).

Bondokji, S. et al. (2011) Clinical Efficacy Of A New Variant Of A Foam Based NWPT System. *Journal Of Wound Care*, 20 (2), 62-67.

Department of Health (2005) *Mental Health Capacity Act*. London, Department of Health.

European Pressure Ulcer Advisory Panel and National Pressure Ulcer Advisory Panel (2009) *Treatment of pressure ulcers: Quick Reference Guide*. Washington DC, National Pressure Ulcer Advisory Panel.

European Wound Management Association (2007) *Topical Negative pressure in wound management*. [Online] Available from: [www.ewma.org](http://www.ewma.org) [Accessed 31<sup>st</sup> May 2013].

FDA (2011) *FDA Safety Communication: UPDATE on Serious Complications Associated with Negative Pressure Wound Therapy Systems*. [Online] Available from: <http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm244211.htm> [Accessed 13th May 2013].

Malahias, M. Hindocha, S. Saedi, F. McArthur, P. (2012) Topical Negative Pressure Therapy: Current Concepts And Practice. *Journal Of Perioperative Practice*, 22 (10), 328-332.

Milne, J. (2013) Effective Use Of Negative Pressure Wound Therapy. *Practice Nursing*, 24 (1), 14-19.

NICE (2005) *Pressure Ulcers: The Management of Pressure Ulcers in Primary and Secondary Care*. London, NICE.

National Institute for Clinical Excellence (2009) *Negative Pressure Wound Therapy for the Open Abdomen*. London, NICE.

Ritchie, K. Abbotts, J. Downie, S. Harbour, J. Kelly, J. Riches, E. Wilson, L. (2010) *HTA Programme: Health Technology Assessment Report 12: Topical negative pressure therapy for wounds*. Edinburgh, NHS Quality Improvement Scotland.

Stephen-Haynes, J. (2007) *Guideline for Wound Management*. [Online] Available from: <http://www.hacw.nhs.uk/policies/whct-clinical-policies---new/> [Accessed 2<sup>nd</sup> July 2013].

**WAHT-NUR-091**

It is the responsibility of every individual to ensure this is the latest version as published on the Trust Intranet

Stephen-Haynes, J., Woodrow, T., Wharton, S. (2011a) V.A.C Therapy. *Wounds UK*, 7 (4), 1-4.

Stephen-Haynes, J. et al (2011b) *Worcestershire Health & Care NHS Trust Wound Management Formulary*. [Online] Available from: <http://www.hacw.nhs.uk/policies/whct-clinical-policies---new/> [Accessed 2<sup>nd</sup> July 2013].

Thompson, G. (2008) An Overview Of Negative Pressure Wound Therapy (NPWT). *Wound Care*, 23-30.

Worcestershire Health & Care NHS Trust (2011) *Infection Prevention and Control: Safe Working Practices*. [Online] Available from: <http://www.hacw.nhs.uk/policies/whct-clinical-policies---new/> [Accessed 2<sup>nd</sup> July 2013]

Wounds UK (2008) *Best Practice Statement: Gauze-based Negative Pressure Wound Therapy*. Aberdeen, Wounds UK.

**Competency Assessment for the use Of Negative  
Pressure Wound Therapy**

All Registered Healthcare Professionals caring for patients receiving Negative Pressure Wound Therapy should be able to demonstrate competence in delivery of this therapy.

**Assessment of Competence**

Any Registered Healthcare Professional caring for patients receiving NPWT will be required to demonstrate competence in the relevant skills.

All nurses undertaking these roles are responsible for accessing a competent assessor. Registered Healthcare Professionals must accept accountability for maintaining competence through regular clinical experience and supporting theoretical knowledge.

Name of Healthcare Professional: .....  
Job title: .....  
Clinical area: .....

Name of Mentor: .....  
Job title: .....  
Clinical area: .....

**WAHT-NUR-091**

It is the responsibility of every individual to ensure this is the latest version as published on the Trust Intranet

**Competencies required to perform Negative Pressure Wound Therapy**

	<b>Competency</b>	<b>Date Achieved</b>	<b>Signature of assessor</b>	<b>Signature of practitioner</b>
1	During discussion practitioner demonstrates knowledge of: <ul style="list-style-type: none"> <li>• Definition of NPWT</li> <li>• How the NPWT system works</li> <li>• Indications &amp; contraindications of NPWT</li> <li>• Rationale for the appropriate use of NPWT</li> <li>• When NPWT should be withdrawn</li> <li>• Infection control precautions</li> <li>• The role of patient education</li> </ul>			
2	Demonstrates how to acquire the appropriate equipment required to initiate NPWT			
3	Demonstrate how to return equipment in a timely manner, including notifying the NPWT provider and the Tissue Viability Service once NPWT is discontinued.			
4	Demonstrate the ability to undertake and record wound assessment according to Trust guidance.			
5	Demonstrate the ability to safely commence NPWT therapy.			
6	Demonstrate the ability to discontinue NPWT therapy.			
7	Understand the current process for discharge e.g. funding and informing district nurses			

I declare that I have expanded my knowledge and skills and undertake to practice with accountability for my decisions and actions. I have read and understood the protocol for the use of Negative Pressure Wound Therapy

**Signature of Practitioner:** ..... **Date**.....

I declare that I have supervised this practitioner and found her/him to be competent as judged by the above criteria.

**Signature of Supervisor:** ..... **Date** .....

**WAHT-NUR-091**

It is the responsibility of every individual to ensure this is the latest version as published on the Trust Intranet



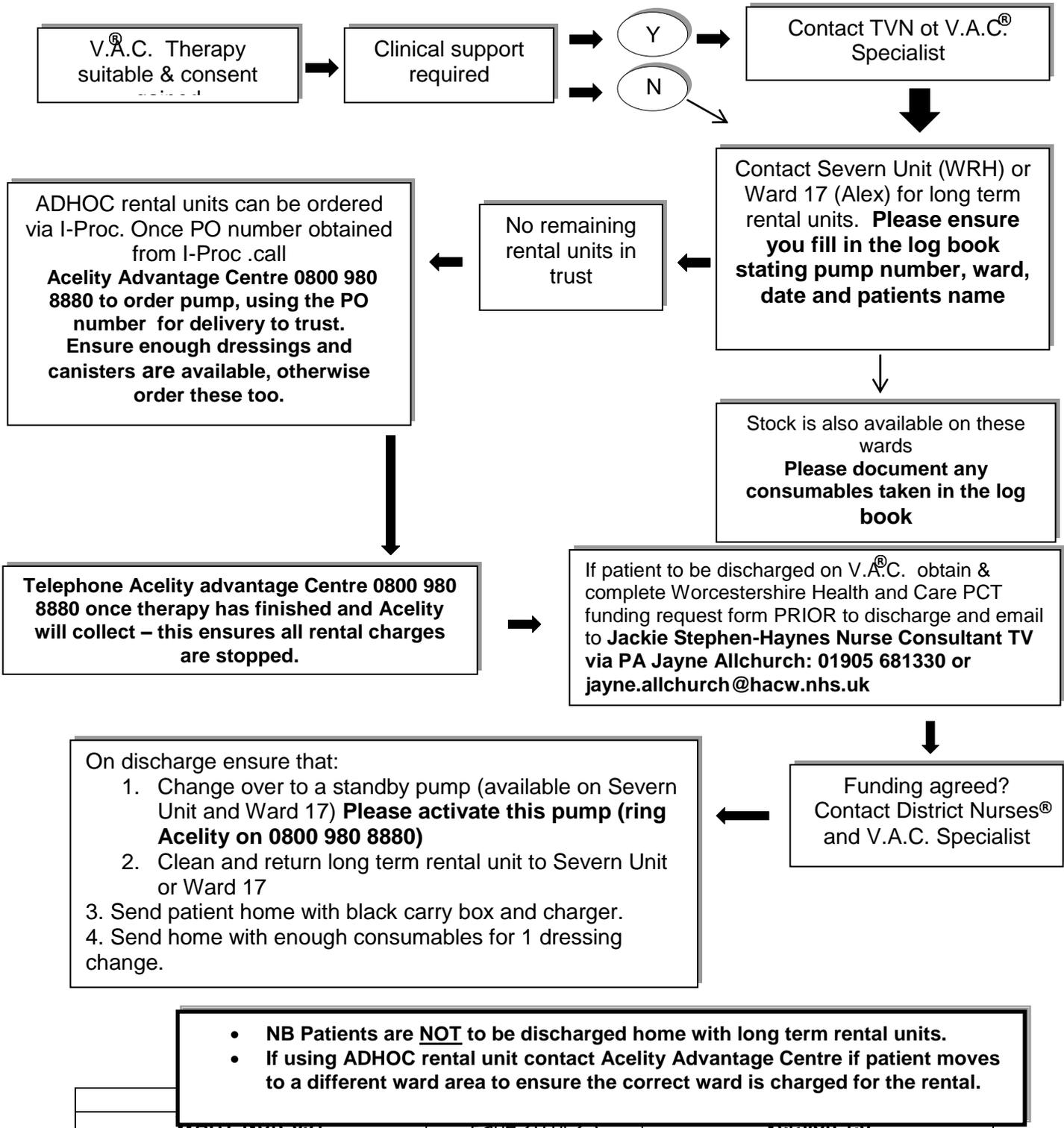
Copies of this record should be placed in the practitioner's personal file, retained by the individual for their Professional Portfolio and held centrally by the Tissue Viability Service

<b>Guideline for the Use of Negative Pressure Wound Therapy (NPWT)</b>		
<b>WAHT-NUR-091</b>	Page 19 of 23	<b>Version 1.8</b>

**Appendix 2**

Flowchart for the use of NPWT

Wound identified – If required :contact Tissue Viability Team on Ext: 33177  
**If no TVN service then contact Acelity® V.A.C. Specialist Lyn Hart 07827278579**



**Appendix 3**

**REFERRAL AND AUDIT FORM FOR WORCESTERSHIRE PCT TNP  
FUNDING**

Please complete and return to Jayne Allchurch/Jackie Stephen-Haynes at  
Email: [jayne.allchurch@hacw.nhs.uk](mailto:jayne.allchurch@hacw.nhs.uk) or [j.stephen-haynes@nhs.net](mailto:j.stephen-haynes@nhs.net) and  
[tissue.viability@worcsacute.nhs.uk](mailto:tissue.viability@worcsacute.nhs.uk).

Tel: 01905 681330

<b>Name</b>		<b>Date of Birth</b>	
<b>Address</b>			
<b>Consultant</b>			
<b>GP</b>			

<b>Wound history</b>	
<b>Date of Surgery (if applicable)</b>	
<b>Type of wound</b>	
<b>Size of wound (cm)</b>	
<b>Depth of wound (cm)</b>	

<b>T</b>	<b>Tissue type in %</b>	
<b>I</b>	<b>Infection, signs of, swab taken, any antimicrobial used?</b>	
<b>M</b>	<b>Manage Exudate – volume and viscosity of exudate</b>	
<b>E</b>	<b>Edge of wound, intact, macerated, fragile</b>	

<b>Reason for using TNP</b>	
<b>How long has TNP been used and progression to date</b>	
<b>Type of pump</b>	
<b>Size of foam</b>	
<b>Canister</b>	

**WAHT-NUR-091**

It is the responsibility of every individual to ensure this is the latest version as published on the Trust Intranet

Patient information supplied	
------------------------------	--

**Appendix 4**
**TNP Therapy Care Plan**
**Goal:** Promote wound healing and safe, effective use of TNP therapy

**Once only actions (prior to commencement of TNP Therapy):**

Rationale & use of TNP therapy explained to patient & consent gained	Yes / No
TNP therapy information leaflet given to patient	Yes / No
TNP dressing to be changed every:	2 / 3 days
Pressure setting required ( <i>usually 125mmHg</i> ):	
Therapy required ( <i>usually continuous</i> ):	Continuous / Intermittent
Type of pump to be used:	
State what wound liner is used i.e. Atrauman, if any	
Other dressing instructions:	

Print

Signature:

Date:

**On-going Actions: complete all the below boxes following every dressing change**

Date:							
Wound Assessment completed & in use:	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
Date dressing changed:							
Date Canister Changed: (every 7 days or when full)							
Volume in Canister (mls):							
Canister Dated:	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
Pain assessed & managed at dressing change:	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
State foam used ( <i>black or white</i> ):							
State number of pieces of foam <i>inserted</i> :							
State number of pieces of foam <i>removed</i> :							
Wound liner used:	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
Pressure setting is:							
Intensity set at low:	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
Continuous/Intermittent therapy:							

**Guideline for the Use of Negative Pressure Wound Therapy (NPWT)**

WAHT-NUR-091

Page 22 of 23

Version 1.8

**WAHT-NUR-091**

It is the responsibility of every individual to ensure this is the latest version as published on the Trust Intranet

Additional Actions							
--------------------	--	--	--	--	--	--	--

<i>Print name:</i>							
<i>Signature:</i>							

**Appendix 5**

**Supporting Document 1 - Equality Impact Assessment Tool**

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

**WAHT-NUR-091**

It is the responsibility of every individual to ensure this is the latest version as published on the Trust Intranet

		Yes/No	Comments
<b>1.</b>	<b>Does the policy/guidance affect one group less or more favourably than another on the basis of:</b>		
	Race	No	
	Ethnic origins (including gypsies and travellers)	No	
	Nationality	No	
	Gender	No	
	Transgender	No	
	Religion or belief	No	
	Sexual orientation including lesbian, gay and bisexual people	No	
	Age	No	
	Disability - learning disabilities, physical disability, sensory impairment & mental health problems	No	
<b>2.</b>	<b>Is there any evidence that some groups are affected differently?</b>	No	
<b>3.</b>	<b>If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?</b>	NA	
<b>4.</b>	<b>Is the impact of the policy/guidance likely to be negative?</b>	No	
<b>5.</b>	<b>If so can the impact be avoided?</b>	NA	
<b>6.</b>	<b>What alternatives are there to achieving the policy/guidance without the impact?</b>	NA	
<b>7.</b>	<b>Can we reduce the impact by taking different action?</b>	NA	

If you have identified a potential discriminatory impact of this key document, please refer it to Human Resources, together with any suggestions as to the action required to avoid/reduce this impact.

For advice in respect of answering the above questions, please contact Human Resources

## Appendix 6

Guideline for the Use of Negative Pressure Wound Therapy (NPWT)		
WAHT-NUR-091	Page 24 of 23	Version 1.8

## Supporting Document 2 – Financial Impact Assessment

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

	<b>Title of document:</b>	<b>Yes/No</b>
1.	Does the implementation of this document require any additional Capital resources	NO
2.	Does the implementation of this document require additional revenue	NO
3.	Does the implementation of this document require additional manpower	NO
4.	Does the implementation of this document release any manpower costs through a change in practice	NO
5.	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff	NO
	Other comments:	

If the response to any of the above is yes, please complete a business case and which is signed by your Finance Manager and Directorate Manager for consideration by the Accountable Director before progressing to the relevant committee for approval.