



## SOP GEN 21: Negative Pressure Wound Therapy

<b>Procedure Number</b>	SOP GEN 21
<b>Purpose of Document</b>	To ensure all appropriately trained staff are consistent in their approach to topical negative pressure wound therapy for clients
<b>Target Audience</b>	All Nurses & appropriately trained carers
<b>Version</b>	V2.1
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<b>Review Frequency</b>	Clinical Advisory Group
<b>Next Review Date</b>	3 yearly or when clinical or operation guidelines change
<b>Procedure Number</b>	June 2023
<b>About Acacium Group</b>	Details of all Acacium Group trading companies that this policy applies to are detailed within Appendix A

## Document History

## Acacium Group Standard Operating Procedure

### 1. Introduction



Topical Negative Pressure (TNP) is a therapy which can be used on a wide variety of acute and chronic wounds to achieve wound closure and to prepare a wound bed for surgical intervention. It can also be used to help to promote healing in complex wounds e.g. meshed grafts and flaps where specialist intervention is essential.

Topical Negative pressure is a therapy and there are various generic terms to describe the therapy including TNP, sub-atmospheric pressure, and sealed surface wound suction.

However, the concept has been patented by KCI Limited (Witney, Oxon, UK), as Vacuum Assisted Closure™ (VAC®) or VAC® Therapy™. The various systems used are the ATS VAC, Acti VAC and VAC Ulta which also incorporates VAC Veraflo.

VAC/TNP Therapy involves applying a suction force or vacuum across a sealed wound using a reticulated foam interface. Both the suction effect and the mechanical forces generated at the interface of the foam and the wound lead to a variety of changes in the wound, positively influencing the healing process.

### Pathophysiological effects of VAC Therapy

- Increases local blood flow
- Reduces oedema
- Controls wound exudate
- Stimulates formation of granulation tissue.
- Reduces bacterial load.
- Draws wound edges closer together
- Removes soluble healing inhibitors from the wound

### 2. Aim

For all Acacium Group staff who undertake this procedure, to complete it in line with current guidelines and best practice.

The aims of negative pressure are to:

1. Improve the blood flow

2. Draw the edges together to assist closure
3. Promote moist healing and fast granulation
4. Reduce bacterial colonisation
5. To improve the client's quality of life

### **3. Who may undertake this procedure**

All Acacium Group workers who are trained and assessed as competent to carry out negative pressure wound therapy.

### **4. Precautions/Contraindications**

Precautions:

- An actively bleeding wound - (If bleeding noted especially in clients taking anti coagulants- TNP should be removed for at least 72 hours until coagulation is achieved before considering whether appropriate to recommence therapy)
- Clients on anticoagulants
- In the presence of bone fragments or sharp edges
- With respect to weakened, irradiated or sutured blood vessels or organs
- With enteric fistulae
- Clients with difficult wound healing

Contraindications can include:

- Non-enteric or unexplored fistulae
- Wounds with unresolved sharp edges or bone fragments
- Malignancy in the wound
- Untreated osteomyelitis
- Necrotic tissue and eschar
- Do not use directly over exposed blood vessels or organs

### **5. Consent**

Consent may be given verbally or non-verbally for the healthcare worker to carry out the procedure, providing the client has received the appropriate information as to the purpose and risk of the procedure prior to this. (DOH 2010).

Please refer to Acacium Group Consent policy for further guidance.

### **6. Client and relatives/carers involvement**

The client has the right to refuse TNP treatment at any point during the procedure. It is important that the procedure is explained to the client prior to commencement.

### **7. Equipment**

- TNP machine
- Foam dressing /gauze dressing and drape (dependent on size of wound) and level of exudate
- Hydrocolloid dressing
- Urgotul or provided liner to cover foam if using the black foam
- Information booklet/Care Plan
- Wound dressing pack

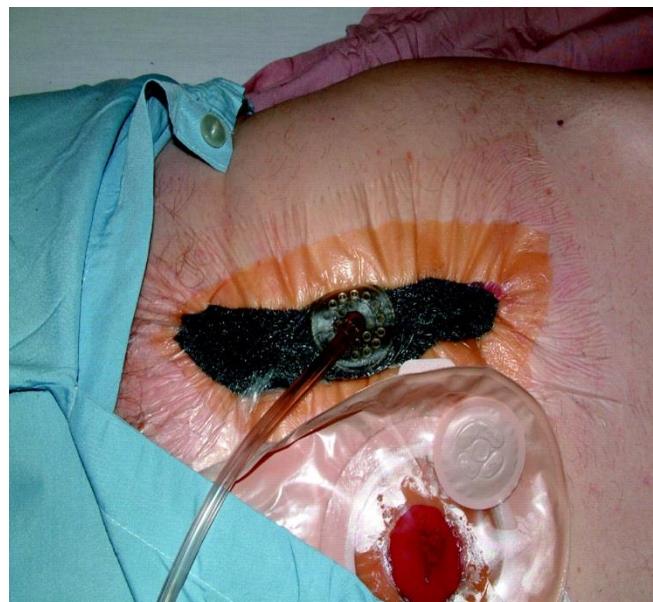
- Skin barrier
- Sterile scissors
- Sterile gloves
- Sterile Normal Saline 0.9% solution
- TNP Connection tubing canister
- Appropriate size TNP canister
- Appropriate PPE in line with current guidance

## 8. Summary for Application of Use

- Must be prescribed by a specialist Nurse or Consultant
- Ensure the client has no known contraindications to TNP
- Obtain client consent.
- Give prescribed analgesia prior to dressing change if applicable
- Switch off the TNP device await the prescribed time before dressing is removed
- Assemble all the equipment needed for removal and application of a new dressing
- Remove previous TNP foam/gauze using sterile saline
- Check that all the pieces of foam/gauze have been removed, If the foam is difficult to remove from the wound base, apply sterile 0.9% Sodium Chloride and leave to soak for 15 – 30 mins.
- If there are problems with the dressing or the pump that cannot be resolved, remove the dressing and apply a conventional dressing until advice can be sought by the office and TVN Nurse

## 9. Procedure

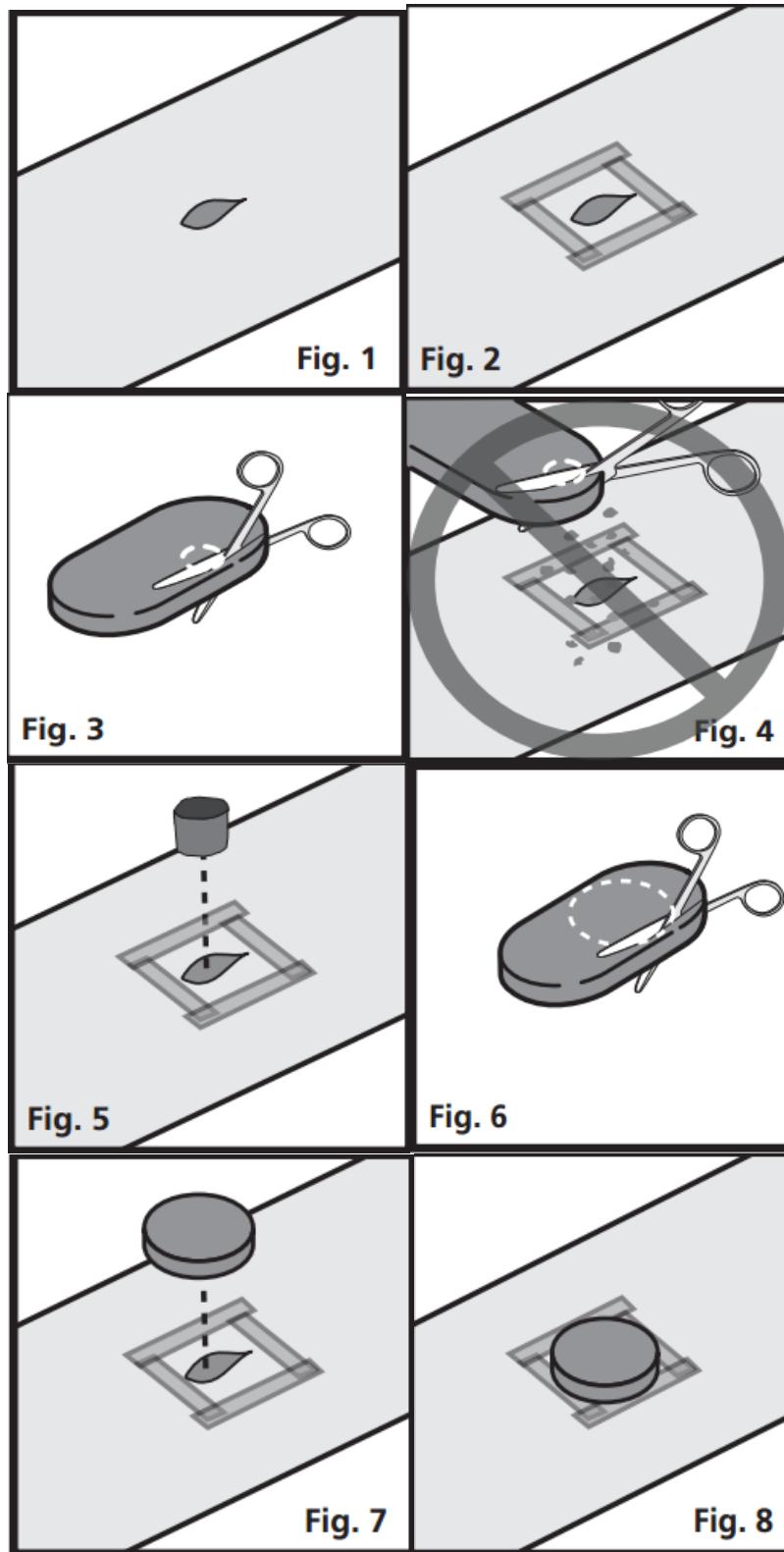
### Topical Negative Pressure Wound Care

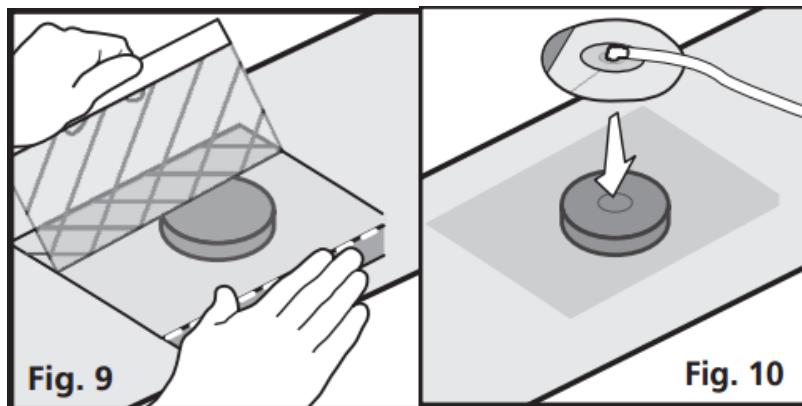


	Action	Rationale
1.	Explain to the client what is going to happen and gain consent	Information reduces anxiety
2.	Wash hands, apply gloves and apron	To prevent cross infection
3.	Remove current dressing (change gloves if hands used to remove)	To expose affected area
4.	If the surrounding skin is fragile, apply hydrocolloid to the intact skin surrounding the wound leaving the wound visible or alternatively apply skin barrier to surrounding skin (as per the care plan)	This will help to protect the surrounding skin from trauma
5.	If gauze with drain – line the wound with wet gauze dressing inserting drain wrapped with gauze. If gauze with port – line the wound with wet gauze. Cover with transparent film. Cut a small circular hole in the centre of the film over the gauze. The hole needs to be 0.6cm in size. Remove any access trimmed film. Remove the backing from the port dressing and align the port over the hole in the film using gentle pressure to anchor	Dressing not to be larger than the wound as this can cause excoriation to the skin.  The film should extend 5cm beyond the wound margin to facilitate an adequate seal
6.	If foam - cut the foam to the size of the wound so it sits just in the wound. – it needs to be cut to a slightly smaller size than the actual wound. No foam should extend the margin as it can damage the edges of the wound. More than one piece can be used, but the number of pieces must be recorded. The wound edges need to touch the sponge. Do not pack tightly. If using the black foam, cover all edges of the foam that touch the wound with Urgotul/ Atrauman/ or provided liner. Cover with transparent film Clear film must NOT stretch or taut as this may cause damage to the surrounding skin and/or the wound margins. Cut a small	This ensures granulation is pulled from all edges and no sinuses develop  To prevent Granulation tissue being pulled through the black foam

	<p>circular hole in the centre of the film over the gauze. The hole needs to be 0.6cm in size</p> <p>Remove any access trimmed film. Remove the backing from the port dressing; align the port over the hole in the film using gentle pressure to anchor</p>	
7.	<p>Connect the tubing with canister to the tubing from port.</p> <p>Ensure both clamps are open</p>	<p>This ensures a single system with no leaks</p>
8.	<p>Turn the machine on and the air is sucked out of the foam/gauze causing it to collapse.</p> <p>Set the suction at either continuous or intermittent and at recommended pressure settings (see manufacturer's instructions) and as per clients care plan</p>	<p>This activates treatment, and is considered the optimum treatment for therapy</p> <p>Pressure can be altered in agreement with the Tissue Viability Nurse if optimum not tolerated</p>
9.	<p>The dressing should be changed at least twice a week, but this will depend on the amount of granulation tissue development and individual assessment (as per care plan)</p>	<p>This improves cost effectiveness and does not unduly disturb the wound</p>
10.	<p>The machine will alarm when the canister is full.</p> <p>Change the canister when it is full, or at least once a week.</p> <p>Record the amount of drainage</p>	<p>If not completed, the machine will not run correctly</p>
11.	<p>All waste, canisters and dressings to be treated as clinical waste</p>	<p>In accordance with Clinical Waste guidelines/policy</p>
12.	<p>Ensure the client is given the instruction booklet, explain how to trouble shoot, and given the 24hr help line number if the client is at home. All contact details should be included within the clients care plan</p>	<p>Helps client feel part of the care and reduces anxiety</p>
13.	<p>Keep the TNP machine as level with the wound as possible</p>	<p>This ensures pressure does not drop - as the further away from the wound the machine is the more the pressure drops</p>
14.	<p>To follow TNP pathway and care plan for discontinuation of TNP</p>	

10. Dressing technique example for small wounds





## 11. Training

The TVN is competent with the setting up, monitoring and evaluation of TNP therapy. Competence must be obtained through guided observation and supervised practice by company representative or TVN and will be organized by Acacium Group.

## 12. Infection Prevention and Control

In order to reduce the risk of transmission this device must be cleaned appropriately:

- All single use elements must be disposed of in the appropriate waste stream
- Decontaminate hands using soap and water, if not available use alcohol hand gel as an interim measure
- Appropriate PPE as per current guidelines and requirements
- Clean the canister with the appropriate disposable wipe as per the manufacturer's instructions ensuring any gross contamination is removed
- Remove gloves and aprons and dispose of in appropriate waste stream
- Decontaminate hands

## 13. Related documents

### Policy:

ORG 06 Communication Policy  
CORP 07 Environmental Policy  
CLIN 05 Privacy and Dignity Policy  
CLIN 06 Consent Policy  
CLIN 07 Infection Prevention Policy

### SOP:

SOP Con 01 Gaining Consent and Decline of Consent  
SOP Gen 20 Pressure Area Care  
SOP Inf Con 01 Aseptic Technique  
SOP Inf Con 02 Standard Precautions  
SOP Inf Con 03 Hand Washing

## 14. References

- Banwell PE, Teot L. Topical negative pressure (TNP): the evolution of a novel wound therapy Journal of Wound Care. Vol 12. 1 22-28
- Evans D, Land L. Topical negative pressure for treating chronic wounds (Cochrane Review). The Cochrane Library, Issue 2, 2002. Oxford: Updated Software
- Greer SE, Duthie E, Cartolano B, Koehler KM, Maydick – Youngberg D, Longaker MT.
- Wound Essentials NPWT in the Community How to Guide June 12 VAC Therapy – Clinical Guidelines – A reference source for clinicians Nov 2005
- Reference Guide to Consent for Examination or Treatment – Department of Health – August 2009
- NMC Consent
- 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 NHS Worcester Guideline for the Use of Negative Pressure Wound Therapy (NPWT) June 15

## Appendix A: About Acacium Group

Acacium Group consists of a number of trading companies, each providing services within core niche areas of the health and social care industries. Therefore, as this document is a Group standard operating procedure (SOP), the SOP herein applies to all trading companies detailed below:

### Thornbury Community Services (TCS)

At Thornbury Community Services (TCS), high quality care is our number one priority. With a team of exceptional and conscientious nurses and care staff, we're able to deliver the best complex care at home or in the community, 24/7 or whenever you need it. With compassion, integrity and dedication, we help empower individuals to achieve personal aspirations, as well as providing care tailored to their needs. Making a positive difference to our client's lives is our passion and it's this that sets us apart.



### Thornbury Community Services Learning Disability & Autism (TCS LDA)

Thornbury Community Services (TCS), provide specialist outcome-focused support for children and adults who are diagnosed with a learning disability and/or autism, who may present with behaviours of concern. Working in close partnership with commissioners, local authorities, hospital teams, our clients and their families; providing bespoke healthcare services, offering tailored care for every individual we support. We have a proven track record of supporting individuals with learning disabilities and/or autism and a reputation for delivering excellence across all aspects of case management.



Our vision is to increase personal choice and to empower people with a learning disability and/or autism to live fulfilling and rewarding lives and be an active member of their own community.

### Pulse Nursing at Home

Pulse Nursing at Home provides flexible, bespoke care for people living in their own homes and communities. We provide a lifetime solution that can adapt to changing healthcare needs.



We're passionate about our people and proud that the services we provide achieve the highest standards of compassionate care, supporting choice and empowering our clients to live the life they want.

## Thornbury Nursing Services (TNS)

Established in 1983, TNS is one of the UK's leading independent nursing agencies, providing skilled nurses on a temporary or permanent basis throughout England and Wales.



Part of Acacium Group

TNS believe it is more important than ever to offer high quality, clinical care at home and in the community.

TNS specialist community nurses and carers provide temporary nursing and care support for clients at home. They're ready to step in to support discharge plans, prevent hospital admissions, maintain client safety and support uncertain rosters.

Service TNS offers

- Temporary staffing to cover shortfalls in existing shift rotas
- Backfilling for interim cover during recruitment periods
- Rapid response to facilitate early discharge and to avoid hospital admission
- A staffing solution to stabilise complex mental health cases in crisis
- A CQC registered staffing service – currently rated 'outstanding'
- Assistance in stabilising staffing in long term complex care packages
- Support for both adults and paediatrics
- A nurse-led team contactable 24 hours a day, 7 days a week

## Scottish Nursing Guild (SNG)

Established in 1995, SNG, as part of Acacium Group, is one of Scotland's leading independent nursing agencies, providing skilled nurses on a temporary basis to major NHS trusts, and private sector clients, throughout Scotland, Northern Ireland and Republic of Ireland.



Part of Acacium Group

Service SNG offers

- A nurse-led team with full case management if needed, including compiling individualised care plans and risk assessments with ongoing support from Case Manager
- Care support for as long as you need us, from a few hours to 24/7
- Our office is contactable 24 hours a day, 7 days a week
- Rapid response to make early discharge possible or to avoid hospital admission
- Highly skilled nurses to provide home-based specialist care tailored to the specific needs of clients with complex care requirements
- Ad-hoc staffing to cover shortfalls in existing shift rotas or provide interim cover during recruitment periods
- Help stabilising staffing in long term complex care packages
- Palliative / end of life nursing care for clients who wish to remain at home
- Care provision for clients who need assistance with personal and/or social care support
- Support for both adults and children
- Support for clients no matter how complex their care needs
- Respite care to support clients either at home or away from home