

SESLHD PROCEDURE COVER SHEET



Health
South Eastern Sydney
Local Health District

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KEY TERMS	Wound, negative pressure, wound filler, foam, antiseptic, gauze
SUMMARY	<p>This document outlines the procedures to be used with NPWT wound dressings.</p> <p>It specifies activities to be undertaken to assess, treat and evaluate a patient's wound when NPWT is being used.</p>

COMPLIANCE WITH THIS DOCUMENT IS MANDATORY

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Wound - Negative Pressure Wound Therapy (NPWT)

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1. POLICY STATEMENT

The aim of this procedure is to ensure that Negative Pressure Wound Therapy (NPWT) for wounds is:

- Appropriately used
- Appropriately applied 'using aseptic non touch technique'
- Continually monitored during treatment

2. BACKGROUND

The use of Negative Pressure Wound Therapy (NPWT) for wounds was developed independently of each other by Chanker and Jeter (1989) and also Fleischmann, Argenta and Morykwas in the 1990s. These methods consist of the application of negative pressure (usually 75 to 125 mmHg) to a foam or gauze placed inside a wound⁵. The wound is sealed with an airtight adhesive film that prevents the entry of air from the external environment. NPWT has been reported for its clinical use in a diverse range of wounds, be they acute or chronic, in patients of all ages⁶.

Topical Negative pressure has the following effect on a wound⁷

- Wound retraction by the negative pressure pulling on the wound margins
- Stimulation of granulation tissue
- Maintenance of a moist wound environment
- Wound cleansing through the removal of small tissue debris by suction
- Removal of wound exudate through a closed system
- Pressure related reduction of interstitial oedema with consequent improvement of local microcirculation

NPWT is suitable for use in chronic, acute, traumatic, subacute and dehiscent wounds, partial-thickness burns, ulcers (diabetic, venous and arterial), pressure injuries, skin flaps and grafts and in some cases fistulae. ^{1, 2, 3, 4.}

Before NPWT can be applied clinical staff must be able to identify the correct NPWT type and setting to use including the reason why NPWT has been chosen to treat the wound.

Special precautions need to be taken for wounds with exposed/weakened/irradiated blood vessels and/or organs.

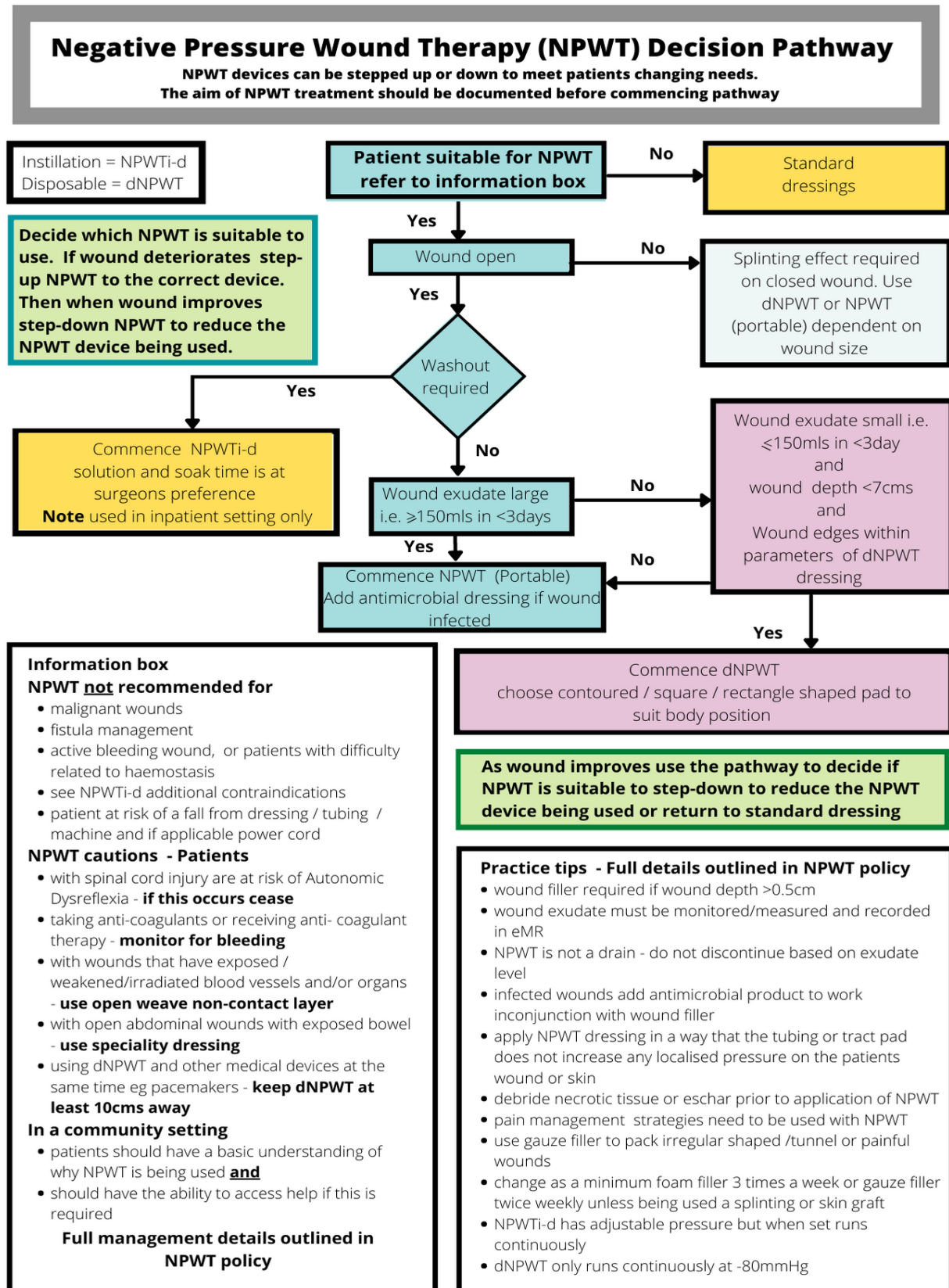
Malignant wounds are generally not treated with NPWT due to the risk of bleeding.

If there is no reduction in the size of the wound for two weeks the use of NPWT needs to be reassessed / ceased^{1, 2}. Discuss with the Wound Care Expert.

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Use the following flow-chart to decide with a NPWT device is suitable for your patient and their situation.



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- **Instillation NPWT (NPWTi-d).** This therapy is only suitable for used in the inpatient setting. It is used to wash out the wound bed and apply NPWT between washouts.
 - it runs continuously
 - has a set soak time and NPWT time (this can be adjusted according to surgeons preference)
 - refer to **NPWTi-d Contraindications** before commencing
- **NPWT applied using a disposable NPWT (dNPWT) or NPWT portable machine.**
dNPWT or NPWT (portable) machine/s are used both in the inpatient and community/outpatient setting.
 - NPWT (portable) machine
 - can deliver varied NPWT pressure settings and is adjustable to run as either continuous or intermittent therapy
 - a NPWT (portable) machine has a canister system to manage a large volume of wound fluid
 - two wounds can be treated concurrently with Y connector tubing
 - dNPWT
 - only runs continuously at a pre-set negative pressure setting e.g. PICO -80mmHg
 - manages wound exudate through a dressing product containing a high moisture vapour transmission rate film and absorbent pad
 - contoured, square or rectangle pad shapes available
 - two breast wounds can be treated concurrently using Y connector machine

Before NPWT can be applied clinical staff must ensure patient safety.

This is dependent on type and level of NPWT to be applied. Multiple patient factors need to be considered. These factors include;

- dNPWT must be kept at least 10cms from other medical devices at all times
- Falls risk including how NPWT will be applied and not put patient at risk of falls related to tubing and if applicable powder cord
- Pressure damage to the patient's wound or skin from the position of the NPWT dressing, tubing device
- Patients understanding of why NPWT is being used
- Patients ability to access help if this is required when in a community setting

Before commencing NPWT patient/advocate must give valid consent for the treatment.

Before discharging a patient with NPWT into the community the patient must be deemed a suitable candidate for the therapy, ensuring they are not a falls risk and have no cognitive impairment.

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The patient/advocate must be willing and able to participate with the ongoing NPWT management and be able to obtain help if required.

3. DEFINITIONS

Antiseptic NPWT Gauze	gauze containing polyhexamethylene biguanide (PHMB). This Antiseptic provides broad-spectrum protection against gram-, gram+ and fungi/yeast microorganisms including MRSA and VRE.
Gauze NPWT Microbe binding	prevent and treat wound infections by lowering the bioburden.
IMS+ (Incident Management System plus)	A computerised system for collecting, classifying, managing, analysing and learning about all incidents that occur within SESLHD.
Incisional Negative Pressure Wound Therapy (iNPWT) also called NPWT closed incisional (ciNPWT)	NPWT applied over a closed surgical site. iNPWT / ciNPWT is applied to reduce the risk of surgical site infection, seroma/haematoma and dehiscence, and to improve scar quality.
Interface Dressing	A non-adherent open weave dressing eg Atrauman silicone. This is placed between the wound base, exposed/weakened/irradiated blood vessels, tendon, bone and/or organs and the wound filler dressing.
Intermittent Therapy	a continuous cycling between low and high sub atmospheric pressure (five minutes of therapy on suction followed by two minutes without suction).
Negative Pressure Wound Therapy (NPWT)	Is the use of an appropriate electric pump with a wound filler of either polyurethane foam or polyhexamethylene biguanide (PHBQ) gauze to assist wound healing using sub atmospheric pressure setting.
NPWT Continuous therapy	a constant sub atmospheric pressure applied to a wound bed.
NPWT Disposable (dNPWT) also known as NPWT single use (sNPWT)	A single patient NPWT device that is non reusable at the completion of patient therapy or has a specific set time line of function e.g. 7days, 14day or 30days. Maybe battery powered or mechanical using a spring to reset the device.
NPWT Intermittent Therapy	a continuous cycling between low and high sub atmospheric pressure (5 minutes of therapy on suction followed by 2 minutes without suction).

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NPWT with instillation and dwell time (NPWTi-d)	NPWTi-d a wound irrigation method that cleanses wounds with controlled delivery of topical solutions and suspensions over the wound bed via a cyclic delivery, dwell, and removal system that removes infectious materials and wound debris.
NPWT Portable	NPWT applied using a portable electronic machine and mostly used with a wound filler of either polyurethane foam or NPWT gauze (antiseptic or microbe binding)
Splinting Effect	NPWT can be used to immobilise wounds often termed splinting or stabilising effect for certain wounds e.g., sternal, abdominal wounds and skin grafts ⁸ . Continuous therapy should be used in order to facilitate the splinting effect thus minimising movement and stabilising the wound bed.
Wound Care Expert	A person with advanced training in wound management and recognised within the facility e.g., CNC Wound Care, CNC Stomal Therapy and Wound Care and some Nurse Educators.
Wound Filler	is either a polyurethane foam or polyhexamethylene biguanide (PHMB) gauze used to fill the wound shape.

4. RESPONSIBILITIES

4.1 Employees will:

- Adhere to the content of this document
- Ensure they work within their scope of practice
- Attend relevant education related to this procedure
- Obtain and document valid consent before and during the proposed treatment/procedure as per the [NSW Health Consent to Medical and Healthcare Treatment Manual¹⁵](#)

4.2 Line Managers will:

- Ensure all clinical staff are given the opportunity to attend wound management education
- Ensure all clinical staff work within this procedure and have appropriate resource
- Have appropriate stock items to implement the recommendations within this procedure.

4.3 Medical staff will:

- Ensure they work within their scope of practice
- Attend relevant education related to this procedure

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- Practice wound debridement as outlined in this procedure
- Provide necessary orders for NPWT for clinicians to follow

5. PROCEDURE

This policy should be used in conjunction with procedure [SESLHDPR/297 – Wound - Assessment and Management](#).

5.1 Negative Pressure Wound Therapy Application

- There are different brands of NPWT devices and the consumables used for each brand need to match the device chosen
- Always follow the manufacturer's guidelines for each device and wound type
- All patients using NPWT need to have their wounds appropriately assessed and managed using the Wound Assessment and Management Plan (S0056).

The following tables outline specifics relating to each type of NPWT:

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Statement applies if tick (✓) shown	NPWTi-d	NPWT Portable	dNPWT
There are different brands of NPWT devices and the consumables used for each brand need to match the device chosen	✓	✓	✓
Always follow the manufacturer's guidelines for each device and wound type	✓	✓	✓
Wound measurements must be undertaken weekly in order to compare and monitor wound healing progress.	✓	✓	✓
If there is no reduction in the size of the wound after two weeks of NPWT, the use of NPWT needs to be reassessed / ceased ^{1, 2} . Discuss with Medical officer or Wound Care Expert	✓	✓	✓
The wound needs to be surrounded with enough intact skin (approximately 2cms around the wound) in order for the drape to adhere well in order to maintain the seal (vacuum) ^{3, 4}	✓	✓	✓
Consider protection of peri-wound skin e.g. use barrier wipes or if there is a likelihood of wound filler protruding onto skin then use a dressing product to protect the surrounding skin e.g. hydrocolloid, film dressing or silicone foam. Note if using a dressing product the product may absorb wound exudate into the dressing product and cause maceration	✓	✓	N/A
If used the number of pieces of wound filler used needs to be recorded in patient's records.	✓	✓	✓
One NPWT port is needed per 30cm of wound area. Exception abdominal wound using specific abdominal wound NPWT dressing	N/A	✓	N/A
NPWT dressing needs to be changed every 2-3 days or more frequently in the case of infected wounds ^{1, 2, 4} . Note Exception wounds requiring a splinting effect e.g. skin grafts	✓	✓	N/A
dNPWT dressing needs to be changed at least every 7 days or more frequently if the wound exudate exceeds the dressing capacity. Click here for basic NPWT (dNPWT) dressing	N/A	N/A	✓
NPWT used over meshed skin grafts and flaps usually stays intact for 5 -10 days as per surgeon's instructions. NPWT should always run on continuous therapy to maintain splinting effect.	N/A	✓	✓

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Statement applies if tick (✓) shown	Statement applies if tick (✓) shown		
	NPWTi-d	NPWT Portable	dNPWT
NPWT devices can be programed to run as either continuous or intermittent therapy . Note dNPWT and NPWTi-d only runs continuously	N/A	✓	N/A
NPWT should be run on continuous therapy optimally for the first 48 hours or until the first dressing change.	N/A	✓	N/A
Following the first dressing change clinicians need to assess if the negative pressure setting should be changed from continuous to intermittent therapy. see point 'Continuous therapy should be maintained'	N/A	✓	N/A
Continuous therapy should be maintained: <ul style="list-style-type: none"> when there are high levels of drainage from the wound or there is difficulty maintaining a seal⁴ for open abdominal wounds or where a "splinting effect" is required when intermittent therapy is painful^{1, 2, 4} over meshed skin grafts when NPWTi-d is being used 	✓	✓	✓
Documentation instructions for NPWT need to include <ul style="list-style-type: none"> the rate the NPWT machine is to be set at the type of therapy being used continuous or intermittent, installation when the dressing should be changed where the dressing changed should occur e.g. inpatients – theatres / ward or community setting - patients home / community centre which team is responsible for overseeing the use of NPWT 	✓	✓	✓

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Statement applies if tick (✓) shown	NPWTi-d	NPWT Portable	dNPWT
Shower patients using NPWT + NPWTi-d <ul style="list-style-type: none"> keep dressing / tubing / pump intact and away from (outside) the wet area 	✓	N/A	N/A
Shower patients using dNPWT- note pump is slash proof and dressing is water resistant <ul style="list-style-type: none"> Keep pump away from (outside) the wet /steam area. Do not direct water jets directly onto or soak dNPWT dressing 	N/A	N/A	✓
Patients with active osteomyelitis need to be receiving appropriate treatment for this (including debridement and antibiotics) when using NPWT ^{1, 2, 4.}	✓	✓	✓
Patients need to be nutritionally stable as otherwise progress with wound healing may be protracted.	✓	✓	✓

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5.2 Special Precautions & Contraindications to NPWT

Statement applies if tick (✓) shown	NPWTi-d	NPWT Portable	dNPWT
NPWT can be used on incontinent patients as it is a closed drainage system ¹ .	✓	✓	✓
NPWT can simplify wound management and progress wound healing to a point where it is suitable for such things as a skin grafts/flaps or so that the patient can be discharged into the community using traditional dressings ^{1, 2, 4, 9} .	✓	✓	✓
NPWT is used to prevent wound breakdown in a surgical incision by splinting the wound and closing the dead space within the wound.	N/A	✓	✓
NPWTi-d can be used with a variety of irrigation solutions with the appropriate electric pump e.g. Veraflo.	✓	N/A	N/A
NPWTi-d soak time is dependant on the solution chosen and the surgeon's discretion. The general recommended is 10 minutes soak time and 3.5 hours of continuous NPWT however surfactant cleanser like Prontosan recommendation are soak time 15-20 minutes and continuous NPWT every 6 hours.	✓	N/A	N/A
NPWT canister need to be changed when full or at least every 7 days. Fluid in canister needs to be monitor and documented in eMR.	✓	✓	N/A
An interface dressing (eg. Silicone dressing (Mepitel/ Atrauman Silicone, Jelonet) is recommended to be used if the patient feels pain when the NPWT dressing is being removed.	✓	✓	N/A
Appropriate pain management needs to be provided to all patients on NPWT.	✓	✓	✓
Wounds with necrotic tissue or eschar need to be debrided prior to the application of NPWT ^{1, 2, 4, 8, 9} .	N/A	✓	✓
Malignant wounds are generally not treated with NPWT mainly due to the risk of bleeding	✓	✓	✓

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Statement applies if tick (✓) shown	NPWTi-d	NPWT Portable	dNPWT
For Fistula management and NPWT: -Always contact Wound Care Expert and team to consider to see if patient is even suitable for NPWT -Always measure and record fistula output and monitor the patient's blood chemistry ¹²	N/A	✓	N/A
It is essential that all output from the wound is strictly measured for all wounds using NPWT and recorded in the patient's health care records.	✓	✓	N/A
Special precautions need to be taken for wounds with exposed/weakened/irradiated blood vessels, tendon, bone and/or organs. Use, an open weave interface dressing e.g. Atrauman silicone between the foam wound filler and the wound bed.	✓	✓	✓
For open abdominal wounds with exposed bowel contact Team and Wound Care Expert ^{1, 2, 4, 10.}	✓	✓	✓
Antimicrobial wound fillers e.g. Atrauman Ag or Granufoam Silver (antiseptic foam) can be used for wounds that are critically colonised or infected post-debridement.	✓	✓	✓
For application to the hand, advice can be sought from the Hand CNC located at Sydney Hospital & Sydney Eye Hospital phone 93827111 via page 22109.	N/A	✓	✓
Precautions to using NPWT need to be taken with patients with active wound bleeding, difficulty with wound haemostasis and who are taking anticoagulants or receiving anticoagulant therapy eg dialysis patients ^{1, 2, 4.}	✓	✓	✓
All NPWT dressing should be applied in such a way that the tubing or tract pad does not increase any localised pressure on the patients wound or skin	✓	✓	✓
In the event a patient with spinal cord injury experiences autonomic dysreflexia, discontinue use of NPWT and immediately seek medical assistance.	✓	✓	✓

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Statement applies if tick (✓) shown	NPWTi-d	NPWT Portable	dNPWT
Additional NPWTi-d™ Contraindications <ul style="list-style-type: none"> Do not use dressings with Octenisept®, hydrogen peroxide or solutions that are alcohol-based or contain alcohol Do not deliver fluids to the thoracic or abdominal cavity due to the potential risk to alter core body temperature and the potential for fluid retention within the cavity Do not use NPWTi-d unless the wound has been thoroughly explored due to the potential for inadvertent instillation of topical wound solutions to adjacent body cavities. 	✓	N/A	N/A

5.3 Transfer of patients with NPWT

Statement applies if tick (✓) shown	NPWTi-d	NPWT Portable	dNPWT
<p>When transferring patients within SESLHD with NPWT, an up-to-date wound assessment chart (soft or hard copy) must be attended to.</p> <p>The following must be included: how often and when the NPWT dressing needs to be changed, which wound filler is being used, the number of pieces of wound filler that have been used and the negative pressure setting.</p>	✓	✓	✓
<p>When transferring to another hospital the NPWT rental agreement needs to be transferred to the receiving hospital in order to ensure smooth transition of patient care e.g. calling and any transfer of costs for NPWT care needs to be clarified.</p>	N/A	✓	✓

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5.4 Discharging patients from hospital with NPWT

Statement applies if tick (✓) shown	NPWTi-d	NPWT Portable	dNPWT
Consider external funding e.g. Department Veterans Affairs 5.4.1 or private health funds 5.4.2	N/A	✓	✓
If a patient is to be discharged with NPWT into the Community sector they should use a portable machine or dNPWT machine. When organising a NPWT in the community please refer to Appendix 1 (POWH) , Appendix 2 (SGH) , Appendix 3 (STH)	N/A	✓	✓
Prior to discharging a patient into the community with NPWT the patient needs to be assessed with regards to compliance and suitability.	N/A	✓	✓
All patients discharged into the community with NPWT need to be given <ul style="list-style-type: none"> the patient education booklet supplied with each machine 	N/A	✓	✓
The patient/advocate needs to be able to recognise NPWT machine alarms and be able to obtain help if required.	N/A	✓	✓
The patient/carer needs to be educated in how to perform basic 'trouble-shooting' with regards to the dressing and the machine including being able to change the canister when necessary.	N/A	✓	N/A
All patients discharged into the community with NPWT need to have a follow-up appointment for review by the discharging team.	N/A	✓	✓
If the patient requires non-standard NPWT dressing products the relevant Community Health NUM should be advised prior to discharge of the patient so relevant consumables can be ordered.	N/A	✓	✓
All patients discharged into the community using portable NPWT need to have a spare canister and dressing for NPWT in case the dressing or canister has to have an unscheduled change.	N/A	✓	N/A

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Statement applies if tick (✓) shown	NPWTi-d	NPWT Portable	dNPWT
All patients discharged into the community need to be supplied <ul style="list-style-type: none"> with a simple traditional dressing e.g. an absorbent pad in case the NPWT dressing has to be removed by the patient or advocate relevant phone numbers for persons coordinating NPWT in the hospital and community 	N/A	✓	✓
Referral to all services should include the brand and model of NPWT being used; the setting used eg whether the therapy is continuous or intermittent. Copy of most recent Wound Assessment & Management plan or electronic equivalent, micro-organism status and Negative Pressure Wound Therapy Transfer of Care from Hospital to Community form.	N/A	✓	✓

5.4.1 Discharging patients with NPWT covered by Department Veterans Affairs (DVA)

Statement applies if tick (✓) shown	NPWTi-d	NPWT Portable	dNPWT
NPWT portable and dNPWT are the same type of intervention therefore apply to DVA for funding of the best device to meet patients' needs. Note if dNPWT is considered best practice there may be a need to supply a cost comparison of NPWT (portable) and dNPWT to DVA. The cost comparison is obtained from the company supply items.	N/A	✓	✓
NPWT (portable) obtain a quote for up to 4 weeks rental of the portable machine and up to 4 weeks of consumables from the company supplying. Email quote with a covering letter to Rehab appliances program (RAP) AMBRAPGE@dva.com.au, TEL:1800 550 457 option 1 then option 2 in order to gain funding for NPWT. Also see DVA web site NPWT AS18 for dNPWT or AS19 for NPWT (portable) Contact the relevant nursing agency to do the NPWT dressings.	N/A	✓	N/A

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5.4.2 Discharging patients with NPWT covered by a Private Health Fund (PHF)

Statement applies if tick (✓) shown	NPWTi-d	NPWT Portable	dNPWT
NPWT portable and dNPWT are the same type of intervention therefore apply to PHF for funding of the best device to meet patients' needs. Note if dNPWT is considered best practice there may be a need to supply a cost comparison of NPWT (portable) and dNPWT to PHF. The cost comparison is obtained from the company supply items.	N/A	✓	✓
If the patient is in a Health Fund the NUM needs to contact the company who will supply equipment (machine and consumables). Please refer to Appendix 5	N/A	✓	N/A
The company will supply the correct form needed to be filled in to justify NPWT. This form needs input from the prescribing Doctor.	N/A	✓	N/A
Once this form is filled in the form is then sent (email or fax) to Equipment Company requesting quote for machine and consumables for the length of therapy.	N/A	✓	N/A
The company will then mediate with the health fund the approval and supply of equipment and the send the equipment out to the patient.	N/A	✓	N/A
The relevant nursing agency or APHC NUM needs to be contacted in order to manage the dressings. <u>Note</u> the process can take 24-48 hours	N/A	✓	N/A
All patients discharged need to have a spare canister and dressing for NPWT in case the dressing or canister has to have an unscheduled change.	N/A	✓	N/A

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5.4.3 Additional Information for Patients receiving NPWT in the community

Statement applies if tick (✓) shown	NPWTi-d	NPWT Portable	dNPWT
<p>APHC staff must ensure the patient understands:</p> <ul style="list-style-type: none"> • how to perform basic 'trouble-shooting' with regards to the dressing and the machine including if applicable being able to change the canister when necessary. • to contact the CH nurse if any problems with NPWT during normal business hours • to contact, the relevant hospital or their GP if any problems with NPWT if they unable to contact the CH nurse at any time • to contact relevant NPWT company's 24hour phone helpline if any problems with NPWT machine at any time. 	N/A	✓	✓
All patients in the community need to be left with a spare canister and dressing for NPWT in case the dressing or canister has to have an unscheduled change.	N/A	✓	N/A
For non-privately funded patients- do not leave any other excess NPWT dressing stock in the patient home, as excess stock cannot be returned to a CH centre due to universal infection precautions	N/A	✓	✓
All patients have to also be supplied with a simple traditional dressing e.g. an absorbent pad in case the NPWT dressing has to be removed by the patient or carer	N/A	✓	✓

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5.5 Completion of NPWT in Hospital or Community setting

Statement applies if tick (✓) shown		NPWTid	NPWT Portable	dNPWT
At the completion of NPWT using rental equipment . Staff must:				
• Dispose of all consumable items i.e. canister / tubing, straps via the relevant waste streams		✓	✓	N/A
• Place reusable machines in return case or returning plastic bag/case, label appropriately		✓	✓	N/A
• Cancel reusable equipment rental agreement with NPWT company		✓	✓	N/A
• Transfer equipment to equipment collection point for collection		✓	✓	N/A
At the completion of dNPWT equipment staff must dispose of all consumable items i.e. battery pack via the relevant waste streams		N/A	N/A	✓

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5.6 Portable Negative Pressure Wound Therapy

e.g.. Solventum (Formerly KCI)

5.6.1 Basic Dressing Procedure – equipment

Staff at all times must adhere to hand hygiene principles, preparation of the environment and equipment practice and aseptic technique as per Aseptic Non Touch Technique (ANTT) protocol. Sterile gloves are to be worn to apply NPWT dressings.

<i>Equipment</i>	<i>Minimum requirement</i>
NPWT device	1
Appropriate dressing type/wound filler (i.e. gauze/foam) and size	1
Interface dressing if filler dressing is in contact with tendon/bone (eg. Silicone dressing (Atrauman Silicone, Jelonet)	1
Canister	1
Sterile scissors	1
PPE (mask, gown, goggles, pair sterile gloves)	1
Large dressing pack	1
Sterile normal saline	1
Use barrier wipes or if required dressing product to protect peri wound skin e.g. film or hydrocolloid	1
Friars balsam can be used on peri wound skin to increase tackiness	1

5.6.2 Dressing Removal

- Switch Therapy off
- Wait for 15 to 30 minutes to allow for foam to decompress.
- Separate dressing tubing and canister tubing by disconnecting the connector. If the canister is less than 7 days old and is still needed cover end with a packet of sterile gauze to maintain sterility.
- Gently remove the old dressing. It may be necessary to moisten any points of adhesion with saline in order to make removal easier
- If the dressing is still adhering to the wound bed introduce 10-30ml of warm normal saline into the drainage tubing and leave in-situ for 15-30 mins to soak into the dressing, and then try again to remove the dressing.
- Assess and measure wound – record details on Wound Assessment & Management plan or electronic equivalent.

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5.6.3 Dressing Application: Initial application

Clean the wound bed with saline. If there is any necrotic tissue or eschar that requires surgical debridement, contact the team requesting NPWT. Haemostasis must be achieved before dressing application

- Gather equipment
- Ensure surrounding skin is cleaned, dry and hair free, clipping where necessary
- If required apply skin barrier e.g. barrier wipe, hydrocolloid
- Select a dressing type and size that is an appropriate type and size for the wound and device, and cut it to size
- The wound filler must fit within the wound area. No wound filler should go on unprotected surrounding skin
- If using foam do NOT cut the foam larger than the wound as this may lead to excoriation and damage to peri wound skin
- Always place dressing gently into the wound, packing too much into the wound may inhibit reduction of the wound size
- Always count and record the number of pieces of wound filler used on the in the patient's health care records.
- Place the dressing gently into the wound, more than one piece of foam can be used as long as the pieces of foam are in contact with each other
- Cut the drape so that it covers the entire dressing plus no more than a 2cms border.
- Apply drape smoothing onto the skin to ensure it is crease free
- Apply tubing to wound dressing using technique appropriate to device. The tubing must not be secured so that it rests over a bony prominence. A strip of hydrocolloid can be used to cushion and anchor the tubing on the skin where it exits the filler
- Remove canister from sterile packaging and insert into NPWT device
- Connect the tubing from the dressing and the canister tubing
- Place the NPWT device on a level surface
- Turn on the NPWT device and follow the instructions on the screen
- Please ensure the NPWT machine is not placed under the patient's bed to protect it from being damaged.

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5.7 Disposable Negative Pressure Wound Therapy

5.7.1 Basic Dressing Procedure – equipment

e.g. Smith and Nephew PICO dressing – see [Appendix 7 for instruction guide for PICO](#)

<i>Equipment</i>	<i>Minimum requirement</i>
dNPWT device ensure correct size and shape	1
Filler dressing for packing if required (this is dependent on wound depth)	1
Interface dressing if filler dressing is in contact with tendon/bone (eg. Silicone dressing (Mepitel/ Atrauman Silicone), Jelonet)	1
Sterile scissors	1
PPE (mask, gown, goggles, pair sterile gloves)	1
Basic dressing pack	1
Cleansing fluid e.g. sterile water, normal saline, Prontosan	1
dNPWT device ensure correct size and shape	1
Filler dressing for packing if required (this is dependent on wound depth)	1

5.7.2 Dressing Removal of dNPWT:

- Switch therapy off
- Gently remove the old dressing using 'Remove wipes' if required
- If the dressing is still adhering to the wound bed irrigate with normal saline to loosen

5.7.2.1 If wound closed and no further dressing required

- Document removal in Medical Record (MR) and discard dNPWT appropriately.

5.7.2.2 If wound requires further intervention

- Clean the surrounding skin with appropriate cleansing fluid
- Clean the wound bed with appropriate cleansing fluid
- Assess and measure wound – record details in Medical Record (MR)

5.7.3 Dressing application – Disposable NPWT – (dNPWT):

- Gather the equipment
- Set up sterile field and open dressing requirements onto field
- Clean the wound bed with appropriate cleansing fluid

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- If there is any necrotic tissue or eschar that requires removal refer to medical team if surgical removal required
- Haemostasis must be achieved before dNPWT dressing application
- Clean the surrounding skin with appropriate cleansing fluid
- Ensure surrounding skin is dry
- Assess and measure wound after cleaning
- The wound filler (packing), if required;
- Must fit within the wound area. No wound filler should go on unprotected surrounding skin
- Always place wound filler gently into the wound. Packing too much into the wound may inhibit reduction of the wound size
- Always count number of pieces of wound filler. Record the number in the eMR
- Apply the dNPWT dressing as per the instructions over the wound and/or wound filler
- A strip of the film dressing can be used to secure the tubing. The tubing must not be secured so that it rests over a bony prominence
- Turn on the dNPWT device and ensure there is a good seal and that the machine is working.

5.7.4 Patient education

Give patient education on protecting the dNPWT including:

- the device cannot get wet
- the machine should be securely placed in a pocket or somewhere safe so it does not become a trip hazard. This is to minimise any falls risk
- what to do if the machine alarms
- who to contact if any concerns related to dNPWT treatment
- give patient education booklet with information on frequently asked questions (provided by company)
- Document wound assessment, wound plan and procedure attended in eMR.

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5.8 Negative Pressure Wound Therapy with instillation and dwell time (NPWTi-d)

5.8.1 Basic Dressing Procedure for NPWTi-d

<i>Equipment</i>	<i>Minimum requirement</i>
NPWTi-d device	1
Canister	1
Cassette	1
Topical wound solution of choice by the medical team	1
V.A.C. Cleanse Choice ® dressing kit	1
Sterile scissors	1
PPE (mask, gown, goggles, pair sterile gloves)	1
Basic dressing pack	1
Barrier wipes	1
Cleansing fluid e.g. sterile water, normal saline, Prontosan	1

5.8.2 Dressing removal NPWTi-d

- Switch Therapy off
- Close clamp on dressing tubing
- Separate dressing tubing and canister tubing by disconnecting the connector and if canister is still required place tubing end in a sterile gauze packet to preserve sterility.
- Wait for 15 to 30 minutes to allow for foam to decompress
- Gently stretch the film horizontally and slowly pull up from the skin all the way round the wound
- Gently remove the old dressing. It may be necessary to moisten any points of adhesion with saline in order to make removal easier
- If the dressing is still adhering to the wound bed introduce 10-30ml of warm normal saline into the drainage tubing and leave in-situ for 15-30 mins to soak into the dressing, and then try again to re-move the dressing
- Clean the surrounding skin with appropriate cleansing fluid
- Assess and measure wound – record details in Medical Record (MR)

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5.8.3 Dressing application NPWTi-d

5.8.3.1 Initial application:

Clean the wound bed with saline. If there is any necrotic tissue or eschar that requires surgical debridement, contact the team requesting NPWT. Haemostasis must be achieved before dressing application.

5.8.3.2 For subsequent dressings wound bed cleansing is not required, however surrounding skin must be cleaned:

- Gather the equipment and indwell solution
- Ensure surrounding skin is cleaned, dry and hair free, clipping where necessary
- Set up sterile field and open dressing requirements onto field
- Clean the wound using cleansing fluid
- Assess and measure wound after cleaning
- If required apply skin barrier e.g. barrier wipe and always apply a stoma ring around the complete circumference of the wound.
- Cut to size the selected Cleanse Choice foam layer/s to fit the size of the wound
- The wound filler
 - Must fit within the wound area. Do NOT cut the foam larger than the wound as this may lead to excoriation and damage to peri wound skin
 - Always place wound filler gently into the wound. Packing too much into the wound may inhibit reduction of the wound size
 - More than one piece of foam can be used as long as the pieces of foam are in contact with each other
 - Always count and record the number of pieces of wound filler used in the medical records.
- Cut the film so that it covers the entire dressing plus a 3cms border
- Apply film, smoothing onto the skin to ensure it is crease free. Note only two layers of film should be used as film is designed to be breathable.
- Cut a hole in the film approximately 4cm round
- Consider placement / direction of tubing before applying, so that it does not:
 - rests over a bony prominence
 - cause a trip hazard
 - compromise patient's ADL
- Apply track pad over cut hole placing the tubing in the appropriate direction
- Remove canister from sterile packaging and insert into NPWTi-d device
- Connect the tubing from the dressing to the canister tubing
- Place the NPWTi-d device on a level surface

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- Turn on the NPWTi-d device and [set up the machine](#);
 - following the instructions on the screen
 - set the dwell time
- Document wound assessment, wound plan and procedure attended in eMR.

Please ensure the NPWT machine is not placed under the patient's bed to protect it from being crushed when the bed is lowered.

6. DOCUMENTATION

- Wound Assessment and Management Plan SEI060118
- Documentation in the health care record needs to include type of NPWT, purpose of the therapy, wound filler to be used and the pressure that the machine needs to be set at and whether the therapy is to run at continuous or intermittent Discharge health care record.

7. AUDIT

Wound Care Nurse's, or nurse's responsible for the NPWT if a wound care nurse is not located at a site, are to monitor the procedures use and effectiveness. Data gathered from compliance audits and reviews of wound care documentation and related clinical incidents should be monitored as they will reflect the effectiveness of this procedure.

8. REFERENCES

8.1 Internal References

[SESLHDPR/287 - Wound - Assessment and Management](#)
[SESLHDPR/437 - Wound Management - managing pain at dressing change](#)
[SESLHDPR/750 - Wound Antiseptic Dressing](#)

8.2 External References

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11	Rai, S et al. (2019). Comparative study of efficacy of negative pressure wound therapy versus conventional dressing in open wounds. <i>National Journal of Medicine and Allied Sciences</i> 8(2): 1-6.
12	European Wound Management Association (2017) Document: <i>Negative pressure wound therapy. Overview, Challenges and Perspectives</i> . London MA Healthcare Ltd.
13	Groenen, H et al. (2023) <i>Incisional negative pressure wound therapy for the prevention of surgical site infection: an up-to-date meta-analysis and trial sequential analysis</i> . eClinicalMedicine doi: 10.1016/j.eclinm.2023.102105. PMID: 37538540; PMCID: PMC10393772.
14	Gupta, S et al. (2016) Clinical recommendations and practical guide for negative pressure wound therapy with instillation. <i>International Wound Journal</i> 13: 159-174
15	NSW Health Consent to Medical and Healthcare Treatment Manual 2020 https://www.health.nsw.gov.au/policies/manuals/Publications/consent-manual.pdf accessed Jan 2021

[CEC Infection Prevention and Control Practice Handbook](#)

9. VERSION AND APPROVAL HISTORY

Date	Version No.	Author and approval notes
February 2022	1	Major review of SESLHDPD/136 Wound - Negative Pressure Wound Therapy (NPWT) converting policy to procedure. Draft for Comment period.
March 2022	2	Reviewed by Wounds Committee.
April 2022	2	To be tabled at Clinical and Quality Council for approval.
May 2022	2	Approved at Clinical and Quality Council meeting.
24 February 2025	2.1	Minor review; update links and grammatic improvements. Removed images and updated contact information. Updates made to Appendix 1, 2 and 3 NPWT at POW, SGH and TSH.

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Appendix 1: Negative Pressure Wound Therapy (NPWT) in the Community – Prince of Wales Hospital

When a patient is discharged into the community with NPWT, Primary Care Team (PCT) will commence case management of clients residing in the Randwick and Botany local area. Clients with NDIS or Home Care Package Level 3 and 4 funding will be redirected to their appropriate service providers.

All clients discharged into the community with NPWT will:

- Have a follow-up appointment for medical review by the discharging team
- Be provided with a NPWT machine from the hospital, a spare canister and dressing in case of an unscheduled change
- Be supplied with a simple traditional dressing e.g. an absorbent pad in case the NPWT dressing has to be removed
- Be educated on performing basic trouble shooting with regards to the dressing and the machine including being able to change the canister when necessary

Process (please also refer to flowchart below)

- The referrer will be instructed to initiate a *Consult Order Request* in eMR to the PCT. This will include the medical review date, the brand and model of NPWT being used, the setting used e.g. whether the therapy is continuous or intermittent and if the client is in a Health Fund
- A copy of the Wound Assessment and Management Plan must be included in the referral.
- If the client is in a Health Fund and where the Health Fund agree to fund the NPWT, the PCT NUM will be contacted in order to manage the dressings. NPWT dressings will be available as part of the standard wound care items available from PCT.
- If the client is not in a Health Fund, POWCH will fund the NPWT machine rental via consolidated invoicing by Solventum.
- The PCT Case Manager is responsible for monitoring and initiating reviews on the established dates or as the need arises, and updating Wound CNC with progress.
- If the client is admitted to hospital, the PCT Case Manager or Wound CNC must notify SOLVENTUM of the client's admission including their ward details. This will ensure that rental fees can be transferred to the hospital for the duration of the inpatient stay.
- Once the NPWT is ceased, the PCT case manager will inform SOLVENTUM and be provided with a cancellation ID.
- The PCT Wound CNC is responsible for entering client's details on NPWT spreadsheet, checking accuracy of monthly invoices and updating SOLVENTUM with any changes.

Useful Contacts POWCH	<ul style="list-style-type: none"> • Solventum - 1300 524 822 • PCT NUM - 0411 616 689 • Northern Network Access and Referral Centre (NNARC) Intake - 02 9369 0400
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Appendix 2: Negative Pressure Wound Therapy (NPWT) in the Community – St George Hospital

When a patient is discharged into the community with NPWT, the community nursing team will commence case management of clients residing in the St George and Community Health Service local area. Clients with NDIS or Home Care Package Level 3 and 4 funding will be redirected to their appropriate service providers.

All clients discharged into the community with NPWT will:

- Have a follow-up appointment for medical review by the discharging team
- Be provided with a NPWT machine from the referring hospital, a spare canister and dressing in case of an unscheduled change
- Be supplied with a simple traditional dressing e.g. an absorbent pad in case the NPWT dressing has to be removed
- Be educated on performing basic trouble shooting with regards to the dressing and the machine including being able to change the canister when necessary

Process (please also refer to flowchart below)

- The referrer will be instructed to initiate a *Consult Order Request* in eMR to the community nursing. This will include the medical review date (to be held in the Ambulatory Care Unit), the brand and model of NPWT being used, the setting used e.g. whether the therapy is continuous or intermittent and if the client is in a Health Fund
- A copy of the Wound Assessment and Management Plan must be included in the referral
- If the client is in a Health Fund and where the Health Fund agree to fund the NPWT, the Community Nursing NUM will be contacted in order to manage the dressings. NPWT dressings will be available as part of the standard wound care items available from Community Nursing.
- If the client is not in a Health Fund, SGH will fund the NPWT machine rental. To initiate this process the NUM or Nurse In-Charge of the discharging ward should be informed to organise payment for the device and consumables.
- For all other hospitals referring to the SGH community nursing team, ***the referring ward from the discharging hospital*** are responsible for paying for NPWT machine rental and provision of consumables for the duration of the treatment.
- Community Nurses will be responsible for monitoring and initiating reviews on the established dates or as the need arises
- Continuation of the NPWT post the initial dates will be monitored by the discharging team or the Wound Care CNC upon follow-up in the Ambulatory Care Unit.
- Once the NPWT is ceased, the Community Nursing case manager will inform SOLVENTUM and be provided with a cancellation ID. This information will be provided to the AO to enter onto the NPWT spreadsheet.
- SOLVENTUM will issue a tax invoice including the clients name, date of rental and the PO number to [Healthshare Accounts Payable](#) for payment within 30 days.

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Appendix 3: Negative Pressure Wound Therapy (NPWT) in the Community – The Sutherland Hospital

When a patient who resides in the Sutherland Shire is discharged into the community with NPWT, SouthCare Community Nurses will commence case management of clients.

All clients discharged into the community with NPWT will:

- Have a follow-up appointment for medical review by the discharging team.
- Be provided with a NPWT machine from the hospital, a spare canister and a 3 day supply of dressing equipment.
- Be supplied with a simple traditional dressing e.g. an absorbent pad in case the NPWT dressing has to be removed.
- Be educated on performing basic trouble shooting with regards to the dressing and the machine including being able to change the canister when necessary.

Process

- The referrer will be instructed to initiate a *Southcare Community Consult Order* on eMR. This should include the medical review date, the brand and model of NPWT being used, the setting used e.g. whether the therapy is continuous or intermittent and if the client is in a Health Fund.
- A copy of the Wound Assessment and Management Plan must be included in the referral.
- If the client is in a Health Fund and where the Health Fund agree to fund the NPWT, the Southcare Community Nursing NUM will be contacted in order to manage the dressings.
- If the client is not in a Health Fund, the discharge ward will fund the NPWT machine rental. To initiate this process the NUM or Nurse In-Charge of the discharging ward should be informed to organise payment for the device and consumables.
- The referring ward from **The Sutherland Hospital** is responsible for providing consumables for three days and NPWT machine rental for the duration of the treatment. Southcare is responsible for providing the consumables for the remainder of the treatment.
- For all other hospitals referring to Southcare with a referral for a patient residing in the Sutherland Shire, if the patient is not eligible for financial assistance and the patient is to be discharged from a public hospital the ward is responsible for rental payment and Southcare General Community Nurses (GCN) is responsible for payment of all consumables for the duration of the treatment.
- For all dNPWT devices, consumables need to be supplied by the referring public or private hospital for the duration of the treatment.
- If a patient is to be discharged from a private hospital both the NPWT rental and consumables are to be covered and organised by the referring private hospital.
- Southcare Community Nurses will be responsible for monitoring and initiating reviews on the established dates or as the need arises.
- Continuation of the NPWT post the initial dates will be monitored by the discharging team or the Southcare Community Nurses.

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- Once the NPWT is ceased, the Southcare Community NUM will inform SOLVENTUM and be provided with a cancellation ID.
- SOLVENTUM will issue a tax invoice including the clients name, date of rental and the PO number to [Healthshare Accounts Payable](#) for payment within 30 days.

Please Refer to [TSH CLIN423 Clinical Business Rule General Community Nursing Services \(GCN\) Southcare – Referral process, The Sutherland Hospital](#) - sections 4.3 and 4.4.2 attached for additional information:

Useful Contacts	<ul style="list-style-type: none">• SOLVENTUM - 1300 524 822• PCT NUM - 0411 616 689• Northern Network Access and Referral Centre (NNARC) Intake - 02 9369 0400• SGH Community Nurses 02 9113 3999• Southcare Community Nurses (TSH) 02 9540 7540
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Appendix 4: Discharge Patient who has Private Health Insurance with a Vac or Snap Therapy. ([Click here for a high resolution PDF](#))

Appendix 5: SOLVENTUM V.A.C Therapy Funding Application form for Privately Insured Patients. ([For a high Resolution PDF please click here](#))

Appendix 6: SOLVENTUM NWPT Setup Guide: (full setup slides available [here](#))

Appendix 7: Smith and Nephew Guide to PICO application guide: (for full PDF guide click [here](#))