



CLINICAL PROTOCOL and PROCEDURE

The art of Negative Pressure (Vacuum) Wound Therapy (NPWT) in the treatment of open wounds was first implemented in 1908. Negative pressure wound therapy modalities today have become highly advanced in order to offer the best protocols that may promote wound healing. PROSPERA introduces the PRO-I (retired), PRO-II and PRO-III series of negative pressure wound therapy pumps, an advanced technology designed to provide negative pressure to the wound site complemented by a variety of wound dressing options thus offering a complete customizable system.

****The following information is recommended to provide the best implementation and management of the PROSPERA negative pressure wound therapy system. ****

WHO IS RESPONSIBLE?

The medical provider (MD, DO, NP, PA) is responsible for determining the appropriate implementation and discontinuation of the PROSPERA negative pressure wound therapy system.

The authorized caregiver (PT, RN, LPN-LVN, WOCN, ET, PA, NP, and DO, MD) is responsible for all wound dressing changes, monitoring progress, documentation and communication of the progress.

PHYSICIAN ORDER

An order requiring the initiation of the PROSPERA negative pressure wound therapy system must be submitted by the medical provider (MD, DO, NP, PA) and requires identification of the three principles of NPWT. Pressure, Wound Filler and Mode of Vacuum.

I.e. Apply negative pressure wound therapy using variable pressure therapy (VPT[®]) settings of -80/-40 mmHg for time of 2 min on/2 min off or continuous pressure therapy

(CPT) at -80 mmHg with the dressing of choice (AMD Gauze, Black Foam, White Foam, Flat or Channel Drain) to sacral Stage IV 6 x 8 x 3 cm wound for 4 weeks starting 00/00/0000. Dressing changes 3 x week. Last debridement 00/00/0000.

The order must include the following:

- Start date and duration of treatment
- Wound location, size and type
- Date of last debridement
- **Pressure** settings {-80mmHg is recommended, psi greater than -125mHg is not recommended}
- **Wound filler** {black or white foam, AMD Gauze or drain type}
- **Mode** of vacuum {continuous (CPT) or variable pressure therapy (VPT®)}
- Time settings (maximum/minimum) if using VPT.
- Frequency of dressing change
- Adjunctive dressing items (antibiotics, collagen, silver, etc.)

INDICATIONS

The PROSPERA negative pressure wound therapy system is indicated for the use of localized continuous or intermittent or variable negative pressure.

The use of this therapy may promote wound healing by:

- maintaining a moist wound environment
- removing excess fluid (infectious and non-infectious)
- stimulating granulation by increasing vascular perfusion
- encouraging wound contraction
- protecting the wound from microbe imbalance

The PROSPERA negative pressure wound therapy system is indicated for the following acute and chronic wound types

- Pressure Injury
- Diabetic/Neuropathic ulcers
- Venous Insufficiency ulcers
- Traumatic
- Post-operative and Dehisced surgical
- EXPLORED fistulas
- Partial Thickness Burns
- Skin Flaps and Grafts
- Full thickness and partial thickness wounds

CONTRAINDICATIONS

The **PROSPERA** system is contra-indicated in the presence of:

- Necrotic tissue with eschar present
- Unexplored or non-enteric fistulas
- Untreated osteomyelitis
- Malignancy in the wound
- Exposed nerves, arteries, veins, or organs
- Exposed anastomotic site

PRECAUTIONS

Precautions should be taken for patients who are or have:

- Difficult wound homeostasis*
- On anticoagulation or active bleeding* Monitor INR
- Close proximity of blood vessels, organs, muscle, and fascia requiring adequate protection. **
- Irradiated or infected vessels and tissue
- Bony fragments
- Untreated Malnutrition
- Non-compliance
- Direct Spinal Cord injuries
- Circumferential dressing application
- Use near vagus nerve
- Patients requiring:
 - MRI
 - Defibrillation or
 - Hyperbaric chamber

*******WARNING*******

****Using Prospera NPWT (negative pressure wound therapy) on patients receiving Anti-coagulant Therapy (see pre-cautions).***

Consistent with all NPWT clinical guidelines, direct use of NPWT on wounds of Anti-Coagulated patients is **PRECAUTIONARY** and the responsibility of the Provider and

Caregiver. If application is chosen, additional assessments skill and protocol is required. These additional assessments should be based on the patient's anti-coagulant status and stability, wound type, location and proximity to high risk structures such as vessels. NPWT Providers and caregivers should closely assess high risk patients (every hour depending on stability or per facility guidelines) for signs and symptoms of active bleeding and document per their facility protocol. Every measure of care should be implemented to prevent unwarranted bleeding. If active bleeding is observed, NPWT should discontinued immediately, unrelieved pressure applied to the bleed site and the facility policy should be implemented (such as calling 911 or primary Physician). The importance of educating the patient/family and team members of the increased risk cannot be under emphasized. Prospera recommends using the FDA Consumer Warning from February 2011 as a guideline/reference for writing facility policy.

****Using Prospera NPWT (negative pressure wound therapy) on organs such as heart, abdominal wounds with exposed viscera, vessels, and/or nerves.**

Again, consistent with all NPWT clinical guidelines, direct use of NPWT is **CONTRAINDICATED** on exposed organs, vessels, and nerves. If application of NPWT is chosen, it is recommended that exposed organ(s), viscera, vessels, and nerves not have NPWT applied directly without a protective covering. *****Direct application of NPWT to the heart, lungs, or bowel without a protective layer may cause organ rupture and death.**

If the viscera of the abdomen does not have a covering of omentum, intact fascia, granulation tissue, muscle, or mesh (used to repair abdominal hernias), it must be protected with multiple layers of fine-mesh non-adherent gauze. The fine-mesh non-adherent gauze must be used to cover the exposed soft structures prior to the application of the Prospera gauze or foam dressing.

If the pericardium of the heart or pleura of the lung is exposed, direct application of NPWT should not be used without a semi-rigid protective layer. Ie. HeartGuard™

NOTE: The maximum recommended size of visceral/vessel/nerve exposure to be treated by the Prospera NPWT will not exceed 15cm x 20cm. Alternate treatments should be considered if the exposure exceeds these dimensions.

OPTIMIZING OUTCOME TIPS

1. Successful wound healing is dependent upon many variables. Clinical guidelines are available to help you achieve the highest rate of cost effective wound closure outcomes. Wounds that have been recalcitrant to standard wound care protocols, wounds expecting to take months to heal and wounds of large depth and drainage are good candidates for PROSPERA negative pressure wound therapy.
2. Optimizing the variables is essential. Co-morbid conditions must be brought close to normal parameters. Adequate blood flow, edema reduction, microbe control, glucose management, and adequate nutrition cannot be over emphasized.
3. Wounds must be debrided as completely as possible of all eschar and slough to avoid slow healing.
4. Pressure injury requires off-loading from direct surfaces. This may include a variety of mattresses, pads, and orthotics to avoid undue pressure at the dressing site.
5. If it is necessary to disrupt the negative pressure therapy environment for the purpose of dialysis, rehabilitation, ambulation, etc., you may do so but remember to keep the time off the negative pressure wound therapy system to a minimum of 4 hours or less especially if the wound is highly exuding. If using Black Foam, a 2 hour minimal interruption is standard protocol. Interruption beyond this 2 or 4 hour window requires a dressing change due to the lack of microbial control and fluid removal thus an increased risk of infection and or maceration.
6. Aggressive wound cleansing with non-cytotoxic solutions should be performed prior to the dressing application. Routine dressing changes should be two to three times a week or sooner based on the volume of exudate. Infected wounds should be changed every 24 to 48 hours until microbial control is achieved.
7. Inspect the dressing frequently. The dressing will have a collapsed appearance if there is adequate negative pressure and an intact seal. Do not allow the “Green Screen” operational mode to be a replacement for wound dressing assessment and good nursing care.
8. Monitor the wound and peri-wound for signs and symptoms of infection. Document erythema, fever/warmth, edema, tenderness, induration, purulent exudate, and strong odor. Depending on the status of the wound the medical provider may choose to temporarily discontinue the negative pressure wound therapy.

9. Careful removal of the dressing will prevent unnecessary damage to new granulation, epithelium and the intact periwound. If needed, apply sterile water or normal saline into the gauze or white foam dressing and allow it to soak 5-10 minutes, and then gently remove from the wound. Black foam does not absorb fluid and requires mechanical removal by hand. Try to avoid removal of granulation tissue that may have ingrown into the black foam. Pain and bleeding may occur with removal.
10. Discomfort can occur with any wound. Some patients may require medication prior to the dressing change. The non-adherent layer reduces the risk of dressing adherence. The moist woven gauze environment prevents “in-growth” of granulation into the gauze. If needed, topical 1% Lidocaine may be applied to wounds prior to dressing application and removal for sensitive wounds.

MONITORING THE WOUND

- 1 Wounds receiving their first dressing with NPWT application should be monitored frequently every 6-8 hours for the first 48 hours.
- 2 Increased exudate and wound size during the first 48-72 hours can be expected due to the decompression of interstitial space and removal of extra-cellular fluid and debris. Gradual reduction of fluid and surface area should be noted with each assessment.
- 3 Wound color may become a deeper red or pink as the perfusion to the site increases. A pale pink granulation base is normal and acceptable under moist gauze negative pressure wound therapy.
4. The appearance of bright red blood requires discontinuation of negative pressure wound therapy and immediate evaluation.
5. Wound measurements should be conducted weekly and recorded. Tracking of the wound’s progress can be used for comparison and outcome data. Wound measurements should progressively reduce on a weekly basis. If the wound does not reduce in 2 weeks, re-evaluate the protocol.
6. Length of treatment is dependent upon wound progress, the medical provider’s goal of therapy and may extend beyond 6 weeks. Average therapy is 2-6 weeks. Therapy beyond 3 months may require a letter of medical necessity.

DRESSING APPLICATION PROCEDURE GUIDELINES

**** Explain the procedure to the patient and assess issues regarding pain (scale of 1-5 or 1-10), tolerance and compliance. Pre-medicate (for pain) as needed.****

1. Prepare the wound bed by thoroughly **cleansing** with Normal Saline, Sterile Water or non-cytotoxic cleanser until free of debris, necrotic slough, etc. Gently pat the wound and peri-wound dry.
2. (Optional step) ****Cut to fit a single thickness of non-adherent material and place over high risk structures such as tendon, nerve, artery, vein, muscle, and bone. Multiple layers are required over exposed bowel.**

GAUZE/DRAIN

- 3a. Open the **anti-microbial AMD gauze**, moisten with Normal Saline or Sterile Water and place a thin layer into the wound bed to include touching but not over lapping the wound edges. Excess filler can be left attached and temporarily laid on the wound edge to later covered the drain and trimmed prior to the application of the semi-permeable transparency. Small wounds may require trimming of the gauze. If so, moisten the AMD gauze and trim one edge and fold it inward to minimize the risk of cotton fiber residual in the wound. Cotton is a natural biodegradable fiber.
- 3b. Pre-measure the **silicone drain** by placing it in the wound bed. The ‘flat’ drain end should be ½ inch to 1 inch from the wound edge. The ‘round’ drain can be trimmed accordingly or curled in a loop to allow placement into undermining and/or tunneled areas. Once the wound bed is covered with a thin layer of moistened AMD gauze place the drain of choice onto the wound surface. The silicone drain should not extend beyond the wound edge. All perforations on the drain should be placed within the wound bed and not extending onto the peri-wound. The drain/tubing ‘junction’ should lie slightly within the wound bed or at the wound margin. Do not place the silicone flat drain directly on the wound bed without the gauze filler. The round channel drain is an exception and may be used for tracks, tunnels or undermining without being sandwiched or rolled in gauze.
- 3c. **Fluff** the remaining moist anti-microbial gauze necessary to sandwich the silicone drain and fill the wound space as needed (without overlapping onto the periwound or over packing above the skin surface). Dressings may have a concaved appearance when negative pressure is activated.
- 3d. (Optional Step) **** Secure the silicone tubing with the stoma-adhesive paste near the exit site (i.e. 1-2 inches from the wound edge) to reduce risk of drain displacement and aid in maintaining a seal under the transparency. Place a small strip of stoma paste on the skin then place the silicone tubing on top the paste to help hold the tubing in place. Place another small strip of stoma paste over the same area to sandwich the tubing between the two strips.**

FOAM/DRAIN

- 4a. Open the **foam** and place it in the wound bed with the trough side (designed to cradle the drain) upward and angled to the exit direction of choice. The foam should touch but not overlap the wound edges and trimmed accordingly. Small wounds may require trimming the foam. If so, trim the foam away from the wound to avoid residual flecks of debris falling into the wound. Foam is a synthetic polyurethane hydrophobic material and will cause inflammatory foreign body tissue reaction if left in the wound. It does not dissolve nor absorb.
- 4b. Place the 19 gauze **drain** onto the foam. Trim accordingly. All perforations should lie within the foam trough.
- 4c. (Optional Step) ** Secure the silicone tubing with the **stoma-adhesive paste** near the exit site (i.e. 1-2 inches from the wound edge) to reduce risk of drain displacement and aid in maintaining a seal under the transparency. Place a small strip of stoma paste on the skin then place the silicone tubing on top the paste to help hold the tubing in place. Place another small strip of stoma paste over the same area to sandwich the tubing between the two strips.
5. Apply **skin sealant** to the peri-wound after the wound filler (gauze or foam) is in place. The peri-wound extends (one) 1 inch or more from the wound edge. This should include all skin to be covered by the transparency. Allow to dry.
6. Open the appropriate sized **transparent dressing** and place over the wound filler while selecting from the following options:
 - **A. (stoma paste) Contour the transparency over the wound filler and stoma-adhesive paste anchor and around the silicone tubing to insure a good seal. Push gently on the paste to achieve an intact seal. Paste will mold itself with the body temperature.
 - **B. (no stoma paste) Contour the transparency over the wound filler. Near the tubing exit lift the tubing slightly (approximately 45 degrees) and crimp the transparency around the tubing (pencil technique) and underneath securing the remaining transparency edges to the periwound.
 - **C. If necessary, to ensure an intact seal when not using stoma paste, use a 2" x 2.75" transparent dressing where the silicone tubing exits the transparency OR secure the silicone tubing with a Hytape chevron at the tubing/transparency exit. Place the Hytape (sticky side up) underneath the silicone tubing directly next to the transparency edge. Press the tubing down so it adheres to the tape. Gently (without traction) fold the tape ends up and over or criss-cross themselves over the tubing at a 45 degree angle toward the wound making a chevron or partial 'X' over the tubing. Pinch the tape along the surrounded tubing to reduce passage of air.
If needed, trim the transparency accordingly to allow 1 to 2 inch overlap onto the periwound.

****DO NOT PLACE MORE THAN ONE LAYER OF TRANSPARENCY DIRECTLY OVER THE WOUND FILLER.** This will reduce the moisture vapor transfer rate and cause a closed system alarm. Window pane the edges as needed with transparency, hydrocolloid or Hytape.
7. Connect the silicone drain tubing to the **PVC tubing** then connect the PVC tubing to the collection canister.

8. Check the collection **canister** over-flow float, filter and confirm the lid is tightly sealed. Check all tubing connections, clamps and covers.
 9. **Turn on** the PROSPERA negative pressure wound therapy pump to continuous suction (-80 mm Hg) and observe the dressing for proper sealing. It should contract. If the dressing does not contract, there is an inadequate seal. Recheck step #6 above. Once the seal is secured, adjust the negative pressure to the parameters indicated by the medical provider's prescription.
- **Check for seal integrity at regular intervals by closing the suction tubing. If the dressing balloons but then contracts after opening the tubing, the seal is intact and secure, otherwise, check for leaks.**

EXTERNAL DOME APPLICATION

1. (Optional Step)**Custom fit the non-contact layer to the wound base. Avoid overlapping onto the peri-wound to prevent maceration.
 2. Custom fit the wound filler of choice to lay gently within the wound base. Do not over pack. Avoid overlap onto the peri-wound. Avoid trimming wound filler over the open wound to prevent debris falling into the wound tissue.
 3. Remove the release liner of the transparency from the center. Seal the wound filler by gently pressing the adhesive side of the transparency over the wound filler and peri-wound. Extend the transparency edges a minimum of 2" beyond the wound margin.
 4. Once a proper seal is secured, remove the carrier backing of the transparency. Secure the edges of the transparency to the peri-wound if needed.
 5. Over the center of the wound filler pinch and lift the transparency. Using scissors or Scalpel cut out a 2-2.5 cm hole in the transparency and release. A small amount of wound filler attached to the transparency may also be removed.
 6. Remove the release liner from the Dome pad. Holding the tabs, center the Dome over the hole in the transparency and press to seal.
 7. Secure the seal and remove the carrier backing from the Dome. Peel away the tabs if desired.
 8. Attach the Dome connector tubing to the adapter/canister tubing. Secure junctions with tape. Avoid removal of the silicon adapter that allows the two tubes to connect.
 9. Start the prescribed negative pressure wound therapy mode.
- ** Notice the contraction or shrinkage appearance of the dressing.
- ** Direct the exit position of the double lumen Dome tubing away from any pressure point areas

Customizing Dressings

The **Choice of Wound Filler should be selected based on the **Goal of Therapy**. Histological research had proven Polyurethane wound filler produces a large quantity of granulation quickly but may have poor quality caused by the in-growth of granulation tissue into the wound filler. This may increase the risk for contractures, poor

scarring and increased pain. Using a non-contact layer can prevent tissue in-growth and may lessen pain. Moist cotton wound filler and Polyvinyl foam (white) produce slightly thinner granulation tissue with sound tissue quality. Moist cotton wound fillers and Polyvinyl foam prevent tissue in-growth, may reduce pain and contractures. Evaluation of the Goal of Therapy should include the history of the wound, wound location ie. joint, face, amount of exudate, degree of pain, amount of tissue lose and quality required for tissue replacement. Both types of wound fillers may be used in the healing of a wound. Polyurethane may be chosen in the beginning and later change to cotton or Polyvinyl or reversed. Also both wound fillers can be used simultaneously ie. large wounds with tracks and tunnels. Understanding the science behind NPWT wound fillers will help the provider choose the appropriate protocol.

****Management of Fistulas** can prove challenging. Thick effluent of fistula(s) may cause occlusion of the wound filler. The loose weave of cotton wound filler may provide improved effluent removal compared to polyurethane or polyvinyl. Adequate effluent removal should be evaluated with the external Dome connection, 19 FR or 28 FR drains. Exposed organs/structures should be protected with a non-contact layer. It is common for fistula dressings to require daily changes.

Trouble Shooting Alarms

Closed system alarms may sound when exudate evacuation has been interrupted or air flow (9 liters/minute) has been reduced. This can occur for several reasons:

- Exudate clogging the tubing.
 - Clamped tubing
 - Full canister and/or wet filter
 - Cutting the evacuation hole over the wound filler too small. Cross hatching, slitting or puncturing the opening is not sufficient. Openings should be nickel to quarter size. Small openings may close shut when NPWT is activated preventing exudate removal or reducing air flow.
 - Placing more than one layer of semi-permeable transparency directly over the wound filler will decrease the moisture vapor transfer rate and reduce air flow.
 - Wounds with small surface area may have a reduced amount of air flow pulled through the semi-permeable transparency. NPWT requires dynamic flow of air through the semi-permeable transparency and wound filler to prevent development of static suction. If necessary, increasing the surface area of the wound filler by layering or offsetting/bridging the wound filler enhances the amount of dynamic air flow.
- Common Rule of Thumb**---make the wound filler extend 1 inch beyond the diameter of the Suction Dome. If the Suction Dome is larger than the surface area of the wound, avoid maceration or injury of the periwound by protecting the periwound with a transparency. Therefore; the extended wound filler will lay on top of the transparency and not directly on the periwound epidermis. This makes the wound appear larger. Avoid Deep Tissue Injury by not allowing the Suction Dome to directly touch the wound or periwound.

****Caution:** A dressing application that interrupts exudate removal may result in stagnation of exudate in the tubing and may increase risk of exudate accumulation in the wound bed.

Open System Alarm may sound with a reduction or loss of vacuum. A lose or reduction of vacuum allows the wound filler to appear thick or expanded. This can occur for several reasons:

- loose fitting canister
- canister cracks
- loose tubing connections
- folds in the transparency
- cuts or tears in the transparency
- exit holes larger than the Suction Dome

Common Rule of Thumb---Begin trouble shooting the alarms by:

- disconnect the canister from the pump and place your finger over the suction port. If the prescribed pressure is reached, you have eliminated pump malfunction.
- attach the canister to the pump and place your finger over the end of the canister tubing. If the prescribed pressure is reached, you have eliminated canister malfunction.
- if the pump and canister pass, the alarm has sounded because of the arts and crafts of the dressing application. Start at the Suction Dome and press firmly around the edges of the Dome and disc. Work outward to the margins of the wound filler and press firmly along the edges. Once the “leak” has been identified, the character of the wound filler will reduce to a vacuumed appearance. Pink Tape which is air and water proof can be a quick resolution.

Battery Alarms

Battery Life of the Prospera system is over 24 hours. Therefore it is unnecessary to operate the unit continually plugged into a power outlet. Continuous charging of the unit may result in ‘battery burn out’. It is highly recommended to charge the unit at night and allow the unit to run by battery during the day.

Low Battery sounds when 25% of the battery life remains. This allows ample time for charging the unit.

Empty Battery sounds when the battery has lost all of its charge. A completely dead battery takes 6 hours for full charge.

Dressing Solutions

***Avoid Over packing** the wound with excess gauze/foam. Intact dressings should be level or slightly below the skin surface during negative pressure therapy.

*If using the drain system, secure the drain with the transparency only (pencil technique), or secure with stoma paste. If “check dressing seal” alarms, reinforce the tubing exit site with additional transparency or Hytape (pink tape).

*Avoid large folds or wrinkles in the transparency.

Bridging and Off-setting

Bridging of the drain/Suction Dome is highly recommended if the origin of the wound is from pressure. i.e. Avoid placing the Suction Dome directly over (the sacrum, coccyx, ischium, trochanter, heel, etc.) pressure areas by bridging the wound filler to soft areas without the risk of pressure points such as the abdomen, thigh, etc.. If pressure placement is unavoidable, dressings over pressure areas should be level or below skin surface to avoid additional pressure to the site. Bridging dressings may involve exudate removal of two or more wounds through one drain/Suction Dome or exudate removal of multiple wounds through an adjacent drain/Suction Dome. A simple bridge of wound filler material away from one wound is also referred to as “offsetting” or “displacement” of the drain/Suction Dome. This avoids direct placement over the wound bed. A cost effective, quick and efficient bridge can be made from “moistened gauze”. The wound exudate is drawn through the wound filler, through the exit hole, onto the bridge material and out the offset drain/Suction Dome.

---Choose the location for the bridge from one wound and apply a single layer of transparency to the adjacent intact skin for moisture protection. Avoid pressure points.

---Extend the wound filler from the wound bed onto/across the protective transparency forming a bridge. (Distance of the bridge may depend on the anatomical location but must remain on top of the protective transparency to avoid maceration of the intact skin). At the end of the bridge, flare the wound filler and place the selected drain/Suction Dome in the center or on the top. If using the drain technique, fold the opened gauze over the drain so the top and bottom of the drain are ‘sandwiched’ within the gauze. Cover the wound and the bridge. Secure as needed. More than one transparency may be used depending upon distance.

---Select the wound with the greatest exudate production as the primary wound. Cover all wounds and bridges with a single layer of transparency. Multiple transparencies can be connected by a 1 inch overlap for greater surface area. Exudate from the other wound(s) will migrate across the various bridges to the primary wound and be removed through the single drain/Suction Dome. Secure the exit site as needed.

ADJUNCTIVE THERAPIES

A. Bovine Collagen: Collagen augments the rate of granulation and epithelialization by attracting fibroblasts to the repair site. Combining collagen with NPWT offers an optimal wound healing environment. Collagen particles may be sprinkled onto the wound base

approximately ¼ inch thick and cover with a non-adherent layer if using sponge or moistened AMD gauze. Change the dressing 2-3 times a week.

B. Enzymes: Enzymatic agents help debride unhealthy tissue. NPWT may be beneficial when used over small areas of less than 20% of the wounds base. The addition of NPWT over the enzyme will enhance the rate of necrotic removal thus improving the rate of healing. Enzymes may be applied to the wound base then covered with the AMD gauze or sponge or applied to the AMD gauze or sponge and laid into the wound base.

C. Hyperbaric Oxygen Chamber: Prior to entering the Hyperbaric Oxygen (HBO) chamber clamp the drain tubing. Turn off the negative pressure wound therapy pump. Disconnect the drain tubing from the PVC tubing. Cap the drain tubing. Place the white tree end of the PVC tubing in a non-sterile exam glove. The dressing may be left intact if an oil emulsion or petroleum non-contact layer has NOT been used next to the underlying tissue. The moisture vapor transfer rate of the transparency will allow the dressing to over time lose its contracted appearance. This contracted appearance will re-appear when NPWT is re-implemented.

Diagnostic Procedures	Therapy Unit Compatible	Therapy Unit NOT Compatible	Dressing Compatible	Dressing NOT Compatible
MRI		X	X	
HBO		X	X	
X-Ray	X		X	
Cat Scan (CT)	X		X	
Dye Tests	X		X	
Flourosocopy	X		X	
Ultrasound	X		X	

DRESSING REMOVAL

1. Using clean disposable gloves raise the tubing connections above the wound level for exudate returns into the canister and tightly clamp the silicone. Disconnect the silicone tubing from the PVC tubing and cap the silicone end.
2. Excess exudates in the PVC tubing will return to the canister, elevate tubing for gravity drainage as needed. Clamp the PVC tubing.
3. Turn off the pump.
4. Cover the PVC/canister tubing end with dry gauze and secure with tape to absorb any leakage of exudate or if using a PRO-II canister cap the tubing end.
5. Lift any transparent edge of the dressing by using a finger to hold down the skin surface and gently begin to remove the transparency. Gently pull the transparency horizontal to release the adhesive bond from the skin surface then lift upward.
6. Remove the stoma paste if used, wound filler and silicone drain from the wound bed. Refer to Optimizing Outcomes Tip #9 for dry dressing removal.
- 7 Change the collection canister when the exudate has reached the safe full level

- (700cc) or weekly.
- 8 Properly dispose of all contaminated materials per facility biohazard protocol.

DISCONNECTING AND RECONNECTING THE PROSPERA PUMP

The following procedure may be implemented for temporary interruption in negative pressure wound therapy. For example; transportation, procedures, therapies, etc.

DISCONNECT:

1. Clamp the silicone tubing.
2. Remove the silicone tubing end from the PVC/canister tubing and cap silicone end to prevent leakage and help maintain negative pressure in the dressing.
3. Residual exudates in the PVC tubing will automatically be suctioned into the canister. Hold PVC/canister tubing upward for gravity drainage if necessary. Clamp PVC tubing. Cap or cover PVC end with gauze and tape to prevent leakage.
4. Turn off the PROSPERA pump

RECONNECT:

1. Remove the caps and/or coverings from the end of the silicone and PVC canister tubing.
2. Reconnect the silicone tubing to the PVC tubing.
3. Open clamps
4. Turn on the PROSPERA negative pressure wound therapy pump, press “start” and the previous mode and previous settings will resume.

CANISTER CHANGES

A new 800cc disposable canister should be used with each patient and changed a minimum of once a week or if the overflow protection float has been activated when the safe level (700cc) is reached. Contaminated hydrophobic filters (blue and white filter) must be changed immediately. The collection canister for PRO-II is a 250cc built in canister which should be changed weekly or as needed based on exudate volume.

TUBING CHANGES

Tubings should be changed when the canister is change weekly or prn. Y connections can be changed weekly or per patient use. The Silicon tubing with attached filter (from the pump to the canister) is per patient use and is discarded at discontinuation of negative pressure wound therapy.

NEGATIVE PRESSURE SETTINGS

Negative pressure wound therapy settings vary according to the wound type, size and amount of exudate. *Continuous (CPT)* settings can be safely administered between -60 to

-80 mmHg pressure and adjusted according to wound type (muscle) and amount of exudate. 100% of blood flow reaches the wound at -80mmHg. The higher the pressure setting (vacuum) the less the blood flow to the wound bed. As the wounds progresses or becomes stagnate **Variable Pressure Therapy (VPT®)** is appropriate. VPT may be safely implemented between -30 to -80 mmHg ranging from 2 to 5 minutes on and 2 minutes off.

WOUND PROGRESS

Follow wound progress based on the initial goal of therapy. Settings for continuous pressure (**CPT**) and variable pressure therapy (**VPT®**) should be assessed at a minimum of twice a week. The medical provider may choose to adjust the prescribed settings based on wound surface, granulation and epithelialization, necrosis, exudate and pain.

CLEANING AND DECONTAMINATION

The outside casing of the PROSPERA pump should be cleaned with a damp cloth or disinfectant wipes per facility protocol. Cleaning agents and disinfectants should never be used in an undiluted concentration. Facility policy and procedure for cleaning equipment should be strictly adhered. Universal precautions should be instituted while working with potentially contaminated components or equipment and appropriately Red Bagged.

REORDERING AND REPLACEMENT

For reordering, replacement or other related questions, please contact PROSPERA.

Prospera

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