

Training Module 5

Negative Pressure Wound Therapy Safety Considerations

PartnerFirst™ 

Upon completion of this module you will be able to:

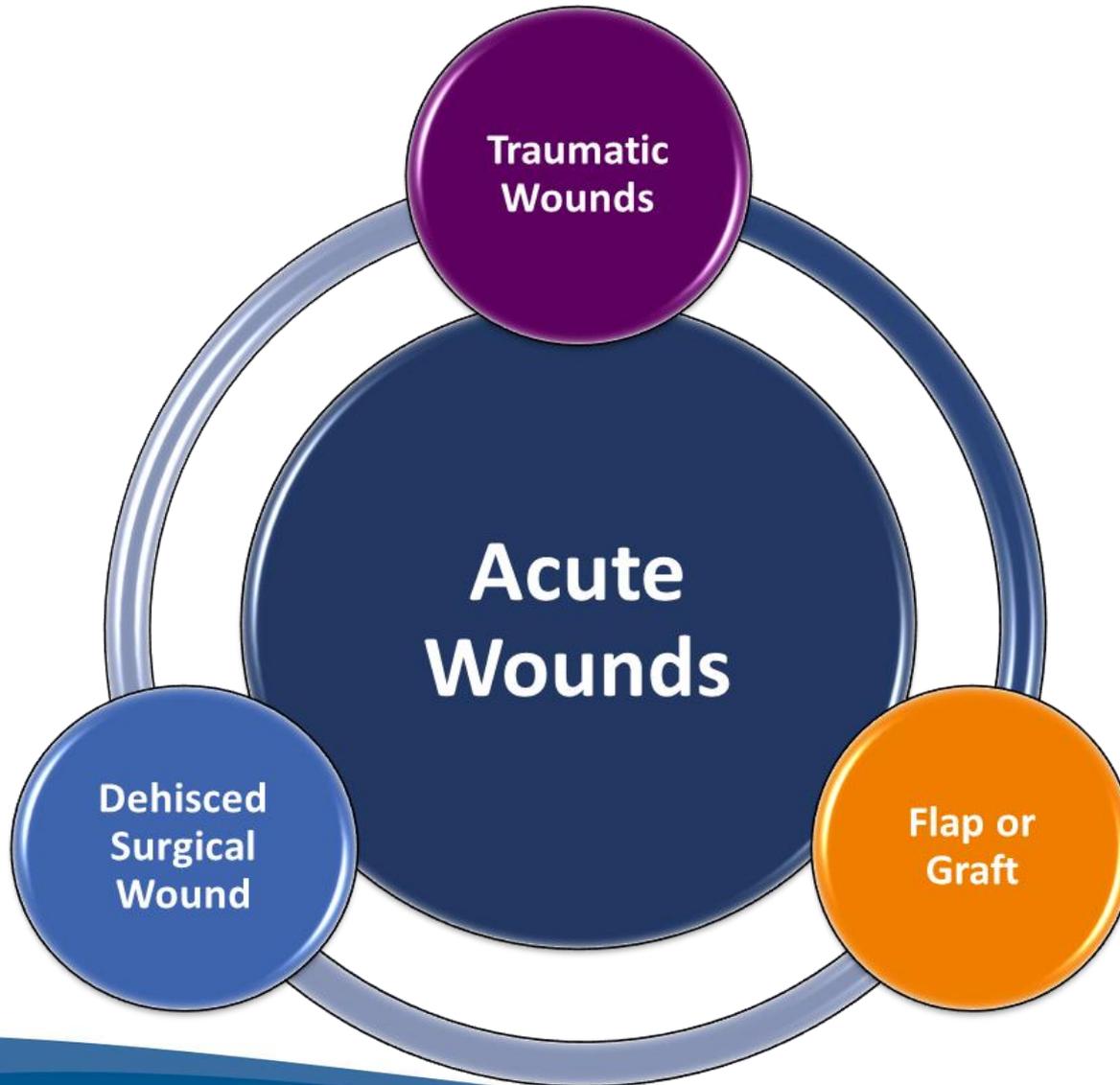
Define Negative Pressure Wound Therapy

Describe the components of a negative pressure wound therapy system

Describe five effects of NPWT has on the wound bed

Identify ten reported clinical benefits of NPWT

Negative Pressure Wound Therapy (NPWT) is indicated to help promote wound healing, through means including drainage and removal of infectious material or other fluids, under the influence of continuous and/or intermittent negative pressures.



Traumatic
Wounds with
Significant
Tissue Loss



Degloving
injury

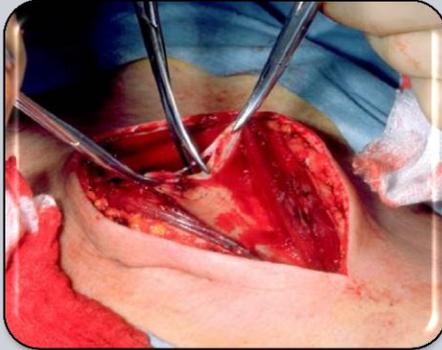


Partial
thickness
burn



Complex
soft tissue
damage

Clinical Indication for NPWT- Abdominal surgery



Laparotomy:
A surgical incision into the peritoneal cavity, usually performed under general or regional anesthesia, often on an exploratory basis²

Majority of laparotomies are closed immediately during same procedure¹

Abdomen left open subsequent to laparotomy for:

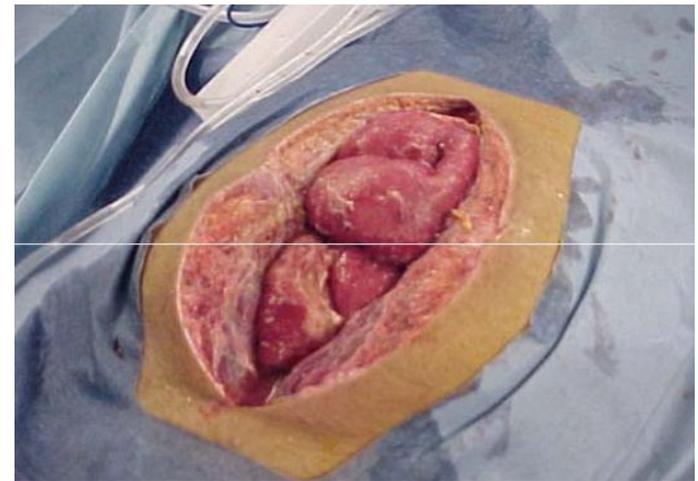
- Management of severe infection
- Management of septic dehiscence
- Prevention of abdominal compartment syndrome³

Definition

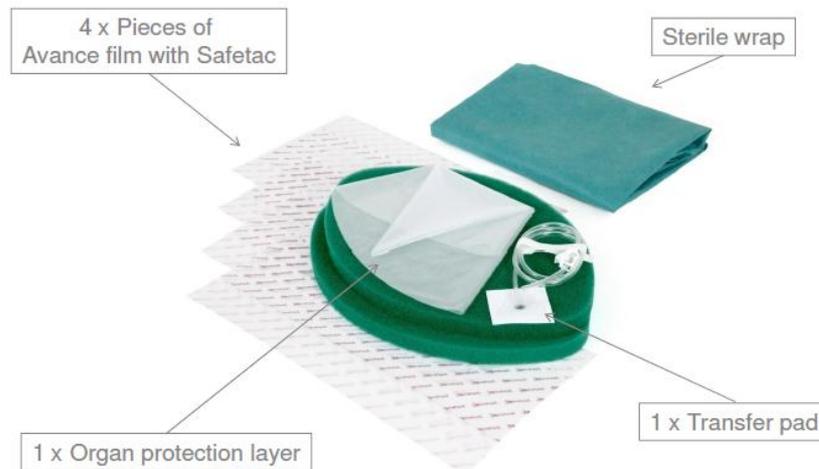
- **Open abdomen is defined as the inability to close the abdominal fascia after laparotomy**



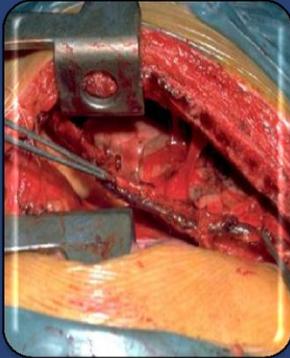
- 3 situations can arise
 1. The surgeon may not be able to close the patient due to oedema
 2. The surgeon can close but the wound opens up later
 3. The surgeon is faced with IAH (Intra Abdominal Hypertension) and signs of ACS (Abdominal Compartment Syndrome) and requires to open the abdomen



Avance Abdominal dressing kit







Infections Post Sternotomy

- Mediastinitis post sternotomy: 1-5% of patients¹
- Mortality rate with mediastinitis: 10-15%¹



Dehiscence

- Infected sternal wounds are prone to complications including dehiscence
- Dehisced sternal wounds are complex, involve major organs and complications can be life threatening²

Flaps

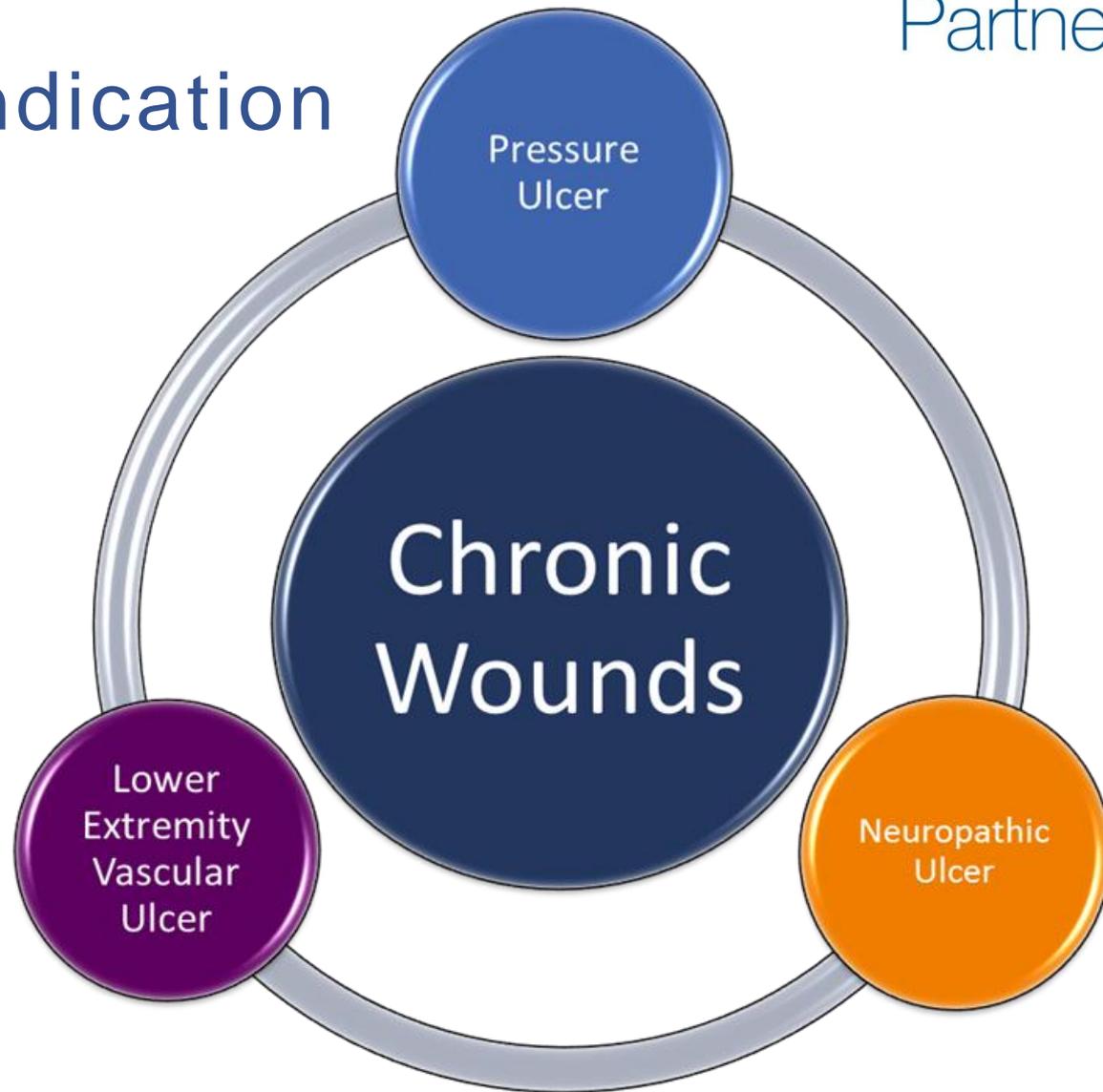


**Skin
Grafts**

Optimal conditions for graft take

- Firm contact of graft to wound bed
- Fluid control
- Eliminate shearing
- Inhibit infection¹

Clinical Indication for NPWT





Malignancy of the wound



Untreated osteomyelitis

- Risk of closing the wound up without healing the bone infection, which may result in ineffective healing
- Treatment of the infection occurred prior to applying NPWT.



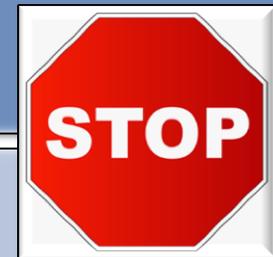
Untreated malnutrition

- Patient must have the nutritional capacity to heal



Unexplored or non enteric fistula

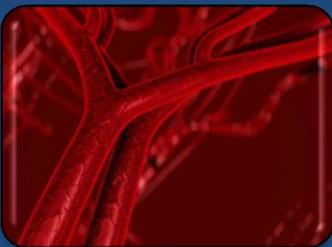
- Fistulas are connections from the skin to body organs and should also be explored prior to treatment
- Treatment of an enteric fistula with NPWT is indicated in very select circumstances
- These types of wounds are not covered by traditional Medicare Part B coverage and many other health plans





Necrotic tissue with eschar present

- Black eschar is dead tissue that can harbor bacteria, and has NO blood supply.
- Must be debrided prior to application of NPWT



Do not place NPWT over exposed blood vessels or organs

- Risk of eroding
- Could potentially lead to tissue growth into the dressing and when you remove it, you run the risk of opening those blood vessels or organs.
- When using NPWT close proximity to these structures a protective barrier, such as a non-adherent wound contact layer, must be used.



Do not place over anastomoses or sutured blood vessel

- Risk of eroding or damage to vessel leading to leakage



Warning

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

A patient undergoing NPWT requires frequent supervision

Objective indications origins of possible infection or complication must be addressed immediately (e.g. fever, pain, redness, increased warmth, swelling or purulent drainage)

Monitor the device, wound, surrounding skin and patient status and comfort level frequently to ensure efficient, safe treatment and patient comfort.

Patient must be closely monitored for bleeding.

If sudden or increased bleeding is observed, immediately stop use of the pump, apply pressure on wound dressing and seek immediate Emergency Medical Attention.

Warning

Consider use of a protective barrier on skin that may come in contact with the tubing, especially in those patients with fragile skin.

Invia Wound Therapy instructions advise 24 hours therapy without interruption. If therapy is discontinued for more than 2 hours using foam or 24 hours using gauze, the dressing should be replaced and therapy restarted by a healthcare professional.

This device has not been studied in pediatric patients.

Special care is advised for dressing placement and removal in order to avoid situations such as unintentional gauze or foam retention.

Use NPWT with caution in patients:

- At high risk for bleeding and hemorrhage
- Taking anticoagulants or platelet aggregation inhibitors, or in patients experiencing active bleeding or difficult wound hemostasis
- With wounds that involve a fistula
- With a history of vascular anastomosis or friable, irradiated, sutured or infected blood vessels
- Using Invia Wound Therapy in close proximity to blood vessels and organs or exposed organs, vessels, nerves, tendons, or ligaments. Provide necessary protection of all vessels and organs using a protective barrier.
- Bone fragments or sharp objects

