Drains: Post-operative ending in the Peritoneal Cavity – Irrigation/Aspiration

This DST addresses those post-op drains that:

- end in the peritoneal cavity with attached suction devices

Site Applicability

All VCH and PHC sites

Practice Level

Profession	Basic Skill	Advanced Skill
NP, RN, RPN	• Care and Management	Additional education required*: • modification of a drain without an existing luer-lock to allow for irrigation • irrigation of the drain • aspiration of the drain
LPN		Additional education required*: • managing post-op drain dressings/drainage

**Additional education consists of observation of the skill being done and then a return demonstration of the skill.*

Policy Statements

- For the management of a post-op drain, a Physician/NP Order is required and must include:
  - confirmation of the drain's distal location
  - the purpose of the drain
  - who is responsible for issues/concerns regarding the management of the drain
- For the irrigation of a post-op drain, a Physician/NP Order is required and must include:
  - confirmation of the drain's distal location
  - the volume of sterile Normal Saline (NS) (or alternate solution) to be used
  - the frequency of irrigation
- For the aspiration (withdrawal of fluid) of a post-op drain, a Physician/NP Order is required.
- Sterile Normal Saline for injection without preservative is the solution of choice for irrigation unless otherwise directed (follow specific Physician/NP Orders for alternate solution recommendations).
- A three-way stopcock is required for irrigation or aspiration of post-op drains.
- Do not irrigate if drain has migrated out of its original position.

Quick Links:

Need to Know

Post-operative drains ending in the peritoneal cavity: These drains are inserted intra-operatively and used to remove excess fluid from the surgical site in order to prevent incisional dehiscence or surgical site infection. The drainage tube is a flat silicone tubing with multiple holes along the proximal end; the drain is inserted by the surgeon through an opening in the skin adjacent to the incision and is sutured in place. The distal end of the drain is then connected to a suction collection device such as a spring-loaded Hemovac or squeeze-bulb Jackson-Pratt (JP). On occasion it may be necessary to irrigate the tubing to maintain patency and promote healing.

In order to perform irrigation, the Hemovac/JP/ tubing must be modified by adding a luer-lock end to which then the 3-way stopcock/needleless connector can be attached. These are to be replaced should one or the other become soiled, blocked or broken.

Precautions:

Alert the most responsible Physician/NP if any of following occur:
- Leakage, redness, swelling and/or pain at the insertion site
- Hemorrhage/bleeding/clots
- Elevated temperature greater than 38.5°C
- Drain position has migrated out of its original position or the drain has come out

Equipment and Supplies

See specific procedures for equipment and supplies.

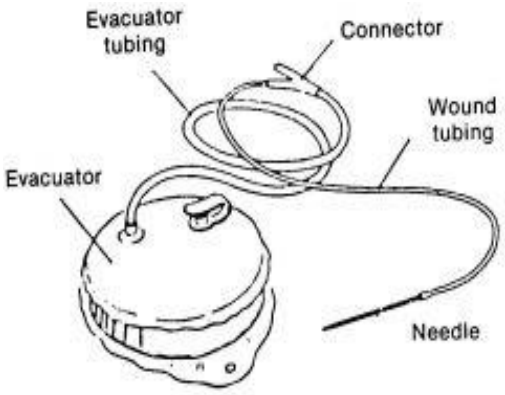
Procedures for Irrigating Post-op Drains

Modifying a Hemovac/400 mL drainage system for the addition of a 3-way stopcock:

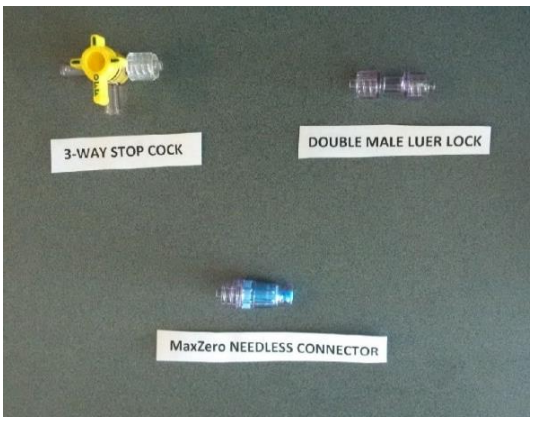
Equipment and Supplies:

- Personal Protective Equipment as needed
- Sterile dressing tray
- Alcohol wipe
- Sterile gloves
- Sterile scissors
- Sterile 3-way stopcock
- Sterile double male luer-lock
- Sterile needleless connector

Hemovac Drainage System



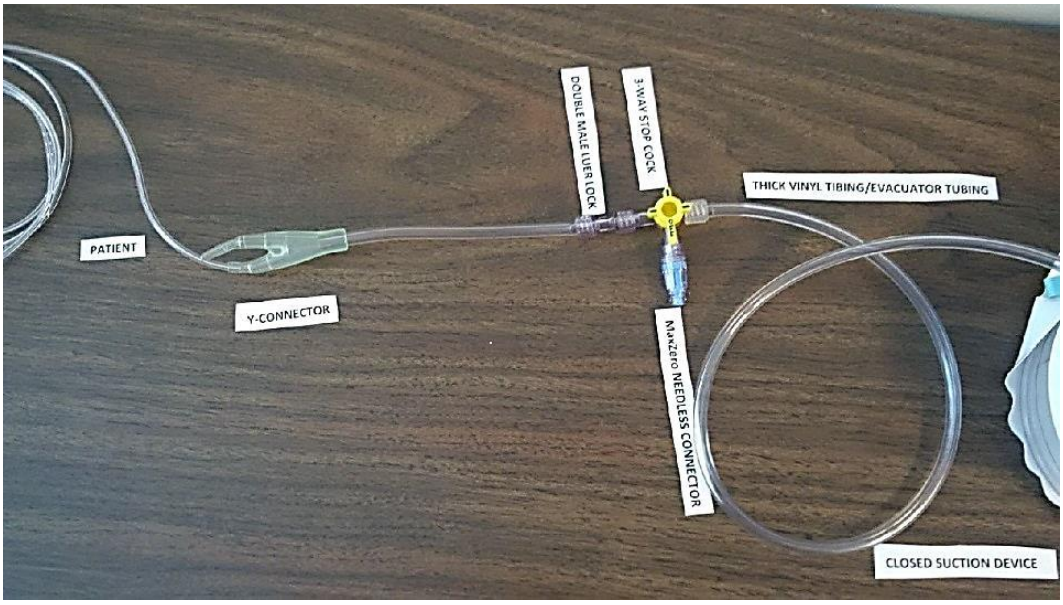
Supplies Needed



Procedure:

1. Gather supplies as above.
2. Perform hand hygiene and prepare/position patient.
3. Perform hand hygiene and prepare sterile dressing tray and supplies.
4. Perform hand hygiene and put on Personal Protective Equipment.
5. Put on sterile gloves.
6. Pick up hard vinyl/evacuator tubing with a sterile 2x2 gauze and place sterile drape under work area.
7. Take the alcohol wipe and vigorously cleanse, for 15 seconds with friction, the thick vinyl tubing/evacuator tubing for a length of 20 cm, from the patient down towards the Y-shaped connector. Place the cleansed tubing on the sterile drape and allow to completely dry for greater than 30 seconds.
8. Using scissors, cut the thick vinyl/evacuator tubing in the center of the cleansed area (about 10 cm from where the vinyl tubing connects with the soft silicone).
9. Firmly insert one end of the double male luer-lock into the tubing end that goes to the patient. Twisting while inserting will assist with insertion. Make sure to insert firmly to prevent it from slipping out.

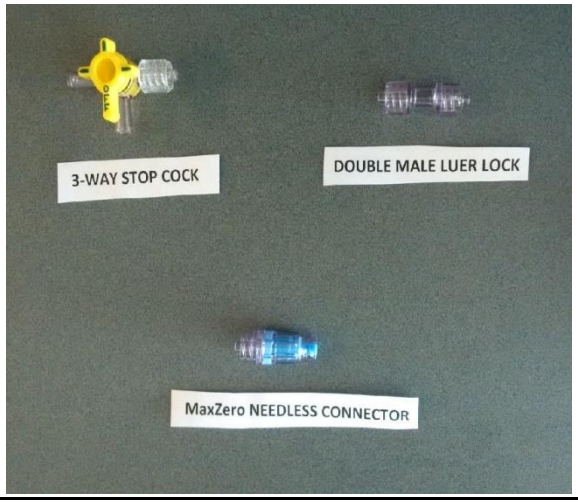
10. Insert the male end of the 3-way stopcock into the cut end of the tubing that is attached to the Hemovac device. Twisting while inserting will assist with insertion. Make sure to insert firmly to prevent it from slipping out.
11. Connect the two ends together (male luer-lock connects to stopcock) so that Hemovac device is now connected to the patient in a straight path.
12. Attach the needleless connector to the perpendicular port on the stopcock.
13. Ensure the stopcock is in the open position to allow flow from the patient to the Hemovac. The OFF indicator should be in the direction of the needleless connector for normal operation.
14. Clean up work surface, remove gloves and perform hand hygiene.



Modifying a Jackson-Pratt/100 mL drainage system for the addition of a 3-way stopcock:

Equipment and Supplies:

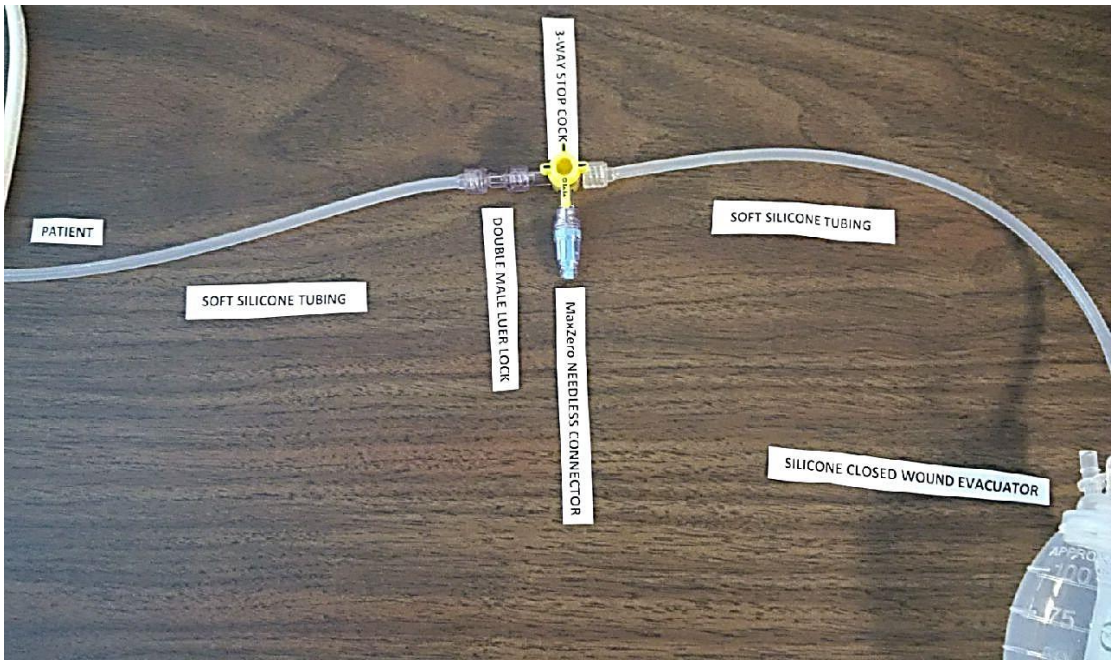
- Personal Protective Equipment as needed
- Sterile dressing tray
- Sterile gloves
- Sterile scissors
- Alcohol wipe
- Sterile 3-way stopcock
- Sterile double male luer-lock
- Sterile needleless connector

Jackson-Pratt Wound Drainage System	Supplies Needed
	

Procedure:

1. Gather supplies as above.
2. Perform hand hygiene and prepare/position patient.
3. Perform hand hygiene and prepare sterile dressing tray and supplies.
4. Perform hand hygiene and put on Personal Protective Equipment.
5. Put on sterile gloves.
6. Pick up soft silicone tubing with a sterile 2x2 gauze and place sterile drape under work area.
7. Take the alcohol wipe and vigorously cleanse, for 15 seconds with friction, the soft silicone tubing for a length of 20 cm, from the patient towards the drainage connector. Place the cleansed tubing on the sterile drape and allow to dry for greater than 30 seconds.
8. Using scissors, cut the tubing in the centre of the cleansed area (about 10 cm from the patient).
9. Firmly insert one end of the double male luer-lock into the tubing end that goes to the patient. Twisting while inserting will assist with insertion. Make sure to insert firmly to prevent it from slipping out.
10. Insert the male end of the 3-way stopcock into the other cut end of the tubing. Twisting while inserting will assist with insertion. Make sure to insert firmly to prevent it from slipping out.

11. Connect the two ends together (male luer-lock connects to stopcock) so that drainage device is now connected to the patient in a straight path.
12. Attach the needleless connector to the perpendicular port on the stopcock.
13. Ensure the stopcock is in the open position to allow flow from the patient to the drainage device. The OFF indicator should be in the direction of the needleless connector for normal operation.
14. Clean up work surface, remove gloves and perform hand hygiene.



Irrigating/Aspirating a Post-op Drain ending in the Peritoneal Cavity:

Check the Physician/NP Order for:

1. The amount and type of irrigation solution to be used; sterile Normal Saline (or alternate solution)
2. A separate order for aspiration, if aspiration is to be done
3. Confirmation of tube placement-distal end location
4. Frequency of irrigation

Equipment and Supplies:

- Personal Protective Equipment as needed
- 10 mL syringe (minimum gauge) of injectable Normal Saline (NS) without preservative (may be a pre-filled syringe) or the ordered alternate solution and a 10 mL syringe (minimum gauge)
- Alcohol wipes
- Clean gloves
- Needleless connector and/or stopcock if either needs to be replaced, e.g. soiled, broken or blocked see adding or changing a Stopcock

Procedure:

1. Gather supplies as above.
2. Perform hand hygiene and prepare/position patient.
3. Perform hand hygiene and prepare supplies.
4. Perform hand hygiene and put on Personal Protective Equipment.
5. Put on clean gloves.
6. If stopcock not present, add one prior to first irrigation (see above procedure)
7. Prepare a 10 mL syringe with the ordered amount of Normal Saline or alternate solution
8. Using an alcohol wipe, vigorously cleanse the needleless connector for 15 seconds, allow to dry completely for greater than 30 seconds.
9. Attach the solution-filled 10mL syringe to the needleless connector and then open the stopcock to patient.
10. Slowly instill ordered volume of sterile NS or other prescribed or ordered solution:
    - Always use gentle pressure when irrigating
    - **If there is resistance or pain on instillation, STOP and notify the most responsible Physician/NP**
    - Only pull back on the syringe if there is an order to aspirate the drainage fluid
    - Always use gentle force when aspirating, **if there is resistance or pain on aspiration, STOP, and notify most responsible Physician/NP**.
11. Close the stopcock to the needleless connector and then remove the syringe.
12. If using a drainage bag system, leave drainage flowing from patient to drainage bag.
13. Clean up work surface, remove gloves and perform hand hygiene.

Documentation

Document procedure as determined by your agency.

Patient and Family Education

Transition/Discharge Process:

Prior to discharge, the Acute Care Nurse as per the Practice Level will provide education to the patient/family in order that they:

- Understand the purpose and expected duration of post-op drain
- Understand that the drain may not be sutured in place so it must be handled carefully to avoid being dislodged/pulled and that there may be activity restrictions
- Understand the frequency of drain assessments
- Understand how to monitor insertion site for; leakage from insertion site, an unexpected change in type or amount of drainage, bleeding, blood clots, and/or an elevated temp greater than 38.5°C or if other signs and symptoms of infection and when to alert RN or Physician/NP
- Observe the acute care nurse performing an instillation/irrigation as per Physician/NP Orders
- Perform a return demonstration of how to instill/irrigate the drain

To provide support to the patient/family until the first Community visit or should Community Services not be available, the Acute Care nurse will put together a **discharge package** which is to include:

- Patient education pamphlet
- Who to call/what to do in the event of an issue with the drain
- As many 10 mL prefilled syringe(s) of Normal Saline/alternate solution and alcohol wipes as needed until the first community visit or in the case of potentially no community services, until **patient** /family can obtain the syringes from their local pharmacy
- Dressings/tape in case the dressing needs to be reinforced
- A measuring cup and information regarding how much drainage to expect

Following discharge from hospital, the Community Health Nurse as per the Practice Level will support the **patient** /family to manage independently by assisting the **patient** /family by:

- Reinforcing teaching regarding irrigation of the post-op drain as per Physician/NP Orders.
- Reinforcing post-op drain care; empty/care for drainage bag or suction device
- Reinforcing the importance of keeping the post-op tube drainage bag/device closed to reduce risk of infection
- Reinforcing how to keep the tube and drainage bag tubing free of twists, kinks
- Ensuring that **patient**/family safely perform the instillation/irrigation if ordered by Physician/NP
- Informing who to call/what to do in the case of issues with the drain e.g. leaks, dislodgement

Following transfer to Residential Care facility, the Residential Care Nurse as per the Practice Level will provide care for the drain/drainage bag as needed within the nurses' scope of practice and where appropriate, reinforce resident/family education regarding the care and safety of the drains.

Patient Education Materials/Pamphlets:
(order through Patient Health Education Materials: VCH or PHC)

- Caring for your Hemovac Drain at Home (FO.160.C191)
- Jackson-Pratt Wound Drainage System (FO.160.J132)
- Discharge Information for Drain Care (ED.160.D735)

Related Documents

VCH/PHC:

- Nephrostomy Tubes, Management and Irrigation (BD-00-12-40043)
- Drains: Percutaneous - Management, Irrigation and Aspiration (BD-00-12-40053)
- Chest Tubes: Thoracic Percutaneous Pigtail Drainage Catheters or Small Bore Chest Tubes - Assisting with Insertion (BD-00-12-40016)
- Chest Tubes: Thoracic Percutaneous Pigtail Drainage Catheters or Small Bore Chest Tubes - Assisting with Removal (BD-00-12-40017)

VCH:

- Chest Tubes: Thoracic Percutaneous Pigtail Drainage Catheters: Irrigation and Removal (D-00-12-30008)

- VA: Abdominal Percutaneous Pigtail Drainage Catheter (PPDC) (C-175)
- VC: Paracentesis – Intermittent Drainage of Ascites (Pleurx Catheter) (CPD-020)
- VC: Paracentesis – Intermittent Drainage of Ascites (Pigtail Catheter) (CPD-051)

PHC:

- Hemovac Surgical Drainage Catheters: Management and Procedure for Irrigation (B-00-12-10129)

References

Wound Exudate Management: Pouches and Drains. Elsevier Clinical Skills (March 2018). St. Louis, MO. Elsevier. Retrieved from www.elsevierskills.com.

Sleisenger and Fordtran (2006). Gastrointestinal and liver disease [2 vol. set]: pathophysiology, diagnosis, management 8th ed.

Definitions

Instillation: the delivery of fluid (one way only)
Irrigation: the process of washing a body cavity or wound with a stream of fluid
Aspiration: the withdrawal of fluid
Patient: the term patient in this document refers to patient/client/resident

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Owners: *(optional)*	PHC/VCH	
	VCH/PHC Regional Nursing Skin & Wound Committee Regional Practice Initiatives Lead for WOC Nursing, VCH Professional Practice	