

**BARNES-JEWISH HOSPITAL  
ORGANIZATIONAL POLICIES/PROCEDURES**

**TITLE: Central Venous Catheters (CVC): Dressing Change/Intermittent Flush/Medication Administration/Luer-Lock Needleless Cap Change**

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This policy covers intermittent infusion/flushing guidelines, dressing change and maintenance care of the CVC.

- For tubing change, see [IV Therapy: Insertion, Maintenance & Discontinuation](#) .
- For obtaining *blood specimens*, see [Specimen Collection: Blood \(Venipuncture/CVC\)](#) .
- For *declotting*, see [Central Venous Catheter \(CVC\): Declotting Procedure For PICC Lines, Right Atrial Catheter, and Central Lines \(TLC-Hohn-Hickman Groshong and IVADs\)](#)
- For *insertion*, see [Central Venous Catheter \(CVC\): Insertion](#)
- For *cannulation, decannulation, and care of implanted infusion port (IVAD)*, see [Central Venous Catheter \(CVC\): Implanted Venous Access Device \(IVAD\) Access](#)

### General Information

**Centrally placed catheters require 2 individuals at the bedside-No visitors in room during procedure.**

**Extended Dwell (Midline) Catheters** are inserted by the Vascular Access Staff (VAS). Orders for line placement can be placed in the EMR (Electronic Medical Record). Midline catheters may be removed by staff RNs.

Heparin-Induced Thrombocytopenia (HIT) is a potentially life-threatening disorder that follows exposure to unfractionated or (less commonly) low-molecular-weight heparin. Flushing recommendations incorporating the use of Heparin Solution included in this policy are in accordance with the Infusion Nurses Society (INS) and may be contraindicated in some clinical situations. A physician's order is **required prior to the use of Heparin solution**. Use of Normal Saline to maintain catheter patency does not require a physician's order. **KEY POINT:** Nurses may order Normal Saline Flushes under their own name in the EMR. **This order is required** so that the Normal Saline Flush is on the eMAR/To Do List and can be charted as given.

### Policy Statements – GENERAL GUIDELINES FOR ALL CVC

A. Initial assessment of line and documentation to include:

1. Presence/Type/Location of line
2. Name of institution where line was placed
3. Catheter size
4. Date and time of placement
5. Condition of placement site/area. If the catheter was placed under emergency or non-sterile conditions, the catheter must be replaced as soon as the patient is stable - not to exceed 48 hours.

B. Verification of line placement:

1. **Newly placed central line catheters:** Documented chest x-ray results (or an order from VIR stating. "Catheter ready for immediate use") verifying correct **catheter tip placement** and a physician's order as required prior to use of catheter. Femoral (groin) lines do not need x-ray verification and may be used immediately.
2. **Newly placed PICC line catheters:** No CXR needed if tip placement confirmed using 3CG Tip Confirmation System (TCS). PICC ready for immediate use with 3CG confirmation, and Vascular Access Nurse will release "ok to use" order in the EMR. **Key Point:** Chest x-ray must be obtained when unable to confirm PICC tip placement with 3CG Technology. Physician's order

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- is required prior to use of the PICC under this circumstance.
3. **Line placed in OR or ED:** Patients admitted to floor from OR or Emergency Department with new CVC *do not need* a repeat chest x-ray prior to use.
  4. **Existing Line:** Must be evaluated for maintenance of aseptic placement and ongoing aseptic maintenance:
    - a. Catheter must be evaluated for proper placement:
      - 1) Patients admitted with CVC, Right Atrial and Peripherally Inserted Central Catheters (PICC) line catheters must have placement radiographically confirmed and a physician's order prior to use.
    - b. Any multilumen catheter placed outside the hospital must be removed as soon as the patient is stabilized if there is knowledge or suspicion that it was placed emergently without adequate preparation.
    - c. Groin lines should be removed as soon as possible or when patient is medically stable.
    - d. Initial assessment of line and documentation to include:
      1. Presence of line
      2. Name of institution where line was placed (if known)
      3. Catheter size
      4. Date and time of placement
      5. Site/location of line
      6. Condition of placement site/area.
  5. **Patients admitted with implanted ports:** Only need radiographic confirmation of placement when the device does not meet criteria. Chest X-Ray recommended upon admission. **Must have Chest X-Ray if no blood return noted from IVAD or IVAD clotted.**
- C. Infusion through CVC:
1. All intermittent and continuous infusions through CVC should be delivered via an electronic infusion device (pump or syringe infuser).
  2. Continuous infusions of solutions are to be hub to hub.
- D. Patency of CVC should be verified and documented by positive blood return *each shift* (for continuous infusions) or *prior to each intermittent infusion*. If no positive blood return, investigate reason. Establish free flowing IV before continuing. Document presence or absence of blood return.
- E. Syringe barrels less than 10 ml may damage CVCs and are not to be used unless medications are *distributed* in them (i.e., carpject). In this case, administer the medication slowly using the smaller syringe. If resistance met, immediately stop and determine cause. Establish patent lumen before continuing. (May determine that a fibrinolytic agent is needed to establish free-flow). Use positive pressure on syringe plunger to prevent catheter reflux leading to occlusion when irrigating the catheter.
- F. Needleless ports:
1. Needleless ports are to be scrubbed *vigorously* with alcohol (for at least 10 seconds) and allowed to dry prior to EACH access or capped with disinfection caps (e.g., Curoc™ caps) that have been in place for  $\geq 1$  minute. **KEY POINT:** Alcohol is the preferred cleansing agent. ChlorPrep® may be substituted when clinically indicated.
  2. Needleless caps are to be replaced every 96 hours (e.g. Sun/Wed) and each time they are removed, regardless of reason for removal.
  3. Specimen collection through a needless cap is not recommended
- G. **Disinfection caps** are to be used for all intravenous tubing ports except TPN, blood products, chemotherapy medications, mannitol and lipid formulated medications. Disinfection caps are single use only. **KEY POINT:** Disinfection caps *must be discarded after removal* and a *new cap* must be applied. These caps should be placed on top of the needless ports. An intact disinfection cap is good for up to 7 days if not removed.
- H. Lumens designated for TPN administration, CVP monitoring, and Pheresis are to be labeled as such. **KEY POINT: REFRAIN from using any lumen of an Apheresis catheter, including the pigtail lumen of the Trialysis catheter, while an Apheresis procedure is being performed.**

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- I. If a line clamp fails, use an Arrow dark blue slide clamp in its place. **Tubing must be engaged all the way to the end of the tight portion of the slide clamp.**
- J. If catheter is damaged, clamp line and call VAS 314-362-1112 to see if it can be repaired. Catheter must be repaired within 24 hours. If catheter cannot be repaired, it must be removed.
- K. To help prevent external pulls, ambulating patients are to have central line tubing secured to their gown (attach tape around tubing and secure to gown using safety pin).
- L. All Transparent CHG dressings and Transparent dressings are changed weekly (every 7 days) and gauze dressings are changed every 48 hours. **If dressing becomes damp or soiled, non-occlusive or drainage larger than a quarter size is present, or has Hemostatic dressing in place for  $\geq$  24 hours, it must be changed immediately.**
- M. All lines are to be labeled and traced from infusion pump to patient.

### Procedure

- A. Assessment
  - 1. Availability of equipment (ordered medications/flushing solutions/caps/dressing supplies)
  - 2. Patient's understanding of procedure
- B. Plan
  - 1. Prepare equipment and patient.
  - 2. Explain procedure to patient/significant other

## Intermittent Flush/Medication Administration

### Equipment

- Pre-filled Heparin Solution (if indicated) for specific CVC as outlined in [Vascular Access Reference Chart](#)
- 10 ml pre-filled normal saline syringes (per lumen being accessed)
- Disinfection cap(s)
- Alcohol wipes (2 wipes per lumen being accessed)
- Luer lock needleless injection cap (mark date placed)

### C. Implementation: *Intermittent flush/Medication Administration*

1. Prior to accessing, scrub needleless injection cap **vigorously** (for at least 10 seconds) with alcohol and allow to air dry or remove disinfection cap that has been in place for at least 1 minute. Verify blood return by aspiration, then flush lumen with 10 ml Normal Saline.
2. Scrub needleless injection cap **vigorously** (for at least 10 seconds) with alcohol and allow to air dry. **KEY POINT:** If a disinfection cap is in place, the cap must be removed prior to first flush. The lumen must be scrubbed **vigorously** (for at least 10 seconds) between each flush or medication given through that lumen. Reapply a new disinfection cap after flushing/medication administration.
3. Attach administration set with infusion as needed, using needleless system.
4. After infusion complete, scrub needleless injection cap **vigorously** (for at least 10 seconds) with alcohol and allow to air dry. Flush with solutions as outlined in [Vascular Access Reference Chart](#) for specific CVC. Apply a new disinfection cap.

## Needleless Luer-Lock Injection Cap Change

### Equipment

- Needleless leur-lock injection cap(s)
- Alcohol prep pads

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- Non-sterile gloves
  - 10 ml Pre-filled syringe(s) containing Normal Saline
  - Disinfection caps(s)
- C. Implementation: *Needleless Luer-Lock Injection Cap Change*
1. Perform hand hygiene and put on non-sterile gloves.
  2. Remove cap from package and prime by flushing with saline solution through cap until fluid is seen in the protective cap. Keep syringe attached.
  3. **Clamp** catheter lumens one at a time by using slide or squeeze clamp.
  4. If patient able, instruct to perform Valsalva maneuver (contract abdominal muscles while maintaining forced expiration against a closed airway), or hum.
  5. Unscrew old injection cap using aseptic technique.
  6. Cleanse catheter hub **vigorously** (for at least 10 seconds) with alcohol swab. Connect new primed injection cap(s) on catheter hub and flush with remaining saline solution. Apply new disinfection cap to needleless injection cap.
  7. Instruct patient to breathe normally.
  8. Flush with prescribed solution (see [Vascular Access Reference Chart](#)).

### Dressing Change

#### Equipment

- Non-sterile gloves
  - CVC dressing change kit
  - Sutureless securement device, StatLock® (if sutures not present)
  - Alcohol foam (for bedside use immediately prior to applying sterile gloves)
- C. Implementation: *Dressing Change*
1. Prior to start: Ensure patient door closed; curtains pulled around patient if in semi-private room; ask visitors to step out of the room during the procedure.
  2. Perform hand hygiene and put on clean gloves.
  3. Open dressing supplies and set up sterile field. If using a sutureless securement device, open and place on sterile field using sterile technique.
  4. Apply mask to self.
  5. If possible, place patient in supine position with their head turned away from the site.
  6. With non-sterile gloves, palpate the catheter insertion site through the intact dressing, assessing for tenderness.
  7. Remove and discard old dressing.
  8. Visually inspect the catheter site for erythema, inflammation, induration or exudate.
  9. If catheter is secured with a sutureless securement a second person may be required to maintain sterile technique and assist. Loosen sutureless securement device (e.g., StatLock®) with alcohol swab(s) and remove. Stabilize CVC with foam adhesive strip if necessary or have assistant hold line secure with a sterile gloved finger.
  10. Remove gloves and perform hand hygiene. Put on sterile gloves.
  11. Prep area with alcohol swab sticks using concentric circles beginning at insertion site and working outwards in order to remove dried blood and/or excessive adhesive residue if present. **ALLOW TO AIR DRY.**
  12. Scrubbing vigorously, prep insertion site with chlorhexidine solution (CHG) using a back-and-forth motion for at least 30 seconds and **ALLOW TO AIR DRY.** Do not fan or blow dry. **KEY POINT:** Povidone-iodine prep may be used when CHG is contraindicated. Povidone-iodine prep is contraindicated when sutureless securement device is in place (the device will not secure properly).
  13. Replace the sutureless securement device if present after applying skin prep-allow to air dry,

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attach catheter to device, then attach device to patient's intact skin.

14. If nylon sutures are present, cut Steri-Strips™ in half and apply over sutures to prevent sutures from poking through dressing if needed. Do **not** cover insertion site with Steri-Strips™.
15. Apply benzoin to outer perimeter of dressing **IF** adherence is a problem. (*SKIN-PREP* may also be used.) Allow benzoin to air dry before proceeding.
16. Use either a sterile, CHG transparent, semi-permeable dressing or sterile gauze dressing to cover the site. For patients with bleeding from the site, the use of a hemostatic dressing can be applied. Remove the hemostatic dressing at 24 hours and replace if needed or change to a transparent or gauze dressing as clinically indicated. Do not cover catheter clamps or the catheter hub with new dressing. Dressing should fully cover the Steri-Strips™ (if used). For patients with a CHG allergy or contraindication, a transparent dressing without CHG can be used.  
**KEY POINT: CHG transparent dressing is the dressing of choice. Do not stretch dressing at placement. APPLY FIRM PRESSURE to entire dressing starting over the gel pad to enhance adhesion.**
17. Secure dressing in place.
18. Discard gloves and used supplies in appropriate waste containers.
19. Securely tape loop of catheter to skin.
20. Label dressing with date, time and initials. For PICC lines, document *external* length.
21. Perform hand hygiene.

**KEY POINT:** If patient has dermatologic reaction to standard dressing, Medipore™ H retentive dressing may be used. Follow steps 1-14 above. Place sterile 4 X 4 (or 2 X 2) gauze over catheter/skin junction. Ensure Steri-Strips™ are under dressing. You may then apply Medipore™ H retentive dressing to achieve occlusive dressing. Change dressing every 48 hours unless exudate, bleeding or moisture is present, then change immediately.

#### D. Evaluation/Documentation

1. Notify physician of signs/symptoms of infection (drainage/redness/tenderness), catheter displacement, difficulty flushing the catheter.  
***Documentation of Intermittent Flush/Medication Administration***
  - a. Document name of & time medication and flush solution (s) given.
  - b. Document site and condition of insertion site/dressing dry & intact; patency (ease of flush) and any interventions.

#### ***Documentation of Needleless Luer-Lock Injection Cap Change***

1. Document cap change.

#### ***Documentation of Dressing Change***

1. Document site appearance & dressing change

#### E. Patient/Significant Other Teaching

- a. Explain purpose/procedure, risks, and benefits to patient.
- b. Instruct patient to notify RN of any pain or warmth around insertion site.
- c. Minimize number of people in the room.

#### Resources/References

CDC Guidelines

INS Standards of Practice (2016)

Policies and Procedures for Infusion Nursing (2016)

Schallom L, Prentice D, Sona C, Micek, S, Skrupky L. Heparin or 0.9% to maintain central venous catheter patency: A randomized study. *Crit Care Med.* 2012;40(6): 1820-1826

#### Approval

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Angelleen Peters-Lewis, PhD, RN; Chief Nurse Executive

Date of Approval: 07/2020

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### VASCULAR ACCESS REFERENCE CHART

#### For All Catheters:

- All tubing and injection caps are to be replaced no more frequently than every 96 hours (e.g, Sun/Wed), unless contaminated or defective. Non-intact CVC and/or tubing (leaking, punctured, etc.) must be changed immediately. **EXCEPTION:** If used to obtain blood (recommended to obtain blood specimen hub to hub) or infuse blood/blood products/lipids, change caps when completed but not more than 24 hours.
- Sterile dressing change: **Change immediately if becomes damp or soiled, non-occlusive or drainage larger than a quarter size is present, or has Hemostatic dressing in place for  $\geq$  24 hours.** Change transparent dressing every 7 days; change gauze dressing every 48 hours.

| Catheter Type  | Use Indications  | Flushing Protocol  | Special Considerations  | Discharge/Outpatient Considerations  |
|--|--|--|---|--|
| Percutaneous Central Venous Catheters (Non-tunneled) (e.g., Arrow, single, double and triple lumen)                          | Short term (approx. 7-14 days) <ul style="list-style-type: none"> <li>Fluids</li> <li>Antibiotics</li> <li>Blood products</li> <li>Blood sampling</li> <li>TPN</li> </ul>                          | See policy for <a href="#">flushing procedure</a> ;<br>NS 10 ml every 8 hours, after each use and PRN.<br><br><i>Following blood drawing:</i><br>flush with 20 ml NS.  | Use: <ul style="list-style-type: none"> <li>Distal lumen – TPN if in use. If not, blood product infusions, blood sampling.</li> <li>Medial (middle) lumen—Infusion of antibiotics, fluids, etc.</li> <li>Proximal lumen—Blood sampling, infusion of antibiotics, fluids, etc.</li> </ul> Label each port indicating use.<br><b><i>Not recommended for home use</i></b>  | Not applicable-catheter not recommended for home use.  |
| <ul style="list-style-type: none"> <li>Hohn (single or double lumen)</li> <li>Power Hohn (single or double lumen)</li> </ul> | Intermediate term (up to 90 days) <ul style="list-style-type: none"> <li>Fluids</li> <li>Chemotherapy</li> <li>Antibiotics</li> <li>Blood products</li> <li>Blood sampling</li> <li>TPN</li> </ul> | See policy for <a href="#">flushing procedure</a> ;<br>NS 10 ml followed by Heparin solution 5 ml (10 units/ml) after each use and PRN or every 24 hours if not in use.<br><br><i>Following blood drawing:</i><br>flush with 20 ml NS followed by 5 ml Heparin solution (10units/ml) | For Dual Lumen Catheters: Red lumen is larger and should be used for TPN, blood product infusion or blood sampling.<br><b><i>Damaged catheter cannot be repaired. Clamp catheter and contact physician to immediately remove.</i></b><br>Clamp catheter between patient and damaged area close to the chest wall. A new catheter can replace the damaged one. Contact MD for placement. Assess sutures for integrity. If catheter broken, physician may contact Interventional Radiology.<br>CT compatible lumen may be used with speed injector. | Home Health Referral needed if catheter to be used for intermittent or continuous infusion in home setting. Sterile dressing changed weekly & PRN. Catheter irrigated once per week if not in use. Inj. caps are changed once a week and with blood draws. Flush with 10 ml NS followed by 5 ml Heparin lock solution (100 units/ml). May shower if transparent dressing is covered with plastic and remains occlusive. Remove plastic covering transparent dressing when shower complete. |
| <ul style="list-style-type: none"> <li>Peripherally</li> </ul>   | Intermediate (1 month) to  | See policy for <a href="#">flushing</a>  | Catheter is not always sutured in and is secured only by a  | Recommended for Home Health  |

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| Catheter Type   | Use Indications  | Flushing Protocol   | Special Considerations  | Discharge/Outpatient Considerations  |
|---|--|---|---|--|
| Inserted Central Catheter (PICC) <ul style="list-style-type: none"> <li>• Power PICC</li> <li>• Angiodynamic</li> </ul> | long term therapy <ul style="list-style-type: none"> <li>• Fluids</li> <li>• Antibiotics</li> </ul>  | <u>procedure;</u><br>NS 10 ml followed by Heparin solution 5 ml (10 units/ml) after each use and PRN or every 24 hours if not in use.<br><br><i>Following blood drawing:</i> flush with 20 ml NS followed by 5 ml Heparin solution (10 units/ml). | catheter securement device/dsg. A strictly occlusive dressing is mandatory to prevent catheter migration. If a portion of the catheter migrates out, measure & document the length. Catheter may still be used depending on length remaining. Do not take blood pressure or perform needle sticks in arm with catheter <b>unless all areas are exhausted.</b> If unable to take blood pressure in opposite arm, place blood pressure cuff on forearm, <b>DO NOT PLACE CUFF OVER PICC IN UPPER ARM.</b> At first signs of phlebitis (redness/warmth) apply heat & encourage patient to exercise extremity. Never force fluid into catheter. CT compatible lumen may be used with speed injector- <b>DO NOT USE CT compatible lumen for TPN INFUSION.</b> | Agency to perform sterile dsg changes weekly & PRN. Flush daily with 10 ml NS then 3 ml of Heparin lock solution (10 units/ml).  |
| <ul style="list-style-type: none"> <li>• Solo PICC</li> <li>• Groshong PICC</li> </ul>                                  | Intermediate (1 month) to long term therapy <ul style="list-style-type: none"> <li>• Fluids</li> <li>• Antibiotics</li> </ul>  | See policy for <a href="#">flushing procedure;</a><br>Flush with 10 ml NS before and after each use.<br><br><i>Following blood drawing:</i> flush with 20 ml NS.  | Catheter is not always sutured in and is secured only by a catheter securement device/dsg. A strictly occlusive dressing is mandatory to prevent catheter migration. If a portion of the catheter migrates out, measure & document the length. Catheter may still be used depending on length remaining. Do not take blood pressure or perform needle sticks in arm with catheter <b>unless all areas are exhausted.</b> At first signs of phlebitis (redness/warmth) apply heat & encourage patient to exercise extremity. Never force fluid into catheter. CT compatible lumen may be used with speed injector.   | <b>GROSHONG:</b> NS flush only (use 20 ml after blood draws); change injection caps weekly & PRN. May take short shower/bathe if transparent dressing occlusive & covered. Avoid long showers & getting dressing wet.                            |
| <ul style="list-style-type: none"> <li>• Percutaneous Midline catheter (8 inch catheter)</li> </ul>                     | Short term (2 weeks – 3 months) <ul style="list-style-type: none"> <li>• Fluids</li> <li>• Antibiotics</li> </ul> <b>NO chemotherapy, vesicants or TPN.</b> See IV medtable. | See policy for <a href="#">flushing procedure;</a><br>NS 10 ml followed by Heparin solution 5 ml (10 units/ml) after each use and PRN   | Maintain hub at/below pt heart during tubing/cap change to prevent possible air embolism. Mechanical speed injection devices (x-ray) may be used if the device is a “Power” Midline. Blood sampling may be done via line <b>only if all other areas exhausted, or line was placed for this purpose.</b> No BP, needle sticks in arm with catheter. Mechanical phlebitis may be present if insertion site red/warm. Apply heat and contact VAS or Home Infusion agency to evaluate if patient complains of extreme tenderness. If pain, redness, warmth or swelling develops in axilla, a chemical phlebitis (due to medication infused) may be present. Medication may be further diluted. If no resolution, contact VAS.                               | Recommended that HH agency perform sterile dressing change every 7 days/PRN. Flush catheter every 24 hours with 3 ml Heparin solution (10 units/ml). May shower/bathe briefly if dressing is occlusive. Injection caps should be changed weekly. |

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| Catheter Type  | Use Indications   | Flushing Protocol  | Special Considerations  | Discharge/Outpatient Considerations  |
|--|---|--|---|--|
| Implanted Venous Access Device (IVAD) (single or double lumens) <ul style="list-style-type: none"> <li>• Infusaport</li> <li>• Porta-Cath</li> <li>• PAS port</li> <li>• Hickman port</li> <li>• PowerFlow Apheresis Port</li> </ul> | Long term therapy <ul style="list-style-type: none"> <li>• Medications/Chemotherapy</li> <li>• Fluids</li> <li>• Blood Products</li> <li>• Blood Sampling</li> <li>• TPN</li> <li>• Pheresis</li> </ul> | See policy for <a href="#">flushing procedure</a> ;<br>NS 10 ml followed by Heparin solution 5 ml (10 units/ml) after each use.<br><br>When not in use, flush every 4 weeks or per MD order.<br><br>If patient receiving active pheresis treatments see Organizational policy <a href="#">Pheresis: Care of the Apheresis Catheter</a> for specific catheter care and flushing guidelines.<br><br><i>For blood drawing:</i><br>flush with 20ml Normal Saline followed by 5 ml Heparin solution (10 units/ml).<br><br>For decannulation – 10 ml NS followed by 5 ml Heparin solution (100 units/ml) | Plt count should be $\geq 20,000$ for needle change. Access port only with right angle, non-coring needle. Needles ordered from sterile processing in a variety of lengths and gauges. Use 20g x 1/2" needle to access PAS Ports. For inability to withdraw or infuse: <ol style="list-style-type: none"> <li>1. Check needle placement first</li> <li>2. change needle</li> <li>3. never force fluid into port</li> <li>4. do not use with speed injector.</li> </ol><br>See <a href="#">Central Venous Catheter (CVC): Declotting Procedure For PICC Lines, Right Atrial Catheter, and Central Lines (TLC-Hohn-Hickman Groshong and IVADs)</a> for declo procedure.<br><br><b><u>PAS Port – located in arm.</u></b><br><br>Pas-Port: A 20g 1/2inch (Huber) needle should be used if blood products are to be administered.<br><br><b><u>PowerFlow Apheresis Port – may ONLY be accessed by RNs working in Vascular Access Service or Pheresis.</u></b><br>See <a href="#">Central Venous Catheter (CVC): Implanted Venous Access Device (IVAD) Access</a><br><br><b><i>Chest X-Ray recommended upon admission . MUST have Chest X-Ray if no blood return noted from IVAD or IVAD clotted.</i></b><br><br><b><i>Dye Study order may be recommended to diagnose problems with IVAD if patient complains of pain and/or burning upon flushing of line.</i></b> | May shower/bathe after 2 days if not accessed. May swim if physician allows.<br><br>When accessed, no shower (sponge bath only) & no swimming.<br><br>Contact Home Infusion Agency for port cannulation. |
| Groshong Port  |   | See policy for <a href="#">flushing procedure</a> ;<br>Heparin is not necessary.<br>Flush with 10ml NS before and after each use.  |   | May shower/bathe after 2 days if not accessed; may swim if physician allows.<br><br>When accessed, no shower   |

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| Catheter Type   | Use Indications   | Flushing Protocol  | Special Considerations   | Discharge/Outpatient Considerations  |
|---|---|--|--|--|
|   |   | Flush with 20ml NS after infusing blood products or blood sampling. Flush unused IVAD every 4 weeks, or according to MD order.   |  | (sponge bath only) & no swimming.  |
| Tunneled Central Venous Catheters (may have 1-3 lumens) <ul style="list-style-type: none"> <li>• Hickman</li> <li>• Raaf</li> <li>• Leonard</li> <li>• Trifusion</li> </ul> | Long term therapy <ul style="list-style-type: none"> <li>• Chemotherapy/other medications</li> <li>• Fluids</li> <li>• Blood products</li> <li>• Blood sampling</li> <li>• TPN</li> <li>• Pheresis</li> </ul> | See policy for <a href="#">flushing procedure</a> ;<br>NS 10 ml followed by Heparin solution 5 ml (10 units/ml) after each use and PRN or every 24 hours if not in use.<br><br>If patient receiving active pheresis treatments see Organizational policy <a href="#">Pheresis: Care of the Apheresis Catheter</a> for specific catheter care and flushing guidelines.<br><br><i>Following blood drawing:</i><br>flush with 20 ml NS followed by 5 ml Heparin solution (10 units/ml). | Do NOT use scissors around catheter. Dye studies can help confirm the cause of blockage. Never force fluid into a lumen. If catheter becomes damaged, clamp the catheter between patient and damaged area (close to the chest wall). Notify MD (some catheters may be repaired). Contact Vascular Access Service. If clamp is not present, replace with another clamp. If clamp is not available, contact MD.<br><br>KEY POINT: REFRAIN from using any lumen of an Apheresis catheter, including the pigtail lumen of the Trialysis catheter, while an Apheresis procedure is being performed. | Sterile dressing change weekly and PRN as assessment indicates. May shower 2 <sup>nd</sup> week post catheter insertion. <b>MAY NOT SWIM.</b> Heparinization may be reduced to once/week. Injection caps are changed weekly or with blood draws. Report arm pain, facial swelling or signs of infection to MD. |
| Groshong (1 or 2 lumens only)   | Long term therapy <ul style="list-style-type: none"> <li>• Chemotherapy/other medications</li> <li>• Fluids</li> <li>• Blood products</li> <li>• Blood sampling</li> <li>• TPN</li> </ul>                     | GROSHONG: Heparin not necessary. Flush with 10ml NS before & after each use. Flush with 20 ml NS after infusing blood products or blood sampling. Flush unused catheter once/week.   | Do NOT use scissors around catheter. Dye studies can help confirm the cause of blockage. Never force fluid into a lumen. If catheter becomes damaged, clamp the catheter between patient and damaged area (close to the chest wall). Notify MD (some catheters may be repaired). Contact Vascular Access Service. If clamp is not present, replace with another clamp. If clamp is not available, contact MD.  | GROSHONG: Same as above for Tunneled Central Venous Catheters, except Heparinization not needed but may be used. The plastic hemostat is sent home with the patient for an emergency if needed.  |

VAS=Vascular Access Service 314-362-1112

\*\*\* Controlled Document \*\*\*

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