Flushing best practice:
- Always use a 10mL diameter syringe or larger when first accessing and when flushing vascular access device (VAD)
- Use a “pulse” or “stop/start” flush technique
- When a catheter lumen is totally patent, internal pressure will not increase during flushing. Excessive force must never be used when flushing any device. Stop flushing VAD immediately and assess if any of the following occurs:
  - The patient reports pain, unable to inject flush, resistance is felt (never flush against resistance due to the risk of catheter damage), leakage of fluid from the catheter or exit site; swelling is observed along the skin tunnel, around the chest site or in the neck area.
- The nurse should assess for contraindication for the use of heparin lock solution including: heparin-induced thrombocytopenia, heparin’s impact on lab studies drawn from catheter, systemic anticoagulation, and use of pork derived products. If contraindication to use heparin, refer to anticoagulant citrate flushing order.
- Change needleless connector if visible blood remains after flushing
- A nurse must assess if a continuous infusion can be stopped or interrupted for lab draw (examples of infusions that would not be interrupted: Blincyto, inotropes, etc.)

Lab:
- A nurse must assess if a continuous infusion can be stopped or interrupted for lab draw (examples of infusions that would not be interrupted: Blincyto, inotropes, etc.)

Medication administration best practice:
- Smaller size syringes can be used once catheter patency has first been established using a 10mL diameter syringe

Infection prevention best practice:
- Prior to accessing any IV hub, disinfect by scrubbing with alcohol wipe, using friction for a minimum of 15 seconds. Allow to air dry.

Line maintenance:
- For all VADs, dressings must be changed if soiled, bloody, non-intact, or wet
- Protect site and tubing connections from exposure to water when bathing
- Securement device and chlorhexidine-impregnated disc (example Biopatch) is changed with each dressing change
- CHG disc is placed on all vascular access devices, excluding PIVs, unless contraindicated
- If gauze is used to support the wings of a non-coring needle and does not obscure the insertion site it is not considered a gauze dressing

Tubing changes:
- Any tubing or needless connector with questionable contamination must be changed.
- Administration sets shall be changed utilizing aseptic technique immediately upon suspected contamination or when the integrity of the product has been compromised.
  - Intermittent and Cyclic Therapy - use a new administration set for each dose of medication, including those provided on an intermittent basis (e.g., hydration and antibiotics therapies) unless otherwise ordered by the physician
  - Continuous Therapy –
    - With bag change – no longer than 24 hours for TPN and IV hydration, unless otherwise ordered by the physician
    - Administration sets for all other therapies (i.e. pain management and inotropes) administered via an electronic infusion pump must be changed at least every 7 days
    - Refer to medication label for frequency of cassette/bag change; and change the tubing at time of bag change
- Emergency clamp should always be readily available in case of accidental catheter fracture

TSM – Transparent Semi-permeable Membrane. CHG - Chlorhexidine-impregnated disc (example Biopatch). N/A – Not applicable.
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<thead>
<tr>
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<th>Routine Flush with Medication Administration</th>
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<th>Dressing Changes</th>
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<tbody>
<tr>
<td>Peripheral Venous Catheter (PIV)</td>
<td>• PIV is rotated when clinically indicated due to symptoms of:</td>
<td>• 0.9% sodium chloride 10 mL</td>
<td>• Not used for routine blood draws.</td>
<td>• 0.9% sodium chloride 10 mL every 12 hours</td>
<td>• PIV placement is an aseptic procedure and mask must be worn with this procedure</td>
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<tr>
<td></td>
<td>▪ Phlebitis</td>
<td>• Medication</td>
<td>• May be used for blood draw after initial cannulation and before releasing tourniquet</td>
<td>• Heparin 10 units/mL 5 mL every 12 hours</td>
<td>• All dressing changes are to be aseptic procedures and mask must be worn by nurse and patient (unless patient refusal)</td>
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<td>▪ Infiltration</td>
<td>• 0.9% sodium chloride 10 mL</td>
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<td>▪ Extravasation</td>
<td>• Use extension set with needleless connector</td>
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<td>Midline, Open-ended or Valved</td>
<td>• No blood pressures or tourniquets should be applied proximal to insertion site</td>
<td>• 0.9% sodium chloride 10 mL</td>
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<td>Extended Dwell Peripheral</td>
<td>• Catheters with an internal valve do not routinely require clamping.</td>
<td>• Medication</td>
<td>• Draw 4-5 mL blood discard prior to obtaining sample</td>
<td>• 0.9% sodium chloride 10 mL every 12 hours</td>
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<td>* Extended dwell: use clamp on extension set to prevent reflux of blood</td>
<td>• At placement, measure and record arm circumference 10 cm above antecubital space on adults</td>
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<td>Central Lines, Open-ended</td>
<td>• No BP’s or tourniquets should be applied proximal to insertion site of PICC</td>
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<td>• Change needleless connector</td>
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<td>(PICC, non-tunneled central catheter, tunneled chest catheter)</td>
<td>• Catheter body has a clamp</td>
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### Fairview Home Infusion

**Infusion Access Device Guide**

**Greater than 10kg**

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| Central Lines, Valved (PICC, non-tunneled central catheter, tunneled chest catheter) | • At placement, measure and record arm circumference 10 cm above antecubital space on adults  
• No BP’s or tourniquets should be applied proximal to insertion site of PICC  
• Catheter body has NO clamp | • 0.9% sodium chloride 10 mL  
• Medication  
• 0.9% sodium chloride 10 mL  
*exception for pregnant patients – also use heparin 10 units/mL 5 mL | • 0.9% sodium chloride 10 mL pre-draw  
• Draw 4-5 mL blood discard prior to obtaining sample  
• 0.9% sodium chloride 20 mL post draw;  
• Change needleless connector  
*exception for pregnant patients – also use heparin 10 units/mL 5 mL | • 0.9% sodium chloride 10 mL every week  
*exception for pregnant patients – also use heparin 10 units/mL 5 mL | • All dressing changes are to be aseptic procedures and mask must be worn by nurse and patient (unless patient refusal)  
• Dressings should be changed at a minimum of every 7 days if a TSM is used or every 48 hours if non-transparent dressing is used  
• If gauze dressing was placed at time of insertion this dressing must be changed within 24-36 hours  
• External length is measured with each PICC dressing change |

| Implant Port, Open-ended | • ONLY use a non-coring Huber needle to access.*  
• For PowerPort, use Power injectable needle if patient is anticipated to any CT infuser  
• Use two patient identifiers if using power injectable non-coring needle. Two identifiers may be palpation for points, ID card from patient, or insertion operative report | • 0.9% sodium chloride 10 mL  
• Medication  
• 0.9% sodium chloride 10 mL  
• Heparin 10 units/mL 5 mL | • 0.9% sodium chloride 10 mL pre-draw  
• Draw 4-5 mL blood discard prior to obtaining sample  
• 0.9% sodium chloride 20 mL post draw;  
• Change needleless connector  
• Heparin 10 units/mL 5 mL | • Heparin 10 units/mL 5 mL daily if accessed but no therapy  
• Heparin 10 units/mL 5 mL before deaccessing to re-access  
* Heparin 100 units/mL 5 mL when deaccessing for no further use, and every 4 weeks when not in use | • All dressing changes are to be aseptic procedures and mask must be worn by nurse and patient (unless patient refusal)  
• Change dressing and needle every 7 days when accessed.  
• If gauze dressing was placed at time of insertion this dressing must be changed within 24-36 hours |

| Implant Port, Valved | • ONLY use a non-coring Huber needle to access.*  
• For PowerPort, use Power injectable needle if patient is anticipated to any CT infuser  
• Use two patient identifiers if using power injectable non-coring needle. Two identifiers may be palpation for points, ID card from patient, or insertion operative report | • 0.9% sodium Chloride 10 mL  
• Medication  
• 0.9% sodium Chloride 10 mL  
• Heparin 10 units/mL 5 mL | • 0.9% sodium Chloride 10 mL pre-draw  
• Draw 4-5 mL blood discard prior to obtaining sample  
• 0.9% Sodium Chloride 20 mL post draw  
• Change needleless connector  
*exception for pregnant patients – also use heparin 10 units/mL 5 mL | • 0.9% sodium Chloride 10 mL daily if accessed but no therapy  
*0.9% sodium Chloride 10 mL every 28 days when not in use  
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• Change dressing and needle every 7 days when accessed.  
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| Peripheral Venous Catheter (PIV) | • PIV is rotated when clinically indicated due to symptoms of:  
  - Phlebitis  
  - Infiltration  
  - Extravasation  
  - Use extension set with needleless connector | • 0.9% sodium chloride 3 mL  
  • Medication  
  • 0.9% sodium chloride 3 mL  
  *If only dosing once per day, will need to do a second flush of 0.9% sodium chloride | • N/A. Not used for routine blood draws. May be used for blood draw upon insertion. | • 0.9% sodium chloride 3 mL every 8 hours | • PIV placement is an aseptic procedure and mask must be worn with this procedure  
  • At minimum of every 7 days. PRN if soiled, bloody, non-intact, or wet |
| Midline, Open-ended or Valved Extended Dwell Peripheral | • No blood pressures or tourniquets should be applied proximal to insertion site  
  • Catheters with an internal valve do not routinely require clamping. | • 0.9% sodium chloride 5 mL  
  • Draw 3 mL blood discard prior to obtaining sample  
  • 0.9% sodium chloride 10 mL  
  • Heparin 10 units/mL 3 mL  
  *If only dosing once per day, will need to do a second flush of heparin 10 units/mL 3 mL | • 0.9% sodium chloride 5 mL  
  • Draw 3 mL blood discard prior to obtaining sample  
  • 0.9% sodium chloride 10 mL post draw  
  • Change needleless connector  
  • Heparin 10 units/mL 3 mL | • Heparin 10 units/mL 3 mL every 12 hours | • All dressing changes are to be aseptic procedures and mask must be worn by nurse and patient (unless patient refusal)  
  • Dressings should be changed at a minimum of every 7 days if a Transparent Semi-permeable Membrane (TSM) is used or every 48 hours if gauze dressing is used  
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| Central Lines, Open-ended (PICC, non-tunneled central catheter, tunneled chest catheter) | • Catheter body has a clamp  
  • At placement, measure and record arm circumference 10 cm above antecubital space on adults  
  • No BP’s or tourniquets should be applied proximal to insertion site of PICC  
  • Use clamp on open-ended catheters, to prevent reflux of blood | • 0.9% sodium chloride 5 mL  
  • Medication  
  • 0.9% sodium chloride 5 mL  
  • Heparin 10 units/mL 3 mL | • 0.9% sodium chloride 5 mL pre-draw  
  • Draw 3 mL blood discard prior to obtaining sample  
  • 0.9% sodium chloride 10 mL post draw  
  • Change needleless connector  
  • Heparin 10 units/mL 3 mL | • Heparin 10 units/mL 3 mL every 24 hours | • All dressing changes are to be aseptic procedures and mask must be worn by nurse and patient (unless patient refusal)  
  • Dressings should be changed at a minimum of every 7 days if a TSM is used or every 48 hours if non-transparent dressing is used  
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| **Central Lines, Valved**  
(PICC, non-tunneled central catheter, tunneled chest catheter)  
- Catheter body has NO clamp | At placement, measure and record arm circumference 10 cm above antecubital space on adults  
- No BP’s or tourniquets should be applied proximal to insertion site of PICC | 0.9% sodium chloride 5 mL  
- Medication  
- 0.9% sodium chloride 5 mL | 0.9% sodium chloride 5 mL pre-draw  
- Draw 3 mL blood discard prior to obtaining sample  
- 0.9% sodium chloride 10 mL post draw  
- Change needleless connector | 0.9% sodium chloride 5 mL every week | All dressing changes are to be aseptic procedures and mask must be worn by nurse and patient (unless patient refusal)  
Dressings should be changed at a minimum of every 7 days if a TSM is used or every 48 hours if non-transparent dressing is used  
- If gauze dressing was placed at time of insertion this dressing must be changed within 24-36 hours  
- **External length is measured with each PICC dressing change** |
| **Implanted Port, Open-ended**  
| ONLY use a non-coring Huber needle to access.*  
- For PowerPort, use Power injectable needle if patient is anticipated to any CT infuser  
- Use two patient identifiers if using power injectable non-coring needle. Two identifiers may be palpation for points, ID card from patient, or insertion operative report | 0.9% sodium chloride 5 mL  
- Medication  
- 0.9% sodium chloride 5 mL  
- Heparin 10 units/mL 3 mL | 0.9% sodium chloride 5 mL pre-draw  
- Draw 3 mL blood discard prior to obtaining sample  
- 0.9% sodium chloride 10 mL post draw  
- Change needleless connector  
- Heparin 10 units/mL 3 mL | Heparin 10 units/mL 3 mL daily if accessed but no therapy  
Heparin 10 units/mL 5 mL before deaccessing.  
* Heparin 100 units/mL 5 mL when deaccessing for no further use, and every 4 weeks when not in use | All dressing changes are to be aseptic procedures and mask must be worn by nurse and patient (unless patient refusal)  
- Change dressing and needle every 7 days when accessed.  
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- 0.9% sodium chloride 5 mL | 0.9% sodium chloride 5 mL pre-draw  
- Draw 3 mL blood discard prior to obtaining sample  
- 0.9% sodium chloride 10 mL post draw  
- Change needleless connector | 0.9% sodium chloride 5 mL daily if accessed but no therapy  
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