Nursing Management of Venous Access Devices: 

*Peripheral IV lines*

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Peripheral IV (PIV)

**Benefits:**
- Short-term access, up to 96 hours (exception is pediatrics: no routine replacement of catheter)
- Simple transparent semi-permeable membrane dressing (TSM)

**Considerations:**
- NO central concentrations
- NOT in an arm status post lymph node dissection (LND)
- NOT in an arm with an arterio-venous fistula (AVF)
Peripheral Catheters

- **Peripheral IV (PIV)**
  - Catheter is less than 3” (7.5cm) in length
  - “Angio”
  - Saf-t-intima (winged butterfly)
  - Insyte Autoguard (straight)
  - Jelco (OR)
  - Nexiva (CT scan power-injector tolerant)
PIV - It’s All in the Details…

- **Site selection/Considerations:**
  - Avoid areas of flexion
  - In general, start distally in hand and progress proximally to preserve peripheral access. Some therapies, such as vesicants, should not be infused through a hand, wrist, or antecubital vein if at all possible
  - Consider individual situations i.e. arm restraints, one arm restrictions, crutches, wheelchairs

- **Type and gauge of catheter:**
  - Use appropriate gauge catheter to meet infusion needs, prevent vessel damage, and complications
# UNIVERSAL COLOR-CODED PIV GAUGE SIZES

<table>
<thead>
<tr>
<th>Size</th>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 G</td>
<td>YELLOW</td>
<td>Used for very fragile, small veins. Not recommended for chemo infusions due to vessel fragility.</td>
</tr>
<tr>
<td>22 G</td>
<td>BLUE</td>
<td>Used for most chemo infusions; patients with small veins; patients NOT expected to receive blood transfusions</td>
</tr>
<tr>
<td>20 G</td>
<td>PINK</td>
<td>“Multi-purpose gauge”. Used for meds, hydration, blood transfusions, routine therapies</td>
</tr>
<tr>
<td>18 G</td>
<td>GREEN</td>
<td>Used for large-volume fluid infusions; multiple transfusions</td>
</tr>
<tr>
<td>16 G</td>
<td>GRAY</td>
<td>Used during major surgeries; patients requiring multiple large-volume infusions; and very unstable patients</td>
</tr>
<tr>
<td>14 G</td>
<td>ORANGE</td>
<td>Used in massive trauma situations</td>
</tr>
</tbody>
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PIV Care and Maintenance

- **Flushing:**
  - Minimum 2ml saline using positive pressure, push-pause method
  - Increase flush volume to include add-on devices (filters or extensions)
  - NO heparin needed for PIVs
  - Flush at least every 12 hours when not in use
- **Dressing change PRN if no longer intact**
- **Securing:**
  - DO NOT obscure insertion site
  - Tape device flush with skin
  - Avoid taping connections
  - Avoid kinks in extension tubing
- **Monitor peripheral IV insertion date – place new PIV when outdated (96 hours)**
- **NO blood pressure or blood draws on that extremity, when possible**
IV Assessment

- **Nursing assessment**
  - Patient comments/complaints
  - What is insertion date?
  - Any swelling/edema noted…
    - Does transparent dressing looking taut?
    - Is ID bracelet tight?
    - Is skin blanched or cool to touch?
    - Is there a positive blood return?
    - Does arm appear to be the same size as the other arm?
  - Any redness (erythema) at insertion site?
  - Leaking or bloody insertion sites?
  - Any resistance to flushing?
  - Document assessment per policy

Vancomycin infiltration
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Midlines

- Length: 3” (7.5cm) to 8” (20cm)
- Short-term peripheral access with two to four week dwell time
- Benefits:
  - No CXR needed for catheter tip verification
  - Same insertion procedure as a PICC
- Considerations:
  - NOT used for continuous vesicants
  - NO Dextrose concentrations > 10%
  - NO Central concentrations
  - NO Blood Pressure on that extremity
  - NO Dialysis fistula in same arm
  - NO Lymph node dissection in same arm

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Retrieved from http://www.rnao.org/pda/vad/overview.html 7/14/10
Midline Care and Maintenance

- **Adults/Adolescents:**
  - Minimum of 5ml saline; recommended 10ml of saline
  - 3ml heparin (10 units/ml) = 30 units heparin

- **Pediatrics:**
  - 2F catheter: 1ml heparin (10 units/ml) = 10 units heparin
  - 2.6F catheter or larger: 2-3 ml heparin (10 units/ml) = 20-30 units heparin

- **Blood drawing not recommended.**

- **Dressing protocol:** same as PICC

- **Maximum infusion rate:** as patient condition warrants

- **No tPA use for catheter occlusions (peripheral catheter)**
Short Jugular lines

Benefits:
- Short term peripheral access
- No CXR needed for catheter placement

Considerations:
- NOT used for continuous vesicants
- NO Dextrose concentrations >10%
- NO Central concentrations
Short jugular lines: care and maintenance

- **Flushing:**
  - Minimum 2ml saline
  - No heparin flush (it is a peripheral line)

- **Dressing protocol:**
  - Simple transparent dressing

- **Complications:**
  - Location-related
  - Needs stabilization