

Michigan Medicine

Post-Acute Care Services Catheter Access Grids

General Information for Adults and Pediatrics

Tubing Changes:

- Parenteral Nutrition and any lipid containing drugs- change tubing daily.
- Other continuous and intermittent infusions change tubing every 72 hours.

Catheter end cap change:

- Every 7 days and anytime blood/ infusate cannot be cleared.
- After each blood draw

Flushes:

- All flushes are per lumen for multi-lumen catheters.
- Ethanol lock patients flush with 10 mL Sodium Chloride 0.9% after removal and prior to instillation of Ethanol lock.
- Patients with heparin allergy or requesting no pork products: flush with Sodium Chloride 0.9% with same frequency indicated in grid for patient's catheter.

IV securement devices:

- Use with PICC, midline, and non-tunneled catheters and change with dressing change.

Blood draws:

- PERIPHERAL BLOOD DRAW PREFERRED for patients with PICCs, peripheral IV, or if serum drug levels ordered.
- Stop infusion and clamp line prior to blood draw.
- Follow steps in grid for each catheter.

Adult Vascular Access Grid- Michigan Medicine Post-Acute Care Services

CATHETER TYPE	DRESSING CHANGE	ACCESS INFORMATION	BLOOD DRAWS, WASTE, AND FLUSHES	FLUSHING WITH INTERMITTENT USE	ROUTINE FLUSHING OF NON-INFUSING OR CAPPED LINES
PICC	- Use sterile technique - Transparent semi-permeable membrane dressings are changed every 7 days. - Pad or gauze dressings are changed 3 times per week. - Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary.	1.9 Fr (24G) PICC: - Do not aspirate for blood return. - Must have continuous infusion at all times to maintain patency.	PERIPHERAL DRAW PREFERRED for PICC and all serum drug levels Draw only from a 2.6 French (21 gauge) or larger catheter - Flush with 10 mL Sodium Chloride 0.9% - Draw 5 mL blood for waste - Draw specimen - Flush with 10 mL Sodium Chloride 0.9% - Flush with 5 mL Heparin 10 units/ mL	5 mL Sodium Chloride 0.9% - 5 mL Heparin 10 units/ mL	5 mL Heparin 10 units/ mL daily
Ports - Implanted Vascular Access Port A catheter surgically placed into a vessel, body cavity, or organ attached to a reservoir located under the skin	Accessed: - Use sterile technique. - Transparent semi-permeable membrane dressings are changed every 7 days. - Pad or gauze dressings are changed 3 times per week. - Change dressing whenever they become wet, loose, or soiled; whenever inspection of the site is needed; or when the non-coring needle is changed. Un-accessed: - No dressing required	- Use a non-coring needle and change needle every 7 days. - Access port monthly if not in use with a non-coring needle. - Use Sterile Field Sodium Chloride 0.9% 10 mL Flush syringe for accessing Power-Ports: - If patient is to receive IV contrast, use a power non-coring needle to access the port. - If patient will not receive IV contrast, a standard non-coring needle can be used to access the port.	- Flush with 10 mL Sodium Chloride 0.9% - Discard 5 mL blood for waste - Draw specimen - Flush with 10 mL Sodium Chloride 0.9% - Flush with 5 mL Heparin 10 units/ mL	10 mL Sodium Chloride 0.9% - 5 mL Heparin 10 units/ mL	Accessed: 5 mL Heparin 10 units/ mL daily 10 mL Sterile Field Sodium Chloride 0.9% Flush weekly with port access Un-accessed: 5 mL Heparin 10 units/ mL monthly 10 mL Sterile Field Sodium Chloride 0.9% Flush monthly with port access
Midline	- Use sterile technique - Transparent semi-permeable membrane dressings are changed every 7 days. - Pad or gauze dressings are changed 3 times per week. - Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary.		No blood draws	5 mL Sodium Chloride 0.9% - 5 mL Heparin 10 units/ mL	5 mL Heparin 10 units/ mL daily

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CATHETER TYPE	DRESSING CHANGE	BLOOD DRAWS, WASTE, AND FLUSHES	FLUSHING WITH INTERMITTENT USE	ROUTINE FLUSHING OF NON-INFUSING OR CAPPED LINES
Tunneled, Cuffed (Broviac, Hickman, Proline, Powerline) **See below if active apheresis or ECP**	• Use sterile technique • Transparent semi-permeable membrane dressings are changed every 7 days. • Pad or gauze dressings are changed 3 times per week. • Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary. •	1. Flush with 10 mL Sodium Chloride 0.9% 2. Draw 5 mL blood for waste 3. Draw specimen 4. Flush with 10 mL Sodium Chloride 0.9% 5. Flush with 5 mL Heparin 10 units/ mL	5 mL Sodium Chloride 0.9% - 5 mL Heparin 10 units/ mL	5 mL Heparin 10 units/ mL daily
Apheresis Catheter (“Active”) Tunneled catheter with scheduled apheresis or photopheresis (ECP) **Once there are no more scheduled apheresis or ECP, care for line as Tunneled, Cuffed (see above)**	• Use sterile technique • Transparent semi-permeable membrane dressings are changed every 7 days. • Pad or gauze dressings are changed 3 times per week. • Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary.	1. Draw 5 mL blood for waste. 2. Draw specimen 3. Flush with 10 mL Sodium Chloride 0.9% 4. Pre transplant with apheresis: Flush with 2.5 mL Heparin 1,000 units/ mL 5. Post-transplant with active photopheresis: Flush with 5 mL Heparin 100 units/ mL	Active Apheresis: 5 mL Sodium Chloride 0.9% - 2.5 mL Heparin 1,000 units/ mL Post-transplant with active photopheresis: 5 mL Sodium Chloride 0.9% - 5 mL Heparin 100 units/ mL	Active Apheresis: 2.5 mL Heparin 1,000 units/ mL 3 times per week (Mon, Wed, Fri): Post-transplant with active photopheresis (ECP): 5 mL Heparin 100 units/ mL daily
Peripheral	• Use clean technique. • Transparent semi-permeable membrane dressing with site change and dressing change every 7 days and/ or when site becomes compromised • Pad or gauze dressing are changed 3 times per week and/or when site/ dressing becomes compromised	NO blood draws unless obtained at the time of new catheter placement. Flush with 5 mL Sodium Chloride 0.9% after sample collected	5 mL Sodium Chloride 0.9%	5 mL Sodium Chloride 0.9% daily
Valved (Groshong)	• Use sterile technique • Transparent semi-permeable membrane dressings are changed every 7 days. • Pad or gauze dressings are changed 3 times per week. • Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary.	1. Flush with 10 mL Sodium Chloride 0.9% 2. Draw 5 mL blood for waste 3. Draw specimen 4. Flush with 10 mL Sodium Chloride 0.9%	10 mL Sodium Chloride 0.9%	10 mL Sodium Chloride 0.9% every 7 days

Adult Vascular Access Grid- Michigan Medicine Post-Acute Care Services

CATHETER TYPE	DRESSING CHANGE	BLOOD DRAWS, WASTE, AND FLUSHES	FLUSHING WITH INTERMITTENT USE	ROUTINE FLUSHING OF NON-INFUSING OR CAPPED LINES
Hemodialysis Catheter (Sorenson, Permacath, GlidePath)	- Use sterile technique - Transparent semi-permeable membrane dressings are changed every 7 days. - Pad or gauze dressings are changed 3 times per week. Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary	No blood draws in the home	- Discard 0.1 mL more than fill volume listed on catheter lumen - Flush with 10 mL Sodium Chloride 0.9% - Give medication - Flush with 10 mL Sodium Chloride 0.9% - Instill with fill volume listed on catheter lumen using Heparin 1,000 units/mL	3 times per week (Mon, Wed, Fri): - Discard 0.1 mL more than fill volume listed on catheter lumen - Flush with 10 mL Sodium Chloride 0.9% - Instill with fill volume listed on catheter lumen using Heparin 1,000 units/mL
Non-Tunneled	- Use sterile technique - Transparent semi-permeable membrane dressings are changed every 7 days. - Pad or gauze dressings are changed 3 times per week. Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary	- Flush with 10 mL Sodium Chloride 0.9% - Draw 5 mL blood for waste - Draw specimen - Flush with 10 mL Sodium Chloride 0.9% - Flush with 5 mL Heparin 10 units/ mL	5 mL Sodium Chloride 0.9% - 5 mL Heparin 10 units/ mL	5 mL Heparin 10 units/ mL daily

Pediatric Vascular Access Grid (**LESS than 25 kg**)- Michigan Medicine Post-Acute Care Services

CATHETER TYPE	DRESSING CHANGE	ACCESS INFORMATION	BLOOD DRAWS, WASTE, AND FLUSHES	FLUSHING WITH INTERMITTENT USE	ROUTINE FLUSHING OF NON-INFUSING OR CAPPED LINES
PICC	• Use sterile technique • Transparent semi-permeable membrane dressings are changed every 7 days. • Pad or gauze dressings are changed 3 times per week. • Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary.	1.9 Fr (24G) PICC: • Do not aspirate for blood return • Must have continuous infusion at all times to maintain patency	PERIPHERAL DRAW PREFERRED Draw only from a 2.6 French (21 gauge) or larger 1. Flush with 2 mL Sodium Chloride 0.9% 2. Draw 3 mL blood for waste 3. Draw specimen 4. Flush with 2 mL Sodium Chloride 0.9% 5. Flush with 2 mL Heparin 10 units/ mL	5 mL Sodium Chloride 0.9% - 2 mL Heparin 10 units/ mL	2 mL Heparin 10 units/ mL daily
Tunneled, Cuffed (Broviac, Hickman, Proline, Powerline)	• Use sterile technique • Transparent semi-permeable membrane dressings are changed every 7 days. • Pad or gauze dressings are changed 3 times per week. • Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary.		1. Draw 1-3 mL blood for waste 2. Draw specimen 3. Flush with 3 mL Sodium Chloride 0.9% 4. Flush with 3 mL Heparin 10 units/ mL	5 mL Sodium Chloride 0.9% - 3 mL Heparin 10 units/ mL	3 mL Heparin 10 units/ mL daily
Ports - Implanted Vascular Access Port A catheter surgically placed into a vessel, body cavity, or organ attached to a reservoir located under the skin	Accessed: • Use sterile technique. • Transparent semi-permeable membrane dressings are changed every 7 days. • Pad or gauze dressings are changed 3 times per week. • Change dressing whenever they become wet, loose, or soiled; whenever inspection of the site is needed; or when the non-coring needle is changed. Un-accessed: • No dressing required	• Use a non-coring needle and change needle every 7 days. • Access port monthly if not in use with a non-coring needle. • Use Sterile Field 10 mL Sodium Chloride 0.9% Flush syringe for accessing Power-Ports: • If patient is to receive IV contrast, use a power non-coring needle to access the port. • If patient will not receive IV contrast, a standard non-coring needle can be used to access the port.	1. Flush with 10 mL Sodium Chloride 0.9% 2. Discard 5 mL blood for waste 3. Draw specimen 4. Flush with 10 mL Sodium Chloride 0.9% 5. Flush with 5 mL Heparin 10 units/ mL	10 mL Sodium Chloride 0.9% - 5 mL Heparin 10 units/ mL	Accessed: • 5 mL Heparin 10 units/ mL daily • 10 mL Sterile Field Sodium Chloride 0.9% flush weekly with needle change Un-accessed: • 5 mL Heparin 10 units/ mL monthly • 10 mL Sterile Field Sodium Chloride 0.9% flush monthly with port access prior to Heparin 10 units/ mL flush

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CATHETER TYPE	DRESSING CHANGE	BLOOD DRAWS, WASTE, AND FLUSHES	FLUSHING WITH INTERMITTENT USE	ROUTINE FLUSHING OF NON-INFUSING OR CAPPED LINES
Midline	• Use sterile technique • Transparent semi-permeable membrane dressings are changed every 7 days. • Pad or gauze dressings are changed 3 times per week. • Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary.	No blood draws	5 mL Sodium Chloride 0.9% - 2 mL Heparin 10 units/ mL	2 mL Heparin 10 units/ mL Q 12 hours
Peripheral	• Use clean technique. • Transparent semi-permeable membrane dressing with site change and dressing change every 7 days and/ or when site becomes compromised • Pad or gauze dressing are changed 3 times per week and/or when site/ dressing becomes compromised	NO blood draws unless obtained at the time of new catheter placement. Flush with 5 mL Sodium Chloride 0.9% after sample collected	1 mL Sodium Chloride 0.9%	1 mL Sodium Chloride 0.9% Q 8 hours
Apheresis Catheter (“Active”) Tunneled catheter with scheduled apheresis **Once there are no more scheduled apheresis, care for line as Tunneled, Cuffed (see above)**	• Use sterile technique • Transparent semi-permeable membrane dressings are changed every 7 days. • Pad or gauze dressings are changed 3 times per week. • Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary.	1. Draw 5 mL blood for waste. 2. Draw specimen 3. Flush with 10 mL Sodium Chloride 0.9% 4. Flush with fill volume listed on catheter lumen using Heparin 1,000 units/ mL	Active Apheresis: 5 mL Sodium Chloride 0.9% - 2.5 mL Heparin 1,000 units/ mL	Active Apheresis: 2.5 mL Heparin 1,000 units/ mL 3 times per week (Mon, Wed, Fri)
Hemodialysis Catheter (Sorenson, Permacath, GlidePath)	• Use sterile technique • Transparent semi-permeable membrane dressings are changed every 7 days. • Pad or gauze dressings are changed 3 times per week. • Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary.	No blood draws in the home	1. Discard 0.1 mL more than fill volume listed on catheter lumen 2. Flush with 5 mL Sodium Chloride 0.9% 3. Give medication 4. Flush with 5 mL Sodium Chloride 0.9% 5. Instill with fill volume listed on catheter lumen using Heparin 1,000 units/mL	3 times per week (Mon, Wed, Fri): 1. Discard 0.1 mL more than fill volume listed on catheter lumen 2. Flush with 5 mL Sodium Chloride 0.9% 3. Instill with fill volume listed on catheter lumen using Heparin 1,000 units/mL

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Valved (Groshong)	• Use sterile technique • Transparent semi-permeable membrane dressings are changed every 7 days. • Pad or gauze dressings are changed 3 times per week. • Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary.	1. Flush with 10 mL Sodium Chloride 0.9% 2. Draw 3-5 mL blood for waste 3. Draw specimen 4. Flush with 5 mL Sodium Chloride 0.9%	5 mL Sodium Chloride 0.9%	5 mL Sodium Chloride 0.9% Q 7 days
Non-Tunneled	• Use sterile technique • Transparent semi-permeable membrane dressings are changed every 7 days. • Pad or gauze dressings are changed 3 times per week. • Change dressing whenever they become wet, loose, soiled or when inspection of the site is necessary.	1. Flush with 3 mL Sodium Chloride 0.9% 2. Draw 1-3 mL blood for waste 3. Draw specimen 4. Flush with 3 mL Sodium Chloride 0.9% 5. Flush with 3 mL Heparin 10 units/ mL	5 mL Sodium Chloride 0.9%, 3 mL Heparin 10 units/ mL	3 mL Heparin 10 units/ mL daily