

Central/Peripheral Line Care and Maintenance

November RN Education

Difference Between Midline and PICC Line



Midline

Insertion of this should be done by an expert as lack of knowledge can cause problems.



PICC Line

A doctor or expert inserts the PICC line into the arms, veins until it reaches the superior vena cava.



What is a PICC line



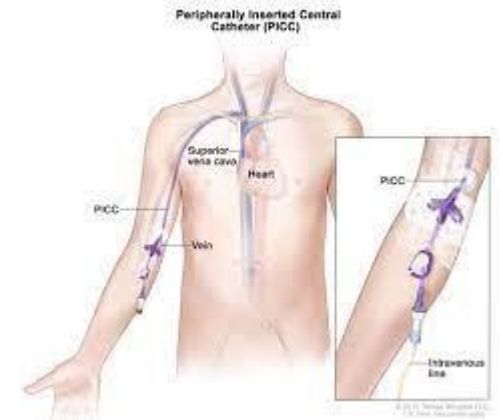
A peripherally inserted central catheter (PICC), also called a PICC line, is a long, thin tube that's inserted through a vein in the arm and passed through to the larger veins near the patient's heart.

Very rarely, the PICC line may be placed in the patient's leg.

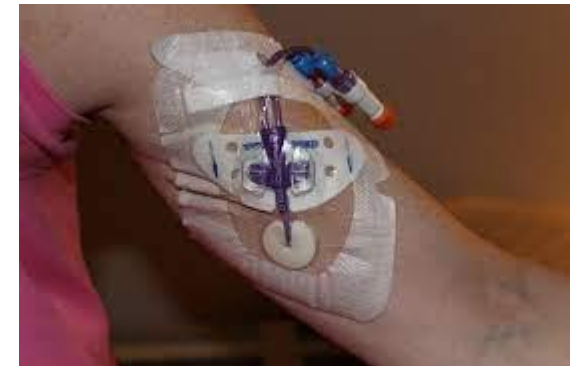
A PICC line can stay in place for approximately 18 months if required.

A PICC line can be used to give intravenous treatments, such as:

- Antibiotics
- Fluids
- TPN
- Cardiac Medications (Milrinone/Dobutamine)

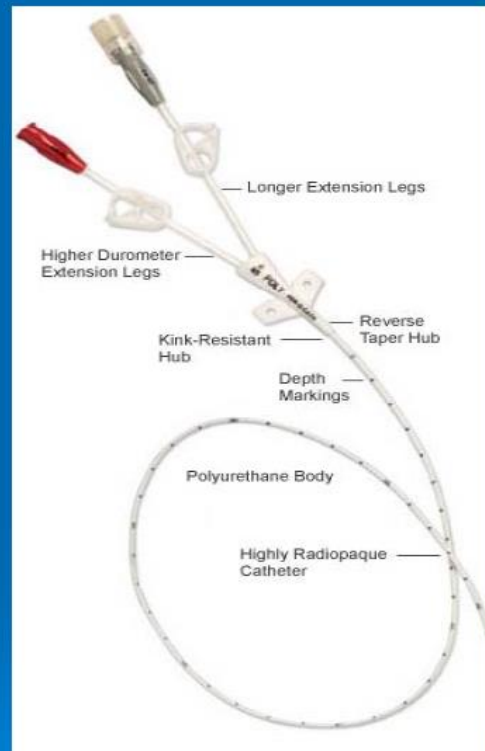


A PICC line **CAN** be used to draw blood.



Red Lumen is normally for RN to draw blood.
Other lumens are for infusions

Multi-lumen PICCs



Double Lumen PICC



Triple Lumen PICC

What is a Midline?



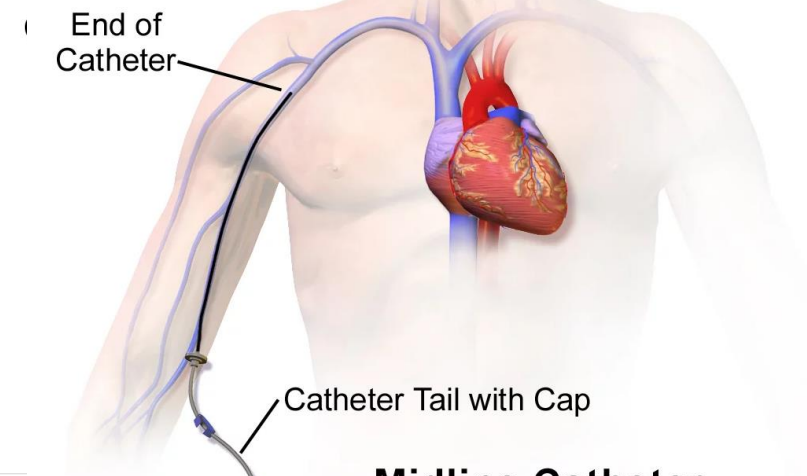
A midline (also called a midline catheter) is like a PICC line, but shorter.

A midline can stay in place for approximately four weeks (28 days) if required.

A midline can be used to give intravenous treatments, such as:

- antibiotics
- fluids
- intravenous (IV) treatment at home

A midline SHOULD NOT be used to draw blood.



What is a Midline?

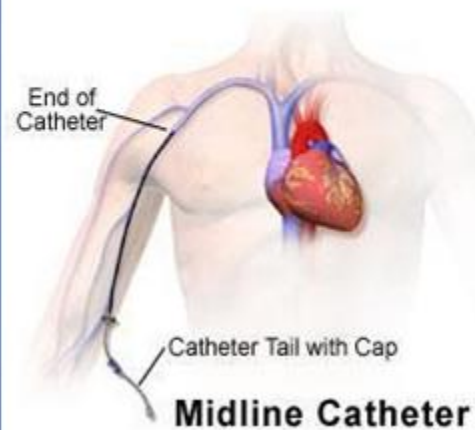


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PICC vs Midline



The difference between a midline catheter and a PICC is the length of the catheter. A midline catheter is about half the length of a PICC and so the end of a midline catheter lies within a vein close to the shoulder

Difference Between Midline and PICC Line



Midline

Insertion of this should be done by an expert as lack of knowledge can cause problems.



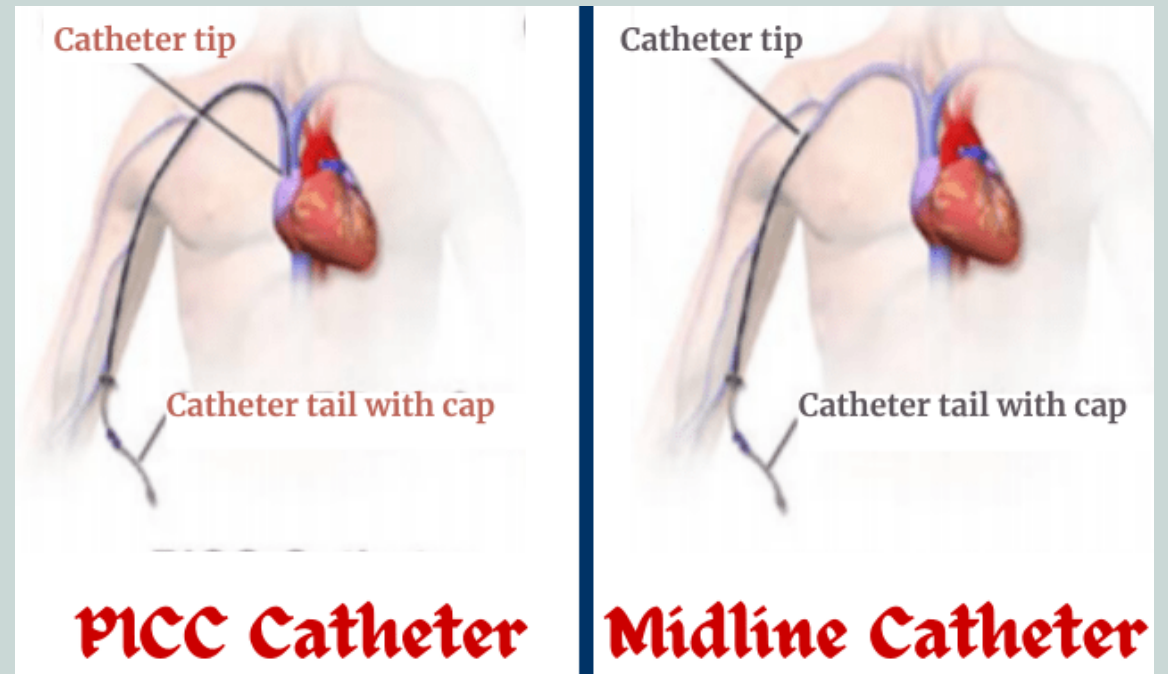
PICC Line

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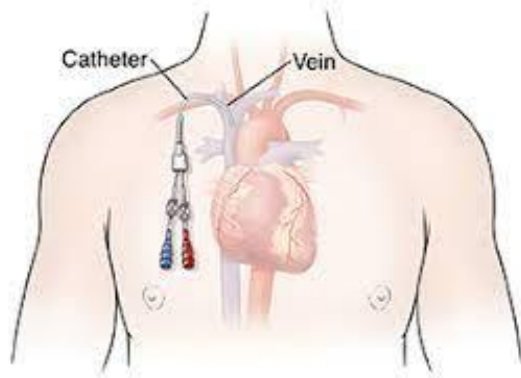
PICC vs Midline



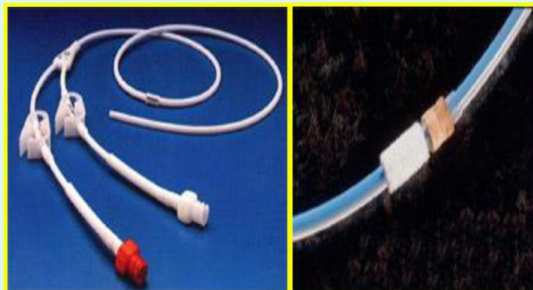
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Tunneled Central Venous Catheters



Tunneled catheter with cuffs



- Hickman/Hohn/Briovac
- Surgically placed
- Tunneled portion under the skin
- Has cuff that sits under skin to hold catheter in place
- Single or multi lumen
- Can NOT be pulled in the home.



Powerline Central Venous Catheters



- Powerline Central Venous catheters are cuffed, tunneled devices for short or long-term vascular access.
- Powerlines **CANNOT** be removed in the home.
- Powerline catheters are found in the chest and the line will say POWELINE on the wings.



Types of Securement Devices



Stat Lock



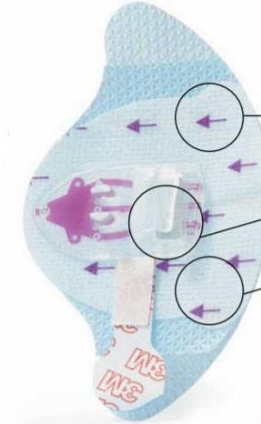
Wing Guard



Grip loc



SecurACath



- **Silicone adhesive**
 - Holds securely, yet removes gently
 - Can be repositioned upon initial application
 - Does not require alcohol to remove
- **Easy application securement base**
 - No mechanical doors or wings
 - Visual cues to aid application
- **Comfortable, soft-cloth material**
 - Comfortable and water-resistant
 - Perforated for additional breathability

3M PICC/CVC
Securement





Prep

1. Cleanse around catheter insertion and outlined securement site with ChlorPrep®, alcohol or as recommended by your health care provider. This is important to remove any lotions or oils from the skin so the anchor pad will hold well.



2. Apply skin protectant provided to same securement site, apply in direction of hair growth to lay any hair around insertion site flat. **Allow to dry completely (10-15 seconds) until it feels smooth to the touch.** Skin protectant helps to further enhance the adherence and holding power of the anchor pad to your skin.



Press

3. Align anchor pad so blue directional arrows point toward catheter insertion site.

4. Sliding Posts (if the posts on the StatLock® device retainer slide back and forth) Place suture hole in catheter wing over first post, then slide catheter to capture second post.



Fixed Posts (if the posts on the StatLock® device retainer do not slide back and forth or say do not move from side to side) Place suture holes in catheter wings over fixed posts.

5. Using thumbs support undersurface of anchor pad and catheter while closing retainer doors. This prevents you from pushing down on your skin.



Peel & Place

6. Peel away paper backing from anchor pad, one side at a time, (like applying a bandaid), then place on skin.

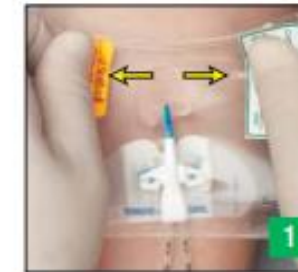


7. Apply transparent dressing over catheter insertion site and/or StatLock® device anchor pad as instructed by your health care provider.

8. Apply both dressing change labels provided.

Catheter Secured

The StatLock® PICC Plus stabilization device should be monitored daily and changed if the pad is lifting, at least every 7 days.



Dissolve

1. Remove transparent dressing using "stretch technique." Apply alcohol on top of the plastic doors and edges/corners of the transparent dressing. With one edge on each side loosened, stretch in each direction by pulling the dressing horizontally across catheter to remove. Always start at the distal edge of dressing and work toward catheter to limit movement.



2. First lift edge of anchor pad using 3-4 alcohol pads by stacking together and squeezing alcohol onto skin and working under edge of pad. Then continue to stroke undersurface of pad with alcohol to dissolve anchor pad away from skin. Be sure to work underneath the pad and again squeeze the alcohol for easy removal. Pad should lift from skin. **Do not pull or force pad to remove.**



Disengage

3. Fold adhesive anchor pad underneath on both sides so it sticks to itself.



4. Stabilize catheter with gloved finger while holding the StatLock® device. Next, use thumb of opposite hand to gently lift retainer door from behind while pressing down with index finger as shown. Reposition hands and repeat process to open second retainer door.

5. Carefully remove PICC from retainer.

6. Re-apply another StatLock® PICC Plus stabilization device. Be sure to temporarily secure line by holding catheter with sterile gloved finger or sterile adhesive foam strip per health care provider's recommendations.

OR

Wing Guard



To properly dress the site, a dressing should cover the catheter exit site.

APPLICATION INSTRUCTIONS

Thoroughly clean and prepare site. Prep well beyond entire site according to facility protocol to ensure adherence. Allow to dry completely (for at least 30 seconds). Note: If the prep doesn't dry completely, the integrity and security may be compromised. A skin protectant may be used according to preference or protocol. Allow to dry completely.

Slide WingGuard under catheter hub and center hub wings over WingGuard.

Holding catheter in place, pull tab out from center to create an opening in slit. Insert first catheter wing into slit.

Repeat on other side.

Remove liner one side at a time and adhere WingGuard to skin.

Apply preferred dressing over the site as usual.

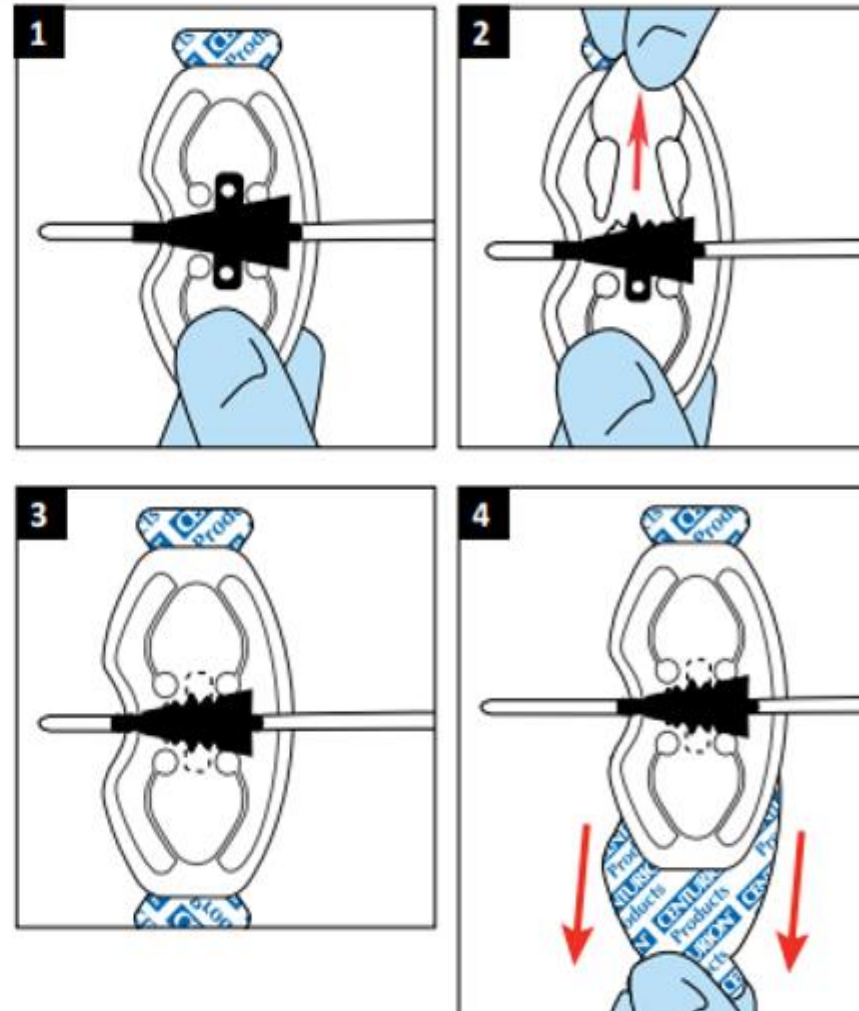
REMOVAL INSTRUCTIONS (not shown)

Remove dressing.

Optional: Apply sterile tape strip to catheter tubing to help stabilize catheter prior to removing WingGuard.

While stabilizing the catheter, pull WingGuard tab out from center to create an opening in slit to release catheter hub wings from device.

Peel WingGuard slowly off skin, away from exit site.



https://www.iskushealth.com/wp-content/uploads/2018/04/WingGuard-IF-leaflet-LGRS03.10.17.1.SJM_.pdf

Grip Loc

• [grip-lok-universal-picc-catheter-securement-device-user-manual.pdf](https://www.healthproductsforyou.com/grip-lok-universal-picc-catheter-securement-device-user-manual.pdf)
([healthproductsforyou.com](https://www.healthproductsforyou.com))



Open the top fabric over-strap and remove the inside release liner. Slide the Grip-Lok under the catheter while centering the hub above the adhesive area.



Secure the fabric over-strap on the catheter and press around and on top of the catheter and lumens to firmly attach the adhesive.



STEP 3
While holding the Grip-Lok and catheter in place with one hand, remove the bottom release liner from one side and adhere to skin.



STEP 4
Then, remove the other bottom release liner and secure that side to the skin. Gently press down around the edges and on the surface of the Grip-Lok to ensure the adhesive connects to the skin and catheter.



<https://securacath.com/clinician-resources/placement-removal-procedures/>

SecurAcath is placed when PICC is placed, and not changed until PICC is pulled



•Removal

- Lift the SecurAcath from the patient
- Grip the HOLD tab with thumb and finger of one hand to stabilize the wings of the SecurAcath
- Pry upward at the edge of LIFT tab with the other hand to release cover from base (Like opening a can of soda).
- Avoid twisting the base while removing the cover. Twisting moves the feet below the skin and will be uncomfortable for your patient.
- Remove the catheter – do not use excessive force
 - Hold pressure at site to achieve hemostasis



3M PICC PLUS

<https://multimedia.3m.com/mws/media/8725630/picc-cvc-securement-device-system-application-and-removal-guide.pdf>

Device, Dressing, Tape Strip Application Instructions

Minimize catheter manipulation during application.



1 Before placing the securement device on the skin, orient the device with arrows pointing toward the insertion site.



2 Place single-, double- or triple- lumen PICC or CVC catheters into device and weave lumen(s) under the single plastic arm.



3 Remove the liner of the attached tape strip and secure lumen(s) to the device base.



4 Position device on skin at the desired location. Pull and remove liner from one side of base to expose adhesive while holding the device in place. Pull and remove liner from the other side of base.



5 Apply pressure to the device base to establish good adhesion to the skin. Apply the Tegaderm™ LV, Advanced dressing following steps 6–10.



6 Peel the liner from the dressing, exposing the adhesive surface.



7 Place the dressing so the transparent film covers the insertion site and the border of the dressing covers the plastic base of the device. Do not stretch dressing during application. Mechanical skin trauma may result if the dressing is applied with tension.



8 Apply firm pressure on the dressing, including the edges, to enhance adhesion to the skin.



9 Slowly remove the frame while simultaneously applying manual pressure to the dressing edges.



10 Smooth the dressing from the center toward the edges using firm, but gentle pressure to enhance adhesion.



11 Remove the liner from the sterile securement tape strip.



12 Grasp the non-adhesive tab of the securement tape strip, and bend slightly with thumb.



13 Lift the catheter lumen(s) and apply the notched end of the securement tape strip under the catheter lumen(s) and over the dressing edge. Push the tape strip notch forward, abutting up against the catheter lumen(s). Apply pressure on the securement tape strip to enhance adhesion.



14 Slowly remove the frame from the securement tape strip while smoothing down the edges.



15 Document dressing change on the documentation tape strip according to facility protocol. Place the documentation tape strip on top of the dressing over the catheter lumen(s). Apply pressure to enhance adhesion.

PICC Plus Removal

Device, Dressing, Tape Strip Removal Instructions

Minimize catheter manipulation during removal.



1 Lift catheter lumens, exposing the notches of the perforated tape strip. Gently pull apart the perforated tape strip.



2 Lift the catheter lumen(s) with one hand and place gloved index finger on the base of the device. Utilizing the low and slow removal technique, slowly start removing the tape strips and dressing, as one layer, toward the insertion site.



3 When the catheter hub is exposed, move your gloved finger to secure the catheter hub and continue to remove the dressing until the device is uncovered. Leave the remainder of the dressing in place over the catheter insertion site. Avoid skin trauma by peeling the dressing back, rather than pulling it up from the skin.



4 Remove the device tape strip from the catheter lumen(s).



5 Use a gloved finger to stabilize the catheter hub and gently remove the catheter lumen(s) out from under the plastic arm of the device.



6 Secure the catheter with one hand and use your other hand to remove the device from the patient's skin.



7 Stabilize catheter with a sterile tape strip or a gloved finger and carefully remove the remainder of the dressing over the insertion site using the low and slow removal technique.

Supplies Needed for

CVC/PICC Dressing Change



- Non-sterile gloves- to remove old dressing
 - Needleless connector for each lumen
- Heparin Flush or other lock flush (e.g. Ethanol)
 - 0.9 % 10 ml normal saline flush – at least 2
 - Trash Receptacle
 - Biopatch – may be separate or in kit
 - If dressing is CHG impregnated a Biopatch is not needed.
- Adhesive securement device (e.g.StatLock, GripLok, Winguard)- may be separate or in kit
 - Heparin flush or other lock solution as ordered (e.g. Ethanol)
 - 10mL 0.9% normal saline x 2
 - Wastepaper bag / bin
 - Central Line Kit to include:
 - Mask – may include one or two
 - Plastic backed protector sheet
 - Sterile gloves – may include one or two
 - Tape
 - Tape Measure
 - 70% alcohol and/or 2% / 70% chlorhexidine/alcohol impregnated swabs and/or Providine
 - Skin Prep (not in every kit)
- Large transparent semi permeable dressing (e.g.Tegaderm, Opsite IV 3000, Sorbaview, PICC Plus CHG)
 - If dressing is CHG impregnated a Biopatch is not needed.
 - Heparin flush or other lock solution as ordered (e.g. Ethanol)
 - 10mL 0.9% normal saline x 2

Link to HHC Dressing Change Policy in Schoox

<https://www.schoox.com/academies/library2.php?acadId=1861895855&id=3277639>



1. **Perform** hand hygiene.
Don PPE if required.



2. **Measure** external catheter length.
Compare with insertion measurement.



3. **Perform** hand hygiene
Don non-sterile gloves



4. **Remove** dressing.
Apply adhesive strip if required.



5. **Remove** stabilisation device.



6. **Remove** gloves.
Perform aseptic handwash.

Tip: Apply a small piece of tape over PICC line to hold in place while cleaning site to prevent movement.



7. **Don** sterile gloves



8. **Remove** chlorhexidine impregnated sponge.
Discard forceps.



9. **Disinfect** insertion site with sterile 2% chlorhexidine in 70% alcohol.
Allow to dry.



10. **Apply** chlorhexidine impregnated sponge.



11. **Apply** stabilisation device.



12. **Cover** with transparent semi-permeable dressing.
If adhesive strip used remove now.

Note: Not all kits include forceps.



13. **Remove** needleless connector(s)/bung(s).



14. **Scrub** lumen(s) & **apply** new connector(s)/bung(s)
Flush lumen(s)
Write date on dressing.



15. **Remove** sterile gloves



16. **Perform** hand hygiene



17. **Measure** external catheter length.



18. **Perform** hand hygiene
Document procedure.



Dressing Change Video Links

<https://www.schoox.com/academies/library2.php?acadId=1861895855&id=3400076>

<https://www.youtube.com/watch?v=pjBPuAULXpM>

<https://www.youtube.com/watch?v=37d3wVuIWcw>

Videos are to be used as a reference and are NOT a replacement for HHC policy.



Types of Dressings



3M Dressing with CHG



IV 3000



Sorba View Ultimate



Infection Prevention Discs (i.e. BioPatches)

Although they are very commonly used, infection prevention discs, the BioPatch brand being the most common.

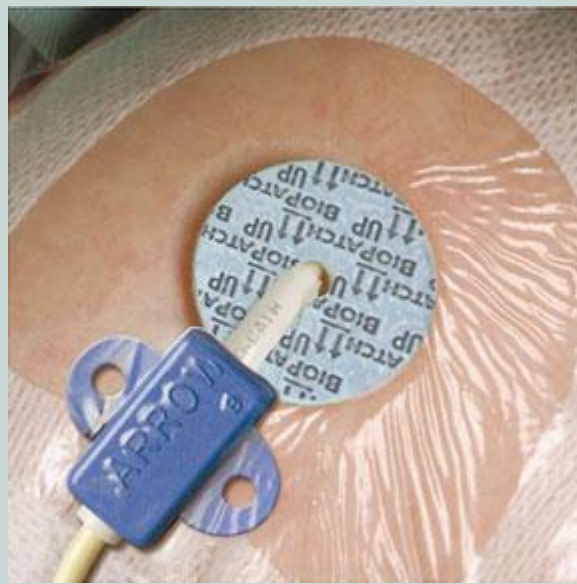
NOT required for all lines.

Most of our vendors send these but there are a few who reserve them for a particular population of patients deemed to be at an increased risk for infection (i.e. TPN, Pediatrics, etc.).

If you are seeing a patient and they do not have these in their supplies (especially if they have one on their current dressing), let us know and we can confirm if it was a delivery oversight or if their Pharmacy does not provide them.

Link to Biotpatch in Schoox

<https://www.schoox.com/academies/library2.php?acadId=1861895855&id=3413335>



Alcohol Impregnated Caps (i.e. Curoso Caps)



These caps come in different colors...green, white, orange, etc. depending on the brand. "Curoso" is a commonly used brand but not the only one.

They are impregnated with alcohol, screw on to the end of the needleless connector/microclave of central venous catheters, and serve as an additional measure for infection prevention.

They are NOT required. In the home setting, most Pharmacies do not provide these or reserve them for patients deemed to be at an increased risk of infection (i.e. TPN, Pediatrics, etc.).



We should be teaching patients to scrub the hub with an alcohol swab and allow it to dry as has always been the standard for line care.

If the patient inquires about them, you can simply let them know that they are an additional infection prevention measure used in hospitals but assure them that they are not required for their line to be properly cared for.

**If your patient does have these in their supplies, be sure they realize that each cap is for one-time use. Once they remove it, it should be trashed, and a new one placed.



Link to Curoso Caps in Schoox

<https://www.schoox.com/academies/library2.php?acadId=1861895855&id=3413472>

Blood Return



- **DO NOT teach patients to check for blood return.**
- If the line flushes well, is still secured at its normal location, with no other signs of line complications (i.e. pain), they can proceed with dosing.
- **The nurse should check for blood return at the weekly dressing change and lab visits.**
- When you are with your patient for their weekly visit, please let us know if you are unable to get blood return and document it. We will inform the Pharmacy/MD and they will decide if we need to take any additional steps (i.e. Cathflo, etc.).
 - Not all pharmacies send Cathflo
- If seeing a patient for labs and you are unable to obtain blood from PICC, Please draw labs peripherally. If unsuccessful after 2 attempts, reach out to Clinical @Teamhelp-Clinical @TeamHelp-CareCoordination for guidance.

Surgilast Gauze Stocking



This is the tubular elastic netting that can be used as additional securement for line dressings and helps to keep them in place.

It is nice to have but they are **NOT required**, and most Pharmacies do not stock it.

If your patient really needs this for special circumstances, you can let us know, and we will see if their Pharmacy provides it or not.

DO NOT tell your patient that they must have this or instruct them to call their Pharmacy and ask for it.

One "old school" solution to this is to take a clean tube sock, cut out the toe, and use it for this purpose.



Documentation

- Always document PICC or CVC site assessment with each visit
- Any redness, drainage, odor, swelling, if there is blood return, flushes easily?
 - Length from insertion site in cm (ie: 3 cm)
- If length from insertion is different from your previous visit, send a message to both @Teamhelp-Clinical and @Teamhelp-CareCoordination. “Mr. Jones PICC is at 6cm and last week it was at 3cm, flushes well, no swelling noted”
 - Arm circumference in cm (ie: 28 cm)
 - Your note might look like...
- “Dressing clean, dry, intact upon RN arrival, PICC line/CVC dressing changed using sterile technique, site within normal limits, no drainage, redness noted, site cleaned with alcohol swab/CHG swabs, skin prep applied, STAT lock applied, biopatch applied, IV 3000 applied. Dressing dated/initialed with this RN initials.”
 - Link in Schoox for PICC line measurements
<https://www.schoox.com/academies/library2.php?acadId=1861895855&id=3272644>

Vitals



- HELMS HOME CARE VITALS PROTOCOL
 - Obtain baseline vitals prior to medication administration
 - Obtain vitals 15, 30, 45, and 60 minutes into the infusion
 - After 1 hour, obtain vitals hourly (2 hrs, 3 hrs, etc.) and each time the infusion rate is changed
 - Obtain post-infusion vitals (after the infusion is complete)



Clinical Supervisors are in the
office
Monday-Friday 8:30 AM-
4:30 PM

**Any messages sent to Clinical
Supervisor outside of hours
above will be addressed on the
next office day**



After-hours, PLEASE use the HHC After-
Hours Ticket/Request form.

[https://forms.monday.com/forms/139d98db8
b6a88cfac13a8dbogfcabe7?r=use1](https://forms.monday.com/forms/139d98db8b6a88cfac13a8dbogfcabe7?r=use1)

When reaching out via Teams, be sure to use
both of the following tags:

@TeamHelp-Clinical

@TeamHelp-CareCoordination

This will get your message seen by all
office/clinical staff who are logged on Teams
at the time.

***Messages sent without the proper tags will
go unseen. ***

If you have any questions, Please reach out! We are here to help!!

Thank you for attending

Brittany and Karen
Clinical Supervisors



Thank you