

Education Checklist

- ☐ Watch Get Well Network Videos on CVC care
- ☐ Review handout on CVC care
- ☐ Attend CVC class in the Family Resource Center
 - Thursdays 12pm-2pm (English), 2pm-4pm (Spanish)
- ☐ Each caregiver demonstrates proficiency with CVC care
 - Flushing, S-A-S-H, dressing & cap change
- ☐ Vendor & pump training
- ☐ Complete 24-48 hours (decided by medical team) total care of patient

This is what is taught to caregivers in the Family Resource Center CVC Class. Please use this as a guide when teaching at the bedside. Do not print and give to your patients and families.

Goals for Home Teaching

- Safe effective care, infection control should be goal
- Ensure families are confident, comfortable
- Consistent teaching is key to prevent confusion
- The class is just the start. Mastery of care is the clinical nurse's responsibility at the bedside.
- Home care is different than hospital care.

Tips to Remember

- Teach proper handwashing
- Hand washing/hand sanitizing is key in between tasks
- Clean area to work on, free of pets/other children

- Turn off overhead fans, close windows, A/C during care/connecting to the line.
- Encourage making “kits” for supplies, including emergency kits
- “If in doubt, throw it out” if unsure if something got contaminated.
- Have caregivers watch the CVC video in GetWellNetwork
- Teach caregiver to do daily flush after new cap placed each week
- Dressing change/cap change day schedule: Have family give the bath, change CVC dressing, change cap, perform daily saline & heparin flush

Home Care Instructions

What **NOT** to Teach

- Use of Gloves
- Use of Sterile Fields
- Drawing back blood to check patency
- Priming our hospital lines
- Using our hospital pumps (pump teaching done by the vendor)
- Priming the cap during cap change-we have them do their daily flush after they place the new cap.

After FRC Class Teaching

- Practice needs to be done at bedside with RN supervision
- Use this Standardized Teaching Plan for consistency in teaching
- Add “Plan” in Patient Education to ensure continuity; note what is next step
- Be consistent: Safety, Infection Control
- Go to Discharge Menu→Education Notes and see if a note has already been started.
- For patient education, don’t start a new note if one is already started. Just add to the existing note. Add “rows” at the bottom of the existing note if more space needed.

- Make an emergency kit for your patient to take home: blue clamp, gauze, 2 alcohol pads, silk tape

CVC Class Objectives

- Identify the type of central venous catheter they will be providing care for
- The purpose and location of the CVC
- CVC line care
- Flushing and giving medications
- Common problems and problem solving
- When to contact health care provider
- Hands-on practice

What is a CVC?

- Central Venous Catheter (CVC)
- Types: Broviac, Hickman, Pheresis MedComp(>10kg) & Pheresis Power Line
- Soft, long lasting catheter
- Either single or double lumen
- Purpose:
 - to give medications, fluids, blood or nutrition
 - to draw blood samples
- Check the CVC Insertion Note for

Central Line Info for Home

- Tunneled, cuffed & located in the chest
- Dressing changes done at home by caregivers if cuff intact
- Assess exit site each dressing change
- Broviac-single or double lumen, daily heparin only, no saline
- Hickman-double lumen, daily heparin only, no saline
- Pheresis Medcomp (>10kg)-double lumen, daily normal saline & heparin
- Pheresis Power Line-double lumen, daily heparin only, no saline

- Check CVC Insertion note if unsure what type of line it is

How is the CVC placed?

- CVC lines are placed in surgery
- General anesthesia will be used
- Child Life may assist in coping

Where is the CVC placed?

- Placed through a vein in the chest
- End of CVC is in the large vein near the heart
- X-ray confirms correct placement
- May be sore
 - May use mild pain medicine (Temperature check will be required prior to giving pain medication)
 - May be taught range of motion movements to help soreness go away
 - Homework for CVC care at home (RN to fill out last page of caregiver handout)

Parts of the CVC

- Dressing-important it remains clean, dry & intact (prevent infection, accidental removal)
- Biopatch-used to clean the skin to prevent infection
- Catheter-either single or double
- Clamp-always important to keep closed when not using, usually dirty (wash hands after touching)
- Hub-cap is attached to the hub; it is cleaned during a cap change
- Cap-needs to always stay on and tight, cleaned each time it is used
- Cuff-used under the skin to help keep the line in & keep germs out.

- Know what the cuff looks like in case you see it during a dressing change & instruct caregivers what to look for.

Risk of Infection

- Increased risk of infection due to opening in skin but there are many things we can do to help decrease the chances of getting an infection.
 - **HANDWASHING** before you get started-30 seconds with soap and warm water, paper towel to dry and use paper towel to turn off faucet. Don't use hand towels in the bathroom or kitchen to dry your hands.
 - **HAND SANITIZER**-to be used in between tasks when you think your hands are dirty (don't be shy about using this...a lot of hand sanitizer use=clean/safe hands)
 - Weekly sterile dressing change & cap change to be done by a trained caregiver at home or clinic nurse.
 - Change the dressing if it is dirty, wet or loose
 - Caps must be cleaned with every use
 - CVC will be removed surgically in the hospital when no longer needed

Hygiene

- Good hand washing-30 seconds scrub with soap and warm water, use paper towel to dry hands, then turn faucet off with paper towel. Friction, not soap, kills germs.
- Remove artificial nails-germs can hide under the nails
- Gloves may be needed if cuts on hands or rash/breakdown on hands
- Remove nail polish and gels during treatment.
- For the child:
 - Daily shower
 - Oral care twice a day (caregivers should brush their teeth 2x/day too)

- Change bed linens at least weekly (earlier if visibly dirty)

Environment

- Choose the cleanest area in your home for CVC care
 - Avoid bathroom and kitchen
 - Turn off air conditioning, ceiling fans and close windows just while connecting the line/during care.
 - Keep pets and other children away while connecting/during care
 - Use a non-porous surface for CVC care (ex: new plastic cutting board or tray)
 - Clean with antibacterial wipes, soap and water, vinegar or alcohol wipes before and after each use
 - Let **air dry** (this part of the process is really important-this is where germs are killed)
 - Place clean plastic cutting board/tray back in box with supplies after use

Supplies

- Supplies will be delivered
- Create supply kits (we give labels for the kits in class)
- Give supplier at least a 3-5 day notice if more supplies needed
- Storing CVC supplies
 - Avoid kitchen and bathrooms
 - Store supplies in a plastic container with a lid
 - Store in clean, dry space
 - Keep out of reach of children
 - Some medication may need to be refrigerated, keep separate from food items (in a ziplock bag or plastic bin inside fridge)

Safety Tips

- Keep CVC dressing clean, dry, intact

- No swimming or submerging site in water
- Showers ok with CVC covered (we recommend Saran wrap or Glad Press 'n Seal plastic wrap & tape edges)
- Place washcloth over the line, use Press 'n Seal™ wrap and tape edges.
- Do not reuse supplies.
- Only use medical tape.
- Keep CVC covered with a shirt or onesie.
- Two caregivers may be needed to give meds (small children).
- Inform school nurse if your child has a CVC & will be attending school
 - Carry an emergency kit (RN to make for caregiver before going home)
 - gauze, alcohol, blue clamp, tape

Problem Solving

Refer to the table at the back of the CVC handout (found in APPLE) for more info.

Infection

- Check skin around CVC at least once a day
- Signs of infection: fever, chills, soreness, redness, swelling, pus at site
- Take child's temperature (If oncology, take temperature before giving acetaminophen; daily temps may be necessary)
- Call the doctor or go to the ED

Tape allergy

- Red skin or rash around dressing
- Irritated skin under dressing, may be itchy
- Notify nurse to check skin
- May need a different type of tape/dressing

CVC will not flush

- Check line, it may be clamped, twisted, or bent
 - Move clamp location slightly with each use to prevent breakdown of the line
 - Be sure to only clamp on thick part of catheter (usually marked with arrows)
- Line may be clotted
- NEVER USE FORCE
- Call the doctor or go to the ED

CVC is leaking

- Make sure cap is tightened
- Check line for tears
- Be sure to keep vulnerable (“stress points”) connections under the dressing
- If you find a leak:
 - Wrap in sterile gauze
 - Use blue clamp to clamp line or fold line in half and tape to skin
- Call the doctor or go to the ED

What if the CVC comes out?

- If partly out:
 - DO NOT PUSH BACK IN!
 - Tape in place, come back into the hospital to check placement. Do not use!
- If completely out:
 - Put sterile gauze over the site and secure with tape
 - Put pressure until bleeding stops
- In both cases call the doctor or go to the ED
 - Place line in a ziplock and have them bring it with them to the hospital.

Cap comes off

- Never replace dirty cap
- Clamp line right away
- Wash hands and clean hub with alcohol pad for 20 seconds, let it dry for 10 seconds.
- Cover hub with sterile gauze and tape to secure
- Perform cap change as soon as possible
- Call doctor/nurse or go to the ED

CVC Flushing

- Flush the CVC at least once a day or before & after medication.
 - Preferably in the morning so problems can be fixed early
 - If your child has 2 lumens, make sure to flush both daily
- Saline flush 10 ml (5ml if infant/small child, medical team to decide)-Daily for MedComp only; saline flush for all lines if giving medications at home.
- Heparin dose based on weight
 - Heparin flush 30 units/3ml child <12kg/26lbs
 - Heparin flush 300 units/3ml for >12kg/26lbs
- Heparin syringe comes with 5 ml and only need 3 ml; need to teach them to push out 2ml each time they give heparin **(all lines)**.
- Broviac, Hickman & Pheresis Power Lines do not require saline and are flushed with Heparin only! **(Exception: Normal saline is needed if patient on TPN or receiving medication through the line)**

S-A-S-H: A way to remember the steps of giving medications

S stands for Saline

A stands for antibiotic or administer medication

S stands for Saline flush

H stands for Heparin flush

FLUSHING THE CVC-Daily Flushes

1. WASH HANDS
2. Clean the work area
3. Gather supplies and open packages, place them on clean work area
4. Open clamp
5. Use hand sanitizer
6. Clean cap with alcohol for 20 seconds and air dry for 10 seconds (20/10)
7. Without letting go of the CVC, pick up the **saline** syringe and with the cap on, pump the barrel of the syringe
8. Take off the cap and push the air gently out of the syringe
9. Attach the syringe, flush with 10ml saline (**Pheresis MedComp only**), and remove empty syringe
10. Use hand sanitizer
11. Clean cap 20/10 and repeat above steps with **heparin (All lines)**
 - a. Reminder: discard 2ml of heparin prior to flushing (only 3ml needed)
12. Repeat steps for 2nd lumen (if applicable)

CVC DRESSING CHANGE

- Wash hands for 30 seconds, dry with a paper towel and turn the faucet off with the paper towel.
- Gather supplies for dressing AND cap change (done every 7 days or if dirty, loose or wet).
- Clean work surface and let air dry.
- Open packages, leaving all supplies in their packaging.
- Use hand sanitizer
- Start removing dressing (if 3 parts-remove belt, pants then shirt)
- Peel dressing from the outside towards the center (Biopatch), taking the Biopatch off last with the dressing.
- When the dressing is off, look at skin for signs of infection such as: swelling, redness, drainage, or pain around exit site.

- Use hand sanitizer.
- Start with ChloraPrep, cleaning for 30 seconds.
- Let dry and apply Cavilon. Do not use Cavilon where the Biopatch goes. Make a box around where the Biopatch goes and move out from there until the entire area that is covered by the dressing has been “painted” with Cavilon.
- Apply Biopatch. Tell parents to open the Biopatch at the split and “clamp” onto the line, making sure the hole of the Biopatch is over where the line comes out the body.

OR

- Place the Biopatch right over the insertion site so that when the dressing is applied, the Biopatch will lie flat on the skin.
- Do not teach parents to open the split in the Biopatch and wrap it around the line. This could cause a higher risk of pulling the line out when removing the dressing.
- Lastly, teach them to apply the dressing
 - If using Tegaderm, teach them to “taco” the dressing. Do not stretch.
 - Lay the dressing down, keeping the Biopatch and looped line in the window, pressing down in the center on the Biopatch and then work outwards. “Stress points” (part where the thin part meets the thick part of the line) need to be under the dressing too.
 - Seal thoroughly.
 - Use a new Cavilon and wipe edges of dressing.

CVC CAP CHANGE

- Wash hands or use hand sanitizer.
- Open packages, leaving supplies in their packaging.
 - Open gauze, without touching inside of the package. Peel and separate the two pieces of gauze in the package. Place a piece of gauze on each side of the wrapper.
 - Place an alcohol pad on top of each piece of gauze.

- Remove the plastic cover on new cap and place back in packaging without touching the inside of the package or end of the cap.
- Use hand sanitizer.
- Pick up first gauze and alcohol pad. Clean where the hub and cap meet for 20 seconds and remove the old cap.
- Pick up second gauze and alcohol pad.
- Clean the hub of the line for 20 seconds and let it dry for 10 seconds.
- Pick up cap carefully and place new cap on the end of the line.
- Perform daily flush.
- Repeat the steps for the 2nd lumen (if applicable)

Feel free to contact the nurses in the Family Resource Center for any questions or concerns (x17698):

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