

2025

Central Venous Catheter (CVC) in the School Setting

“It’s their lifeline”

Andria Redman, BSN, RN, NCSN, AE-C

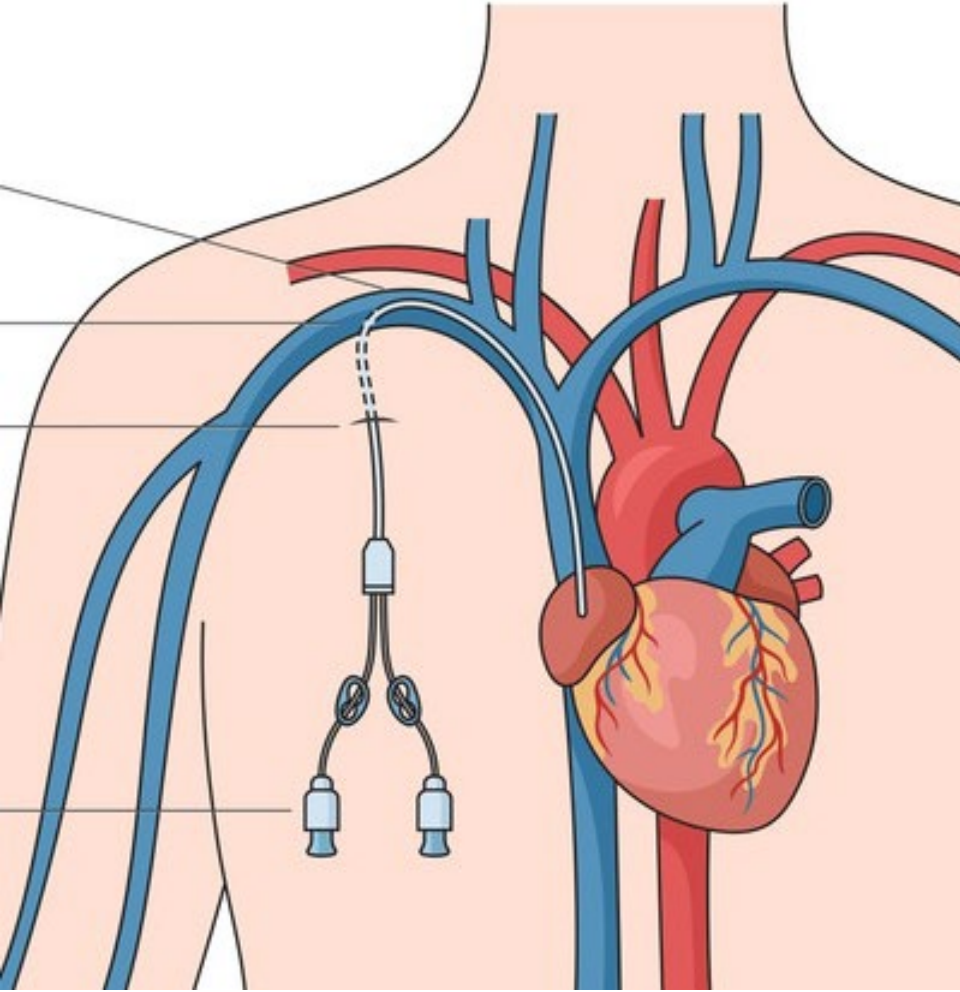


CVC's in the School Setting

- 1 What is a central venous catheter and why would one be needed
- 2 Types of central lines
- 3 Considerations for school, school kits, and daily checks
- 4 Emergencies in the school
- 5 CLABSI risk (central line-associated bloodstream infection)



Central venous catheter



What is a CVC?

- It's a long-term use IV
- Placed in the Superior Vena Cava to deliver medicine and fluids to the heart, so it can be moved to the rest of the body quickly.
- It can also be used to draw blood
- Can be placed sedated or while awake.
- The CVC goes straight into the heart, so, infection prevention is key!

Reasons for a CVC



Long term access for medications, chemo



Highly irritating meds/fluids/TPN & lipids



Poor peripheral access



Common Types of CVC's

1

Hickman/Broviac

2

Implanted port

3

Peripherally
Inserted
Central
Catheter
(PICC)



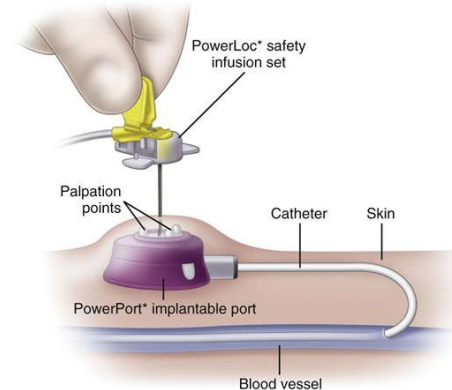
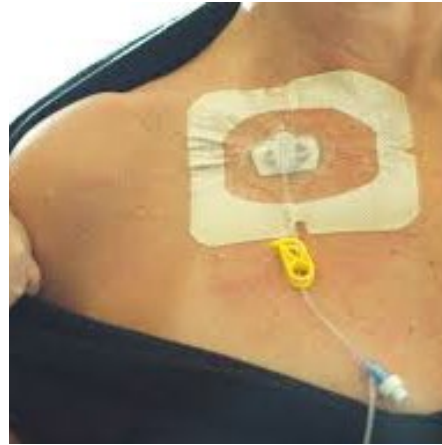
Hickman/Broviac

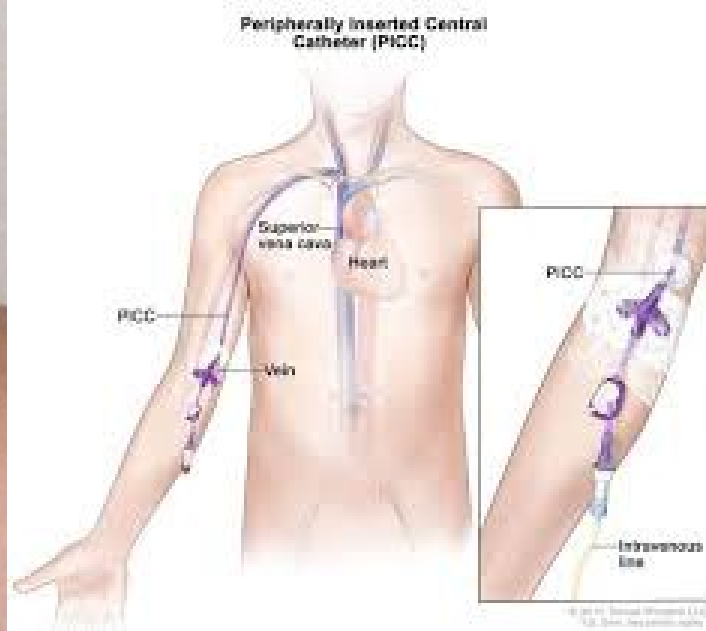
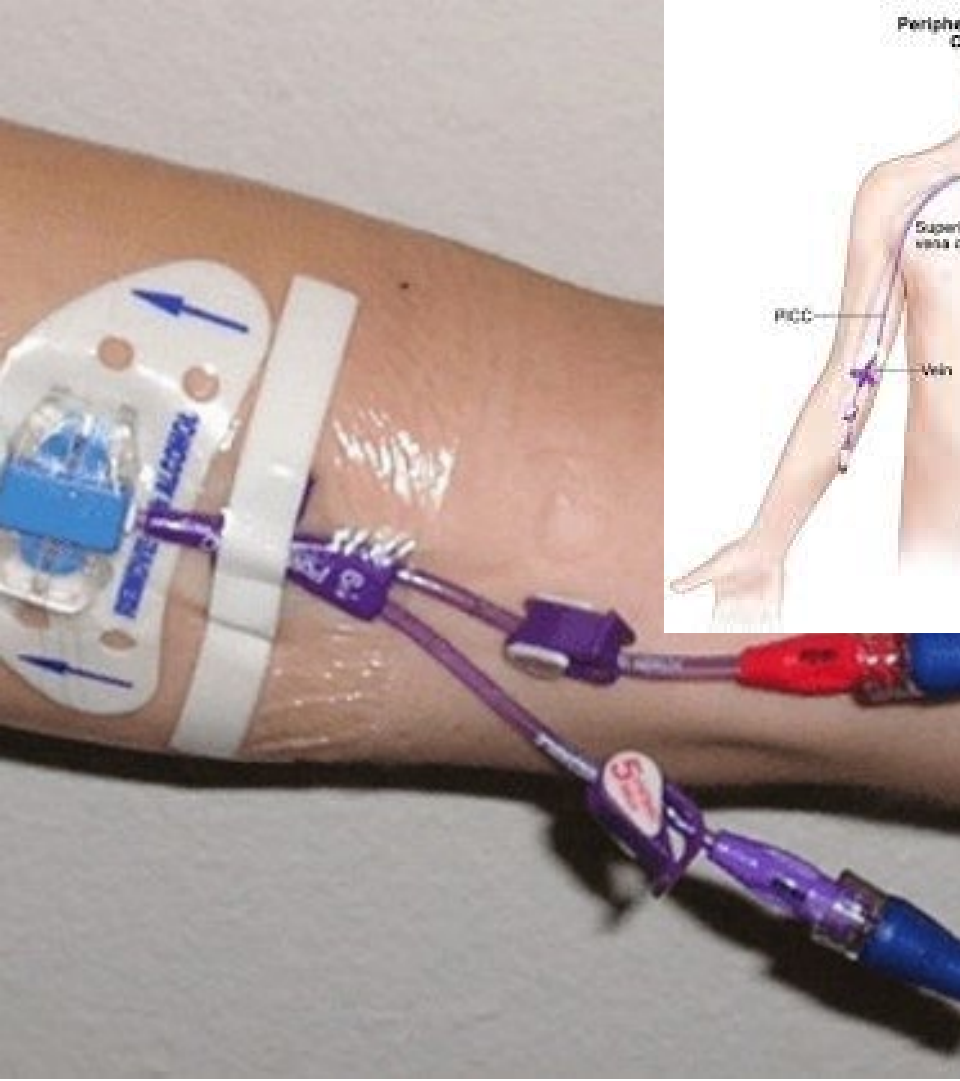
- Placed by surgery while sedated
- The difference is bore size, Broviac has a smaller gauge
- These CVC's are cuffed-goal is to stay in for years-body creates scar tissue
- Can have 1, 2 or 3 lumens (separate lines in the same device)
- Need to vary clamping to not create weak spots and note the designated clamping areas



Implanted port

- Minor surgical procedure
- Placed in chest, arm, or abdomen
- Single or double port
- When not in use = un-accessed
- May see sutures or steristrips if newly placed





PICC

- Peripherally inserted above the elbow
- Can be placed at the bedside with guided ultrasound, local and mild sedative
- Sutured in place or secured with device such as a STAT lock

Considerations for School

Why was it placed, what type of line, when was it placed, how long it will be in place, and any other special considerations?

Providers may have restrictions, however, “let kids be kids” and be aware they have a line. Kids with PICC lines should not be allowed to hang from monkey bars or lift over 10#s.

How far away from closest ED? Concern would be for quick intervention for potential line infection or septic shock. (Temp of 100.4 or higher or signs of site infection)

Staff should not do any routine cares including: dressing changes, cap changes, infusions, or flushes



School Emergency Kit

This emergency kit should be with the student at all times

- Extra Tegaderm
- Plastic clamp (NEVER a metal clamp)
- Sterile 2x2
- Clear tape



Daily Check

Wash	When touching supplies or line/caps, you must wash with soap and water with friction for at least 15 seconds and wear gloves
Verify	All supplies are in the emergency school supply kit
Check	Check temperature-100.4 or higher must be seen ASAP. If parent cannot get there within 1 hour, call 911. Concern is line infection or septic shock
Inspect	Check all caps, are they loose? If they are, tighten them



Daily Check Continued

Inspect	<p>Check all clamps, are they clamped? If not, clamp.</p> <p>Are the clamps in the correct spot? If not, move them to appropriate spot and re-clamp. (Hickman/Broviac)</p>
Inspect	<p>Check all lines, are there any signs of leakage or cracking? If so, place plastic clamp between child and leak/break. Call family to pick up and take to the ED.</p>
Inspect	<p>Look at site itself</p> <ul style="list-style-type: none">• Are there any signs of infection; swelling, redness, or drainage? If so, call parent for immediate f/u or call 911. How does the dressing look, is it wet or dirty? If so, it needs changed ASAP, contact parent.• Is the bandage secure, intact, all edges down? If not, apply clear tape and notify parents.





Potential Emergencies in the School

- Fever of 100.4 or higher-must be seen ASAP-could be ED or 911 if family is unable to pick up within 1 hour. Concern is a potential line infection or sepsis.
- Pain, redness, swelling, drainage at the site-must be seen ASAP, call 911 if unable to be picked up within 1 hour-this can progress to septic shock quickly.
- Swelling of chest, neck, face or arm-concern could be fluid overload, infiltrate or dislodgment.

Potential Emergencies in the School Continued

- CVC is dislodged but not fully pulled out- DO NOT reinsert-call parent ASAP, child needs to be seen.
- CVC falls out- immediately put pressure on insertion site with sterile gauze and put sterile dressing over it - parent must contact provider.
- If catheter is leaking-clamp catheter with plastic clamp between leak and child, call parent, child needs to be seen in the ED.
- If no cap on the end of the lumen, parents need to be contacted right away to be seen-do not put new cap on.



Note: If child has an infusion of life sustaining medication and line was dislodged or clamped and child is no longer getting the medication, call 911.



When to Call 911

Difficulty breathing
(Concern for PE,
fluid overload,
extravasation)

Very weak, limp,
too weak to stand,
pale cool skin
(shock)

Cracked or broken
CVC and can't
clamp the line to
stop bleeding

Fever 100.4 or
higher and child
can't be picked up
within 1 hour

Insertion site has
redness, drainage,
swelling and child
can't be picked up
within 1 hr.

Child has life
sustaining
medications
infusing and line is
clamped or
dislodged



CLABSI risk (central line-associated bloodstream infection)



Infection prevention is key-wash hands with friction with soap or hand sanitizer if line/cap needs to be touched. If dressing becomes wet or dirty, contact parent.



CVC's are their "lifeline", a bloodstream infection is an emergent concern



Any fever with a central line needs to be seen in the ED immediately or provider contacted-it is the highest level of urgency in CHCO.



Line should not be checked or touched in the bathroom.



Delegation/Training of Tasks

The only thing that can be delegated/trained will be the daily checks and interventions

- Supplies in emergency school kit-are they all there?
- Temperature check-100.4 is your threshold
- Caps-Are they secure? If not, tighten.
- Are the clamps, clamped and in the right spot? If not clamp or move to designated spot and re clamp.

- Line weakness or leakage-plastic clamp and notify parent
- Site-infection concern or dressing concern? Reinforce dressing and notify parent.

Don't forget to wash hands with soap and water and put gloves on before touching supplies or line!!!



Things you might see

- Alcohol caps
- Gus Gear
- Bandnet or other



Thank you!

