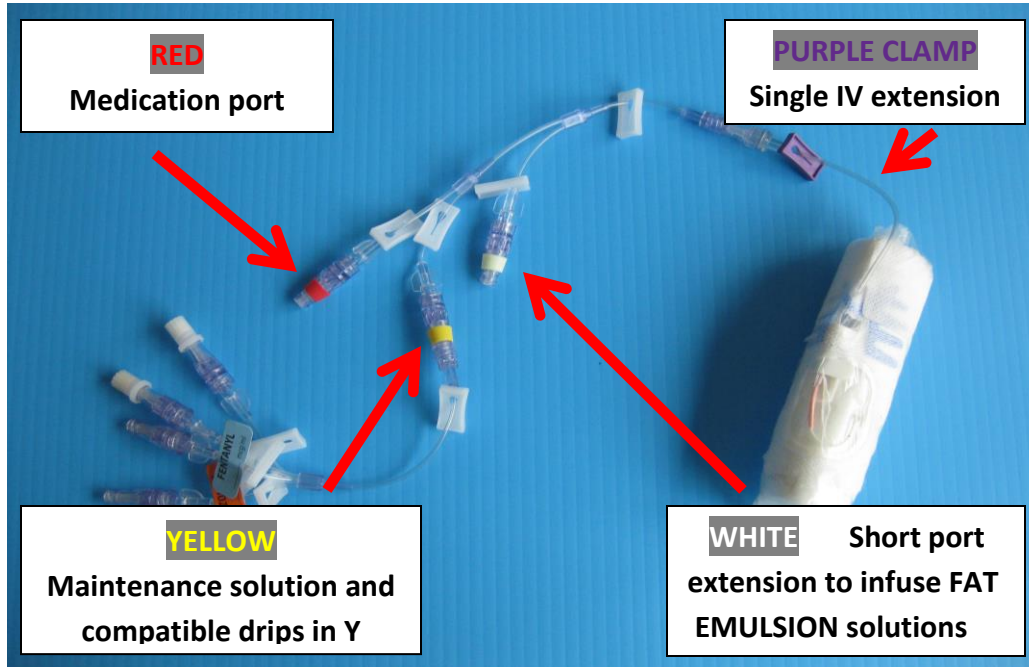


NICU - IV LINES PRACTICES



Central & peripheral line tubing set-up & Key points:

- Triple extension must be placed directly on either the single IV extension (with purple clamp) attached to the single lumen PICC lines and PIVs. Use the RED clamp lumen of double PICC 2.6Fr or Distal lumen of CVL & UVL and directly on broviacs (**DO NOT use triple extensions anywhere else**).
- Double, triple and quadruple extensions as well as maintenance tubing should be changed **q96hrs**. **REMEMBER to ALWAYS finish** priming your set-ups with your maintenance solutions.
- Fat solutions should **always** infuse in the first port (white port) of the triple extension. Use a double extension on this port if more than one fat solution. Change that double extension **q24hrs** as well as the tubing and the fat solutions themselves. Change maintenance solutions and drips including the microbore tubing **q24hrs**.
- **All meds** (push or intermittent) should always infuse via medication port when given through a central line. **Antibiotics** should always infuse through central lines **except** when inotropes, PGE or insulin infusing. However, you can & should infuse the antibiotics centrally when drips of sedation and/or narcotic are infusing (example: fentanyl, midazolam, morphine ...). Use the med port (red port) and hold any solution incompatible in **Y** with antibiotics. If you infuse a push antibiotic insure that the narcotic drips have not just been started. Other meds except antibiotics can still be infusing in PIVs when available. However, if the PIV is no longer patent, you should use your central access instead of restarting a PIV. Remember each poke increases the risk of bacteremia.
- Add a quadruple extension if drips are needed. All extensions must be primed with NS and clamped until used. An alcohol cap must be placed on all the extensions not in use. If a quadruple is already in place, you must flush **0.15ml** when starting a new drip in order to reach the junction of the main line.
- When a drip is discontinued, just clamp the port. **DO NOT FLUSH** the tubings until they are changed (q 96hrs) and condemn this port with pink tape. If extra ports needed before 96hrs change the quadruple extension.
- Alcohol IV caps placed on extensions are good for **96hrs** **BUT** they need to be replaced with a new one each time a port is accessed.
- **ALL drips** should always infuse **in quadruple** extension with the maintenance solution attached to the yellow port. **NEVER ATTACH A DRIP IN THE MED PORT**. A double extension could be considered instead of a quad if only one drip remains in "Y" with the maintenance and the probability of adding more drips is a certainty. (This is to avoid opening your set-up more than once if drips are added). Identify all drips with the appropriate stickers (ex. Fentanyl, midazolam, dopamine ...).

Procedure for tubing and solution changes:

- Ensure that the door of the patient room is closed.
- Wash hands, disinfect the metal table and place a blue pad or use tubing package for priming. Gather all supplies needed (tubings, extensions and solutions).
- Wash hands. Prime all tubings and solutions at the patient's bedside on this table. **NEVER** prime over garbage or sink!!!
- Wash hands and proceed with tubing change immediately. Remember to do a proper ***Scrub the Hub*** when changing your tubings: **Scrub 15sec & Let dry 15- 30sec. Allow to dry completely.**

Guidelines for maintaining line patency and decreasing the formation of thrombi

- ALL central line lumens **MUST** be infusing with a heparinized solution (one per lumen).
- The KVO rate for PICCs is 2 ml/h but for neonates less or equal to 1.5Kg, 1.5 ml/h is acceptable.
- The KVO rate for UVL is 1ml/h per lumen.
- The concentration of heparin in solutions should be:
1 unit/mL for neonates bigger than 1.5 kg AND 0.5 unit/mL for neonates less or equal to 1.5 kg.
- The primary lumen for double lumen lines should always infuse the fat emulsions, drips and amino acids. It is defined as the largest gauge or the distal lumen.
- The secondary lumen for double lines should be used for the intermittent meds and the minimal maintenance infusion (2 mL/h for PICCs and 1 mL/h for UVLs). It is defined as the smallest gauge or the proximal lumen.
- If the solution infusing in the secondary lumen is an amino acid solution, ADD a dilantin filter (0.2 micron) at the end. This syringe should be covered with an amber plastic but not the microbore tubing.
 - **TRANSFUSIONS:** It is permitted to infuse Blood products through all **UVLs**, Broviacs, jugular and femoral CVL. This is also true for **PICCs that are 3Fr** and greater gauge without a medical order. **EXCEPTIONALLY, with a medical order**, you could transfuse in 1.9 Fr.
 - **WITHDRAWING BLOOD:** You can withdraw blood from UVLs for all blood tests as per present MCH protocol with a medical order. This is also true for Broviacs, jugular and femoral CVL. Just remember that with each test you will discard 2ml as per the present protocol.
REMINDER For PICCs :
≥ 3 Fr PICC: ONLY blood cultures may be drawn (No other blood work).
1.9 Fr PICC: Blood cultures may be drawn **EXCEPTIONALLY** (No other blood work).
1.2 Fr PICC: BLOOD SHOULD **NEVER** be Drawn or Transfused. Even with a medical order.

SPECIAL NOTE

- **PERIPHERAL SOLUTIONS CAN BE TRANSFERRED TO OTHER PERIPHERAL IV SITES**
- **CENTRAL SOLUTIONS CAN BE TRANSFERRED TO A PERIPHERAL IV SITES ONLY IF THE OSMOLARITY (REFER TO DIETICIAN), THE CONCENTRATION OF DEXTROSE (D12.5%), SODIUM (150 MEQ/L) AND POTASSIUM (60 MEQ/L) IS COMPATIBLE WITH A PERIPHERAL SITE**
- **PERIPHERAL SOLUTIONS CAN NEVER EVER EVER BE SWITCHED TO A CENTRAL LINE SITE**
- **CENTRAL SOLUTIONS CAN NEVER EVER EVER BE SWITCHED FROM ONE CENTRAL LINE TO ANOTHER CENTRAL LINE (EX. FROM A UVL TO A NEW PICC)**