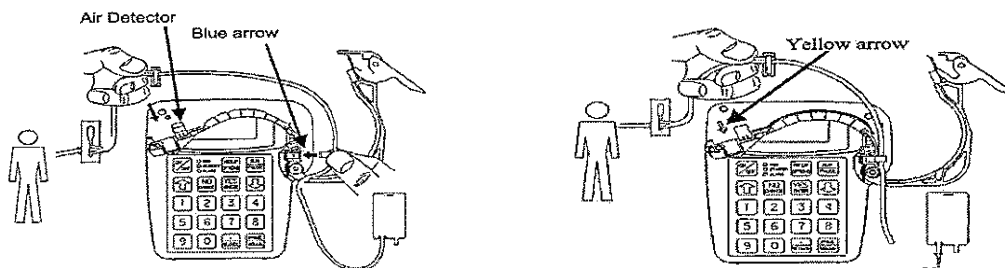


## EQUIPMENT SET UP: CURLIN EPIDURAL PUMP

Use only the Curlin® pump that is designated for epidural use.

1. Set up equipment using aseptic technique as follows:
  - 1.1 Perform hand hygiene and don procedure mask. Masks must be worn during priming of tubing, connection of tubing to epidural catheter, bag changes, medication bolus (top-ups) and at any time the system is “open” to the air. The patient may wear a mask or turn her head away from the catheter hub whenever the system is “open” to the air.
  - 1.2 Unlock the lock box around the pump.
  - 1.3 Remove epidural tubing from package, twist and remove the breakaway tab (small disc on the side of the yellow “flow stop” device).
  - 1.4 Using aseptic technique (hand hygiene and mask), spike the bag.  
**Note: Alcohol is toxic to neural tissue. If it is used to clean the connection sites on the medication bag or epidural tubing the site must be completely dry before spiking.**
  - 1.5 Remove pump from the lock-box and open the top. Insert the blue ‘tubing guide’ into the pump as indicated by the blue arrow. Insert yellow ‘flow stop’ device in the cavity indicated by the yellow arrow. Close the lever over the tubing and load the pump back into the lock-box; hand the bag in the medication compartment; close and lock the lock-box.



2. **Program the pump for a new patient** (to select what is highlighted or flashing on the screen, always press the ‘YES’ key. Selecting ‘NO/CHANGE’ will provide other options).
  - Press ON/OFF key once to turn pump on. Allow it to run through the self tests.
  - First screen defaults to ‘PROGRAM’. Use the ‘YES’ key to select it.
  - 3 options will appear. Use the arrow buttons to highlight the option you want:
    - a) ‘RESUME’ option can be used when the pump has been stopped and is being restarted using the same settings (ex. after an epidural top-up) or if changing the PCEA settings.
    - b) ‘REPEAT Rx’ option can be used if making a bag change when not changing any other settings. Scroll to ‘YES’ to repeat the prescription then ‘YES’ again to maintain current settings. The bag volume will revert back to 125 mL and the cumulative total back to 0.
    - c) ‘NEW PROGRAM’ select for new patient.
  - Highlight the ‘NEW PROGRAM’ option and press ‘YES’
  - Enter the Code **94629**.
  - Press ‘YES’ for ‘NEW PROGRAM’
  - Select ‘YES’ to erase old Rx.
  - **Set the program as follows: (note: if you use the arrow button instead of pressing ‘yes’ you will get a ‘ALERT FIELD NOT ACCEPTED’ message when completing the programming.**

- Set units as 'mLs', Press 'YES'.
- The admin route will default to 'EPI', Press 'YES'.
- Set loading dose as '0', Press 'YES'.
- Press 'YES' for 'Med Limits Off'.
- Press 'YES' for "NEXT".
- Set remainder of pump as ordered:
  - **Bag volume: 125mL**, Press 'YES'. (0.08% bupivacaine with 2mcg/mL fentanyl or 0.08% ropivacaine with 2 mcg/mL fentanyl)
  - **Basal Rate:** as ordered to a maximum of 10-12 mL/hour. Usually start at 8-10 mL/hour (range 4-12mL/hour). Press 'YES'
  - **Patient Bolus (PCEA dose): 5 mL**. Press 'YES'
  - **Bolus Interval (delay): 10 minutes**. Press 'YES'
  - **#boluses per hour** (maximum # of PCEA doses/hour): usually **4 or 5**. Press 'YES'
- Press 'YES' for 'DONE'.
- 'RUN' - Press 'NO' to review the settings. A second nurse must independently check the pump settings against the epidural orders. Press 'YES' for each setting. If you arrow down through the settings the pump will not accept the review and you will have to do it again.
- Prime the epidural line. **Prime only through the pump**. You will be required to enter the code again. To prime, hold down the 'PRIME/BOLUS' button until the fluid has reached the end of the tubing. To exit press 'YES'.
- When attached to patient and ready to start infusion, remember to unclamp the line. Place pendant in the patient's hand and provide appropriate education for PCEA. Press 'RUN' to start.
- The anesthetist will always give the loading dose for epidurals. Once the pump has all the parameters set, if not ready to connect to the patient right away, you can press 'run/pause' button. After 2 minutes to pause, an alarm will sound; press the silence key until ready to connect to patient. To continue, press 'RESUME' then 'RUN' to start the infusion.

Note: the pump continuously scrolls through various screens to provide above information. The 'Hourly Total' button (#5) can be used to obtain an hour by hour history of pump/medication use if necessary.

3. To turn the pump off, press the 'RUN/PAUSE' key followed by the 'ON/OFF' key
4. **Top-ups and bag changes:** To stop the pump temporarily so that a top-up can be administered or to change the bag, press the 'PAUSE' button. Press 'RESUME' or 'REPEAT Rx' as appropriate. (see explanations in #2)
5. **To change the battery:** The "PainSmart" pump uses 2 "C" batteries. Press 'PAUSE' then 'OFF' to turn the pump off. Slide the grey tab on the back of the pump to unlock position. Pull the compartment plate down. Pry the top (+) edge of the batteries up and out using the coin or paperclip (removing batteries from the bottom end 1<sup>st</sup> can damage the springs and cause batteries to overheat). Replace batteries and compartment door. Slide door to "lock" position. Turn pump 'ON' and select 'RESUME' setting to continue therapy.
6. **Air in Line:** If the pump alarms and shows air in line, follow pump directions.