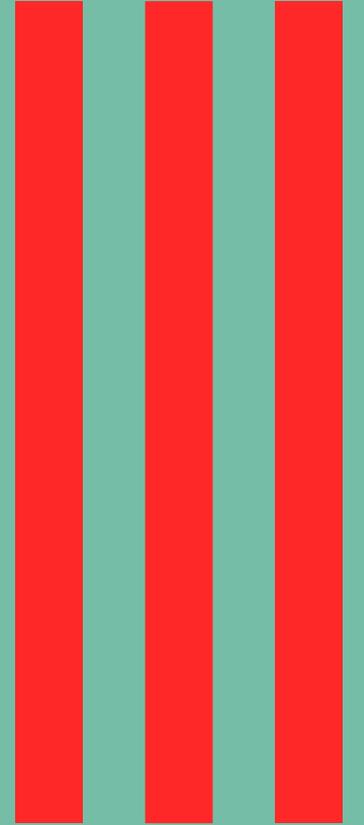
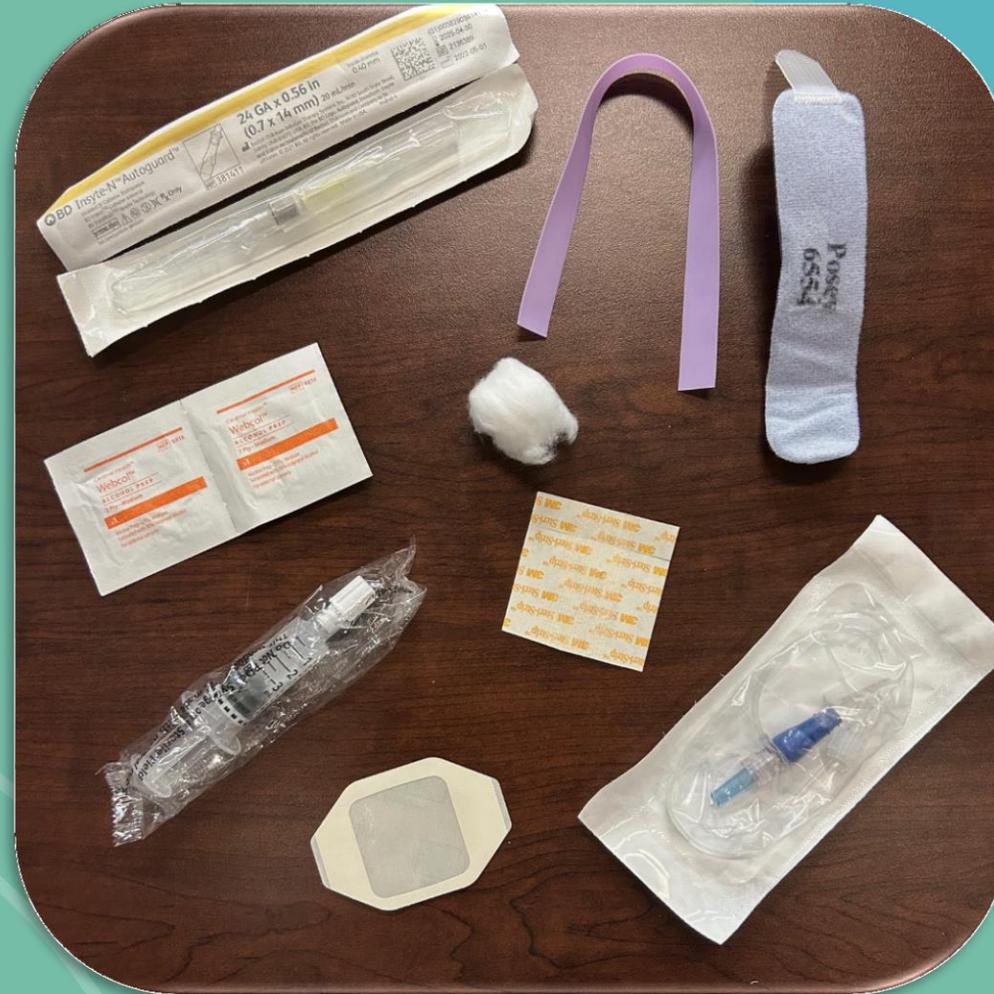


# Peripheral IV Insertion



# Supplies



# Steps for PIV Insertion

## Preparation:

- Plan for infant comfort interventions
- Gather supplies
- Prepare tape and dressing
- Apply gloves
- Disinfect skin
- Apply tourniquet PRN
- Select vein (transillumination may be helpful)
- Clean area with antiseptic solution

## Insertion:

- Select vein (transillumination may be helpful)
- Clean area with antiseptic solution
- Insert catheter
- Remove tourniquet when blood flashback is seen
- Lower angle and advance a small amount to ensure needle and catheter are in the vein
- Gently slide the IV catheter off the needle to advance into the vein

# Securing PIV

- Place ½” piece of tape over hub
- Apply additional tape to secure IV catheter and tubing
  - Don't tape over the needle insertion area to allow for observation
- While taping, periodically flush IV with small amount of NS to ensure patency
- Secure catheter by placing transparent dressing from the hub down to below the insertion site
- Use padded board if IV is over a joint to prevent flexion
- Protect skin from IV tubing injury with cotton ball or gauze sponge



# After PIV Insertion

## Documentation:

- Location
- Size & device used
- Number of attempts
- Any bruising or notable skin findings at area of insertion
- If extremity was avoided & why
- Hourly appearance and fluid volume infused

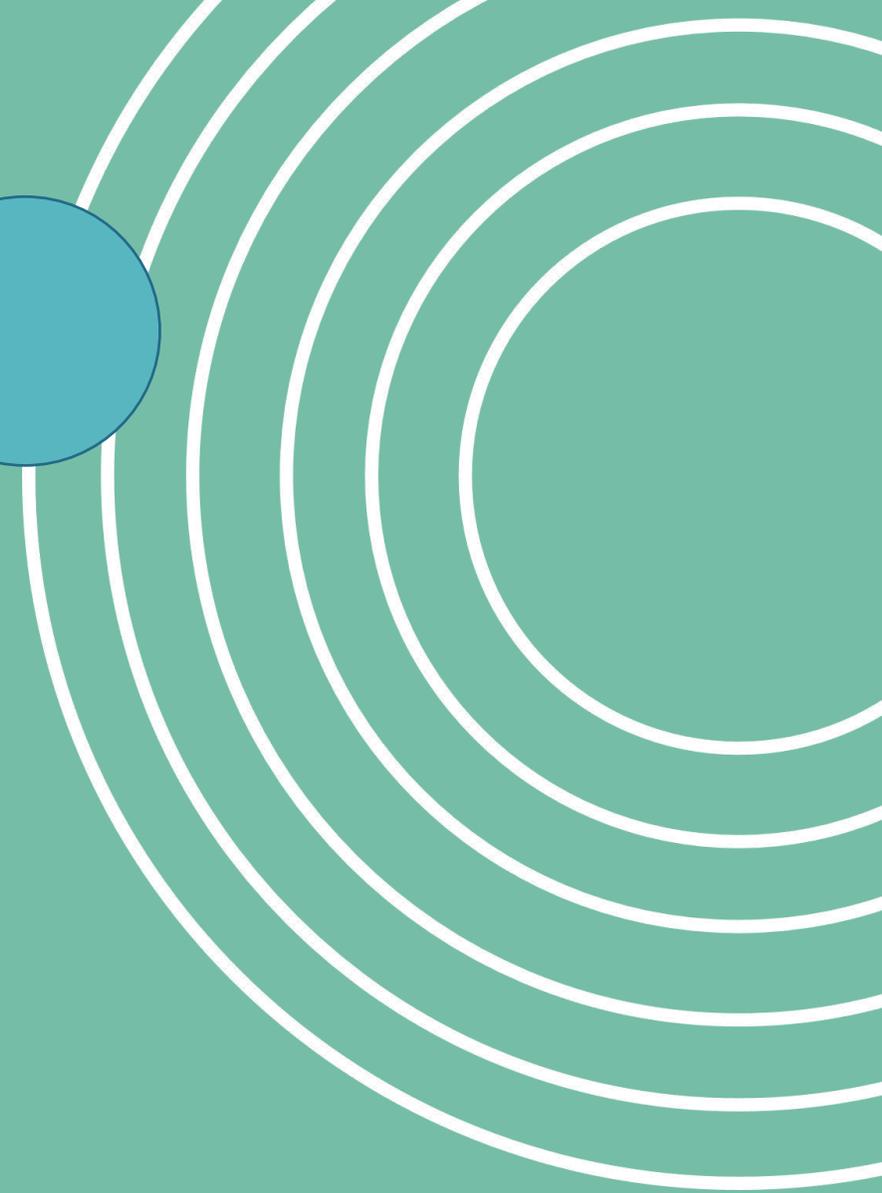
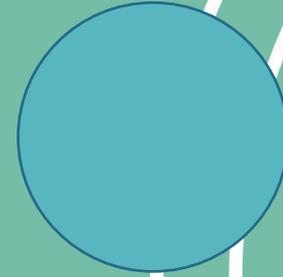
## Monitoring:

- Hourly for swelling or redness
- Swelling may indicate infiltrated IV
- Prevention of extravasation injury

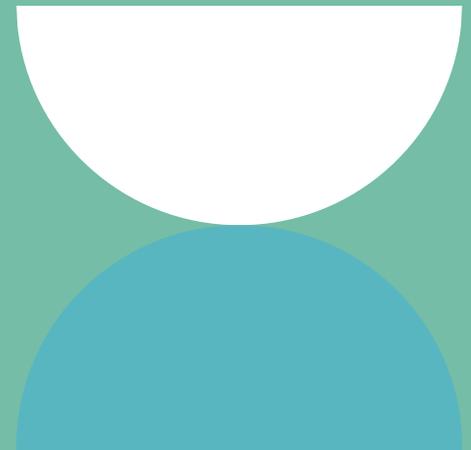
# Helpful Hints for PIV in Infants

- Two person procedure
  1. Stabilize and comfort
  2. Prepare materials and place IV
- Decrease pain
  - Pacifier
  - Oral sucrose
  - Involve parents in comforting, if desired
- Limit insertion attempts to two/person
- If IV insertion is difficult, consider UVC or IO
- If 24 gauge IV catheter is unavailable, may use 23 or 25 gauge butterfly needle with  $\frac{3}{4}$ " needle length may be used
  - Enter skin  $\frac{1}{4}$ " away from when you enter the vein
  - After blood return, don't try to cannulate the vein further to prevent the needle from going through the vein

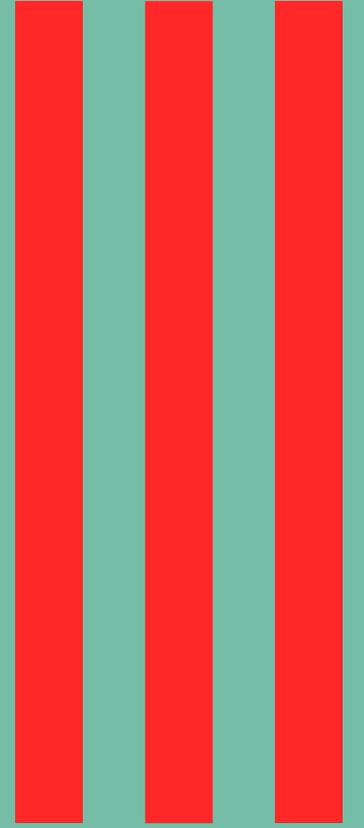
# PIV Insertion Video



**Let's Practice!**



**NG/OG**



# Purpose for NG/OG

Lavage

Gavage

Decompress

# NG/OG Supplies

- Breast milk, formula, water at room temperature
- Oral syringe with appropriate adapters if needed (for bolus feeding by gravity or syringe pump)
- Oral feeding extension tubing for use with a syringe and syringe pump
- Syringe pump as needed
- Syringe to aspirate to verify tube placement with adapters if needed
- Stethoscope
- Enteral feeding labels
- Gentle adhesive dressing
- Feeding tube (5, 6.5, 8 Fr options)
- pH test strips

# NG/OG Supplies

Appropriate  
size feeding  
tube

Syringe

Gloves

Sucrose  
(oral)

Lubricant  
(water  
soluble)

Transparent  
dressing

Pectin-  
based  
barrier

Breast milk  
or formula,  
as ordered

Feeding  
infusion  
pump

Milk warmer

Feeding  
tube  
cleaning tool

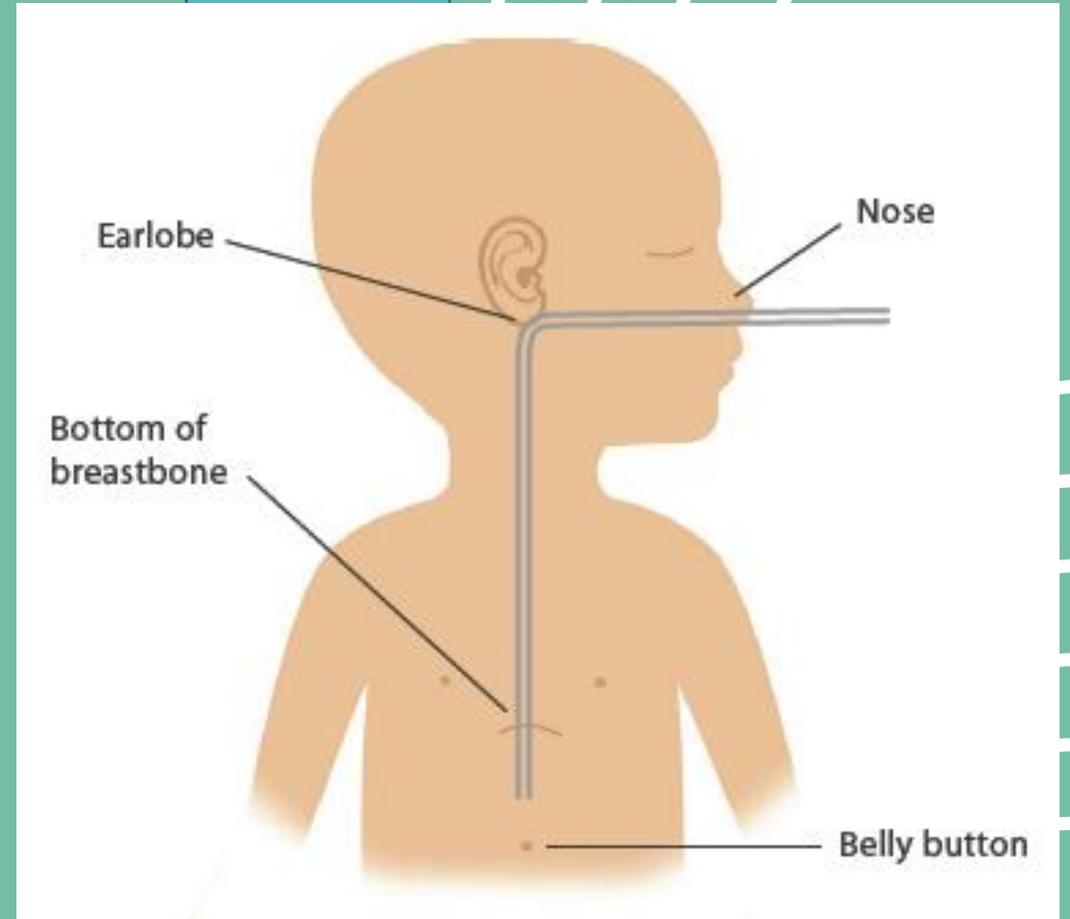
Suction  
equipment

# Preparation for NG/OG Insertion

- Assess GI tract function, for distention, and discoloration
- Assess respiratory status
- Verify daily weight
- Verify order and correct breastmilk or formula to be administered
- Gather supplies
- Prepare ordered volume
- Position infant
  - Elevate head of bed, prone or side lying
  - Consider skin to skin with parent during feeding
- Don gloves
- Measure length for insertion

# NG/OG Tube Placement

- Measure by placing the tip of the feeding tube at the tip of the nose to the base of the earlobe, then halfway between the xiphoid process and the umbilicus
- Note the centimeter line on the tube to ensure insertion to the proper length



# NG/OG Insertion

- Swaddle the infant with arms secured in a blanket
- If possible, administer oral sucrose and offer a pacifier to encourage sucking and swallowing
- Lubricate the tip of the tube with the lubricant or water
- Insert the tube
- Do not force the tube
- Stop the procedure if there is any onset of respiratory distress, cough, struggling or resistance
- Hold the tube securely in place

## Nasal insertion:

- Stabilize the infant's head, insert the tube straight back into the nare, gently pushing the tube in a downward arc into the oropharynx, advance as tolerated to predetermined length

## Oral insertion:

- Stabilize the infant's head, push the anterior portion of tongue down, insert the tube into the oropharynx gently pushing the tube in a downward arc into the esophagus, advance as tolerated to predetermined length

# Securing Feeding Tube

- Apply pectin-based barrier to cheek for skin protection
- Secure tube with transparent dressing
- The predetermined centimeter line on the tube is to be positioned at the lip or edge of the nostril to ensure insertion of the proper length
- Assess skin integrity of tube insertion site and surrounding area with hands on cares



# Verify Feeding Tube Placement

- When to verify tube placement:
  - After initial tube insertion
  - Before each intermittent feeding
  - Before medication administration
  - With hands on cares/changing of syringe with continuous feedings
- X-ray is recommended to confirm proper placement before initiation of feedings or medication administration
- If x-ray is not obtained, verify placement by:
  - Confirm the predetermined centimeter line on the tube is to be positioned at the lip or edge of the nostril to ensure insertion of the proper length
  - Aspirate small amount of gastric content and evaluate color (clear, light yellow or light green)

# Steps for Feeding with Feeding Tube

- Full feedings given over 30 minutes unless otherwise ordered
- Trophic feedings may be given via gravity/slow push per nurse's discretion
- Verify placement of feeding tube prior to each feeding
- Offer pacifier during feeding when appropriate
- Prepare feeding syringe with exact feeding amount ordered
- Warm feeding if it is to be given over less than 1 hour
- Feed
- After infusion complete, manually clear tubing of residual feeding with air over at least a few minutes; slow as needed per infant tolerates
- Disconnect syringe and extension tubing from feeding tube, discard and cap feeding tube

# Syringe Pump vs. Gravity

## Syringe Pump:

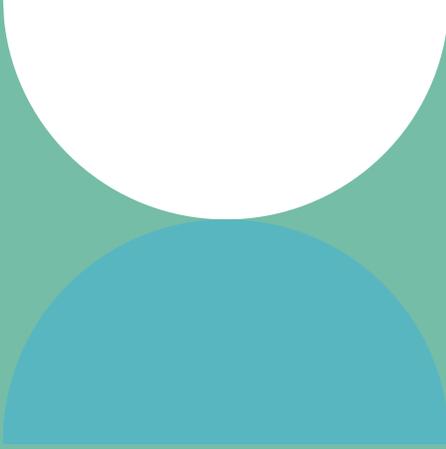
- Attach feeding syringe to extension tubing and prime. Attach extension tubing to feeding tube
- Place syringe onto feeding pump with syringe tip up
- Program feeding pump and set feeding time for  $\leq 30$  minutes or as per order

## Gravity:

- Remove plunger from syringe
- Attach oral syringe to end of the feeding tube
- Adjust height of the syringe to desired infusion rate

# Orogastic Tube During CPAP or PPV

- Using a face mask or laryngeal mask results in gas entering the stomach, which may interfere with ventilation
- If CPAP or PPV are required for > several minutes, consider OG tube placement and leaving it uncapped to act as a vent for the stomach
- Equipment needed: 8F orogastric tube, 20ml syringe, tape
- Measure the distance from the bridge of the nose to the earlobe and from the earlobe to a point halfway between the xiphoid process and the umbilicus
- To minimize interruption of ventilation, measurement of tube can be estimated with mask in place and ventilation can be resumed as soon as the tube has been inserted
- Once tube is inserted to desired distance, aspirate gastric contents, leave the end of the tube open, tape to infant's cheek



# Is NPO Indicated?

- If infant is unstable, enteral feedings may be withheld
  - Respiratory distress and increased work of breathing → poor suck, swallow, breathe coordination → increased risk for choking and aspiration
  - Infection and hypoxia → intestinal ileus → delayed gastric emptying
  - Hypotension → reduced intestinal blood flow and oxygenation → possible ischemic injury to bowel
  - Bowel obstruction
  - If NPO is indicated, establish IV access and infuse glucose containing solution (D10W)
- 

**Let's Practice!**

