



# IV or IO Access

## History

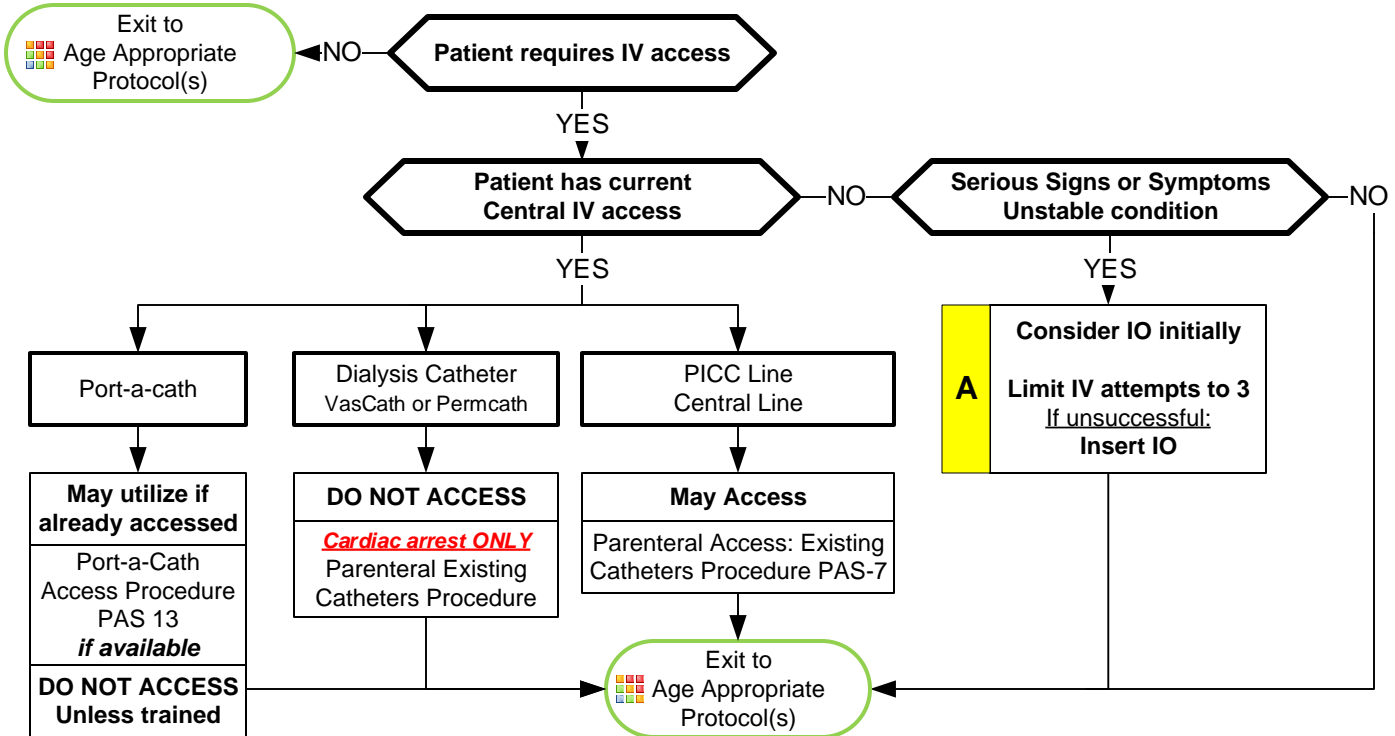
- Chronic medical conditions requiring recurrent need for IV access for medication, hydration, or blood sampling.
- Medical condition requiring administration of IV medications at home.
- End-stage renal disease requiring hemodialysis.
- Chronic medical condition requiring IV nutrition.

## Signs and Symptoms

- Fever
- Bleeding
- Hypotension
- Redness, swelling, and/or pain at IV catheter site
- Shortness of breath
- Chest pain
- IV catheter patency

## Differential

- Infection or sepsis
- Infection of catheter
- Clotted IV catheter
- Air embolism
- Pneumothorax
- Overdose of home medication
- Shock



Universal Protocol Section

## Pearls

- **Frequent encounter of patients with IV access devices and confusion as to which device can be accessed and used by EMS providers.**
- **If unclear about device use, always ask "Is this device used for dialysis?"**
- **When accessing central catheter, always ensure sterility of catheter connection point by cleaning port with alcohol, or similar disinfectant, 2 – 3 times prior to access.**
- **Central line catheters placed for administration of chemotherapy, medications, electrolytes, antibiotics, and blood are available to EMS providers for access and administration of fluids, medications, antibiotics, and blood products.**
- **Central line catheters placed for hemodialysis are NOT available for access by EMS providers unless the patient is in cardiac arrest.**
- **Long term IV access is frequently needed for a variety of indications:**
  - Medication administration such as antibiotics, pain relief, or chemotherapy
  - Administration of IV nutrition or feeding
  - Need for multiple IV line access or recurrent blood sampling
  - Poor vasculature requiring repeated attempts at IV access
  - End-stage renal disease requiring hemodialysis
- **Common complications of central access devices:**
  - Infection
  - Damage to vasculature
  - Air embolism
  - Loss of patency due to clogging or clotting
  - Pneumothorax

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