

# Vascular Access

## Procedure

Douglas County KS EMS System

March 2022

**Approved Provider:** AEMT, Paramedic

**Reference Protocols:** None

### **Indications**

- Fluid and/or medication administration
- Indications for large bore IV (14 or 16) and volume expander fluid include:
  1. Trauma patients (2 IV's large bore)
  2. Any patient in shock or with abnormally low BP < 90
- Other patients requiring IV's should have the largest feasible standard IV catheter (18, 20, 22 GA) placed.

### **Contraindications**

- None

### **Precautions**

- Patients on anticoagulant therapy may bleed large amounts on missed attempts
- Do not delay Treatment/ Transport of critically unstable patient to establish IV unless required for critical treatment

### **Procedure**

- Don PPE
- Explain procedure to patient
- Connect lockset to flush and fill with saline
- Tear sufficient tape and prepare opsite
- Apply tourniquet proximal to proposed site. A blood pressure cuff may be used as an alternate tourniquet method
- Using aseptic technique, prepare the insertion site
- Hold vein in place by applying gentle traction on vein distal to the point of entry
- Puncture the skin with the bevel of the needle upward about 0.5 to 2cm. from the vein and enter the vein either from the side or from above.
- Note blood return and advance the catheter
- DO NOT ADVANCE NEEDLE THROUGH CATHETER
- Release tourniquet
- Occlude end of catheter with finger to prevent excessive bleeding from IV
- Remove needle and place in sharps container unless rapid glucose test is to be performed
- Connect lockset with flush attached
- Release occlusion of catheter
- Aspirate blood to ensure placement (not all properly placed IV's will aspirate blood)
- Flush IV with at least 5cc NS and ensure no infiltration
- Secure tubing with at least one 180 degree turn in tubing when taping.

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### Complications

- Embolism
- Localized swelling or infection
- Bleeding from missed attempt

### Notes

- Administration Sets
  - 10 gtts for NS bolus, D10 administration and some drips as defined in formulary
  - Pressure infuser administration bags for hypotensive (BP<90 mmHg) patients requiring NS bolus, IO administration of fluid/medication
  - 60 gtts for some drips as defined by formulary
- Saline locksets should be used in all patients. Only if NS bolus is required should a IV bag be hung
- Remember you can infuse TKO through a large bore IV but you cannot effectively infuse volume through a small IV.
- Acceptable Sites for insertion
  - Arms
  - Hands
  - Feet
  - Scalp in infants < 2 mo.
  - External Jugular in Adults > 8 y/o (See EJ Procedure)