VASCULAR ACCESS AND MONITORING

ADULT	PEDIATRIC (≤34KG)

BLS

- Universal Protocol #601
- In stable patients, providers may monitor and turn off IV lines of isotonic balanced salt solutions without medication or electrolyte additives and flowing at a maintenance rate

BLS Optional

Pulse Oximetry – O_2 administration per Airway Management Protocol #602

ALS Standing Orders

- Establish IV with drip set or saline lock as appropriate.
- Tibial Intraosseous (IO) placement may be utilized for:
  - Patients in extremis or cardiac arrest with hemodynamic instability/respiratory distress/cardiac arrest.
    AND
  - Unable to establish following attempt(s) or general suspicion of the inability to establish vascular access.
- Attempts to establish vascular access shall be continued even if IO is successful.
- If patient becomes responsive to painful stimuli following IO administration:
  - Lidocaine 0.5mg/kg (Total max dose of 40mg) slow IO push over 60 seconds.
- ALS providers can monitor and administer medications through a Pre-existing Vascular Access Device (PVAD). These pre-existing catheters are:
  - Peripheral Inserted Central Catheter (PICC Line)
  - Midline IV Catheters
- PVAD access procedure:
  - Wipe the access port with an alcohol pad to ensure aseptic technique.
  - Ensure that if your line is a dual lumen line that it is the line designated for medication administration (do not use the line utilized for blood, this can be identified by a red colored catheter or stated on the catheter).
  - Attach a 10ml syringe and draw up 5-10ml of fluid out of the line until blood is noted in the syringe. This is to ensure the line is not pre-loaded with heparin.
  - Discard the filled syringe and flush the line with an entire 10cc saline flush. This is to ensure that the line is clean and ready for medication administration.
  - Connect the syringe with the desired medication and administer according to the appropriate formulary. Follow the medication administration with an entire 10cc saline flush.
  - If any sort of cap was used to cover the port, ensure the cap is wiped down and placed back on the port following use.
  - If the patient is needing an infusion from a saline bag, ALS Providers may connect the IV line to the PVAD after the line has been aspirated per instructions listed above. After the infusion is finished, ensure the line is flushed with a 10cc saline flush, and wipe the port with an alcohol pad. If any sort of cap was used to cover the port, ensure the cap is wiped down and placed back on the port following use.

Base Hospital Orders Only

- Pain management if patient becomes conscious after establishing IO access
- Humeral IO Placement
- Access to tunneled/non-tunneled Central Lines for patients in extremis or cardiac arrest. Access of these central lines shall follow the PVAD access procedure listed above.
- As needed

Notes

- Peripheral IV placement is preferred to IO placement – including the external jugular.
- Tibial plateau is preferred for IO placement over humeral placement. Humeral IO placement shall only be utilized if the Tibial plateau is unable to be accessed.
- When establishing IV/IO access in a patient in extremis or cardiac arrest, ALS Providers will take the following into consideration:
  - When assessing a patient's vasculature and determining access to be difficult, an ALS Provider may proceed straight to IO access. Further IV attempts will continue following IO placement.
  - If the first attempt at IV placement fails, an ALS provider may consider placement of an IO prior to a second attempt.
- External Jugular (EJ) access should always be considered prior to IO placement.
- If a patient becomes responsive to painful stimuli following IO placement, Lidocaine may be administered to assist with pain management during fluid/medication administration. The total amount of Lidocaine administered to the patient shall not exceed 40mg.