



Intraosseous (IO) Vascular Access - Draft

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Approved:

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Authority: California Health and Safety Code, Division 2.5 EMS, Sections 1797.220 & 1797.221

I. Principles

- A. Purpose: To provide guidelines on the indications and procedure to obtain Intraosseous (IO) Vascular Access to treat critically ill patients when a peripheral IV cannot be established.
- B. Indications:
 - 1. Intravenous fluids or medications are urgently needed and a peripheral IV cannot be established in two (2) attempts or within 90 seconds and the patient exhibits one or more of the following:
 - a. GCS of 8 or less.
 - b. Imminent respiratory failure.
 - c. Hemodynamic instability (SBP < 90 mmHg).
 - 2. Cardiopulmonary or traumatic arrest in which it may be obvious that attempts at placing an IV would likely be unsuccessful and/or too time consuming, resulting in a delay of life saving fluids or medications.
- C. Equipment:
 - 1. Approved Intraosseous infusion need/device (EZ-IO or bone injection gun).
 - 3. Alcohol or Chlorhexidine.
 - 4. 10 ml Normal Saline syringe.
 - 5. Standard extension set.
 - 6. 2% Lidocaine per *treatment guideline 7305 Pain Management*.

II. Scope Paramedic

III. Basic Life Support: None.

IV. Advance Life Support:

- A. Location:
 - 1. Proximal tibia.
 - 2. Distal tibia.
 - 3. Proximal Humeral
- B. Procedure:
 - 1. Clean the site appropriately.
 - 2. Stabilize the selected extremity/site.
 - 3. Insert needle from a 90-degree angle.
 - 4. When needle is in the position, remove stylet.
 - 5. Connect extension tubing primed with normal saline.
 - 6. Confirm proper placement by insuring fluids flow without evidence of extravasation and the ability to aspirate blood.
 - 7. Consider pain management per *treatment guideline 7305 pain management* for awake patients prior to other medication administration.
 - 9. Dress site and secure device.
 - 10. Apply appropriate identification such as a wristband.

V. Special Considerations: None.

VI. Base Orders: None.

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VII. Contraindications:

- A. Fracture of the bones selected for IO placement (consider an alternate site).
- B. Excessive tissue at the insertion site with the absence of anatomical landmarks.
- C. Previous significant orthopedic procedure within the last 24 hours
- D. Signs on infection at the site.

VIII. Documentation on the EMS patient care report (PCR) shall include:

- A. Indications for performing the procedure.
- B. Any improvements post procedure.
- C. Complications.