



# SIERRA-SACRAMENTO VALLEY EMS AGENCY PROGRAM POLICY

REFERENCE NO. 1110-J

## **SUBJECT: INFREQUENTLY USED SKILLS – VERIFICATION OF MAINTENANCE**

### **INTRAOSSIOUS INFUSION – POWERED DEVICE (EZ-IO® or B.I.G.®) - ADULT & PEDIATRIC ANNUAL SKILLS VERIFICATION**

NAME \_\_\_\_\_ DATE \_\_\_\_\_

ALS AGENCY \_\_\_\_\_ EVALUATOR \_\_\_\_\_

**OBJECTIVE:** The candidate will demonstrate the ability to correctly insert an intraosseous needle using a powered device, check for proper needle placement, stabilize the needle and administer fluid.

**EQUIPMENT:** Powered IO insertion device, intraosseous needle, IO manikin or long bone (such as a tibia) from chicken or other animal, gauze roller bandage or other material to maintain proper position of long bone, IV solution, IV administration set, IV extension set, blood pressure cuff or pressure bag, appropriate syringes, recognized antiseptic agent and appropriate PPE.

**PERFORMANCE CRITERIA AND CONDITIONS:** The candidate will be presented with a long bone and requested to initiate an intraosseous infusion.

EVENT	DOES	DOES NOT
<b>1. States the indications for intraosseous infusion</b> <ul style="list-style-type: none"><li>• Weight 3 kg or more</li><li>• Unable to achieve IV access rapidly (within 60-90 seconds) and present with one or more of the following conditions:<ul style="list-style-type: none"><li>○ Cardiac Arrest</li><li>○ Hemodynamic instability (SBP &lt; 90 &amp; signs of shock)</li><li>○ Imminent respiratory failure</li><li>○ Status epilepticus with prolonged seizure activity &gt; 10 minutes and refractory to IM / IN anticonvulsants</li><li>○ Toxic conditions requiring immediate IV access for antidote</li></ul></li></ul>		
<b>2. States the contraindications for intraosseous infusion</b> <ul style="list-style-type: none"><li>• Fracture or suspected vascular compromise of the selected site</li><li>• Previous significant orthopedic procedures (IO within previous 24 hours; prosthesis)</li><li>• Inability to locate anatomical landmarks for insertion</li><li>• Skin infection overlying the area of insertion</li></ul>		
<b>3. States or demonstrates the use of PPE</b>		
<b>4. Selects proper / approved anatomical site for IO infusion</b> <ul style="list-style-type: none"><li>• Small Children (3-12 kg) – two finger-breadths below the patella in the flat aspect of the medial tibia</li><li>• Larger Children (13-39 kg) – flat aspect of the medial tibia one finger-breadth below the level of the tibial tuberosity</li><li>• Adults – proximal or distal tibial sites may be utilized</li><li>• Optional Adult – humeral head (base of the greater tubercle)</li></ul>		

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**INTRAOSSUEOUS INFUSION – POWERED DEVICE (EZ-IO® or B.I.G.®) – ADULT & PEDIATRIC  
ANNUAL SKILLS VERIFICATION – Cont.**

EVENT	DOES	DOES NOT
5. Preps IO site using aseptic technique		
6. Primes IV extension set with saline for unresponsive patient or lidocaine 2% for conscious patient		
7. Properly inserts the IO needle according to the device specific manufacturers guidelines		
8. Removes stylet from catheter and places it in approved sharps container		
9. Attaches the primed IV extension set to the IO catheter		
10. Administers 0.5 mg / kg of 2% lidocaine (not to exceed 50 mg) if patient responds to painful stimuli (may be verbalized)		
11. Syringe flushes catheter with 10 ml of NS to establish infusion (No Flush = No Flow)		
12. Attaches IV administration set and administers proper fluid by applying pressure to the fluid bag		
13. Properly secures device		
14. Checks administration rate and IO site for infiltration		