



SIERRA-SACRAMENTO VALLEY EMS AGENCY PROGRAM POLICY

REFERENCE NO. 1110-J

SUBJECT: INFREQUENTLY USED SKILLS – VERIFICATION OF MAINTENANCE

INTRAOSSUEOUS INFUSION – FDA APPROVED DRILL TYPE DEVICE (ADULT & PEDIATRIC) ANNUAL SKILLS VERIFICATION

NAME _____ DATE _____

ALS AGENCY _____ EVALUATOR _____

OBJECTIVE: The candidate will demonstrate the ability to correctly insert an intraosseous needle using an FDA approved drill type device, check for proper needle placement, stabilize the needle, and administer fluid.

EQUIPMENT: FDA approved drill type 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, EZ-Connect (or equivalent) extension set, blood pressure cuff or pressure bagm appropriate syringes, recognized antiseptic agent, 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
1. States the indications for intraosseous infusion <ul style="list-style-type: none">• Weight 3 kg or more• 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">○ Cardiac Arrest○ Hemodynamic instability (SBP < 90 & signs of shock)○ Imminent respiratory failure○ Status epilepticus with prolonged seizure activity > 10 minutes and refractory to IM / IN anticonvulsants○ Toxic conditions requiring immediate IV access for antidote		
2. States the contraindications for intraosseous infusion <ul style="list-style-type: none">• Fracture or suspected vascular compromise of the selected tibia• Previous significant orthopedic procedures (IO within previous 24 hours; prosthesis)• Inability to locate anatomical landmarks for insertion• Skin infection overlying the area of insertion		
3. States or demonstrates the use of PPE		
4. Selects proper / approved anatomical site for IO infusion <ul style="list-style-type: none">• Small Children (3-12 kg) – two finger-breadths below the patella in the flat aspect of the medial tibia• Larger Children (13-39 kg) – flat aspect of the medial tibia one finger-breadth below the level of the tibial tuberosity• Adults – proximal or distal tibial sites may be utilized		
5. Preps IO site using aseptic technique		

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ANNUAL SKILLS VERIFICATION – Cont.**

EVENT	DOES	DOES NOT
6. Selects the appropriate needle based on patient size <ul style="list-style-type: none"> • PD needle (15 mm) – patients < 39 kg • AD needle (25 mm) – patients ≥ 39 kg • LD needle (45 mm) – patients with excessive tissue over insertion site 		
7. Opens cartridge and attaches driver to needle set leaving cap on until ready to insert		
8. Primes EZ-Connect with saline with NS for unresponsive patient or lidocaine 2% for conscious patient		
9. Attaches 10 ml syringe filled with NS to EZ-Connect		
10. Removes the needle tip covering and stabilizes the patients extremity		
11. Inserts IO needle set through the skin at a 90° angle to the bone until the needle tip rests against the bone		
12. Confirms that the 5 mm mark is visible above the skin before powering the driver on. If 5 mm mark is not visible, selects a longer needle		
13. Depresses the trigger and inserts the needle into the bone		
14. Stabilizes device, removes driver by pulling straight back		
15. Removes stylet from catheter and places it in approved sharps container		
16. Administers 0.5 mg / kg of 2% lidocaine (not to exceed 50 mg) if patient responds to painful stimuli (may be verbalized)		
17. Syringe flushes catheter with 10 ml of NS to establish infusion (No Flush = No Flow)		
18. Attaches IV administration set and administers proper fluid by applying pressure to the fluid bag		
19. Properly secures device		
20. Checks administration rate and IO site for infiltration		
21. Attaches green wristband to the same extremity side where IO was placed		