

## SKILLS VERIFICATION INTRAOSSIOUS INFUSION - MANUAL

NAME \_\_\_\_\_

DATE \_\_\_\_\_

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

EVALUATOR \_\_\_\_\_

**OBJECTIVE:** The candidate will demonstrate the ability to correctly insert a manual intraosseous needle in a pediatric patient, check for proper needle placement, stabilize the needle, and administer fluid.

**EQUIPMENT:** 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, flush solution, IV solution, IV administration set, three-way stopcock, blood pressure cuff or pressure bag 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
<b>1. States the indications for intraosseous infusion in a pediatric patient</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 tibia</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> <ul style="list-style-type: none"> <li>•</li> </ul>		
<b>4. Assembles equipment and fills syringe with flush solution (if necessary)</b>		
<b>5. Selects proper / approved anatomical site for IO infusion</b> <ul style="list-style-type: none"> <li>• 1 – 3 cm distal to tibial tuberosity on anteromedial surface of proximal tibia</li> </ul>		
<b>6. Preps IO site using aseptic technique</b>		

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EVENT	DOES	DOES NOT
7. Inserts IO needle at the proximal tibial site, directing the needle caudally		
8. Penetrates the bone with firm pressure and a rotary (“screwdriver”) motion. Identifies a “pop” and a sudden lack of resistance signaling		
9. Stabilizes device, removes stylet and places in sharps container		
10. Attaches syringe and aspirates for marrow contents and / or slowly infuses 2 – 3 ml of NS while observing the site for absence of infiltration to confirm patency		
11. Administers 0.5 mg / kg of 2% lidocaine (not to exceed 50 mg) if patient responds to painful stimuli (may be verbalized)		
12. Syringe flushes catheter with 10 ml of NS to establish infusion (No Flush = No Flow)		
13. Attaches IV administration set and administers proper fluid by applying pressure to the fluid bag		
14. Properly secures device		
15. Checks administration rate and IO site for infiltration		

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