



Infrequently Used Skills Verification Checklist Intraosseous (IO) Infusion

1110-K

Name:	Date:		
Provider Agency:	Evaluator:		
Objective: Describe the indications/contraindications for powered IO device utilization and demonstrate the ability to proficiently perform the procedure.			
Equipment: Appropriate PPE, IO manikin, S-SV EMS approved powered IO device/needle, needle securing supplies, antiseptic agent, 10 mL syringe, flush solution or prefilled syringe, IV extension set, IV administration set, IV solution, blood pressure cuff or pressure bag, 2% lidocaine.			
Performance Criteria: The AEMT (pediatric only) or paramedic (pediatric and adult patients) will be required to adequately describe the indications/contraindications for powered IO device utilization and proficiently perform the procedure on an IO manikin.			
Step	Description	Does	Does Not
1	Verbalizes/demonstrates use of appropriate PPE		
2	Verbalizes indications for IO infusion <ul style="list-style-type: none"> • Weight \geq 3 kg and unable to achieve IV access rapidly (within 60 – 90 seconds) in a patient with one or more of the following: <ul style="list-style-type: none"> ○ Cardiac arrest ○ Hemodynamic instability (SBP < 90 and signs of shock) ○ Imminent respiratory failure ○ Status epilepticus with prolonged seizure activity < 10 minutes ○ Toxic conditions requiring immediate IV access for antidote 		
3	Verbalizes contraindications for IO infusion (any of the following) <ul style="list-style-type: none"> • Fracture or suspected vascular compromise in targeted bone • Excessive tissue or absence of adequate anatomic landmarks • Infection at area of insertion site • Previous significant orthopedic procedure at site (e.g., prosthetic limb) • IO access in targeted bone within past 48 hours 		
4	Verbalizes/selects appropriate adult IO site (paramedic only) <ul style="list-style-type: none"> • Proximal Tibia: Approximately 3 cm (2 finger widths) below the patella and approximately 2 cm (1 finger width) medial, along the flat aspect of the tibia • Distal Tibia: Approximately 3 cm (2 finger widths) proximal to the most prominent aspect of the medial malleolus • Humerus: On the most prominent aspect of the greater tubercle, 1 to 2 cm above the surgical neck 		
5	Verbalizes/selects appropriate pediatric IO site (AEMT & paramedic) <ul style="list-style-type: none"> • Proximal Tibia: Just below patella, approx. 1 cm (1 finger width) and slightly medial, approx. 1 cm along the flat aspect of the tibia • Distal Tibia: approximately 1-2 cm (1 finger width) proximal to the most prominent aspect of the medial malleolus • Distal Femur: Just proximal to the patella (maximum 1 cm) and approx. 1-2 cm medial to midline 		



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Step	Description	Does	Does Not
6	Prepares equipment for procedure <ul style="list-style-type: none">• Primes extension set with normal saline (if patient unresponsive to pain) or 2% lidocaine (if patient responsive to pain)• Assembles IV bag, IV tubing and pressure infuser• Fills 10 mL syringe with normal saline flush solution (or uses prefilled syringe)• Assembles 2% lidocaine if necessary (patients responsive to pain)• Selects appropriate size needle or device (based on manufacturer)• Attaches needle to driver (based on manufacturer)		
7	Preps IO site using aseptic technique		
8	Inserts IO needle according to manufacturer specific instructions		
9	Stabilizes needle, removes stylet from catheter and places in sharps container		
10	If using manufacturer supplied stabilizer device, place prior to attaching extension set (or at appropriate time per manufacturer instructions)		
11	Attaches primed extension set to IO catheter		
12	Secure IO needle per manufacturer instructions		
13	For patients unresponsive to pain <ul style="list-style-type: none">• Administers rapid flush of 10 mL of normal saline For patients responsive to pain: <ul style="list-style-type: none">• Slowly administers 2% lidocaine over 120 seconds<ul style="list-style-type: none">○ Adults – 40 mg○ Pediatric – 0.5 mg/kg (maximum 40 mg)• Allows lidocaine to dwell in IO space 60 seconds• Administers rapid flush of 10 mL of normal saline• Slowly administers a subsequent ½ dose of 2% lidocaine over 60 seconds<ul style="list-style-type: none">○ Adult – 20 mg○ Pediatric – ½ the initial dose (maximum 20 mg)		
14	Connects fluids to extension set using IV tubing and administers fluid by applying pressure to the fluid bag if necessary to achieve desired rate		
15	Dresses site and secures tubing		
16	Checks administration rate and IO site for infiltration		