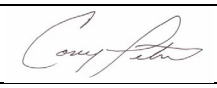
Centre for Prehospital Care
Health Sciences North

STANDARD WORK

PEDIATRIC INTRAOSSEOUS ACCESS

Document Owner: Luc Simard	**Program/Service Area**: Centre for Prehospital Care	**Issue Date: April 2009**
Review Date: October 2024	**Revision Date:** November 2023	
Approval: Corey Petrie, Regional Manager, Centre for Prehospital Care & Trauma Services	**Frequency: As Required,** in accordance with the Pediatric Intraosseous Medical Directive.	
Signature: 		

Purpose: To ensure a consistent standardized practice for pediatric intraosseous access.

	Content	Details
1.	Ensure that the patient qualifies for intraosseous access or contact a Base Hospital Physician (BHP) for further direction.	
2.	Communicate the need for pediatric intraosseous access and its effects to the patient/family member whenever possible.	
3.	To establish access in the proximal tibia, position the leg with slight external rotation and identify the tibial tuberosity just below the knee joint.	The insertion site is the flat part of the tibia, about 1-3 cm (about 1 finger's width) below and medial to this bony prominence
4.	Cleanse skin at site with an appropriate antiseptic using a circular motion. Cleanse from the proposed puncture site outward 2" in diameter.	Repeat this process until satisfied the area is clean. Allow skin to dry.
5.	Leave the stylet in the needle during insertion to prevent the needle from becoming clogged with bone or tissue. Stabilize the leg on a firm surface.	Place a rolled towel under the patient's knee to secure the limb during insertion. Do not place your hand behind the leg.
6.	Insert the needle through the skin over the anteromedial surface of the tibia perpendicular to the tibia. This avoids injury to the growth plate. Use a twisting motion with gentle but firm pressure. Continue inserting the needle through the cortical bone until there is a sudden decrease in resistance as the needle enters the marrow space. If the needle is placed correctly, it should stand easily without support.	When inserting into the tibia, do not direct the needle in a cephalic direction (towards the head) as it may enter the epiphyseal plate. If you require greater depth of insertion, some IO devices have a depth guard which can be removed.
7.	Remove the stylet and attach a syringe. Aspiration of bone marrow and blood into the hub of the needle confirms correct placement.	Blood or bone marrow may not always be aspirated.
8.	Infuse a small volume of saline which should infuse easily. Check for swelling at the insertion site or posteriorly opposite the insertion site.	Always monitor IO site to ensure fluid is not infiltrating in surrounding tissues
9.	To stabilize the needle, place tape over the flange. You may also place gauze padding on both sides of the needle for support. Tape IV tubing to the skin to avoid tension on the tubing that might displace the needle.	
10.	Fluid can be infused by a syringe attached to a 3 way stopcock or by pressure infusion. When using a pressurized fluid bag, ensure no air gets into the system.	Any medication that can be administered IV, can be given the IO route.
11.	Discontinue if complications occur, or as directed by the BHP.	
12.	Document the IO procedure on the patient care record as per the Ministry of Health and Long Term Care Emergency Health Services Branch Ambulance Call Report Documentation Standards and your Service Provider policy which includes: • needle length • IO site • if IO access was successful	
13.	Document patient condition before and after IO access	

Expected Outcome: Successfully performs pediatric intraosseous access