

Title: **INSERTION, CARE, & MAINTENANCE OF AN INTRAOSSEOUS (IO) INFUSION DEVICE**

Responsibility: The trained and competent ED Registered Nurse (RN), physician or Emergency Medical Technician-Paramedic (EMT-P) may insert an IO vascular infusion device in accordance with the following guidelines.

Purpose of Guidelines: To provide the ED RN with direction for safe and proper establishment of an IO vascular access device as well as recommendations for maintaining the device. These guidelines will provide the insertion and management of the IO vascular infusion devices in accordance with evidence-based practice, Infusion Nurses' Society recommendations, and the manufacturer's guidelines (EZ-IO).

Procedure:

1. Indications for IO insertion include short-term treatment when intravascular access cannot be achieved in a timely manner and the patient's condition is life threatening at that time. If the standard peripheral IV access is insufficient to meet the clinical resuscitation needs of the patient at the time (trauma, cardiac/respiratory arrest, obtunded patient) in an emergent and/or medically necessary situation then an IO infusion is appropriate. IV fluids and medications are to be administered by the RN for resuscitation purposes per the physician's orders.
2. RN's, physicians or EMT-P's may insert an IO device after they have completed instruction with clinical supervision. An order must be received to by a physician for a RN or EMT-P to insert an IO.
3. Nursing service procedures must be followed for the management of all types of IV or IO infusion therapies (see policy #3364-110-05-01).
4. Contraindications of an IO must be discussed between a RN and physician before insertion, which are:
 - a. Placement in a fractured bone or in an extremity with vascular injury
 - b. Infection at area of insertion
 - c. IO in targeted bone within the past 48 hours
 - d. Excessive tissue or absence of adequate anatomical landmarks
 - e. Previous, significant orthopedic procedures at insertion site (example: prosthetic limb or joint)
5. Explain procedures to patient/family if and when possible.
6. Use a clean "no touch" technique and maintain asepsis. Prepare the site by using antiseptic cleanser prior to insertion.
7. Once IO is inserted and position is verified, the RN must make sure the correct primed extension tubing is being used. RN must place the IV fluid bag on either a pressure bag or use an IV pump for infusion. RN must place correct IO dressing on site as well.
8. RN is to assess site frequently as described in IV infusion therapy policy (see policy #3364-110-05-01) as stated above.

9. RN or EMT-P can discontinue IO vascular device when order is received from physician. A dressing is to be placed on the site after the IO has been discontinued and IO's are to be discontinued following manufacturer's guidelines as well as site integrity.

References: Infusion Nurses Society. Retrieved on August 23, 2021, from <http://www.ins1.org/i4a/pages/index.cfm?pageid=1>

Reviewed by: Nancy Gauger, MSN, RN, Staff Development Coordinator
& Todd Stec, Director ED, BSN, RN

Approved: 9/15

Reviewed: 9/15, 9/18, 6/2022

Revised:

Reviewed by Policy & Standard Committee: 9/15, 9/18, 6/2022