

**REGION I EMERGENCY MEDICAL SERVICES-Kishwaukee Community EMS  
STANDING MEDICAL ORDERS  
EMT – Paramedic**

**Procedure: Use of EZ-IO® For Adult and Pediatric Patients**

**Overview: In critical situations it may be difficult to establish a patent IV for the administration of medications/fluids. The EZ-IO® is an alternative to vascular IV access, and once established will allow for access to deliver fluids and medications to the central circulation in the same concentrations and at the same speeds as drugs given intravenously. IO vessels do not collapse when the body goes into shock since they are supported and physically “held open” by structures unique to the intraosseous space.**

**OBJECTIVE FINDINGS**

1. Patient needing medication and/or fluid resuscitation when peripheral vascular access has been attempted unsuccessfully two times or more than 90 seconds and the patient exhibits one or more of the following:

- An altered mental status (GCS of 8 or less)
- Respiratory compromise (SaO<sub>2</sub> 80% after appropriate oxygen therapy, respiratory rate <10 or >40 min.)
- Hemodynamic instability (systolic BP <90)

2. EZ-IO AD® (40 kg and over) and EZ-IO PD® (3-39 kg) may be considered PRIOR to peripheral IV attempts in the following situations:

- Cardiac arrest (medical or traumatic)
- Profound hypovolemia with alteration of mental status
- Patient in extremis with immediate need for delivery of medications and or fluids

**EQUIPMENT**

- EZ-IO® Driver
- EZ-IO AD® or EZ-IO PD® Needle Set
- Alcohol or Betadine Swab
- EZ-IO® Connect or Standard Extension Set
- 10 ml Syringe
- Normal Saline or (suitable sterile fluid)
- Pressure Bag or Infusion Pump
- 2% Lidocaine (preservative free)

1/07

Reviewed:

Revised:

EMS/ Region1 SMOs

## Medical Control Contact Criteria

- Contact Medical Control as soon as possible for any patient needing the EZ-IO®
- Contact Medical Control with any questions.

### **PROCEDURE**

- If the patient is conscious, advise patient of Emergent need for this procedure and obtain informed consent
- Wear approved BSI
- Determine EZ-IO AD® or EZ-IO PD® indications
- Rule out contraindications
- Locate appropriate insertion site, tibial tuberosity for both Pediatric and Adult patients.
- Prepare insertion site using aseptic technique
- Prepare the EZ-IO® driver and appropriate needle set
- Stabilize the site and insert the appropriate needle set
- Remove EZ-IO® driver from needle set while stabilizing catheter hub
- Remove stylet from catheter, place stylet in approved sharps container or shuttle
- Confirm placement
- Connect primed EZ-IO® Connect tubing
- Slowly administer appropriate doses of Lidocaine 2% (preservative free) if patient is conscious through the EZ-IO® hub, 20-40 mg for Adult patient, and 0.5mg/kg for pediatric patient
- EZ-IO AD® syringe bolus-flush the catheter with the appropriate amount of normal saline (10 ml)
- EZ-IO PD® syringe/bolus while using the connect set with the appropriate amount of normal saline (5 ml)
- Repeat syringe/bolus as needed
- Utilize pressure bag or infusion pump for continuous infusions where applicable
- Begin infusion
- Dress site, secure tubing and apply wristband as directed
- Monitor EZ-IO® site and patient condition
- Upon arrival at the receiving hospital, advise staff that you have an EZ-IO® in place and provide directions (handout) for removal of EZ-IO®

### **Documentation of adherence to protocol:**

- Reason for use of EZ-IO®
- Site of insertion
- Lidocaine 2% (preservative free) dosage used
- Bolus delivered
- Pressure bag applied to fluid container
- Wrist band applied

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**PRECAUTIONS AND COMMENTS**

Fracture of the bone selected for IO infusion (consider alternate site)

Excessive tissue at insertion site with the absence of anatomical landmarks (consider alternative site)

Previous significant orthopedic procedures (IO within last 24 hours, prosthesis (consider alternative site)

Infection at the site selected for insertion (consider alternative site)

**The EZ-OI AD® and EZ-IO PD® are not intended for prophylactic use.**

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