# *Impedance Threshold Device (ITD) (MCA Optional Protocol)*

☑ Medical Control Authorities choosing to adopt this supplement may do so by selecting this check box. Adopting this supplement changes or clarifies the referenced protocol or procedure in some way. This supplement supersedes, clarifies, or has authority over the referenced protocol.

MCAs will be responsible for maintaining a roster of the agencies choosing to participate and will submit roster to MDHHS

**Indications:**

1. Cardiopulmonary arrest (medical etiology) in patients > 10 kg (22 lbs.)

**Contraindications:**

1. Cardiopulmonary arrest related to trauma
2. Patients ≤ 10 kg (22 lbs.)

**Procedure:**

1. Confirm absence of pulse and begin CPR immediately. Assure that chest wall recoils completely after each compression.

2. Using the ITD on a facemask:
   A. Connect ITD to the facemask.
   B. Connect ventilation source (BVM) to top of ITD. If utilizing a mask without a bag, connect a mouthpiece.
   C. Establish and maintain a tight face seal with mask throughout chest compressions. Use a two-handed technique or head strap.
   D. Do not use the ITD's timing lights during CPR utilizing a facemask for ventilation.
   E. Perform ACLS interventions as appropriate.
   F. Prepare for endotracheal intubation.

3. Using the ITD on an endotracheal tube (ET) or Supraglottic Airway Device (SAD):
   A. Endotracheal intubation is the preferred method of managing the airway when using the ITD.
   B. Place endotracheal tube or SAD and confirm placement with end tidal capnography and standard techniques (see **Airway Management-Procedure Protocol**). Secure the tube.
   C. Move the ITD from the facemask to the advanced airway and turn on timing assist lights (remove clear tab).
   D. Devices should be stacked in this order after tube placement confirmation.
      a. ET/SAD – ITD - EtCO2 - BVM

E. Continue CPR with minimal interruptions:
   a. Provide continuous (no pauses) chest compressions and ventilate asynchronously over 1 second when light flashes
F. Perform ACLS interventions as appropriate.
G. If a pulse is obtained, remove the ITD and assist ventilations as needed.

**Special Notes:**

1. Always place $ETCO_2$ detector between the ITD and ventilation source.
2. Administer endotracheal medications directly into endotracheal tube, if indicated.
3. Do not interrupt CPR unless absolutely necessary.
4. If a pulse returns, discontinue CPR and the ITD. If the patient rearrests, resume CPR with the ITD.
5. Do not delay compressions if the ITD is not readily available.
6. Initial training and ongoing competency skills shall be monitored by the agency.