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.

Interfacility High Flow Nasal Oxygen (MCA Optional Protocol)

This protocol is for paramedic use only

Purpose: To outline the process for paramedics who have received MCA approved training, to transport a patient on a high flow nasal cannula during an interfacility transport.

☑ 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.

In conjunction the MCA must also select the option for Interfacility High Flow Nasal Oxygen on the **Interfacility Facility Patient Transfers Protocol**.

I. Indications
- A. Order from sending facility/physician
- B. Hypoxic respiratory failure, hypoxic respiratory distress, respiratory distress
- C. Availability of an MCA approved high flow nasal cannula device and necessary supplies required to facilitate transport of patient.
- D. Adults (> 14 years of age)
- E. Pediatrics (≤ 14 years of age) per MCA selection for allowance and/or staff requirements.

MCA approval for pediatric HFNO (≤ 14 years of age) WITHOUT accompanying hospital staff

☐ NO – Staff must accompany patient

☐ YES - Enhanced Paramedic or Critical Care Paramedic only

☑ YES – Paramedic who has received additional MCA approved training.

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

II. Contraindications
- A. Inability to provide continuous, humidification using an approved delivery device
- B. Inability to provide therapy through appropriately sized nasal prongs
- C. Insufficient supply of oxygen to complete the transport

III. Procedure

A. Ensure that an adequate supply of oxygen is available for the transport.
   i. Calculate the amount of oxygen needed prior to departure.
   ii. Ensure that you have at least two times the amount of oxygen anticipated.
B. Perform appropriate patient assessment, including obtaining vital signs, pulse oximeter reading, cardiac rhythm, and current device settings
C. Set FiO2 to maintain SpO2 at or above 94% or to patient's targeted baseline oxygen saturation as directed by the sending physician. Utilize facility settings as starting point, if available.
D. Set flow rate in liters per minute (L/min) to decrease work of breathing.
   i. Utilize facility settings as starting point, if available.
   ii. Flow calculation: 2 L/kg/min up to the first 12 kg, plus 0.5 L/kg/min for each kg thereafter, up to a maximum flow rate of 60 L/min.
E. Reassess vitals, work of breathing, mental status, and breath sounds. Reassessment should be continuous, but documentation of vitals must occur at least every five minutes throughout patient contact.
F. Consider the need for escalation of respiratory support if patient remains in respiratory failure on more than 2 L/kg/min of flow or maximum settings for the delivery device.
G. If patient deterioration occurs, terminate HFNO and begin positive pressure respiratory support via CPAP, BIPAP, BVM, or intubation, if necessary.

NOTES:

A. For suspected or confirmed COVID-19 patients, personnel must don respirators, eye protection, gowns, and gloves for transport.
B. Patients with congenital heart conditions may have baseline saturations considerably lower than 90% and driving saturations higher than the target can be harmful for these patients.

Mechanical Chest Compression Device (MCA Optional Protocol)

Manual chest compressions remain the standard of care for the treatment of cardiac arrest. Mechanical chest compression devices may only be used as alternative to conventional CPR in specific settings where the delivery of high-quality manual compressions may be challenging or dangerous for the provider (e.g., limited rescuers available, CPR during hypothermic cardiac arrest, CPR in a moving ambulance).

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MCAs will be responsible for maintaining a roster of the agencies choosing to participate and will submit roster (including brand name/model number of device) to MDHHS.

Requirements:

1. FDA approved MCA authorized mechanical chest compression devices as listed below (brand name and model if applicable)

☑ Physio-Control/Stryker LUCAS Device

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2. Providers utilizing the device are trained on use of the device per MCA requirements
3. Follow manufacturer's instructions for use unless otherwise directed by the MCA.

Indications:

1. Cardiac Arrest

Contraindications:

1. Return of Spontaneous Circulation
2. Age and weight restrictions per manufacturers recommendations.
3. Patients with LVAD

Procedure:

1. Perform high-quality CPR while the device is being prepared for use.
2. Utilize device according to manufacturer's recommendations.
3. Refer to **Adult or Pediatric General Cardiac Arrest -Treatment Protocol**
4. Document use of Mechanical Chest Compression Device in patient care record including but not limited to:
    A. Type/brand of device
    B. Applicable times Mechanical Chest Compression Device was in use.
    C. Rate at which the device is set/delivering mechanical chest compressions.

OB High-Risk Delivery Transport Guidelines (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.

Purpose:
This policy is to establish guidelines for transport of women with pregnancy of more than 20 weeks and less than 34 weeks gestation in active labor, as these infants may require newborn intensive care.

1. In all cases where delivery is imminent, transport will be to the closest emergency receiving facility.

2. If labor is brought on by medical illness or injury of the mother, appropriate medical treatment of the mother is the first priority. This is also the most appropriate treatment of the newborn.

3. If time allows, any woman in active labor with a gestational period of more than 20 weeks and less than 34 weeks, in anticipation of delivery of a high risk newborn, should be taken to (list facilities and instructions for where to proceed with the patient):

X Sparrow Hospital - Main Campus

NOTE: This protocol was created as a template to be used for each MCA to determine the most appropriate transport decisions for the high-risk OB patient in their individualized MCA areas.

☑ 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.

ALS and LALS Intercept/Transfer of Care

Purpose: The purpose of this protocol is to establish indications and procedures for ALS intercept for patients being managed by a BLS or LALS unit who might benefit from ALS care or LALS intercept for patients being managed by a BLS unit when ALS is not available.

I. If a transport has begun by a Basic Life Support (BLS) unit, a rendezvous with an Advanced Life Support (ALS) unit or Limited Advanced Life Support (LALS) if available and ALS unit is not available, should be attempted at a mutually agreed upon location, if indicated and available.

II. If a transport has begun by a Limited Advanced Life Support (LALS) unit, a rendezvous with an Advanced Life Support (ALS) unit should be attempted at a mutually agreed upon location, if indicated and available.

III. Indications
   a. Patients presenting with conditions for which ALS interventions would be potentially beneficial for patients, if the intercept can be completed 10 or more minutes from the receiving facility, including, but not limited to patients with:
      i. Chest pain with suspected cardiac etiology
      ii. Seizure
      iii. Uncontrolled pain
      iv. Hypoglycemia
      v. Altered mental status
      vi. Worsening respiratory distress
      vii. Major trauma
   b. Patients presenting with conditions where ALS may be needed for life saving interventions may be intercepted at any distance from the hospital:
      i. Those with an uncontrolled airway
      ii. Patients in cardiac arrest without a mechanical CPR device in place

III. Contraindications
   a. Low acuity patients for which advanced intervention would likely not be beneficial to the patient.
   b. Patients with time sensitive emergencies where advanced intervention would likely not be beneficial to the patient

NOTE: BLS unit may contact Medical Control for assistance with any situation as necessary.

Procedure & Documentation

1. BLS/LALS personnel are required to provide the receiving ALS (or if applicable LALS) personnel with a complete hand-off report including medical history, pertinent physical exam findings, vital signs, treatment provided and response to treatment.
    a. The hand-off procedure (i.e., verbal report, field notes, air drop, etc.) must be MCA approved.
2. ALS (or if applicable LALS) personnel will include the complete hand-off report from BLS/LALS within or attached to (i.e., scannable field note) the ALS (or if applicable LALS) patient care record.
3. Both the initial unit (BLS/LALS) and unit receiving the rendezvous (ALS or if applicable LALS) shall complete an electronic Patient Care Report (PCR) and include the following in addition to patient care information:
    a. Agency name/unit number/providers names from whom patient was received or transferred to.
    b. If both transferring and receiving units are from the same agency, all personnel should be listed as crew in both the ALS and BLS run when possible.

ALS to BLS Transfer of Care (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.

Purpose
Patients who need or desire transport to a hospital and do NOT meet criteria for ALS interventions, may have care transferred from an ALS unit to a BLS unit if all criteria are met.

1. Criteria for transfer of care from ALS to BLS must include:
    a. Patient assessed by on scene paramedic and deemed appropriate for BLS care.
    b. Patient's airway is patent, maintained without assistance or adjuncts.
    c. Patient is hemodynamically stable with medical complaints or injuries that would be cared for at the BLS level.
    d. No imminent changes are anticipated in the patient's present condition.
    e. Patient presents at baseline mentation and GCS or if unknown, GCS ≥ 14.
    f. The EMT in attendance must be willing to accept the transfer of care given the patient's condition.
    g. ALS may consider transfer to BLS for the patients who have meet the above criteria and have had the following ALS interventions:
        i. IV placement with saline lock
        ii. Dextrose administration with return to baseline mental status
        iii. Naloxone administration with return to baseline mental status and without respiratory complaints
        iv. Analgesia administration, with no other excluding criteria and not requiring additional doses during transport.
    h. For any other patients with ALS interventions performed, contact medical control prior to ALS to BLS transfer of care.

2. Transport by the ALS unit shall be considered if the transfer of care to the BLS staffed ambulance would incur a time delay greater than the projected transport time to the intended receiving facility.

Procedure & Documentation
1. ALS personnel are required to provide BLS personnel with a complete hand-off report including medical history, pertinent physical exam findings, vital signs, treatment provided and response to treatment.
    a. The hand-off procedure (i.e., verbal report, field notes, air drop, etc.) must be MCA approved.

2. BLS personnel will include the complete hand-off report from ALS within or attached to (i.e., scannable field note) the BLS patient care record.
3. Both ALS and BLS shall complete an electronic Patient Care Report (PCR) and include the following in addition to patient care information:
    a. Agency name/unit number/providers names from whom patient was received or transferred to.
    b. If both transferring and receiving units are from the same agency, all personnel should be listed as crew in both the ALS and BLS run when possible.

Quality Improvement/Quality Assurance (QA/QI)

1. The MCA shall establish a QA/QI process for review of ALS to BLS transfers of care.

Licensure Level Requirement of Attendant during Transport (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.

Purpose: To provide a protocol to fulfill the requirement that allows for EMS personnel to transport patients up to their individual licensure level in the event that the vehicle is licensed at a higher level as set forth in Michigan Administrative Code Part 3, Ambulance Operations R325.22133 (f).

Michigan Administrative Code Part 3. Ambulance Operations R 325.22133 (f) states: that an individual whose license is at least equal to the level of vehicle license is in the patient compartment when transporting an emergency patient, or consistent with department approved medical control authority protocols.

I. Patient care transport level is to be determined by the individual(s) whose license is at least equal to the level of the vehicle license. This individual will perform a patient assessment to determine the level of patient care transport. The electronic patient care record must reflect this assessment both as a procedure and in components of the assessment.
   A. EMT-Basic may attend in the patient compartment during transport on a patient deemed to be within the scope of practice for an EMT-Basic as defined by the State of Michigan.
   B. EMT-Specialist may attend in the patient compartment during transport on a patient deemed to be within the scope of practice for an EMT-Specialist as defined by the State of Michigan.
   C. EMT-Paramedic may transport a patient at any level.

II. Ambulance(s) must maintain minimum staffing in accordance with Public Health Code Act 368 of 1978 Section 333.20921:
   (3a) If designated as providing basic life support, with at least 1 emergency medical technician and 1 medical first responder.
   (3b) If designated as providing limited advanced life support, with at least 1 emergency medical technician specialist and 1 emergency medical technician.
   (3c) If designated as providing advanced life support, with at least 1 paramedic and 1 emergency medical technician.

III. An appropriate licensed health professional, designated by a physician with an established patient relationship may be present in the patient compartment of the ambulance in place of EMS staffing, according to 333.20921 (6).

Evidentiary Blood Draw Protocol (MCA Optional Protocol)

This protocol is for specialist/AEMT and paramedic use only

☑ 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.

Purpose

In order to effectively utilize the resources of the Medical Control Authority, licensed Life Support Agencies may allow Paramedics working for them to draw a sample specimen of blood as allowed under the delegation of the Medical Control Authority EMS Medical Director, a licensed physician by the State of Michigan, pursuant to PA 368 (1978) MCL 333.16215 (Public Health Code) and PA 300 (1940) MCL 257.625a (Michigan Vehicle Code) and subsequent amendments reference these Public Acts. This shall be considered a Priority 3 level of service. However, if a patient presents with a medical condition, the General Pre-hospital Care protocol will be initiated.

Definitions

Consent to Search: Permission given by a person authorizing a law enforcement officer to make a seizure or conduct a search.

Implied Consent: A requirement under Michigan Law; all drivers are to have given their consent for a chemical test upon being arrested for Operating While Intoxicated as part of their application and issuance of a driver's license.

Medical Environment: Any area not within a freestanding medical facility(e.g., booking area, jail, or other scene where the paramedics may provide medical care).

Warrant: A precept or writ issued by a competent judge or magistrate authorizing a law enforcement officer to make a seizure or conduct a search.

Procedure

A paramedic may draw a blood specimen if one of the listed criteria is met:

1. When requested by a law enforcement officer, who provides verbal or written verification from the subject who is in custody, that the subject is voluntarily submitting to an Evidentiary Blood Draw as required by Implied Consent under PA 300 (1940) MCL 257.625a (Michigan Vehicle Code).
2. When requested by a law enforcement officer, who is in possession of a consent to search form duly signed by the subject in custody.

3. When requested by a law enforcement officer, who is in possession of a search warrant duly signed by a magistrate or judge.

This procedure is done at the delegation of the Medical Control Authority EMS Medical Director, a licensed physician, and under the supervision and at the direction of medical control, to draw blood for the purposes of determining the presence of alcohol and/or drugs as allowed for in PA 368 (1978) MCL 333.16215 (Public Health Code) in a Medical Environment.

Pre-Radio
PARAMEDIC

1. Obtain a full set of vital signs.
2. Obtain blood draw kit from law enforcement officer and use the provided contents within the kit for collection.
3. Sample shall be obtained in the presence of a law enforcement officer.
4. Do not use alcohol or alcoholic solutions to sterilize skin surface, needle or syringe.
5. In the presence of a law enforcement officer tell the subject that no alcohol was used in sterilizing the skin surface, needle, or syringe; then draw two tubes of venous blood from subject and upon completion of obtaining the specimen, slowly invert blood collection tube(s) several times to distribute the sodium fluoride/potassium oxalate preservative.
6. Complete blood specimen label(s) by entering name of subject, date and time of blood collection, and your name in ink.
7. In the presence of subject, hand tube(s) of blood and label(s) to law enforcement officer for signing, packaging, and transfer to the laboratory.
8. If the patient has no medical or trauma complaints and the vital signs are within normal limits consider this a treat and release from care.
9. If the patient has a medical or trauma complaint and/or vital signs are outside normal limits, transport the patient to the hospital.
   a. If officer refuses transport, contact medical control.

Personal Metered Dose Inhaler Use (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.

Purpose: Nebulized respiratory treatments are preferred over MDI's. This protocol is to allow for the use of the patient's own prescribed Metered Dose Inhaler (MDI) containing only albuterol, in place of nebulized albuterol administration by EMS personnel. This is to be used only in patients with **febrile respiratory symptoms**

A. To substitute administration of **albuterol 2.5 mg/3ml NS** nebulized with use of the patient's own prescribed MDI the following criteria MUST be met.
   1. A specific and applicable treatment protocol is being followed
   2. EMS provider administering patient prescribed MDI is MCA authorized to administer **albuterol 2.5 mg/3ml NS** nebulized within the treatment protocol

B. Indications
   1. Patients with febrile respiratory symptoms in need of bronchodilator treatment

C. Requirements
   1. Patient has a prescribed rescue Metered Dosed Inhaler (MDI) containing albuterol only
   2. MDI is prescribed to the patient (no one else)
   3. Medication is not expired
   3. MDI has a functioning spacer (preferred not required)

D. Procedure
   1. Assist patient in receiving four (4) puffs of their own rescue Albuterol Metered Dose Inhaler (MDI), with spacer, in place of each nebulized treatment of **albuterol 2.5 mg/3ml NS** as indicated in applicable treatment protocol.
   2. Use of a spacer is optimal. When no spacer is available, ensure that that patient breathes out completely before each puff in order to inhale as much medication as is possible.
   3. Do not use an MDI prescribed to another person.
   4. All MDI's should be brought to the hospital with the patient, if transported.

E. Directions for use an MDI with spacer (Figure 1)

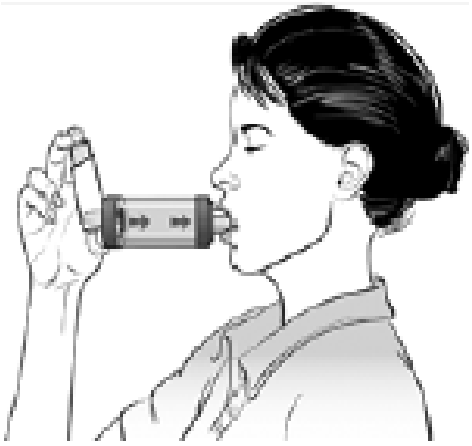

Figure 1

1. Remove the cap from the MDI and spacer. Shake well
2. Insert the MDI into the open end of the spacer (opposite the mouthpiece).
3. Place the mouthpiece of the spacer between the patient's teeth and have them seal their lips tightly around it.
4. Have the patient breathe out completely
5. Press the MDI canister once.
6. Have the patient breathe in slowly and completely through their mouth. If you hear a "horn-like" sound, they are breathing too quickly and need to slow down.
7. Have the patient hold their breath for 10 seconds (count to 10 slowly) to allow the medication to reach the airway of the lung.
8. Repeat the above steps for each puff.
9. Replace the cap on your MDI when finished.