



MICHIGAN State Protocols

Protocol Number

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12-Lead ECG

Aliases: EKG, 12 lead

Indications:

1. A 12-lead ECG must be performed on patients exhibiting any of the following signs/symptoms:
 - A. Chest pain or pressure
 - B. Upper abdominal pain
 - C. Syncope
 - D. Shortness of breath
 - E. Pain/discomfort often associated with cardiac ischemia
 - a. Jaw, neck, shoulder, left arm or other presentation; unless no other symptoms exist and the cause of the specific pain can be identified with a traumatic or musculoskeletal injury.
 - b. If there is any doubt about the origin of the pain/discomfort, or the presentation seems atypical for the mechanism, a 12-lead should be performed.
2. Patients exhibiting the following signs/symptoms should have a 12-lead ECG performed if the etiology of the illness is indicative of an Acute Coronary Syndrome or the etiology of the illness is indeterminate:
 - A. Nausea
 - B. Vomiting
 - C. Diaphoresis
 - D. Dizziness
 - E. Patient expression of “feelings of doom”
3. A 12-lead ECG may be performed based on the clinical judgment of the paramedic even in the absence of the above signs/symptoms.

Procedure:

1. Follow **General Pre-hospital Care Protocol**.
2. Perform 12-lead ECG per manufacturer guidelines, if available.



MCA approval for EMT to obtain and transmit ECG (and notify if STEMI)

3. Report if acute MI is suspected, either by device or **paramedic** provider interpretation.
4. Promptly relay either the 12-lead findings via MCA approved communications system or transmit 12-lead to the receiving facility.
5. Agencies in cooperation with Hospitals with 12-lead ECG pre-hospital receiving capability should have the relay done electronically immediately upon completion of the ECG in the following conditions:
 - A. ST elevation \geq 1mm in 2 contiguous leads.
 - B. Chest pain patient with left bundle branch block.
 - C. EMS personnel request assistance by hospital for interpretation of ECG.

- D. Hospital requests ECG be sent.
- 6. The Acute MI Report relayed to the receiving facility should include the following:
 - A. ***** Acute MI Suspected ***** or equivalent machine indication of Acute MI.
 - B. Location of MI, "ST elevation, consider _____injury".
 - C. Time of onset of the Chest Pain, if present.
 - D. Current level of pain.
 - E. Cardiac history (previous MI, CHF, CABG, Angioplasty or Stent).
 - F. Presence of possible indicators of False Positive ECG (Tachyarrhythmia, left bundle branch block, Pacemaker, wide complex QRS, noisy positive ECG after previous negative ECG).
- 7. Transport patients per MCA transport protocol.

Macomb
General Procedures
12 LEAD ECG PROCEDURE
SUPPLEMENTAL PROTOCOL

This supplemental protocol is to be used in addition to the approved state protocol. In Macomb County the following differences are noted:

1. The acquisition and transmission of 12-lead ECG's is mandatory.
2. A 4-digit unique identifier number, generated by the 12-lead ECG machine is to be noted on the EMS run form and communicated to the receiving hospital in the radio report
3. The patients date of birth will be entered into the monitor/defibrillator prior to the transmission of the EKG to the receiving hospital.

Macomb County supplemental details:

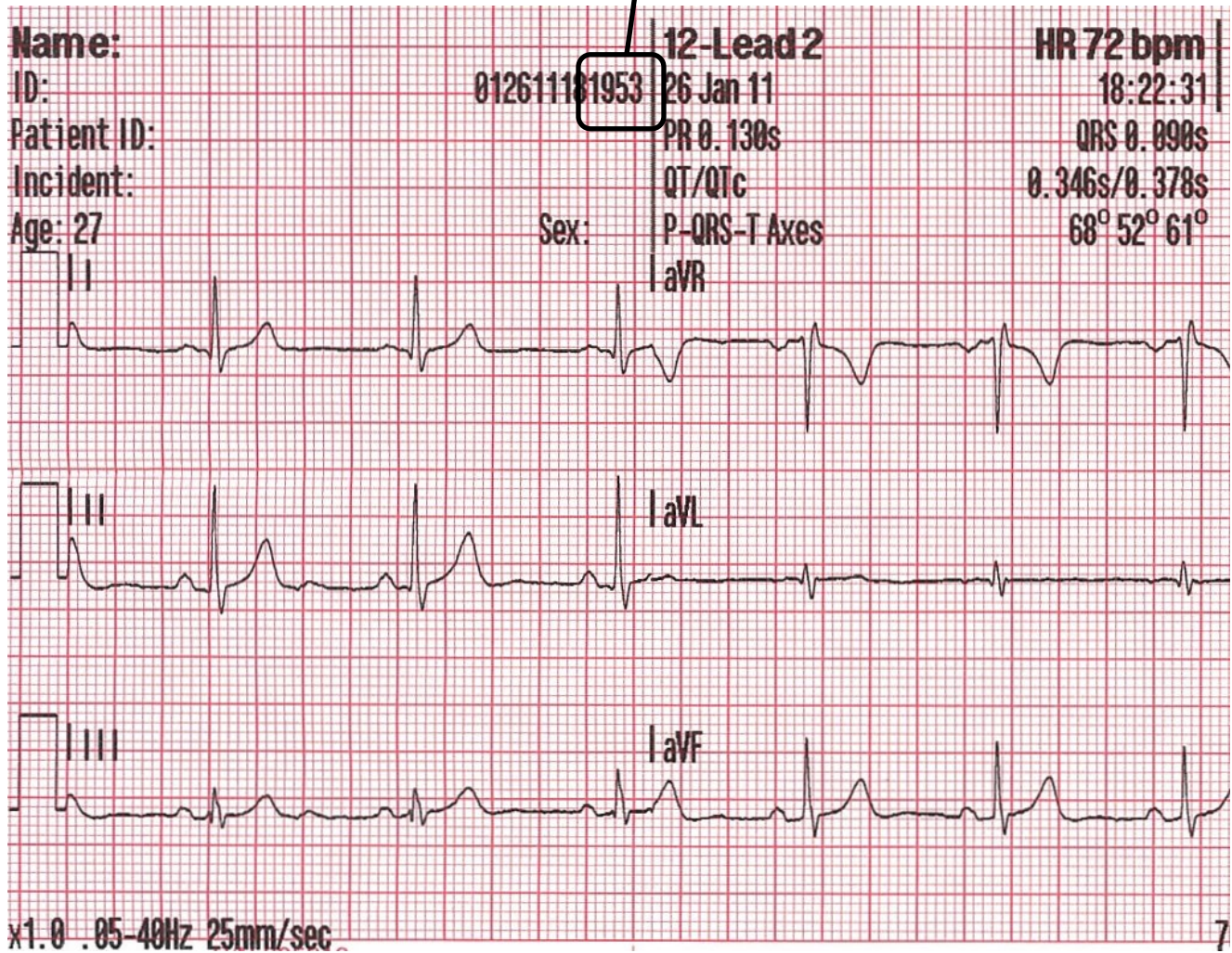
1. A 12 ECG must be performed on patients exhibiting any of the following signs/symptoms:
 - A. Chest pain or pressure
 - B. Upper abdominal pain
 - C. Syncope
 - D. Shortness of breath (not including asthma or COPD)
 - E. Pain/discomfort often associated with cardiac ischemia
 - a. Jaw, neck, shoulder, left arm or other presentation; unless no other symptoms exist and the cause of the specific pain can be identified with a traumatic or musculoskeletal injury.
 - b. If there is any doubt about the origin of the pain/discomfort, or the presentation seems atypical for the mechanism, a 12 lead should be performed.

Pre-Medical Control
PARAMEDIC

1. Follow **General Pre-hospital Care Protocol.**
2. Perform 12-lead ECG per manufacturer guidelines.
 - A. **Ensure that 4-digit identifier number is communicated via radio to the receiving facility.**
 - B. **See Page two for sample 4-digit identifier.**
3. Report if acute MI is suspected, as indicated by a 12-lead device.
4. **Promptly transmit 12-lead to the receiving facility (if unable to do so relay the 12-lead findings via radio).**

Macomb
General Procedures
12 LEAD ECG PROCEDURE
SUPPLEMENTAL PROTOCOL

Example: Last Four Digits of ID Number : 1953



Abuse & Neglect (Suspected)

Aliases: Child abuse, elder abuse, 3200 form, mandatory reporting

Purpose: To provide the process for assessment and management for patients of suspected child abuse and elder abuse.

When emergency personnel suspect that a patient has been abused (physically and/or sexually), neglected, or exploited, **a verbal and written report must be made to the emergency physician on arrival at the hospital and to the Protective Services Agency (child or adult)**. The primary purpose is protection of the patient from further harm. Do not confront the patient or family members with such suspicions at the scene.

Michigan law (MCL 722.623) requires that licensed EMS providers who have “reasonable cause to suspect child abuse or neglect” shall report “immediately, by telephone or otherwise” their suspicions to the Protective Services Agency for the County involved. In cases of suspected child abuse, this oral report shall also be followed with a written report on the Department of Human Services forms available in every hospital emergency department.

Michigan law (MCL 400.11a) also requires this same oral report for suspected cases of abuse or neglect of an adult.

Licensed providers are required to make an immediate verbal report and a written report within 72 hours when they suspect child abuse or neglect. Mandated reporters must also notify the head of their organization of the report. Reporting the suspected allegations of child abuse and/or neglect to the head of the organization does not fulfill the requirement to report directly to MDHHS.

The verbal report can be completed by calling 855-444-3911. The form is found here http://www.michigan.gov/documents/FIA3200_11924_7.pdf and is included in the protocol for reference.

1. Definitions

“Child Abuse” means harm or threatened harm to a child’s health or welfare by a parent, legal guardian, or any other person responsible for the child’s health or welfare...that occurs through non-accidental physical or mental injury; sexual abuse; sexual exploitation, or maltreatment.

“Child Neglect” means harm or threatened harm to a child’s health or welfare by a parent, legal guardian, or any other person responsible for the child health or welfare that occurs through either of the following: 1) Negligent treatment, including the failure to provide adequate food, shelter, or medical care; 2) Placing a child at an unreasonable risk to the child’s health or welfare by failure of the parent, legal

guardian, or any other person responsible for the child's health or welfare to intervene to eliminate that risk when that person is able to do so and has, or should have, knowledge of the risk.

"Abuse" means harm or threatened harm to an adult's health or welfare caused by another person. Abuse includes, but is not limited to, non-accidental physical or mental injury, sexual abuse, or maltreatment.

"Exploitation" means an action that involves the misuse of an adult's funds, property, or personal dignity by another person.

"Neglect" means harm to an adult's health or welfare caused by the inability of the adult to respond to a harmful situation or by the conduct of a person who assumes responsibility for a significant aspect of the adult's health or welfare. Neglect includes the failure to provide adequate food, clothing, shelter, or medical care.

2. Indicators of Possible Abuse

- Unsolicited history provided by the patient
- Delay in seeking care for injury
- Injury inconsistent with history provided
- Conflicting reports of injury from patient and care-giver
- Patient unable, or unwilling, to describe mechanism of injury
- Lacerations, bruises, ecchymosis in various stages of healing
- Multiple fractures in various stages of healing
- Scald burns with demarcated immersion lines without splash marks
- Scald burns involving anterior or posterior half of extremity
- Scald burns involving buttocks or genitalia
- Cigarette burns
- Rope burns or marks
- Patient confined to restricted space or position
- Pregnancy or presence of venereal disease in a child less than 12 years

3. Physical Assessment

- A. Treat and document physical injury per the appropriate medical treatment protocol.
- B. Observe for:
 - Potential over-sedation
 - Inappropriate fear
 - Avoidance behavior
 - Poor parent-child bonding
 - Inappropriate interaction with care giver

4. Evaluation and Documentation

- Focus the interview on the patient's physical injury. Do not address the specifics of abuse or neglect at this point.
- Obtain and record pertinent history related to the presenting problems.
- Determine and chart past medical history, and any cognitive or physical impairment.
- Note signs of inadequate housing or lack of facilities such as heat or water.
- Carefully and specifically document the patient's statement of instances of rough handling, sexual abuse, alcohol or drug abuse by family members, verbal or emotional abuse, isolation or confinement, misuse of property or theft, threats, gross neglect such as restriction of fluids, food or hygiene.
- Attempt to record, verbatim (word for word), any excited utterances (spontaneous comments).
- If necessary, ask the care-giver for information regarding the patient's medical condition. Observe mental health of care-giver.
- Request police assistance if there is any history of threatening, abusive, or violent acts. Protect yourself while obtaining a safe environment for the patient.

5. Special Considerations

- If the patient is not transported, the suspected abuse must still be reported. Law enforcement may also be contacted, at the discretion of EMS providers.
- Careful and specific documentation is vital because the "story" often changes as the investigation proceeds.
- Contact the Department of Health and Human Services Hotline at 1-855-444-3911.



Michigan PROCEDURES ABUSE AND NEGLECT (SUSPECTED)

Initial Date: 5/31/2012
Revised Date: 10/25/2017

Section: 7-2

REPORT OF ACTUAL OR SUSPECTED CHILD ABUSE OR NEGLECT Michigan Department of Health and Human Services

Was complaint phoned to MDHHS? <input type="checkbox"/> Yes <input type="checkbox"/> No ▶ If yes, Log # _____ ▶ If no, contact Centralized Intake (855-444-3911) immediately					
INSTRUCTIONS: REPORTING PERSON: Complete items 1-19 (20-28 should be completed by medical personnel, if applicable). Send to Centralized Intake at the address list on page 2.					1. Date
2. List of child(ren) suspected of being abused or neglected (Attach additional sheets if necessary)					
NAME	BIRTH DATE	SOCIAL SECURITY #	SEX	RACE	
3. Mother's name					
4. Father's name					
5. Child(ren)'s address (No. & Street)		6. City	7. County	8. Phone No.	
9. Name of alleged perpetrator of abuse or neglect		10. Relationship to child(ren)			
11. Person(s) the child(ren) living with when abuse/neglect occurred		12. Address, City & Zip Code where abuse/neglect occurred			
13. Describe injury or conditions and reason for suspicion of abuse or neglect					
14. Source of Complaint (Add reporter code below)					
01 Private Physician/Physician's Assistant		11 School Nurse		42 MDHHS Facility Social Worker	
02 Hosp/Clinic Physician/Physician's Assistant		12 Teacher		43 DMH Facility Social Worker	
03 Coroner/Medical Examiner		13 School Administrator		44 Other Public Social Worker	
04 Dentist/Register Dental Hygienist		14 School Counselor		45 Private Agency Social Worker	
05 Audiologist		21 Law Enforcement		46 Court Social Worker	
06 Nurse (Not School)		22 Domestic Violence Providers		47 Other Social Worker	
07 Paramedic/EMT		23 Friend of the Court		48 FIS/ES Worker/Supervisor	
08 Psychologist		25 Clergy		49 Social Services Specialist/Manager (CPS, FC, etc.)	
09 Marriage/Family Therapist		31 Child Care Provider		56 Court Personnel	
10 Licensed Counselor		41 Hospital/Clinic Social Worker			
15. Reporting person's name		Report Code (see above)		15a. Name of reporting organization (school, hospital, etc.)	
15b. Address (No. & Street)		15c. City	15d. State	15e. Zip Code	15f. Phone No.
16. Reporting person's name		Report Code (see above)		16a. Name of reporting organization (school, hospital, etc.)	
16b. Address (No. & Street)		16c. City	16d. State	16e. Zip Code	16f. Phone No.
17. Reporting person's name		Report Code (see above)		17a. Name of reporting organization (school, hospital, etc.)	
17b. Address (No. & Street)		17c. City	17d. State	17e. Zip Code	17f. Phone No.
18. Reporting person's name		Report Code (see above)		18a. Name of reporting organization (school, hospital, etc.)	
18b. Address (No. & Street)		18c. City	18d. State	18e. Zip Code	18f. Phone No.
19. Reporting person's name		Report Code (see above)		19a. Name of reporting organization (school, hospital, etc.)	
19b. Address (No. & Street)		19c. City	19d. State	19e. Zip Code	19f. Phone No.



**Michigan
PROCEDURES
ABUSE AND NEGLECT (SUSPECTED)**

Initial Date: 5/31/2012
Revised Date: 10/25/2017

Section: 7-2

TO BE COMPLETED BY MEDICAL PERSONNEL WHEN PHYSICAL EXAMINATION HAS BEEN DONE

20. Summary report and conclusions of physical examination (Attach Medical Documentation)		
21. Laboratory report	22. X-Ray	
23. Other (specify)	24. History or physical signs of previous abuse/neglect <input type="checkbox"/> YES <input type="checkbox"/> NO	
25. Prior hospitalization or medical examination for this child		
DATES	PLACES	
26. Physician's Signature	27. Date	28. Hospital (if applicable)
<small>The Michigan Department of Health and Human Services (MDHHS) does not discriminate against any individual or group because of race, religion, age, national origin, color, height, weight, marital status, genetic information, sex, sexual orientation, gender identity or expression, political beliefs or disability.</small>		<small>AUTHORITY: P.A. 238 of 1975. COMPLETION: Mandatory. PENALTY: None.</small>

INSTRUCTIONS

GENERAL INFORMATION:

This form is to be completed as the written follow-up to the oral report (as required in Sec. 3 (1) of 1975 PA 238, as amended) and mailed to Centralized Intake for Abuse & Neglect. Indicate if this report was phoned into MDHHS as a report of suspected CA/N. If so, indicate the Log # (if known). The reporting person is to fill out as completely as possible items 1-19. Only medical personnel should complete items 20-28.

Mail this form to:
Centralized Intake for Abuse & Neglect
5321 28th Street Court S.E.
Grand Rapids, MI 49546

OR

Fax this form to 616-977-8900 or 616-977-8050 or 616-977-1158 or 616-977-1154
OR
email this form to MDHHS-CPS-CIGroup@michigan.gov

1. Date – Enter the date the form is being completed.
2. List child(ren) suspected of being abused or neglected – Enter available information for the child(ren) believed to be abused or neglected. Indicate if child has a disability that may need accommodation.
3. Mother's name – Enter mother's name (or mother substitute) and other available information. Indicate if mother has a disability that may need accommodation.
4. Father's name – Enter father's name (or father substitute) and other available information. Indicate if father has a disability that may need accommodation.
- 5.-7. Child(ren)'s address – Enter the address of the child(ren).
8. Phone – Enter phone number of the household where child(ren) resides.
9. Name of alleged perpetrator of abuse or neglect – Indicate person(s) suspected or presumed to be responsible for the alleged abuse or neglect.
10. Relationship to child(ren) – Indicate the relationship to the child(ren) of the alleged perpetrator of neglect or abuse, e.g., parent, grandparent, babysitter.
11. Person(s) child(ren) living with when abuse/neglect occurred – Enter name(s). Indicate if individuals have a disability that may need accommodation.
12. Address where abuse / neglect occurred.
13. Describe injury or conditions and reason of suspicion of abuse or neglect – Indicate the basis for making a report and the information available about the abuse or neglect.
14. Source of complaint – Check appropriate box noting professional group or appropriate category.


Note: If abuse or neglect is suspected in a hospital, also check hospital.

MDHHS Facility – Refers to any group home, shelter home, halfway house or institution operated by the Department of Health and Human Services. Refers to any institution or facility operated by the Department of Health and Human Services.

15.-19 - Reporting person's name - Enter the name and address of person(s) reporting this matter.

Crime Scene Management

Aliases: Crime scene preservation

1. Follow **General Pre-hospital Care Protocol**
2. Preserve evidence whenever possible.
 - A. Wear gloves for all patient care and other activities within the crime scene.
 - B. Never cut through holes in clothing created by bullets or knives.
 - C. Retain all clothing, place in a paper bag. Be alert for torn clothing, fragments of cloth, blood, or body fluids, etc. for they need to be preserved as evidence.
 - D. Law enforcement is responsible for the disposition of this evidence.
 - E. When transporting a patient who may be dying, ascertain name and/or description of assailant if possible.
 - F. At an outdoor crime scene do not disturb shoe prints, tire marks, shell casings, etc.
 - G. Limit movement at the crime scene.
 - H. Attempt to keep others out of the area.
3. Advise patient to not shower, change clothes, or dispose of pertinent objects.
4. Assess patient for injury and treat according to protocol.
5. Use sensitivity in asking victim for historical information.
6. Thoroughly document all injuries and voluntary statements of patient. Red marks may disappear and your documentation may be the only witness that the victim was choked or struck, even though he/she stated it.
7. Document patient's emotional state.
8. Assure law enforcement agency has been notified.
 - A. Notify the investigating law enforcement of any alteration of the crime scene by EMS personnel including:
 - a. Any movement of furniture, tables, etc.
 - b. The original position of the patient and items.
 - c. If you turned on lights.
 - d. What you touched, moved, etc.
-  9. Transport, treating according to appropriate protocol



If transport is refused, refer patient to support agency and/or hospital whenever possible.

NOTES:

1. Your first duty is to provide emergency medical care at the scene of an illness/injury.
2. Certain measures can be taken to assist law enforcement personnel in preserving a crime without jeopardy to the patient.
3. The investigation of the circumstances surrounding the incident is the responsibility of the law enforcement agency.
4. Do not touch firearms (loaded or unloaded) unless it poses a potential or immediate threat. Secure any weapon that can be used against you or the crew out of the reach of the patient and bystanders.

Contaminated Patient

1. Identification of the Contaminated Patient
 - A. Use all your senses. Suspect hazardous material situation if you:
 - a. **See** containers, labels or placards, or a location suggesting a hazardous substance
 - b. **Hear** explosions, or reports of possible contamination, pre-arrival or on scene
 - c. **Smell** unusual odors – be suspicious
2. If contamination of a patient is suspected, the local fire or public safety department must be informed of the hazardous material situation.
3. The responding EMS agencies must prevent further contamination to themselves or others. Determine if any contaminated patients have already left the scene and promptly notify the hospital(s).
4. The responding EMS agency must not spread any contamination outside the response area until the responding fire or public safety department incident commander, or appropriate designee, has confirmed that decontamination is complete. Contaminated patients will not be transported out of the decontamination area until field decontamination is complete.
5. EMS responders will not enter a known contaminated area without proper personal protective equipment, training, and direction by incident command.
6. Invasive patient care procedures (IV/IO, OPA, NPA, ET, and Emergency Airway Devices) should not begin until decontamination of the patient is confirmed or until personal protective equipment is in place.
7. Prior to transport of a decontaminated patient, on-line medical control will be contacted to assure the patient is transported to a facility equipped to handle the specific needs of the patient.
8. Once the scene Incident Commander, or the appropriate designee, has confirmed that the patient is decontaminated, the responding EMS agency may transport the patient to the designated facility.

CPAP/BiPAP Administration

- Medical Control Authorities choosing to adopt this optional protocol may do so by selecting this check box.

Select the levels for which CPAP/BiPAP is approved

- BLS
 LALS
 ALS

The CPAP portion of the protocol may be utilized by BLS/LALS/ALS agencies that have completed CPAP training, approved by the MCA, and are equipped with CPAP Equipment including pulse oximetry. BiPAP use is limited to ALS agencies that have completed BiPAP training, approved by the MCA, and are equipped with BiPAP Equipment. For use of this protocol, patients must meet the Inclusion Criteria. Contraindicated patients and those that do not meet the inclusion criteria will be treated according to existing protocols without the application of CPAP/BiPAP.

Indications:

Severe respiratory distress not responding to initial treatment with any of the following:

1. CHF/Pulmonary edema/near drowning
2. Hypoxia, i.e., SaO₂ less than 92% on supplemental oxygen.
3. Acute exacerbation of asthma/COPD.

Contraindications:

1. Respiratory/cardiac arrest.
2. B/P less than 90mmHg.
3. Unresponsive to speech.
4. Inability to maintain patent airway.
5. Major trauma, pneumothorax, penetrating chest trauma.
6. Vomiting or active GI bleeding with emesis.
7. Unstable facial fractures.

Procedure



1. EXPLAIN THE PROCEDURE TO THE PATIENT.
2. Apply CPAP/BiPAP per manufacturer's recommendations.
3. Place the patient on continuous pulse oximetry.
4. Secure the mask with provided straps and tighten to obtain a good seal, check for air leaks
5. Continue to coach the patient to keep the mask in place, readjust as needed.
6. Advise medical control of CPAP/BiPAP use during radio report.
7. If respiratory status deteriorates, remove the device and assist ventilations with a BVM/supplemental O₂; place an appropriate airway control device.



8. Place the patient on cardiac monitor and record rhythm and vital signs.
9. Administer medications, per respiratory distress protocol, as indicated.



10. Consider sedation to reduce anxiety per **Patient Sedation Procedure**.

Removal Procedure

1. CPAP/BiPAP therapy needs to be continuous and should not be removed unless the patient cannot tolerate the mask or has marked deterioration including respiratory arrest, decreasing LOC or patient may vomit.
2. Assist ventilations as necessary

Special Notes:

1. Do not remove CPAP/BiPAP until hospital therapy is ready to be placed on the patient.
2. Watch the patient for gastric distention.
3. CPAP/BiPAP may be used on DNR patients not in arrest.
4. Due to changes in cardiac preload and afterload during CPAP/BiPAP therapy, a complete set of VS must be obtained every 10 minutes (5 minutes in short transport situations).

Macomb
General Procedures
CPAP/BiPAP ADMINISTRATION
SUPPLEMENTAL PROTOCOL

Page 1 of 1

This supplemental protocol is to be used in addition to the approved state protocol. In Macomb County the following differences are noted:

- 1. All advanced life support agencies in Macomb County must carry and utilize CPAP**
- 2. The procedure (application and removal) varies from the state protocol in both detail and order and is listed below**

Purpose: This protocol **shall** be utilized by both transporting and non-transporting Advanced Life Support agencies. For use of this protocol, patients must meet the Inclusion Criteria. Contraindicated patients and those that do not meet the inclusion criteria will be treated according to existing protocols without the application of CPAP/BiPAP.

Pre-Medical Control

PARAMEDIC

Procedure

1. Assess and record the patient's vital signs, including a respiratory distress severity scale.
2. Place the patient on a cardiac monitor and record rhythm.
3. Place the patient on continuous pulse oximetry.
4. EXPLAIN THE PROCEDURE TO THE PATIENT.
5. Apply CPAP/BiPAP per manufacturer's recommendations.
6. Secure the mask with provided straps and tighten to obtain a good seal, check for air leaks.
7. Administer medications, per respiratory distress protocol, as indicated.
8. Continue to coach the patient to keep the mask in place, readjust as needed, and consider sedation to reduce anxiety (per **Patient Sedation Procedure**).
9. Advise medical control of CPAP/BiPAP use during radio report.
10. Re-assess and record the patient's vital signs and severity of respiratory distress using a respiratory distress severity scale.
11. If respiratory status deteriorates, remove the device and assist ventilations with a BVM/supplemental O₂; place an appropriate airway control device.

Removal Procedure

1. CPAP/BiPAP therapy needs to be continuous and should not be removed unless the patient cannot tolerate the mask or has marked deterioration including respiratory arrest, decreasing LOC or patient may vomit.
2. Assist ventilations as necessary with BVM **and control airway with intubation/Supraglottic airway.**

Dead on Scene

Aliases: DOA, DOS

I. Dead on Scene inclusion criteria:

Initiate or continue CPR for patient found to be in cardiac arrest UNLESS one or more of the following conditions exists:

- A. Decomposition
- B. Rigor mortis (Caution: do not confuse with stiffness due to cold environment)
- C. Dependent lividity
- D. Decapitation
- E. Incinerated or frozen body
- F. Submersion greater than 1 hour documented by the licensed health care professional after arrival on scene.
- G. Gross dismemberment or obvious mortal wounds/conditions (injuries inconsistent with life – i.e., crushing injuries of the head and/or chest)
- H. Unwitnessed arrest of traumatic origin, without organized electrical activity (must be asystolic or other rhythm with rate less than 40/min).
- I. Patient has a valid “Do Not Resuscitate” identification bracelet or order.
- J. In cases of mass casualty incidents, where the number of patients exceeds the providers and resources to care for them, any patient who is pulseless and apneic may be triaged as deceased.

II. Specific Exceptions

- A. Patients who are struck by lightning, are acutely hypothermic or victims of cold water drowning (unless submersion time is over 1 hour) do not qualify for use of this policy.
- B. EMS personnel may initiate resuscitation efforts based upon professional judgement of viability, or if there is any concern over the validity of DNR orders, when present.

III. Procedure

- A. If none of the inclusion criteria are present, continue CPR and proceed to the appropriate treatment protocol
- B. If any of the above inclusion criteria, and none of the exclusion criteria, are met, cease CPR (if performed) and refer to the **Determination of Death, Death in an Ambulance and Transport of a Body Protocol**.

Do-Not-Resuscitate

Aliases: DNR

Purpose: The purpose of this policy is to provide a guideline to prehospital providers, who under certain circumstances may accommodate patients who do not wish to receive and/or may not benefit from cardiopulmonary resuscitation. This policy is drafted in accordance with Public Act 368 of 1978, as amended, as well as Act 192 and 193 of the Public Acts of 1996. This policy is intended to facilitate kind, humane, and compassionate service for patients who have executed a valid "Do-not-resuscitate order" under the aforementioned Acts.

1. Definitions

- A. Attending Physician – means the physician who has primary responsibility for the treatment and care of a declarant.
- B. Declarant – means a person who has executed a do-not-resuscitate order, or on whose behalf a do-not-resuscitate order has been executed pursuant to applicable laws.
- C. Do-not-resuscitate order – means a document executive pursuant to Act 193, directing that in the event a patient suffers cessation of both spontaneous respiration and circulation in a setting outside of a hospital, nursing home, or mental health facility owned or operated by the Department of Community Health, no resuscitation will be initiated.
- D. Do-not-resuscitate Identification Bracelet or Identification Bracelet – means a wrist bracelet that meets the requirements of Act 193 and worn by a declarant while a do-not-resuscitate order is in effect.
- E. Order – means a do-not-resuscitate order.
- F. Patient Advocate – means an individual designated to make medical treatment decisions for a patient under Section 496 of the revised probate code, Act No. 642 of the Public Acts of 1978, being section 700.496 of the Michigan Compiled Laws.
- G. Vital Sign – means a pulse or evidence of respiration.

2. Procedure

A do-not-resuscitate order is applicable to all prehospital life support agencies and personnel. A do-not-resuscitate order may be executed by an individual 18 years of age or older and of sound mind **OR** by an individual 18 years of age or older and of sound mind, and adherent of a church or religious denomination whose members depend upon spiritual means through prayer alone for healing **OR** by a patient advocate of an individual 18 years of age or older.

- A. EMS providers **shall not attempt** resuscitation of any individual who meets **ALL** of the following criteria:
 - a. 18 years of age or older
 - b. Patient has no vital signs. This means no pulse or evidence of respiration.

- c. Patient is wearing a do-not-resuscitate identification bracelet which is clearly imprinted with the words “Do-Not-Resuscitate Order”, name and address of declarant, and the name and telephone number of declarant’s attending physician, if any **OR**

The EMS provider is provided with a do-not-resuscitate order from the patient. Such an order form shall be in substantially the form outlined in Annex 1 or 2 and shall be dated and signed by all parties.

- B. A patient wearing a “do-not-resuscitate order” identification bracelet, or who has executed a valid “do-not-resuscitate order” form, **but who has vital signs, shall not be denied** any treatments or care otherwise specified in protocols.
- C. If a do-not-resuscitate order form is presented and is not substantially in the form as outlined in Annex 1 or 2, or is not complete and signed by all parties, **resuscitation will be initiated** while Medical Control is being contacted for direction.
- D. In the event care has been initiated on a patient, and subsequently a valid do-not-resuscitate order form is identified, and the patient meets the criteria in Item 1 above, discontinue resuscitation.
- E. A do-not-resuscitate order will not be followed if the declarant or patient advocate revokes the order. An order may be revoked at any time and in any manner by which the declarant or patient advocate is able to communicate this intent. **Resuscitation efforts will be initiated** and EMS personnel shall contact on-line Medical Control to advise them of the circumstances.
- F. A patient care record will be completed for runs handled within this protocol. The patient care record will clearly specify the circumstances and patient condition found by the EMS providers, and describe the do-not-resuscitate documents involved.



3. Honor DNR, terminate resuscitation or continue resuscitation and transport to the Hospital.

Note: The forms included in this protocol are samples, and examples of what a DNR may look like and should include. A valid DNR form does not need to look like this, but must contain fundamentally these items.



**Michigan
PROCEDURES
DO-NOT-RESUSCITATE**

Initial Date: 5/31/2012
Revised Date: 10/25/2017

Section 7-7

“DO-NOT-RESUSCITATE ORDER”

I have discussed my health status with my physician _____. I request that in the event my heart and breathing should stop, no person shall attempt to resuscitate me.

This order is in effect until it is revoked by me.

Being of sound mind, I voluntarily execute this order, and I understand its full import.

(Declarant’s signature) (Date)

(Type or print declarant’s full name)

(Signature of person who signed for declarant, if applicable) (Date)

(Type or print full name)

(Physician’s signature) (Date)

(Type or print physician’s full name)

ATTESTATION OF WITNESSES

The individual who has executed this order appears to be of sound mind, and under no duress, fraud, or undue influence. Upon executing this order, the individual has (has not) received an identification bracelet.

(Witness signature) (Date) **(Witness signature)** (Date)

(Type or print witness’s name) (Type of print witness’s name)

**This form was prepared pursuant to, and in compliance with,
The “Michigan do-not-resuscitate procedure act”.**

ANNEX 1



**Michigan
PROCEDURES
DO-NOT-RESUSCITATE**

Initial Date: 5/31/2012
Revised Date: 10/25/2017

Section 7-7

**“DO-NOT-RESUSCITATE ORDER”
Adherent of Church or Religious Denomination**

I request that in the event my heart and breathing should stop, no person shall attempt to resuscitate me.

This order is in effect until it is revoked by me.

Being of sound mind, I voluntarily execute this order, and I understand its full import.

(Declarant’s signature) (Date)

(Type or print declarant’s full name)

(Signature of person who signed for declarant, if applicable) (Date)

(Type or print full name)

ATTESTATION OF WITNESSES

The individual who has executed this order appears to be of sound mind, and under no duress, fraud, or undue influence. Upon executing this order, the individual has (has not) received an identification bracelet.

(Witness signature) (Date) (Witness signature) (Date)

(Type or print witness’s name) (Type of print witness’s name)

**This form was prepared pursuant to, and in compliance with,
The “Michigan do-not-resuscitate procedure act”.**

ANNEX 2

Electrical Therapy

Aliases: AED, Cardioversion, defibrillation, pacing

Automatic External Defibrillation (AED)

The AED shall be applied only to patients found in cardiopulmonary arrest. Interruptions to CPR should be kept to a minimum. The AED should not be used on patients found lying on conductive surfaces or patients in moving vehicles. There are no age or weight limits for AED use. In pediatric patients, attenuated pads should be used, if available. If adult pads are used in pediatric patients, place in an anterior/posterior configuration.

1. Follow the **Cardiac Arrest - General Protocol (Adult or Pediatric)**.
2. Stop CPR to analyze patient and shock once, if indicated.
3. Continue CPR immediately after the shock, or immediately if no shock is indicated and continue for 2 minutes (5 cycles) or when AED initiates analysis.
4. If no pulse, analyze the patient and repeat one shock, if indicated.
5. If patient converts to a non-shockable rhythm at any time, continue CPR until AED prompts to check the patient.
6. Should a patient who is successfully defibrillated arrest again, analyze the patient again.



Manual Defibrillation

1. Indications:
 - A. Ventricular fibrillation
 - B. Pulseless ventricular tachycardia
 - C. Unstable irregular wide complex tachycardia
2. Technique:
 - A. Turn defibrillator on.
 - B. Apply defibrillator paddles/pads according to manufacturer specifications.
 - C. Charge defibrillator to energy level specified in appropriate protocol or according to manufacturer specifications.
 - D. Verify shockable rhythm.
 - E. Assure that no one is touching the patient.
 - F. Defibrillate patient.
 - G. Immediately initiate or resume CPR.
 - H. Repeat defibrillations at 2 minute intervals if the patient remains in a shockable rhythm per protocol.
 - I. Continue to treat the patient according to the appropriate protocol.
3. Precautions
 - A. Dry the chest-wall if wet or diaphoretic.
 - B. Nitroglycerin paste should be removed; paddles should not be placed over nitroglycerin patches.
 - C. Avoid placing the paddles over a pacemaker or AICD.
 - D. If visible muscle contraction of the patient did not occur, defibrillation did not occur; check equipment.
 - E. If pediatric pads were used with an AED prior to ALS management,

- a. Either use the AED with their pediatric pads or
 - b. Remove the pediatric AED pads and use non-attenuated pediatric pads for defibrillation.
4. Complications
- A. Accidental shock of adjacent individual
 - B. Skin burns resulting from inadequate contact between paddles and skin or due to inadequate conducting gel or dry conductive pads.



Synchronized Cardioversion

1. Indications: Hemodynamically unstable patient with the following rhythms:
 - A. Regular Wide Complex Tachycardia (Presumed Ventricular Tachycardia).
 - B. Narrow Complex Tachycardia (Supraventricular Tachycardia (SVT) or Atrial Fibrillation with a rapid ventricular response).
2. Contraindications: Heart rate < 150 unless ordered by medical control
3. Technique:
 - A. Consider IV sedation per **Patient Sedation Procedure**.
 - B. Turn on defibrillator (monophasic or biphasic)
 - C. Attach monitor leads to the patient and ensure proper display of the patient's rhythm.
 - D. Turn SYNC on, assure that QRS complex is marked
 - E. Apply defibrillator paddles/pads according to manufacturer specifications.
 - F. Charge defibrillator to energy level specified in appropriate protocol or according to manufacturer specifications.
 - G. Check Rhythm.
 - H. Assure that no one is touching the patient
 - I. Cardiovert patient
 - J. Recheck pulse and rhythm
 - K. If rhythm does not convert, repeat cardioversion according to the appropriate protocol.
 - L. Recheck the "sync mode" after each synchronized cardioversion as many defibrillators default back to unsynchronized mode.
 - M. If ventricular fibrillation occurs, deactivate synchronized mode and defibrillate.
4. Precautions
 - A. Same as for defibrillation
 - B. In "sync" mode, the button(s) need to be held until a shock is delivered. If a shock is not delivered the first time, hold the button(s) again.
 - C. If a sinus rhythm is achieved by cardioversion, even briefly, and then reverts to previous rhythm, repeat the cardioversion at the same setting as was initially successful.
5. Complications
 - A. Accidental shock of adjacent individual
 - B. Skin burns resulting from inadequate contact between paddles and skin or due to inadequate conducting gel or dry conductive pads.



Transcutaneous Pacing (TCP)

1. Indications: Symptomatic Bradycardia with inadequate perfusion.

2. Technique:

- A. Monitor rhythm.
- B. Follow manufacturer's guidelines for pacing. For some monitors, ECG electrodes must be in place, along with pacing pads or combo-pads, in order for the pacer to function.
- C. Apply pacing electrodes per manufacturer's instructions.
- D. Consider sedation, per **Patient Sedation Protocol**.
- E. If QRS complexes are present, select a lead in which the QRS is the most positive or upright (so machine can sense their presence).
- F. Set external pacemaker rate to 60 bpm to begin.
- G. Initiate pacing and increase MA output until evidence of capture has occurred
- H. Increase at increments of 20 MA for unconscious patients and 5 MA for conscious patients.
 - a. Use minimal MA needed for mechanical capture.
- I. Run a rhythm strip and save.
- J. Assure adequate electrical and mechanical capture.
 - a. Electrical:
 - 1. Visible pacer spike immediately followed by wide QRS and broad T waves.
 - b. Mechanical:
 - 1. Palpable Pulses, improved LOC; improved BP; improved patient color.
- K. If mechanical capture is not obtained, contact medical control. Perform CPR if appropriate.

3. Precautions

- A. Use of transcutaneous pacemakers can cause painful muscle contractions. Consider the use of sedation in patients that are awake. See **Patient Sedation Protocol**.

4. Contraindications

- A. Wet environment
- B. Burns to the chest (relative)

Special Considerations for Electrical Therapy:

- 1. Electrical therapy may not be successful in hypothermic patients; refer to **Hypothermia Cardiac Arrest Protocol**.

Emergency Airway

Alias: *Airway Management, Airway Intervention, Supraglottic Airway, Intubation, Cricothyroidotomy.*

Effective airway management and ventilation are important lifesaving interventions that all EMS providers must be able to perform. The approach to airway management should generally proceed in a stepwise fashion, from basic to advanced, since basic maneuvers can sustain life until an advanced airway can be established. Providers should use clinical judgment in conjunction with medical direction to determine which interventions are most appropriate for a particular patient.

Indications for Airway Management and Ventilation

1. Airway Management
 - a. Airway obstruction
 - b. Need for positive pressure ventilation (see below)
 - c. Airway protection, such as an unconscious patient without a gag reflex.
 - d. Trauma patient with a Glasgow Coma Score of 8 or less.
2. Positive Pressure Ventilation
 - a. Respiratory or cardiac arrest (including agonal respirations)
 - b. Respiratory failure (inadequate respiratory rate/volume)

Contraindications for Airway Management and Ventilation

1. Presence of a gag reflex may be a contraindication to some specific airway interventions.
2. Specific supraglottic airways may have contraindications due to caustic ingestion or known esophageal varices.

MANAGEMENT OVERVIEW

1. In cases of foreign body airway obstruction, refer to Foreign Body Airway Obstruction section of this protocol.
2. CPAP (when available) should be considered for patients with severe respiratory distress that do not improve with supplemental oxygen administration in accordance with the **CPAP/BiPAP Administration Procedure**.
3. When the airway is not self-maintained, open the airway using basic maneuvers (chin lift or jaw thrust). Patients with a potential cervical spine injury should have a modified jaw thrust performed attempting to minimize neck flexion and extension.
4. Perform oral pharyngeal suctioning as needed to remove body fluids and minimize risk of aspiration. When possible, suctioning should be limited to no more than 15 seconds and should not extend beyond the pharynx.
5. In unconscious patients without a gag reflex, insert a properly sized oropharyngeal airway. Immediately remove upon return of gag reflex.
6. In unconscious patients with gag reflex, consider insertion of a properly sized nasopharyngeal airway, using water-soluble lubrication when available.
7. In patients requiring bag-valve-mask ventilations, consider inserting both oral and nasopharyngeal airways to optimize ventilations.
8. For patients with respiratory arrest or significant respiratory depression (e.g., adult patient with respiratory rate less than 8 per minute) perform bag-valve-mask (BVM) ventilations.
 - a. Note: BVM ventilations should be performed by 2 rescuers whenever possible. Use supplemental oxygen and reservoir system, focusing on adequate chest rise and ventilations that are not too forceful.

9. Ventilate at an appropriate rate. **Avoid hyperventilation.** Generally appropriate rates for ventilation are:
 - a. Adults >8 y/o 10 breaths / minute
 - b. Children 1-8 y/o 20 breaths / minute
 - c. Infants < 1 y/o 25 breaths / minute
10. A pocket mask or face shield is an acceptable alternative for single rescuer ventilations.
11. When caring for patients with stomas, use pediatric masks to achieve seal.
12. For patients with a tracheostomy tube and home ventilator connect BVM (without mask) directly to tracheostomy tube and ventilate at appropriate rates.
13. In the adult patient, providers may consider continuing basic airway management techniques if the airway is able to be maintained adequately.
14. In the pediatric patient (14 or under), providers **must** continue basic airway management, unless the airway is unable to be adequately maintained.
15. MCA-approved supraglottic airways (e.g., Combitube®, King Laryngeal Tracheal Tube or i-gel®) may be used to secure the airways in unconscious patients that do not have a gag reflex.



MCA Approved Supraglottic Airways

- Combitube® King Laryngeal Tracheal Tube® i-gel®

- a. **i-gel® is the only supraglottic airway for MFR use. It does not require cuff inflation and can be used by MFR if approved by the MCA and adopted by the agency.**

**MCA Approval for MFR use of i-gel®
(Agency Optional)**

- Yes No

16. In cardiac arrest patients, although endotracheal intubation has been considered the gold standard, supraglottic airways are considered equivalent to endotracheal intubation and are appropriate as a first-line advanced airway and should be used early when endotracheal intubation cannot be readily performed without interrupting chest compressions. Use of supraglottic airways in cardiac arrest patients may allow for earlier transition to continuous chest compressions.
17. Each MCA must select at least one state-authorized supraglottic airway for use in their system.
18. Supraglottic airways should be placed in accordance with manufacturer's instructions for use (see appropriate procedure) and must be confirmed by positive end-tidal CO₂ levels by waveform capnography (preferred) or by use of colorimetric qualitative end-tidal CO₂ detectors and by auscultation for absence of gastric sounds and presence of bilateral lung sounds. Additional clinical findings consistent with a properly placed airway include chest expansion, improvement in patient's color, and improvement in pulse oximetry (when available).
19. Supraglottic airway placement should be re-confirmed at frequent intervals throughout the care of the patient, particularly after each patient movement.

Table 1 Airway Procedures

PROCEDURE	MFR	EMT	EMT-A (Specialist)	PARAMEDIC
Oropharyngeal Airway	X	X	X	X
Nasopharyngeal Airway	X	X	X	X
Bag-Valve-Mask Ventilation	X	X	X	X
Supraglottic Airway (Individual Agency approval per MCA)	O/SR	X	X	X
Oral Endotracheal Intubation				X
Needle / Surgical Cricothyroidotomy				O/O
X: Approved Intervention O: Optional Intervention per MCA selection SR: Special Requirements =additional education, monitoring and reporting.				

** This table indicates the type of airway procedures allowed per level of licensure. Based on jurisdictional need, the MCA may approve the use of the i-gel® supraglottic airway by MFRs. If an MCA opts to allow MFRs in a particular agency to utilize the i-gel® airway, special requirements must be enacted by the MCA including competency assessment, on-going training for MFRs, and PSRO review of every case in which an MFR utilizes a supraglottic airway.*



20. Orotracheal intubation under direct laryngoscopy may be performed in adult patients who are unable to protect their own airway (e.g., no gag reflex), require sustained positive pressure ventilation, and/or are in cardiac arrest.



21. Orotracheal intubation under direct laryngoscopy may be performed in pediatric patients (14 years old and under) who are unable to protect their own airway (e.g., no gag reflex), require sustained positive pressure ventilation, and/or are in cardiac arrest ONLY when basic airway management techniques (e.g., 2-person mask ventilation with oropharyngeal airway) are ineffective. Per MCA selection, may be pre or post-radio.

<p><u>MCA Selection</u> Pediatric Intubation <input type="checkbox"/> Pre-Radio <input type="checkbox"/> Post-Radio</p>
--

22. Deep tracheal suctioning may be performed when indicated using sterile technique and suctioning only during withdrawal of catheter.

- a. Maximum suction time:
 - i. Adults (>14 years old): maximum 10 seconds
 - ii. Children (1 to 14 years old): maximum 10 seconds
 - iii. Infants (< 1 year old) maximum 5 seconds

23. When approved by local MCA, needle and/or surgical cricothyroidotomy may be performed when airway compromise from injury is present that prevents ventilation with basic techniques and makes intubation impractical in a patient who needs immediate airway management. In cases of complete airway obstruction that cannot be corrected, and in situations when other basic and advanced airway management techniques are unsuccessful in achieving effective ventilation.

- MCA approval of Needle Cricothyroidotomy by Paramedics
- MCA approval of Surgical Cricothyroidotomy by Paramedics
- MCA Commercial Percutaneous Cricothyroidotomy by Paramedics

24. Use of sedation to facilitate advanced airway placement is contraindicated. Sedation for tube tolerance following successful tube placement is indicated in accordance with the **Patient Sedation Procedure**.

FOREIGN BODY AIRWAY OBSTRUCTION

This procedure is intended for situations in which a severe foreign body airway obstruction (FBAO) has occurred. EMS personnel must be able to rapidly initiate treatment in such cases.

Note: Sudden cardiac arrest that occurs while a person is eating is frequently dispatched as “choking.” EMS personnel should consider these cases to be potential cardiac arrests.

1. In conscious (responsive) adults and children >1 year of age, deliver abdominal thrusts in rapid sequence until the obstruction is relieved.
2. Administer chest thrusts in conscious patients in place of abdominal thrusts when:
 - a. Abdominal thrusts are ineffective (optional consideration)
 - b. Patient is obese and rescuer is unable to encircle the patient’s abdomen
 - c. Patient is in the later stages of pregnancy (e.g., greater than 20 weeks)
 - d. Patient is under 1 year of age
3. For conscious infants (under 1 year old) with evidence of severe FBAO:
 - a. Deliver repeated cycles of 5 back blows (slaps) followed by 5 chest compressions until the object is expelled or the patient becomes unresponsive.
 - b. Note: Abdominal thrusts are not recommended for infants because they may damage the infant’s relatively large and unprotected liver.
4. If any patient becomes unresponsive or is found unresponsive and is unable to be ventilated using the 2-person bag-valve-mask technique with oropharyngeal airway:
 - a. Start CPR with chest compressions (do not perform a pulse check).
 - b. After 30 chest compressions, open the airway and visually inspect the mouth for a foreign body, remove it but do not perform blind finger sweeps as this may push obstructing objects farther into the pharynx and may damage the oropharynx.
 - c. Attempt to give 2 breaths and continue with cycles of chest compressions and ventilations until the object is expelled.
5. For unconscious patients, while chest compressions are being provided, perform direct laryngoscopy. If foreign body is visible, remove using adult or pediatric Magill forceps.
6. If unsuccessful in visualizing foreign body, consider brief trial of abdominal thrusts while performing direct laryngoscopy.
7. Once FB is removed, if spontaneous respiration does not return, perform endotracheal intubation if able to be readily accomplished or place Supraglottic airway and begin ventilations.



SPECIFIC AIRWAY PROCEDURES



i-gel® Supraglottic Airway

***MFR approved only if approved by the MCA, adopted by the agency, and personnel are trained**

Table 2 i-gel® Supraglottic Airway Required Documentation

Size of i-gel® used	Time of attempt(s)
Number of attempts	Suctioning required before placement
Ventilation compliance	Chest rise with ventilation
Capnography Used	ET CO ₂ /Capnography reading (serial)
Equality of lung sounds	Absence of epigastric sounds
Method for securing airway	Any complications with procedure
Gastric decompression performed (excluding MFRs)	

Indications:

1. Cardiac arrest. Appropriate as first-line advanced airway.
2. Respiratory arrest (including agonal breathing), without gag reflex, not responsive to initial treatment including bag-valve-mask ventilation and naloxone (when indicated)
3. Rescue airway for failed endotracheal intubation (Paramedics only).

Contraindications:

1. Responsive patients with a gag reflex.
2. Trismus (limited mouth opening), suspected pharyngo/peri-laryngeal abscess, major facial trauma or oral-pharyngeal mass.
3. Patients in whom caustic substance ingestion is suspected.

Equipment:

1. i-gel® O₂ Resus Pack (includes airway, support strap, water-soluble lubricant)
2. Supplies: bag-valve-mask, capnography, suction
3. Use appropriate size for patient based on table below.

Table 3 i-gel® Quick Reference

Size	Color	Patient Size	Patient Weight
3	Yellow	Small adult	30-60 kg (~65-130 pounds)
4	Green	Medium adult	50-90 kg (~110-200 pounds)
5	Orange	Large adult	90+ kg (More than 200 pounds)

Source: <http://www.intersurgical.com/info/igel>

Note: Patients with cylindrical necks or wide thyroid/cricoid cartilages may require a larger size i-gel® than would normally be recommended on a weight basis. Equally, patients with a broad or stocky neck or smaller thyroid/cricoid cartilage, may require a smaller size i-gel® than would normally be recommended on a weight basis. Patients with central obesity, where the main weight distribution is around the abdomen and hips, might in practice require an i-gel® of a size commensurate with the ideal body weight for their height rather than their actual body weight.

i-gel® O₂ Pre-Insertion:

1. Provide bag-valve mask ventilation using 2 person technique with an oropharyngeal airway, avoiding hyperventilation, and performing pharyngeal suctioning as needed.
2. Inspect the packaging and ensure it is not damaged prior to opening.

3. Inspect the device carefully, check that the airway is patent and confirm that there are no foreign bodies or a bolus of lubricant obstructing the distal opening of the airway or gastric channel.
4. Remove the i-gel® O₂, open the sachet of supplied lubricant and place a small bolus of the lubricant on the base of the inner side of the main shell of the packaging.
5. Grasp the i-gel® O₂ along the integral bite block and lubricate the back, sides and front of the cuff with a thin layer of lubricant. This process may be repeated if lubrication is not adequate. After lubrication has been completed, check that no bolus of lubricant remains in the bowl of the cuff or elsewhere on the device. Avoid touching the cuff of the device with your hands.
6. Ensure the supplementary oxygen port is firmly closed with the integral cap in place.
7. Position the patient's head (ideal position is the sniffing position, but the neutral position can be used especially for suspected spinal injury).
8. Pre-position the airway support strap behind the patient's neck.

i-gel® O₂ Procedure:

9. Grasp the lubricated i-gel® O₂ firmly along the integral bite block. Position the device so that the i-gel® O₂ cuff outlet is facing towards the chin of the patient.
10. Introduce the leading soft tip into the mouth of the patient in a direction towards the hard palate.
11. Glide the device downwards and backwards along the hard palate with a continuous but gentle push until definitive resistance is felt.
12. At this point, the tip of the device should be located in the upper esophageal opening and the cuff should be located against the laryngeal framework. The incisors should be resting on the integral bite block.
13. i-gel® O₂ should be secured with the airway support strap provided.
14. Attach bag-valve device and verify placement by ALL of the following criteria:
 - a. Positive end-tidal CO₂ levels by waveform capnography (preferred) or by use of colorimetric qualitative end-tidal CO₂
 - b. Rise and fall of the chest
 - c. Bilateral breath sounds and absent epigastric sounds
15. If there is any question about the proper placement of the i-gel® O₂ airway, remove the airway, ventilate the patient with BVM and OPA for at least 30 seconds and repeat insertion procedure (maximum of 3 attempts), considering different size.
16. If unsuccessful, return to BVM ventilation and consider alternative advanced airway as authorized by MCA.
17. If successful, continue positive pressure ventilation, avoiding hyperventilation.
18. Consider reinforcing the airway support strap with tape for transport.
19. Continue to monitor the patient for proper airway placement throughout prehospital treatment and transport using waveform capnography.
20. Following successful placement, consider gastric decompression (excluding MFR) using a lubricated 10F (#3 or 4 i-gel) or 12F (#5 i-gel) oral gastric tube, if available.

Combitube® Airway

Table 4 Combitube® Airway Required Documentation

Size and type of Combitube® Airway	Time(s) attempted
Number of attempts	Suction required
Ventilation compliance	Chest rise with ventilation
Absence of epigastric sounds	Which tube used for ventilation
Capnography used	ET CO ₂ capnography reading
Equality of lung sounds	Any complications with intubation procedure

Indications:

For use in unconscious patients with absent gag reflex, that require assisted ventilation. May be used as a rescue device for failed endotracheal intubation or as a primary advanced airway technique. May be preferred over ET intubation in cardiac arrest patients to minimize interruptions in chest compressions.

Contraindications:

1. Patient with an intact gag reflex
2. Patient under 5 feet tall for a regular adult, 4 feet for Combitube® SA
3. Patients in whom caustic substance ingestion is suspected
4. Presence of a tracheostomy

Equipment:

1. Combitube® is available in 2 sizes, 41F and 37F (SA)
2. Support equipment: Bag-valve-mask, suction, capnography, securing device
3. Use appropriate size and inflation volumes for patient based on table below

Table 5 Combitube® Quick Reference

Patient Height	Combitube® size	Proximal Balloon #1 Inflation Volume	Distal balloon #2 Inflation Volume
>4 Feet Tall	Combitube® SA 37f	50-75 cc (85 cc max)	12cc
>5 Feet Tall	Combitube® 41f	50- 75 cc initially (100cc max)	15cc

Note: In most patients under 6' the Combitube® SA (37F) is preferred.

Procedure for Combitube® Airway Insertion

1. Provide bag-valve-mask ventilation using 2-person technique with an oropharyngeal airway, avoiding hyperventilation, and performing pharyngeal suctioning as needed.
2. Test cuff inflation system by injecting the maximum inflation volume listed in table above for the size of the tube.
3. Deflate cuffs completely before insertion, leaving syringe attached to connector.
4. Lubricate tip of Combitube® with water soluble medical lubricant.

5. Position patient with head/neck in a neutral position (or slightly flexed if no suspected spinal injury).
6. With gloved hand, lift mandible (jaw) forward.
 - Ⓢ a. Alternatively, may use a curved laryngoscope blade to establish path for insertion.
 - b. Insert Combitube® into mouth following the same curvature as the pharynx.
7. Gently advance Combitube® (along midline) deep into the pharynx until the patient's teeth (gums) lie between the two circular ring markings on the outer end of the airway.
 - a. If resistance is felt while advancing, assure the mandible is fully displaced forward.
 - b. Do not forcibly advance the airway against resistance.
 - c. If resistance continues to be felt, withdraw the Combitube® and reinsert.
8. Without holding the Combitube®, inflate the Blue Port #1 (proximal pharyngeal balloon) with 50-75 cc of air using the large syringe. Combitube® may be slightly displaced outward.
9. Inflate the White Port #2 (distal esophageal balloon) with 12 cc of air (Combitube® SA 37 F) or 15 cc of air (Combitube® 41 F) using the small syringe.
10. Attach the bag-valve ventilator to the Blue Tube (#1) and begin ventilations while assessing for placement.
 - a. Confirm positive end-tidal CO₂ levels by waveform capnography (preferred) or by use of colorimetric qualitative end-tidal CO₂. Assess for chest rise, listen for absence of gastric (stomach sounds), then listen for bilateral breath sounds.
 - b. If chest rises, no gastric sounds and bilateral breath sounds are present and CO₂ detected, continue ventilating through Blue Tube #1. Tube should be in esophagus.
 - c. If chest does not rise and if gastric sounds are present when ventilating through Blue Tube #1, immediately switch to Clear Tube #2. If chest rises, no gastric sounds and bilateral breath sounds are present and CO₂ detected, continue ventilations through Clear Tube #2. Tube should be in trachea.
 - d. If ventilation through either tube does not produce chest rise, absent gastric sounds, bilateral breath sounds and detection of CO₂, then immediately fully deflate balloon #1 then balloon #2 and remove Combitube®, reinsert oropharyngeal airway and resume 2-person bag-valve mask ventilations prior to re-attempting procedure.
11. If ventilations are successful through Blue Tube #1 but an air leak is detected at the mouth, place additional air into Blue Port #1 in 10 cc increments while ventilating (85 cc maximum for 37 F or 100 cc maximum for 41 F) until air leak resolves.
12. If ventilating successfully through Blue Tube #1 and gastric distension is present, insert suction catheter (provided) through Clear Tube #2, attach suction and decompress stomach, if available.
13. The large pharyngeal balloon generally is sufficient to keep the Combitube® in place during pre-hospital care. Additionally securing the Combitube® with tape or similar means is recommended when extensive patient movement is likely to occur (e.g., during extrication).
14. Constant monitoring of the patency of the airway must be done throughout the care of the patient. End tidal CO₂ monitoring, evaluating chest rise and re-auscultation of gastric and breath sounds should be performed at frequent intervals.
15. Both the pharyngeal and esophageal balloons are at risk for being punctured during insertion from sharp teeth. If either balloon is punctured the device will not work effectively and must be removed. This can be detected by the pilot cuffs being unable to maintain air.
- Ⓢ 16. Combitube® should be removed if patient develops a gag reflex. Alternatively, paramedics may sedate as needed for tube tolerance per **Patient Sedation Procedure**.

King LTS-D® Supraglottic Airway

Table 6 King ® Supraglottic Airway Required Documentation

Size and type of King ® airway used	Time(s) attempted
Number of attempts	Suctioning required before placement
Ventilation compliance	Chest rise with ventilation
Equality of Lung Sounds	Absence of Epigastric Sounds
Capnography used	ET CO ₂ capnography reading
Method for Securing Airway	Any Complications with Intubation Procedure
Gastric decompression performed	

Indications:

For use in unconscious patients without gag reflex, that require ventilation. May be used as a rescue device for failed endotracheal intubation or as a primary advanced airway technique. Consider in cardiac arrest patients to minimize interruptions in compressions.

Contraindications:

1. Responsive patients with a gag reflex
2. Patients who are under 4 feet
3. Patients in whom caustic substance ingestion is suspected.

Equipment:

1. King LT-D ®: Disposable King Airway that does not have gastric access.
2. King LTS-D ®: Disposable King Airway that provides gastric access to allow for gastric decompression using an 18F gastric tube (preferred for adults).
3. Supplies: Water-soluble lubricant, bag-valve-mask, capnography, securing device.
4. Use appropriate size and inflation volumes for patient based on table below.

Table 7 King Airway ® Quick Reference

Size	Patient Criteria	Connector Color	Inflation Volume LT-D	Inflation Volume LTS-D
3	4-5 ft.	Yellow	45-60 ml	40-55 ml
4	5-6 ft.	Red	60-80 ml	50-70 ml
5	Greater than 6 ft.	Purple	70-90 ml	60-80 ml

Source: <https://www.narescue.com/media/custom/upload/File-1443546141.pdf>

King LTS-D ® Procedure:

1. Provide bag-valve-mask ventilation using 2-person technique with an oropharyngeal airway, avoiding hyperventilation, and performing pharyngeal suctioning as needed.
2. Test cuff inflation system by injecting the maximum inflation volume listed in table above for the size of the tube.
3. Deflate cuffs completely before insertion, leaving syringe attached to connector.

4. Lubricate the beveled distal tip and posterior aspect of the tube avoiding introduction of lubricant in or near the ventilatory openings.
5. Position the patient's head (ideal position is the sniffing position but the neutral position can be used).
6. Holding the King® at the connector, hold the patient's mouth open and apply chin lift unless contraindicated due to trauma and/or spinal immobilization,
7. With the King® rotated laterally 45-90 degrees, such that the blue orientation line is touching the corner of the mouth, introduce tip into the mouth and advance behind the base of the tongue. Never force the tube into position.
8. As the tip passes under tongue rotate tube back to midline (blue orientation line faces chin).
9. Without exerting excessive force, advance the King® until base of connector aligns with teeth or gums.
10. Inflate the cuff based on the listed volumes for the tube size used.
11. Attempt ventilation. If resistance is met and/or no chest rise occurs, carefully withdraw the airway approximately 1 cm at a time while attempting to ventilate. When airway is in supraglottic position, patient should easily ventilate and chest should rise and fall.
12. Attach bag, valve device and verify placement by ALL of the following criteria:
 - a. Positive end-tidal CO₂ levels by waveform capnography (preferred) or by use of colorimetric qualitative end-tidal CO₂.
 - b. Rise and fall of chest
 - c. Bilateral breath sounds
 - d. Absent epigastric sounds
13. Secure the airway, preferably with a commercial tube holding device appropriate for the King Airway®.
14. If there is any question about the proper placement of the King Airway®, deflate the cuffs and remove the airway, ventilate the patient with BVM for 30 seconds and repeat insertion procedure or consider other airway management options.
15. Continue to monitor the patient for proper airway placement throughout prehospital treatment and transport.
16. Following successful placement, consider gastric decompression using a lubricated 18F gastric tube, if available.
17. King Airway® should be removed if patient develops a gag reflex. Alternatively, paramedics may sedate as needed for tube tolerance per **Sedation Procedure**.






Orotracheal Intubation



Pediatric Orotracheal Intubation should not be performed unless unable to ventilate by any other means (including BVM and basic airway adjuncts).

Table 8 Orotracheal Intubation Required Documentation

ET tube size	Number of attempts
Visualization of vocal chords	Suction required
ET Tube measurement (cm) at teeth	Chest rise with ventilation
Ventilation compliance	Bulb syringe check documented if used
Capnography used	ET CO ₂ capnography reading
Equality of lung sounds	Absence of epigastric sounds
Method for securing ET tube	Any complications encountered

1. Ventilate the patient with 100% oxygen using BVM and 2-person technique.
2. Gather equipment:
 - a. Appropriate size ETT with stylet
 - b. Syringe
 - c. Laryngoscope with blades
 - d. Suction
 - e. Bag-valve-mask (BVM)
 - f. Commercial device for securing tube after placement
 - g. Waveform capnography (preferred) or colorimetric capnometry for confirmation
 - h. Pulse oximeter, if available
3. If no suspicion of cervical spine injury, position patient with head elevated and extended.
4. If cervical spine injury suspected, have 2nd person stabilize head and neck in neutral position.
5. Perform direct laryngoscopy:
 - a. If using a curved blade, place the tip anterior to the epiglottis into the vallecula.
 - b. If using a straight blade, directly lift the epiglottis with the tip of the blade.
 - c. For infants and children less than 4-6 years old, a straight blade is recommended.
 - d. For commercial video laryngoscopy systems (approved by MCA and the Division), follow manufacturer's instructions for use regarding placement.
6. In the adult patient the ET tube should be advanced through the cords until the proximal portion of the balloon is passed 2 to 3 cm beyond the vocal cords. Unless otherwise contradicted by auscultation, the tube should be 21 cm at the incisors (or corner of the mouth) in females and 23 cm in males.
- 
 7. In pediatric patients, the ET tube should be advanced to the depth recommended based on patient's weight. In general the ET tube should be advanced to a depth that is approximately 3 times the size of the ET tube (e.g., a 4.0 tube should be advanced to ~12 cm).
8. In general, attempts should be limited to less than 30 seconds each.
9. No more than two attempts should be made prior to considering a Supraglottic airway and/or continuing with basic airway management techniques.
10. In cardiac arrest patients, limit interruptions of compressions to no more than 10 seconds.
11. If using a cuffed tube, inflate the balloon.

12. Confirm tube placement with positive end-tidal CO₂ levels by waveform capnography (preferred) or by use of colorimetric qualitative end-tidal CO₂, by absence of gastric sounds and by presence of bilateral breath.
13. Document the procedure including all the above confirmation techniques for each oral intubation attempt. Maintain airway monitoring once established.
 - a. For documentation purposes an oral attempt is defined as anytime an ET tube passes patient's lips.
14. Airway placement should be re-confirmed at frequent intervals throughout the care of the patient, particularly after each patient movement.


Cricothyroidotomy

NOTE: If MCA selects Commercial Percutaneous Cricothyroidotomy; training program must be submitted with this protocol.

Table 9 Cricothyroidotomy Required Documentation

Type of cricothyroidotomy attempted	Indication for cricothyroidotomy
Number of attempts	Times attempted
Ventilation compliance	Previous advanced airway attempts
ET CO ₂ Capnography reading	Chest rise with ventilation
Equality of lung sounds	Post cricothyroidotomy pulse oximetry
Any complications with procedure	

The cricothyroid membrane is located subcutaneously between the thyroid cartilage ("Adam's apple") and cricoid cartilage. There are three methods for performing a cricothyroidotomy: surgical cricothyroidotomy, needle cricothyroidotomy, and percutaneous cricothyroidotomy using a state and local MCA-authorized commercial kit. The surgical technique uses a scalpel blade to create an opening in the cricothyroid membrane through which an endotracheal tube is inserted. The needle technique uses a large bore (> 14 ga) IV catheter inserted percutaneously and requires a commercial transtracheal jet insufflation device for optimal use. The percutaneous cricothyroidotomy uses a commercial kit to perform the cricothyroidotomy.

 Patients less than age 8 may have a needle cricothyroidotomy performed or a percutaneous cricothyroidotomy using an approved pediatric kit. Patient's age 15 or greater may undergo a needle, surgical, or commercial percutaneous cricothyroidotomy, **as approved by local medical control.**

Indications for Cricothyroidotomy:

1. Total airway obstruction not relieved by other methods.
2. Airway compromise from injuries that prevent ventilation with basic techniques and makes intubation impractical in a patient who needs immediate airway management.
3. Inability to intubate or effectively manage with basic ventilation techniques or supraglottic airway.

Contraindications for Cricothyroidotomy:

1. Ability to ventilate by any other method.

12. Confirm tube placement with positive end-tidal CO₂ levels by waveform capnography (preferred) or by use of colorimetric qualitative end-tidal CO₂, by absence of gastric sounds and by presence of bilateral breath.
13. Document the procedure including all the above confirmation techniques for each oral intubation attempt. Maintain airway monitoring once established.
 - a. For documentation purposes an oral attempt is defined as anytime an ET tube passes patient's lips.
14. Airway placement should be re-confirmed at frequent intervals throughout the care of the patient, particularly after each patient movement.


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Any complications with procedure	

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1. Total airway obstruction not relieved by other methods.
2. Airway compromise from injuries that prevent ventilation with basic techniques and makes intubation impractical in a patient who needs immediate airway management.
3. Inability to intubate or effectively manage with basic ventilation techniques or supraglottic airway.


Contraindications for Cricothyroidotomy:

1. Ability to ventilate by any other method.

Technique for Surgical Cricothyroidotomy:

1. Gather necessary equipment in addition to that needed for oral intubation:
 - a. Antiseptic solution
 - b. Scalpel
 - c. Tracheal hook (recommended)
 - d. Gum elastic bougie (recommended)
2. Identify cricothyroid membrane.
3. Prep the site with antiseptic solution.
4. While stabilizing the larynx with one hand, use the opposite hand to make a 3 cm vertical incision through the skin in the midline over the cricoid membrane.
5. After identification of the cricoid membrane, use the scalpel to make a ~1 cm horizontal incision through the lower portion of the membrane.
6. Enlarge the hole and advance the ET tube into the airway, and inflate the balloon.
 - a. Care should be taken to assure tube is inserted into the trachea and not a false passage.
 - b. When available, use a tracheal hook to displace the inferior aspect of the membrane anteriorly so as to facilitate tube placement.
 - c. When available, insert a gum elastic bougie through the incised membrane and advance until resistance is felt at the level of the carina. Then advance the ET tube over the bougie (recommended technique).
7. Verify correct placement using usual techniques, including end tidal CO₂ detection.
8. Maintain continuous CO₂ monitoring once established.
9. Apply dressing to area.

Technique for Needle Cricothyroidotomy:

1. Gather necessary equipment:
 - a. Antiseptic solution
 - b. Transtracheal jet insufflation device 50 psi (required for adults)
 -  c. For pediatric patients under 5 y/o use a ventilation system using a 3 mm ET tube adapter connected directly to the catheter Luer lock and to bag-valve device. This system provides only temporary limited oxygenation.
 - d. IV catheter (≥ 14 gauge) and syringe (5-10 cc). Do not use needle safety catheters that do not allow for connection of a syringe.
2. Identify cricothyroid membrane.
3. Prep the site with antiseptic solution.
4. Connect the IV catheter to a syringe.
5. Stabilize the larynx and re-identify the cricothyroid membrane.
6. Direct the IV catheter posteriorly and inferiorly at an angle of ~45 degrees to the skin.
7. Insert the IV catheter through the skin, maintaining negative pressure on the syringe. Entry of air and loss of resistance signifies entry into the larynx.
8. Advance the catheter into the larynx and retract the needle.
9. Caution must be used to ensure the catheter does not bend.
10. Ventilate using a commercial transtracheal jet insufflation device, as indicated.
11. Deliver 100% O₂ at 20 bursts/minute with Inspiratory/Expiratory of 1:2.

Technique for Percutaneous Cricothyroidotomy Using Approved Commercial Kit:

Note: Only state and local MCA approved commercial percutaneous cricothyroidotomy kits may be used.

1. Prepare necessary equipment.
2. Follow Instructions for use provided by device manufacturer.

Nasal Intubation Procedure



This protocol is only to be utilized by paramedics within an adopting MCA.

Indication: Spontaneously breathing adult patient with a gag reflex in need of advanced airway.

Documentation Points

✓ Size of ET tube	✓ Specific indication(s) for NT intubation
✓ Number of attempts	✓ Suction required
✓ ET Tube measurement (cm) at nare	✓ Chest rise with ventilation
✓ Ventilation compliance	✓ Color-metric End-tidal CO2
✓ Capnography used	✓ ETCO2/Capnography reading
✓ Equality of lung sounds	✓ Absence of epigastric sounds
✓ Method for securing ET tube	✓ Any complications with intubation procedure

Contraindications:

1. Patients without spontaneous respiratory effort.
2. Patients with mid-face and nasal trauma.
3. Relative contraindication - known bleeding disorder.
4. Patients that are candidates for CPAP, if available, and not already attempted.

Technique for Nasotracheal Intubation:

1. Ventilate patient with 100% oxygen.
2. Gather equipment: Same as for orotracheal intubation except:
 - A. Stylet is not used
 - B. Water soluble lubricant needed, preferably lidocaine jelly
3. Liberally lubricate nares and the distal portion of the tube. If available, lidocaine jelly on a nasal pharyngeal airway should be used.
4. Secure the tube connector to the tube with firm pressure prior to beginning procedure.
5. Insert ET tube into nares with the bevel against the septum.
6. Advance the tube posteriorly with gentle pressure. If resistance is encountered may attempt gentle back and forth rotation of tube while advancing.
7. As tube is advanced into nasopharynx, listen for airflow through the ET tube. Advance the tube until airflow appears loudest. If using tip-controlled ET tube, direct tube tip anteriorly.
8. In synch with inhalation rapidly advance tube until airflow is clearly heard through tube.
9. Advance tube until the adapter is approximately 1 cm from nares.
10. Inflate balloon, attach ventilation device, and confirm as for orotracheal intubation. Right main stem intubation is uncommon. If chest rise is limited to right side, carefully withdraw tube (with balloon deflated) until breath sounds become equal.
11. Secure tube and reassess tube placement at frequent intervals.

Injured Athlete & Helmet Removal

Treatment of the injured athlete with protective gear presents unique challenges that are best considered prior to the event if possible. Whether responding to a request after an injury or responding as a stand by resource, an emergency action plan that has been discussed prior to the event may provide organized consistent treatment for the athlete.

1. High Impact Helmets (i.e. motorcycle, car racing)
 - A. Whether the helmet is a closed or open faced style helmet, the helmet must always be removed.
 - B. Provide constant spinal precautions.
2. Low Impact Helmets with Shoulder Pads (i.e. football, ice hockey, etc.)
 - A. In those patients wearing a well-fitted helmet which conforms closely to the patient's head, **unless there is a prearranged agreement between team training/medical staff, EMS providers and the likely receiving facility**, helmet and shoulder pads should be removed as spinal precautions are maintained. Removal of all equipment at the scene provides the best access to the athlete for treatment.
 - B. If prearrangement is in place to keep the helmet and shoulder pads in place the procedure would be as follows (or as determined by agreement):
 1. If the patient is awake and able to protect his/her airway, the helmet should be left in place and the patient should have spinal precautions maintained using the helmet to assist with spinal precautions. The face shield must be removed prior to transport.
 2. If the patient has an altered level of consciousness or, for any other reason, is unable to protect his/her airway, the helmet should be left in place and the patient should have spinal precautions maintained using the helmet to assist with spinal precautions. The face shield should be immediately removed to allow access to the airway.
 3. If the face shield cannot easily be removed for any patient, the helmet and shoulder pads should be removed using in-line stabilization.
 4. If the airway cannot be controlled for any reason with the helmet in place, the helmet and shoulder pads should immediately be removed, using in-line stabilization.
3. Low Impact Helmets without Shoulder Pads (i.e. baseball, bicycle, rollerblade, etc.):
 - A. Whether the helmet is a closed or open faced style helmet, the helmet must always be removed.
 - B. Provide constant spinal precautions.

Impedance Threshold Device (ITD) (Optional)

X 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.

Indications:

1. Cardiopulmonary arrest (medical etiology)

Contraindications:

1. Cardiopulmonary arrest related to trauma

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 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. Secure the tube.
 - C. Move the ITD from the facemask to the advanced airway and turn on timing assist lights (remove clear tab).
 - D. Continue CPR with minimal interruptions:
 - a. Provide continuous (no pauses) chest compressions and ventilate asynchronously over 1 second when light flashes
 - E. Perform ACLS interventions as appropriate.
 - F. If a pulse is obtained, remove the ITD and assist ventilations as needed.

Special Notes:

1. Always place ETCO₂ 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.



Michigan PROCEDURES

IMPEDANCE THRESHOLD DEVICE (ITD) (OPTIONAL)

Initial Date: 5/31/2012

Revised Date: 10/25/2017

Section 7-11

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.

Oxygen Administration

Assuring adequate patient oxygenation is a fundamental responsibility of EMS providers at all levels. Supplemental oxygen when clinically indicated and through the proper delivery system can have an important impact on patient outcome.

Indications

1. Real or suspected hypoxia
2. Patients in respiratory or cardiac arrest
3. Respiratory distress
4. Chest pain, stroke, seizures, or altered mental status when pulse oximetry is unavailable or when oxygen saturation is less than 94%
5. General trauma (more than isolated trauma)
6. Shock
7. Suspected carbon monoxide and/or cyanide poisoning (including smoke inhalation) regardless of pulse oximetry value
8. Complicated childbirth
9. Patients who normally use supplemental oxygen as part of their routine care
10. Any condition in which pulse oximetry (when available) is <94%.

Contraindications

1. There are no absolute contraindications to oxygen administration.
2. In general, supplemental oxygen should be guided by pulse oximetry (when available) to maintain oxygen saturations $\geq 94\%$.
3. Patients with COPD may develop a hypoxic drive to breath. High concentrations of oxygen may suppress their respiratory drive. Oxygen should still be administered when clinically indicated. Providers should monitor for respiratory depression and assist ventilations when indicated.

Procedure

1. Assure the patient has an adequate airway or establish an airway in accordance with the **Emergency Airway Procedure**.
2. In spontaneously breathing patients administer supplemental oxygen by appropriate means.
 - A. Nasal cannula at 2-6 LPM (decrease for pediatric patients): This is appropriate for most patients with mild to moderate hypoxia and minimal or no respiratory distress. Most patients tolerate nasal cannulas.
 - B. Non-rebreather (NRB) mask at 8-12 LPM (adjust flow rate to keep reservoir bag inflated). A NRB should be used on all spontaneously breathing patients with moderate to severe respiratory distress and all patients with suspected carbon monoxide and/or cyanide poisoning (e.g., smoke inhalation).
3. In patients not breathing or breathing below their normal respiratory rate use a bag-valve-mask to provide ventilations with oxygen connected at 15 LPM (decrease in pediatric patients to assure reservoir bag inflated). See **Emergency Airway Procedure**.
4. Pediatric "blow-by" oxygen is an ineffective means of delivering supplemental oxygen to pediatric patients and should be avoided when possible. Pediatric nasal cannulas are well tolerated by most children. When using, blow-by technique, keep mask as close to face as possible and use high flow (e.g., ~15 LPM).
5. When caring for patients with stomas, use pediatric size masks.

Pain Management


Aliases: Analgesia, pain control, acute pain



For patients with suspected cardiac chest pain, refer to the **Chest Pain/Acute Coronary Syndrome Protocol**.

The goal is to reduce the level of pain for patients in the pre-hospital setting.




All pain should be assessed and scored according to the “Wong Pain Scale”.


Reassessment should be timed according to medication onset of action, changes in patient condition, patient positioning and other treatments.


Note: Medical Control contact is required for patients with labor pains, dental pain, established care plans that deter pain management, and patients with chronic pain who do not have a palliative care plan. 

1. Place the patient in the position of comfort.
2. Verbally reassure the patient to control anxiety.
3. If not improved with BLS intervention, consider analgesia.
-  4. Start an IV NS KVO. If the patient’s systolic blood pressure is clinically hypotensive, and signs of hypoperfusion, administer an IV/IO fluid bolus. Refer to **Vascular Access & IV Fluid Therapy Procedure**.
-  5. Per MCA selection, for mild to moderate pain (described as 1-4 on the Wong Pain Scale), consider non-opioid analgesia.

MCA Selected Non-Opioid Analgesia

- Acetaminophen 15 mg/kg PO (max dose 1 gm)
 - Pediatrics, see dosing chart 
- Ibuprofen 10 mg/kg PO (Not appropriate for patients < 6 months or pregnant, maximum dose 600 mg)
 - Pediatrics, see dosing chart 
- Ketorolac (Toradol®)
 - Adult 15 mg IM/IV (not appropriate for pregnancy)
 -  Pediatric 1 mg/kg IM/IV (max dose 15 mg)

6. For patients with significant pain (described as greater than 4 on the Wong Pain Scale), consider Ketamine.
 - a. Adults (or > 80 lbs.)
 - i. 0.2 mg/kg IV/IO or 0.5 mg/kg IN (if available)
 - ii. Maximum single dose 25 mg
 - iii. May repeat after 10 minutes to a maximum dose of 50 mg
 -  b. Pediatrics (or < 80 lbs.)

- i. 0.2 mg/kg IV/IO or 0.5 mg/kg IN (if available)
 - ii. Maximum single dose 25 mg
 - iii. May repeat after 10 minutes to a maximum dose of 0.4 mg/kg IV/IO or 1.0 mg/kg IN
7. When administering analgesic medications, patients may experience nausea as a side effect. Consider Ondansetron.
 - a. Adults: 4 mg IV/IO or ODT
 -  b. Pediatrics: 0.1 mg/kg IV/IO (max dose 4 mg)
 - c. May repeat one time for continued nausea.
8. If a patient is unable to tolerate Ketamine or has significant pain (described as greater than 8 on the Wong Pain Scale), opioid analgesia may be administered. Patients should receive only one opioid medication.












MCA Selected Opioid Analgesia

- Morphine 0.1 mg/kg IV/IO (maximum single dose 10 mg) may repeat one time. Total dose may not exceed 20 mg.
- Fentanyl 1 mcg/kg IV/IO (IN, if available) Maximum single dose 100 mcg, may repeat one time. Total dose may not exceed 200 mcg.
- Hydromorphone 0.5 mg IV/IO (for extended transports), may repeat every 10 minutes, for a maximum dose of 2 mg.



9. For patients with refractory pain after Ketamine administration, contact medical control for opioid administration.
10. Administer opioids slowly when using IV or IO routes (Intranasal per MCA selection). Systolic BP should be maintained at > 100 mm Hg for adult patients and > 80 + (2 x age) mm Hg for pediatric patients.
11. For patients with evidence of hypotension or hypoperfusion, contact medical control.

Wong Pain Scale: Pain Assessment Scale
Choose a number from 1 to 10 that best describes your pain

No pain		Distressing pain				Unbearable pain				
0	1	2	3	4	5	6	7	8	9	10
										
0	2	4	6	8	10					
NO HURT	HURTS LITTLE BIT	HURTS LITTLE MORE	HURTS EVEN MORE	HURTS WHOLE LOT	HURTS WORST					


Dosing Table		
Child's Weight (AGE)	Children's Acetaminophen Elixir (160 mg/5ml)	Children's Ibuprofen Elixir (100 mg/5 ml)
6-12 lbs. (0-2 mos.)	1.5 mL (48 mg)	DO NOT GIVE
13-16 lbs. (3-6 mos.)	3 mL (96 mg)	DO NOT GIVE
17-20 lbs. (7-10 mos.)	4 mL (128 mg)	4 mL (80 mg)
21-25 lbs. (11-18 mos.)	5 mL (160 mg)	5 mL (100 mg)
26-31 lbs. (19 mos-3yrs)	6 mL (192 mg)	6 mL (120 mg)
32-35 lbs. (3-4 yrs.)	7 mL (224 mg)	7.5 mL (150 mg)
36-40 lbs. (4-5 yrs.)	8 mL (256 mg)	8.5 mL (170 mg)
41-45 lbs. (5-6 yrs.)	9 mL (288 mg)	9.5 mL (190 mg)
41-51 lbs. (5-6 yrs.)	10 mL (320 mg)	11 mL (220 mg)
52-64 lbs. (7-9 yrs.)	12 mL (384 mg)	13 mL (260 mg)
65-79+ lbs. (10-14 yrs.)	15 mL (480 mg)	15 mL (300 mg)

Patient Assessment

Scene Size Up

1. Recognize environmental hazards to rescuers, and secure area for treatment.
2. Recognize hazard for patient, and protect from further injury.
3. Identify number of patients. Follow the **Mass Casualty Incident Protocol** if appropriate.
4. Observe position of patient, mechanism of injury, surroundings.
5. Identify self.
6. Utilize universal precautions in all protocols.
7. Determine if patient has a valid Do-not-resuscitate bracelet/order.

Primary Survey

1. Airway:
 - A. Protect spine from movement in trauma victims. Provide continuous spinal precautions. Follow the **Spinal Injury Assessment Protocol**.
 - B. Observe the mouth and upper airway for air movement.
 - C. Establish and maintain the airway. Follow the **Emergency Airway Procedure**.
 - D. Look for evidence of upper airway problems such as vomitus, bleeding, facial trauma, absent gag reflex.
 - E. Clear upper airway of mechanical obstruction as needed.
2. Breathing: Look, Listen and Feel
 - A. Note respiratory rate, noise, and effort.
 - B. Treat respiratory distress or arrest with oxygenation and ventilation.
 - C. Observe skin color and level of consciousness for signs of hypoxia.
 - D. Expose chest and observe chest wall movement, as appropriate.
 - E. Look for life-threatening respiratory problems and stabilize.
 -  F. Tension pneumothorax: Follow **Pleural Decompression Procedure**.
3. Circulation
 - A. Check pulse and begin CPR if no central pulse. Follow **Cardiac Arrest – General Protocol Adult or Pediatric or Neonatal Resuscitation Protocol**.
 - B. Note pulse quality and rate; compare distal to central pulses as appropriate.
 - C. Control hemorrhage by direct pressure. (If needed, use elevation, pressure points or follow the **Tourniquet Application Procedure**.)
 - D. Check capillary refill time in fingertips.
 - E. If evidence of shock or hypovolemia begin treatment according to **Shock Protocol**.
4. Level of consciousness:
 - A. Note mental status (AVPU)
 - a. Alert
 - b. Verbal stimuli response
 - c. Painful stimuli response
 - d. Unresponsive



B. Measure Glasgow Coma Scale

Patient age > 2 years old

Patient age < 2 years old

Eye opening

Spontaneous	4	Spontaneous
To speech	3	To speech
To Pain	2	To Pain
No response	1	No response

Verbal response

Oriented and talking	5	Smiles, recognizes sounds, follows objects, interacts
Disoriented and talking	4	Cries, consolable, inappropriate interactions
Inappropriate words	3	Inconsistently inconsolable, moaning
Incomprehensible sounds	2	Agitated, restless, inconsolable
No response	1	No response

Motor response

Obeys command	6	Spontaneous movement
Localizes pain	5	Withdraws from touch
Withdraws to pain	4	Withdraws from pain
Flexion to pain	3	Abnormal flexion to pain (decorticate posturing)
Extension to pain	2	Abnormal extension to pain (decerebrate posturing)
No response	1	No response

Any combined score of less than eight represents a significant risk of mortality.

If the patient is not alert and the cause is not immediately known, consider:

**A – Alcohol
E – Epilepsy
I – Insulin
O – Overdose
U – Uremia**


**T – Trauma
I – Ingestion
P – Psych
P – Phenothiazine
S – Salicylates**

**C – Cardiac
H – Hypoxia
E – Environmental
S – Stroke
S - Sepsis**

5. The secondary survey is performed in a systematic manner.

(Steps listed are not necessarily sequential.)

A. Vital Signs:

- A. Frequent monitoring of blood pressure, pulse, and respirations
- B. Temperature as indicated in protocol.
- C. Blood glucose measurement as available and appropriate.
- D. Pulse oximetry as available and appropriate.
-  E. ECG monitoring as indicated in protocol.
- F. 12 Lead if available and appropriate, follow **12 Lead ECG Procedure**.
- G. Monitor capnography, if available.

B. Head and Face

- A. Observe and palpate for deformities, asymmetry, bleeding, tenderness, or crepitus.
- B. Recheck airway for potential obstruction: upper airway noises, dentures, bleeding, loose or avulsed teeth, vomitus, or absent gag reflex.
- C. Eyes: pupils (equal or unequal, responsiveness to light), foreign bodies, contact lenses, or raccoon eyes
- D. Ears: bleeding, discharge, or bruising behind ears.

C. Neck

- A. Maintain stabilization; follow the **Spinal Injury Assessment Protocol**, if appropriate.
- B. Check for deformity, tenderness, wounds, jugular vein distention, and use of neck muscles for respiration, altered voice, and medical alert tags.

D. Chest

- A. Observe for wounds, air leak from wounds, symmetry of chest wall movement, and use of accessory muscles.
- B. Palpate for tenderness, wounds, crepitus, or unequal rise of chest.
- C. Auscultate for bilateral breath sounds.
- D. Capnography/capnometry if available and appropriate

E. Abdomen

- A. Observe for wounds, bruising, distention, or pregnancy.
- B. Palpation.

F. Pelvis

- A. Palpate pelvis for tenderness and stability

G. Extremities

- A. Observe for deformity, wounds, open fractures, and symmetry.
- B. Palpate for tenderness and crepitus.
- C. Note distal pulses, skin color, and medical alert/DNR tags.
- D. Check sensation.
- E. Test for motor strength if no obvious fracture present.

H. Back

- A. Observe and palpate for tenderness and wounds.

Special Considerations:

1. If there is a specific mechanism of injury with only localized injury, a focused exam may

be performed in lieu of the full patient survey provided the patient is alert.

2. Follow the appropriate assessment protocol:

- A. **General Pre-hospital Care**
- B. **Newborn Assessment, Treatment and Resuscitation**
- C. **Cardiac Arrest – General Protocol**
- D. **Pediatric Cardiac Arrest – General Protocol**
- E. **General Trauma**
- F. **Spinal Injury Assessment**

MACOMB COUNTY
PROCEDURES
PATIENT CARE RECORD, ELECTRONIC DOCUMENTATION &
EMS INFORMATION SYSTEM

Revised Date: 05/28/2021

Section 7-15

Patient Care Record, Electronic Documentation & EMS Information System

This protocol is to be followed for completion of EMS Patient Care Records (PCR) and the use of an electronic documentation and information system.

1. Responsibility

- A. An electronic EMS PCR must be completed on any request for service to which a life support agency is dispatched. This includes all emergency and non-emergency EMS incidents and patients, ambulance inter-facility transfers, patient refusals, other patient contact. Ensure electronic documentation exists for no patient found and cancellations.
- B. All PCR reports will be made available to the receiving facility, the MCA and the Bureau of EMS, Trauma and Preparedness, in electronic format.
- C. If a patient is evaluated and/or treated and is not transported a Refusal of Treatment and/or Transport Evaluation Form shall be completed.

2. Documentation

- A. The PCR shall be created using a National EMS Information System (NEMSIS) and State of Michigan compliant software package allowing for upload to the state repository. All electronic charting software must meet or exceed State of Michigan requirements. To be compliant with MI-EMSIS, agencies must use a NEMSIS Gold Compliant system.
- B. Signed electronic or paper PCRs shall be maintained by the EMS agency as the official medical record for each patient treated and/or transported.
 - a. Each PCR should include:
 - 1. All demographic, response and other general information pertinent to the EMS personnel's actions related to the response or transfer.
 - 2. Patient care information including chronology and clarity of patient care including history, assessment, treatment, response to that treatment, changes in patient's condition upon arrival at destination and transfer of responsibility for care.
 - b. The agency PCR shall be considered a confidential medical record and treated in accordance with state and federal law.
 - c. Each agency's PCR shall be signed by the person documented as the agency's Primary Care Provider for that particular patient/incident.

3. Distribution

- A. The transporting unit shall provide written patient care documentation, along with a verbal report, prior to leaving the receiving facility. An agency may be granted permission from their MCA to transmit a PCR by fax or electronically to the hospital deferring delivery under any of the following circumstances:
 - a. An agency that is transporting out of their primary service area.
 - b. An agency completing the PCR using an MCA approved mobile EMSIS.
 - c. An agency that is dispatched for another emergency call.
 - d. As otherwise approved by the MCA.

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Revised Date: 05/28/2021

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4. Submission to MI-EMIS Data Repository

- A. All agencies using approved EMIS software shall transfer data monthly. Reporting period begins at 00:00:01 hours on the 1st day of the calendar month, ending at midnight on the last day of the calendar month. Data must be uploaded by the 15th of the month following the close of the reporting period. MCAs may require data to be transferred more frequently.
- B. Agencies using approved EMIS software are responsible to ensure that the quality of the data submitted to the MI-EMIS repository is an accurate reflection of the information entered into their EMS information system.
- C. Agencies entering data from paper PCRs after-the-fact are responsible for entering those PCRs in accordance with the above time frames.

5. Utilizing Data

- A. Data submitted by the life support agencies shall be reviewed by the medical control authority professional standards review organization for the purpose of providing professional oversight and for improving the quality of medical care within the MCA region.
- B. MCAs may utilize aggregate data that does not identify the patient or agency to support EMS system and public health activities.
- C. MCAs may choose to maintain its own repository and in turn submit the data to the Department of Health and Human Services.
- D. The information accessed by the MCA is confidential in nature and is intended for the medical control professional standards review organization (PSRO). Data protection is critical and is provided for through 1967 PA 270, MCL 331.531 to 331.533, other applicable confidentiality laws, and use and user agreements. The MCA will:
 - a. Only use or disclose data for the purposes described in Part 209 of the Public Health Code and the Michigan Administrative Code R 325.22101 through R 22217. Any other uses or disclosures will be made only as required by applicable laws.
 - b. Use appropriate safeguards to prevent use or disclosure of the information other than as provided by this agreement.
 - c. Limit access to the data to only those employees assigned to perform the functions under the above statute and administrative rules and who have signed a data user agreement.
 - d. Report any actual or suspected breach, intrusion, or unauthorized use or disclosure to the MDHHS EMS and Trauma Systems Section and the affected life support agency within 10 days of becoming aware of such breach, intrusion, or unauthorized use or disclosure or such shorter time period as is reasonable under the circumstances.
 - e. Mitigate the effects of any breach, intrusion, or unauthorized use or disclosure.
 - f. Comply with the Michigan Identity Theft Protection Act notification procedures at MCL 445.61 et seq.
 - g. As a public body subject to the Freedom of Information Act (FOIA),

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redact all personal identifiers or other information pursuant to applicable
FOIA exemptions. 1976 PA 441: MCL 15.231 et seq.

Patient Restraint

Purpose: To ensure appropriate restraint of patients and to assure patient, others and EMS safety.

Indications:

1. When an ill or injured person who is behaving in such a manner as to interfere with their examination, care and treatment to the extent they endanger their life or the safety of others.

Physical Restraint Procedure

1. Ensure that enough personnel are available to properly control the patient and establish the restraints.
2. Explain the purpose of the restraints.
3. Physically control the patient and apply restraints.
 - ⓐ A. If patient continues to resist physical restraints, consider chemical restraint.
4. Complete Primary and Secondary Assessments.
 - A. Restrained extremities should be evaluated for pulse quality, capillary refill time, color, sensory and motor function continuously
 - a. Restraints must be adjusted if any of these functions are compromised.
 - b. Restraints must not interfere with medical treatment.
5. Attempt to identify common physical causes for patient's abnormal behavior.
 - Hypoxia
 - Hypoglycemia
 - Head Trauma
 - ETOH/ Substances use/ abuse
6. Patient should be secured to a backboard or stretcher only. Patients must never be secured directly to a vehicle or immovable object.
7. Transport patient.
8. Inform hospital that restraints are in place and assistance will be necessary to continue restraint of the patient.



Chemical Restraint Procedure

1. Administer **Midazolam 10 mg IM or 5 mg IN.**
2. Monitor capnography, if available.
3. After 5 minutes if the patient remains combative administer Ketamine 4mg/kg IM.

Special Considerations

1. Physical restraints should be of a soft nature (e.g. hook and loop restraints, cravats, sheets, etc.) applied to the wrists and ankles. A restraint may also be needed across the chest and/or pelvis.
2. Stay with a restrained patient at all times, be observant for possible vomiting and be prepared to turn the patient and suction if necessary.
3. Documentation should include:
 - A. A description of the circumstance / behavior which precipitated the use of restraints.

-
- B. Time of application of the restraints.
 - C. Type of restraint used.
 - D. The positions in which the patient was restrained.
 4. When restraint devices are applied by law enforcement officers:
 - A. An officer must be present with the patient at all times at the scene, as well as in the ambulance during transport.
 - B. The restraint and position must not be so restrictive that the patient is in a position that compromises patient care.
 5. EMS Personnel may NOT use:
 - A. Hard plastic ties or any restraint devices that require a key to remove.
 - B. Backboards to “sandwich” the patient.
 - C. Restraints which secures the patient’s hands and feet behind the back.
 - D. Restraints that “hog tie” the patient.
 - E. Any device that restricts normal breathing.
 6. EMS personnel shall NOT transport a restrained patient in the prone position.

Authority to Restrain - EMS personnel are able to restrain and treat and transport an individual under authority of Sec 20969 of Public Act 368 which states: *"This part and the rules promulgated under this part do not authorize medical treatment for or transportation to a hospital of an individual who objects to the treatment or transportation. However, if emergency medical services personnel, exercising professional judgment, determine that the individual's condition makes the individual incapable of competently objecting to treatment or transportation, emergency medical services may provide treatment or transportation despite the individual's objections unless the objection is expressly based on the individual's religious beliefs."*



Patient Sedation

Purpose: Proper sedation of patients requiring a painful medical procedure. This procedure is for Paramedic use only.

Indications for Sedation

1. Electrical Therapy (Cardioversion or Transcutaneous pacing)
2. Post intubation sedation
3. CPAP/BiPAP only under direct Medical Control Order

Contraindications

1. Inability to control the patient's airway
2. As an adjunct for establishing an airway
3. Known allergy to sedation medications

Assessment

1. Evaluate adequacy of airway, ventilation and oxygenation
2. Monitor vital signs and level of consciousness
3. Monitor ECG
4. Monitor Pulse oximetry
5. Monitor capnography, if available

Procedure

1. Maintain airway, provide oxygenation and support ventilation
2. Obtain vascular access
3. For Electrical cardioversion, transcutaneous pacing, and post intubation sedation sedate patient to a level of consciousness where procedure can be performed, per MCA selection
4. **Only one sedation medication may be given pre-radio if authorized by the MCA. Medical Control must be contacted if a different sedation medication is needed**

Pediatric Sedation:

(Titrate to minimum amount necessary)

- Midazolam 0.05 mg/kg IM/IV/IO titrated slowly (IN, if available); may repeat once in 5 minutes to a maximum of 0.1 mg/kg.
- Fentanyl 1 mcg/kg IM/IV/IO titrated slowly (IN, if available); may repeat every 5 minutes to a maximum of 3 mcg/kg.
- Ketamine 4 mg/kg IM **OR** 1-2 mg/kg IV/IO titrated slowly (1-2 mg/kg IN, if available)

Adult Sedation:

(Titrate to minimum amount necessary)

- Midazolam 1-5 mg (0.05 mg/kg) IM/IV/IO titrated slowly (IN, if available); may repeat once in 5 minutes to a maximum of 0.1 mg/kg.
- Diazepam 5-10 mg (0.1 mg/kg) IM/IV/IO titrated slowly, may repeat every 5 minutes to a maximum of 0.3 mg/kg.
- Fentanyl 50-100 mcg (1 mcg/kg) IM/IV/IO titrated slowly (IN, if available); may repeat every 4 minutes to a maximum of 3 mcg/kg.
- Ketamine 4 mg/kg IM **OR** 1-2 mg/kg IV/IO titrated slowly (1-2 mg/kg IN, if available)



Possible orders post radio contact

1. Additional sedation as needed.
2. Sedation for CPAP/BiPAP



Pleural Decompression

Indications

1. Suspected Tension Pneumothorax (not simple pneumothorax) with hemodynamic compromise.
2. Considered for patients who remain in PEA after treatment of other reversible causes of PEA have been unsuccessful.

Presentation of Tension Pneumothorax

A tension pneumothorax will have at least one of the following:

1. Severe respiratory distress in the conscious/breathing patient with **hemodynamic compromise (hypotension)**.
2. Difficult ventilation in the hypotensive, unconscious/apneic patient in the presence of a confirmed, correctly positioned endotracheal tube.

Technique

1. Evaluate and maintain the airway, provide oxygenation and support ventilations.
 2. Decompression procedure:
 - A. Assemble equipment
 - a. Large bore IV catheter - 14 gauge or larger and at least 3" in length (catheter should not have any type of flow restricting valve); or other MCA approved commercial device.
- MCA Approved Commercial Device**

Yes:
 No
- b. Antiseptic swabs
 - c. Dressing and tape
- B. Identify landmarks
 - a. Insertion site is the mid-clavicular line at the second intercostal space just above the third rib.
- C. Prep the area with antiseptic swab.
- D. Remove flash chamber cap from IV catheter.
- E. Insert the catheter over the top of the rib until air rushes out. Advance catheter over the needle. Remove needle leaving catheter in place.
- F. Reassess breath sounds and patient's condition (patient's condition should improve almost immediately).
- G. Secure catheter with tape.

NOTE: ***REMEMBER** to go just above the rib due to all of the major structures (arteries, veins, and nerves) which lie below the rib. The closer you stay to the top of the rib, the less chance of complication.

Pediatric Considerations

1. To perform needle decompression use an 18 or 20 gauge over the needle catheter inserting the needle in the mid-clavicular line at the second intercostal space, just above the third rib.

Refusal of Care; Adult & Minor

EMS personnel have an affirmative duty to provide care to any patient presenting to them after a report of an emergency situation.

Individuals who are competent may object to treatment or transportation by EMS personnel. MCL 333.20969 "If emergency medical services personnel, exercising professional judgment, determine that the individual's condition makes the individual incapable of competently objecting to treatment or transportation, emergency medical services may provide treatment or transportation despite the individual's objection unless the objection is expressly based on the individual's religious beliefs."

1. Definition

- A. "Competent individual":
 - a. One who is awake, oriented, and is capable of understanding the circumstances of the current situation.
 - b. Does not appear to be under the influence of alcohol, drugs or other mind altering substances or circumstances that may interfere with mental functioning.
 - c. Is not a clear danger to self or others.
 - d. Is 18 years of age or older, or an emancipated minor.
- B. "Emancipated Minor" is one who is married, is a parent, or has been granted emancipation by the court.

2. Procedure for Competent Individual Refusing Care or Transport

- A. All patients with signs or symptoms of illness or injury shall be offered assessment, medical treatment and transport by EMS.
- B. Clearly explain the nature of the illness/injury and the need for emergency care or transportation.
- C. Explain possible complications that may develop without proper care or transportation.
- D. For individuals with signs or symptoms of serious or potentially fatal illness or injury, consider contacting medical control.
- E. Request that the individual sign an EMS Refusal Form. If the individual refuses to sign the EMS Refusal Form, attempt to obtain signatures of witnesses (family, bystanders, public safety personnel).
- F. Document assessment and complete approved EMS Refusal Form.
- G. Inform the individual that if they change their mind and desire evaluation, treatment, and/or transport to a hospital, to re-contact the emergency medical services system or seek medical attention.

3. Procedure for the Individual Incapable of Competently Objecting to Treatment or Transportation

- A. Contact medical control as soon as practical and follow applicable treatment protocol.

- B. Any patient with an urgent/life-threatening illness or injury who is incapable of competently objecting to treatment or transportation shall be transported by EMS for further evaluation and treatment.
- C. Police assistance may be sought if needed.
- D. A patient with non-urgent/non-life-threatening illness or injury who is incapable of competently objecting to treatment or transportation should be transported for further evaluation and treatment after consultation with on-line medical control.

4. Procedure for the Individual who becomes Competent after Treatment has been Initiated and Refuses Transport

- A. Contact medical control in all cases when a patient (now refusing transport) has been given medications or other advanced treatment by EMS personnel (i.e., glucose, Albuterol, IV, etc.).
- B. Such patients should be strongly encouraged to seek further evaluation and treatment.
- C. Comply with Section II above and document treatment on a patient care record.

5. Procedure for the Minor Patient Refusing Care or Transport

- A. A minor is any individual under the age of 18 and who is not emancipated.
- B. In general, minor patients are unable to consent or refuse consent for medical care. Such permission can only be provided by the minor's parent or legal guardian.
- C. Treatment and transport of real or potential life-threatening emergencies will not be delayed by attempts to contact the parent or guardian.
- D. For all emergency and non-emergency patients, contact medical control.

6. Procedure for Parent/Guardian Refusing Care or Transport of the Minor Patient

- A. All patients with signs or symptoms of illness or injury shall be offered assessment, medical treatment and transport by EMS.
- B. Clearly explain the nature of the illness/injury and the need for emergency care or transportation.
- C. Explain possible complications that may develop without proper care or transportation.
- D. For individuals with signs or symptoms of illness or injury, contact medical control.
- E. Request that the parent/guardian sign an approved EMS Refusal Form. If the parent/guardian refuses to sign the EMS Refusal Form, attempt to obtain signatures of witnesses (family, bystanders, public safety personnel).
- F. Document assessment and complete an approved EMS Refusal Form.
- G. Inform the parent/guardian that if they change their mind and desire evaluation, treatment, and/or transport to a hospital, to re-contact the emergency medical services system or seek medical attention.

Note: A sample EMS Refusal Form has been included on a separate page.



Michigan PROCEDURES REFUSAL OF CARE; ADULT AND MINOR

Initial Date: 05/31/2012 Revised Date: 10/25/2017

Section 7-19

SAMPLE EMS REFUSAL FORM REFUSAL OF TREATMENT, TRANSPORT AND/OR EVALUATION

PLEASE READ COMPLETELY BEFORE SIGNING BELOW!

Because it is sometimes impossible to recognize actual or potential medical problems outside the hospital, we strongly encourage you to be evaluated, treated if necessary, and transported to a hospital by EMS personnel for more complete examination by a physician.

You have the right to choose to not be evaluated, treated or transported if you wish; however, there is the possibility that you could suffer serious complications or even death from conditions that are not apparent at this time.

By signing below, you are acknowledging that EMS personnel have advised you, and that you understand, the potential harm to your health that may result from your refusal of the recommended care; and, you release EMS and supporting personnel from liability resulting from refusal.

PLEASE CIRCLE THE FOLLOWING THAT APPLY:

I refuse: EVALUATION TREATMENT TRANSPORT

IF YOU CHANGE YOUR MIND AND DESIRE EVALUATION, TREATMENT, AND/OR TRANSPORT TO A HOSPITAL, YOU MAY RE-CONTACT THE EMS SYSTEM AT ANY TIME.

Patient's Printed Name Age DOB Phone # Patient's Address City State Zip Signature Relationship, if applicable Witness Signature Witness Printed Name Date and Time

BP Pulse Resp. Skin Pupils LOC

- 1. Oriented to person, place, and time?
2. Coherent speech?
3. Auditory and/or visual hallucinations?
4. Suicidal or homicidal?
5. Able to repeat understanding of their condition and consequences of treatment refusal?
6. Narrative: describe reasonable alternatives to treatment that were offered; the circumstances of the call; specific consequences of refusal; and, names of family or witnesses present:

EMS Agency Name Printed Crew Names Signature of EMS Provider

Spinal Precautions

Indications & General Guidance

1. Refer to the **Spinal Injury Assessment Protocol**. Patients with a positive spinal injury assessment should have spinal precautions maintained during transport.
2. Major trauma patients who require extrication should have spinal precautions maintained using an extrication device (long backboard or equivalent) during extrication. If sufficient personnel are present, the patient may be log rolled from the extrication device to the ambulance cot during loading of the patient.
3. Patients may remain on the extrication device if the crew deems it safer for the patient considering stability, time and patient comfort considerations. This decision will be at the discretion of the crew.
4. Patients with penetrating traumatic injuries do not require spinal precautions unless a focal neurologic deficit is noted on the spinal injury assessment.
5. An ambulatory patient with a positive spinal injury assessment should have an appropriately sized cervical collar placed. Place the patient directly on the ambulance cot in a position of comfort, limiting movement of the spine during the process.
6. Patients, who are stable, alert and without neurological deficits may be allowed to self-extricate to the ambulance cot after placement of a cervical collar. Limit movement of the spine during the process.
7. Patients over the age of 65 with a mechanism of injury with the potential for causing cervical spine injury will have a cervical collar applied even if the spinal injury clinical assessment is negative.

Specific Techniques

1. Cervical Collars
 - A. Cervical collar should be placed on patient prior to patient movement, if possible.
 - B. If no collar can be made to fit patient, towel, blanket rolls, head block or similar device may be used to support neutral head alignment.
 - C. The cervical collar may be removed if interfering with airway management or airway placement, or if causing extreme patient distress.
2. Self-Extrication Procedure
 - A. Patients, who are stable, alert and without neurological deficits may be allowed to self-extricate to the ambulance cot after placement of a cervical collar.
 - B. Limit movement of the spine during the process.
3. Emergency Patient Removal
 - A. Indicated when scene poses an imminent or potential life threatening danger to patient and/or rescuers, (e.g. vehicle or structure fire).


- B. Remove the patient from danger while best attempt is made to maintain spinal precautions.
- C. Rapid Extrication is indicated when patient condition is unstable (i.e.: airway or breathing compromise, shock, unconsciousness, or need for immediate intervention).
4. Long Extrication Device (e.g. long Backboard, scoop stretcher, basket stretcher)
 - A. Indicated when patient requires spinal precautions and the patient condition prevents self-extrication.
 - B. Patient's head and cervical spine should be manually stabilized.
 - C. Rescuers should place the patient in a stable, neutral position where space is created to place backboard or other long extrication device in position near the patient.
 - D. Move the patient to supine position on the long extrication device.
 - E. The patient is secured to the device with torso straps applied before head stabilization.
 - F. Head stabilization material should be placed to allow for movement of the lower jaw to facilitate possible airway management.
 - G. The extrication device is used to move the patient to the ambulance cot.
5. Log Roll Procedure
 - A. Cervical collar should be placed when indicated.
 - B. Place the backboard or equivalent behind the patient.
 - C. Patient is log rolled, maintaining neutral alignment of spine and extremities.
 - D. Log roll procedure requires 2 or more personnel in contact with the patient.
 - E. If log roll is not possible, patient should be moved to board or equivalent while attempting to maintain neutral alignment spinal precautions.
 - F. Patient is secured to the backboard or equivalent for movement to the ambulance cot.
 - G. Head stabilization materials such as foam pads, blanket rolls may be used to prevent lateral motion. Pad under the head when feasible.
 - H. If sufficient personnel are present, the patient should be log rolled from the extrication device to the ambulance cot during loading of the patient.
 - I. When log roll on to the ambulance cot is impractical, secure the patient to the extrication device and ambulance cot for transport.
6. Spinal Precautions
 - A. Once the patient is placed on the ambulance cot, if no extrication device is still in place, secure the patient with seatbelts in a supine position, or in position of comfort if a supine position is not tolerated.
 - B. Head may be supported with head block or similar device to prevent rotation if needed. Padding should be placed under the head when practical. Do not tape the head to the ambulance cot.

Special Considerations

1. Hypoventilation is likely to occur with spinal cord injury above the diaphragm. Quality of ventilation should be monitored closely with support offered early.
2. Spinal/neurogenic shock may result from high spinal cord injury. Monitor patient for signs of shock. Refer to **Shock Protocol**.
3. Spinal precautions in the patient wearing a helmet should be according to the Helmet Removal Procedure.
4. Manual spinal precautions in the obtunded patient must be initiated and continued until the patient is secured to the ambulance cot.
5. Patients who are markedly agitated, combative or confused may not be able to follow commands and cooperate with minimizing spinal movement. Rigid immobilization should be avoided if it contributes to patient combativeness. Patients may remain on the backboard if the crew deems it safer for the patient, and this will be at the discretion of the crew.
6. Manual in line stabilization must be used during any procedure that risks head or neck movement, such as endotracheal intubation. If manual cervical stabilization is hampering efforts to intubate the patient, the neck should be allowed to move as needed to secure the airway. An unsecured airway is a greater danger to the patient than a spinal fracture.
7. Document spinal precautions techniques utilized.
8. Document the patient's neurologic status before and after establishing spinal precautions when possible.
9. Pediatric Patients and Car Seats:
 - A. Infants restrained in a rear-facing car seat may be immobilized and extricated in the car seat. The child may remain in the car seat if the immobilization is secure and his/her condition allows (no signs of respiratory distress or shock).
 - B. Children restrained in a car seat (with a high back) may be immobilized and extricated in the car seat; however, once removed from the vehicle, the child should have spinal precautions maintained as for an adult.
 - C. Children restrained in a booster seat (without a back) need to be extricated and immobilized following standard procedures.



Termination of Resuscitation

1. Follow the **Cardiac Arrest - General Protocol**.
2. Medical cardiac arrest patients undergoing attempted resuscitation should not be transported unless return of spontaneous circulation (ROSC) is achieved or transport is ordered by medical control or otherwise specified in protocol. These patients should have resuscitation continued at the scene for at least 30 minutes. Temporary return of pulse qualifies as ROSC.
If ALS personnel believe a prolonged resuscitation at the scene will be unduly distressing to the patient's family or bystanders, transport may begin prior to the termination of resuscitation. If the resuscitation cannot be safely and efficiently performed on scene transport may begin whenever deemed appropriate by the ALS personnel.
3.  If the resuscitation has been unsuccessful after at least 30 minutes (ALS time without ROSC), the resuscitation may be terminated with the permission of medical control. If persistent Ventricular Fibrillation, prompt emergency transport will be initiated. **Once resuscitation is initiated by ALS or LALS it may be terminated only at the direction of medical control.** ROSC, i.e. return of a pulse resets the 30 minute clock and transport should be initiated.
4. Exceptions to the 30 minute time requirement may be requested of Medical Control. Care is to be provided, according to protocol, until such time as it is felt that appropriate procedures and medication are administered based on the medical condition and presentation of the patient. Medical Control must be contacted prior to termination of resuscitation. Total resuscitation time should be provided in the communication.
5. Once resuscitation is terminated, the prehospital personnel will provide information to the family which should include medical control procedures for termination of resuscitation.
6. The medical examiner system will be activated consistent with **Dead on Scene Protocol**.

Tourniquet Application

Purpose: A tourniquet is a constricting or compressing device used to control venous and arterial circulation to an extremity for a period of time. Pressure is applied circumferentially to the skin and underlying tissues a limb; this pressure is transferred to the vessel wall causing a temporary occlusion. There are a number of commercially available tourniquets available for pre-hospital and hospital patients of exsanguinating extremity trauma. While there are potential risks involved in the utilization of tourniquets (see “Notes” section), expeditious and clinically appropriate application in the presence of potentially life threatening hemorrhage is in keeping not only with the standards of medical professionals, but also with the best interests of the patient.

Indications:

1. Life threatening extremity hemorrhage. An amputation with hemorrhage does not necessitate the use of a tourniquet; most bleeding from these injuries is controllable through use of direct pressure and elevation.
2. Amputation with uncontrolled active bleeding.
3. A mass causality incident may be an indication for the use of tourniquets for temporary control of hemorrhage while the situation is brought under control.

Contraindications:

1. Never use a tourniquet for more than the recommended period of time (product-specific). With any extrication plus transport time of less than 180 minutes, there is minimal risk of developing an ischemic limb.
2. Never apply a tourniquet over an impaled object.

Procedure:

1. Check neurovascular status prior to tourniquet application (pulse, sensation, motor function distal to hemorrhage).
2. Apply tourniquet proximal to the area of bleeding, at least 3-5 centimeters from the wound margins.
3. Secure the tourniquet in place; continue to tighten the tourniquet until hemorrhage is controlled – avoid “over-tightening” the tourniquet. Use only the minimal effective pressure required to reliably maintain arterial occlusion throughout the procedure.
4. Elevate the extremity if possible.
5. Note the time the tourniquet was applied. Reassess neurovascular status every five minutes post application.
6. Notify the receiving hospital that a tourniquet is in place. Once tourniquet is in place, do not remove prior to transferring patient to the emergency department staff.

Notes:

- Tourniquets should not be applied over joints. Application of the cuff over the peroneal nerve (knee or ankle) or ulnar nerve (the elbow) may result in nerve damage or paralysis.

Michigan
PROCEDURES
TOURNIQUET APPLICATION

Initial Date: 5/31/2012

Revised Date: 10/25/2017

Section 7-22

- Tourniquets should not be applied over clothing. Any limb with an applied tourniquet should be fully exposed with removal of all clothing, and the tourniquet should never be covered with any other bandage.
- Continued bleeding (other than medullary oozing from fractured bones) distal to the site of the tourniquet is a sign of insufficient pressure and a need to tighten the tourniquet further. A second tourniquet adjacent to the first may be necessary.
- **A tourniquet should not be loosened in any patient with obvious signs of shock or amputation that necessitated use of the device.**

Vascular Access & IV Fluid Therapy

Indications

1. Patients with potential need for either fluid resuscitation or medication administration.
2. External jugular cannulation should be initiated in patients in whom access is necessary and other peripheral vascular access is not accessible or is contraindicated.
3. IO indications: Adult and pediatric life threatening situations where venous access using peripheral veins has been unsuccessful. IO access should be considered early in situations where IV access is unsuccessful or technically challenging. Indications include:
 - A. Cardiac Arrest
 - B. Severe burn injury with shock
 - C. Shock
 - D. Severe multi-system trauma with shock
 - E. Status epilepticus
 - F. Contact medical control for other situations without delaying transport

Contraindications

1. To peripheral vascular access:
 - A. No peripheral sites available
 - B. Burns overlying available peripheral sites unless no other sites available
 - C. Infection overlying available peripheral sites
2. To intraosseous infusion and placement:
 - A. If infiltration occurs (rare), do not reuse the same bone as fluid will leak out of the original hole; select another site.
 - B. Do not place in a fractured extremity. If the femur is fractured, use the opposite leg.

Special Considerations (Side effects/Complications)

1. Initiation of vascular access generally should not delay patient transport to the hospital.
2. General side effects or complications: infection, air embolism, catheter shear, hematoma, arterial puncture, and fluid overload.
3. Intraosseous placement:
 - A. Complications include subperiosteal infusion, osteomyelitis, sepsis, fat embolism, and bone marrow damage.

Standards for IV attempts

1. Two (2) attempts per provider, maximum 4 attempts.
2. Consider IO early, as indicated above.
3. Document any reasons for deviation.

Needle size for IV placement

1. Adult TKO 18 ga - 20 ga Angiocath
2. Adult trauma, bleeding or cardiac arrest 14 ga - 18 ga.
3. Pediatrics 20 ga - 24 ga Angiocath

Flow Rates

1. Saline lock IV is preferred, unless fluid resuscitation is needed.
2. Flow rates and changes in flow rates must be documented on the EMS Patient Care Record.
3. The standard IV/IO fluid bolus volume will be 1 liter normal saline with repeat as necessary, unless otherwise noted by protocol. IV/IO fluid bolus is contraindicated in patients with pulmonary edema. Volume for pediatric IV/IO fluid bolus is 20 mL/kg, unless otherwise noted by protocol.
4. Medicated drips should be piggybacked into the main IV line or saline lock.

Solutions – Unless otherwise specified, the IV solution of choice is Normal Saline 0.9% (NS).

IV Tubing

1. Macro drip is the preferred tubing.

Procedure IV/IO Placement

1. Utilize universal precautions for all IV/IO placements.

Procedure for Peripheral Vascular Cannulation:

1. Gather and prepare equipment.
2. Place the tourniquet on the extremity.
3. Cleanse the skin
4. Make your puncture while maintaining vein stability.
5. Watch for flashback. Once you have a blood return, advance the catheter as per normal IV technique and attach the IV tubing or Normal saline lock tubing and cap.
6. If you have no blood return and you are in the vein, remove the needle hub and attach your syringe to assist in aspirating for blood.
7. Instill 2-3 mL of normal saline if normal saline lock placed.
8. Secure catheter and IV tubing.

Procedure for External Jugular Cannulation:

1. Gather and prepare equipment
2. Position patient supine (trendelenburg, if possible)
3. Turn head to opposite side of venipuncture (if no C-spine injury is suspected)
4. Cleanse the skin
5. Occlude the vein by using the side of your finger above the clavicle to facilitate filling the vein.
6. Make your puncture midway between the angle of the jaw and the middle of the clavicle.
7. Watch for flashback. Once you have a blood return, advance the catheter as per normal IV technique and attach the IV solution or normal saline lock cap,

covering catheter with gloved finger while preparing to attach the IV tubing. If you have no blood return and you are in the vein, remove the needle hub and attach your syringe to assist in aspirating for blood.

8. Instill 2-3 mL of normal saline if normal saline lock placed.
9. Secure IV catheter and tubing.

Procedure for Intraosseous Placement:

1. Have all IO equipment ready prior to bone penetration.
2. Expose the extremity.
3. Stabilize the extremity to minimize motion.
4. Selection of site:
 - A. Medial aspect of proximal tibia or proximal humerus.
 - B. In children less than six years of age, the preferred site is the proximal tibia.
5. Insertion:
 - A. Follow the manufacturer's recommendations for IO insertion with the above indications.
6. Scrub the insertion site with alcohol prep/chlorhexidine. Strict adherence to aseptic technique is essential.
7. Insert the IO needle.
8. Attempt to confirm marrow placement by removing the stylet and aspirating blood and/or bone marrow.
 - A. If unable to aspirate, attach 10 – 20 mL syringe with normal saline and gently infuse normal saline.
 - B. Observe for normal saline leakage or SQ tissue swelling.
 - a. If neither occurs, proceed.
 - b. If either occurs, select a different site.
9. Connect the appropriate IV equipment (normal saline locks not indicated in IO placement).
10. Administer the appropriate fluids and/or drugs.
11. Stabilize the entire intraosseous set-up as if securing an impaled object.
12. In conscious patients experiencing pain with IO infusion, consider administering Lidocaine 2%, 20 mg IO for adult patients, 0.5 mg/kg for pediatrics administer to a maximum of 20 mg. (Lidocaine 2% = 20 mg/mL).
13. If the IO is unsuccessful after 2 attempts, contact Medical Control.

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PROCEDURES
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End-Tidal Carbon Dioxide Monitoring (Capnometry and Capnography)

Aliases: ETCO₂, End Tidal, Capnography

Definitions: For the purpose of all protocols the mention End Tidal Carbon Dioxide monitoring, these are the definitions:

1. Capnography is a graphic representation of exhaled carbon dioxide. Capnography is a waveform along with a numeric representation. Capnography is the preferred method of detection for ALS providers and will be mandatory for all ALS providers by October 1, 2018.
2. Capnometry is simply a numeric representation of exhaled carbon dioxide.
 - a. A colorimetric end tidal carbon dioxide monitor is a rudimentary form of capnometry and is acceptable for use in MFR and BLS applications.
 - b. Capnometry that includes a numerical read out is preferred to colorimetric capnometry.

Indications:

1. Determining appropriate placement of an airway has taken place.
 - A. Capnography/Capnometry **must** be utilized to confirm endotracheal tube placement.
 - B. Capnography/Capnometry **must** be utilized on all supraglottic airways.
2. Continuous monitoring of the integrity of the ventilatory circuit.
 - A. Capnography **may** be utilized in patients receiving assisted ventilations without advanced airways (used between the face mask and the bag-valve).
 - B. Capnography **must** be used for patients on transport ventilators.
3. Monitoring severity of pulmonary disease (bronchospasm) and evaluating response to therapy
 - A. Capnography **may** be utilized in patients with respiratory distress, or with signs and symptoms suggestive of acidosis.
4. Monitoring therapy intended to increase coronary blood flow, reflected in CO₂ elimination
 - A. Capnography **may** be utilized in patients receiving CPR (even without advanced airway placement), cardiac pacing, or when receiving medications that are intended to increase cardiac output, as a means to determine the physiological effectiveness of interventions

Contraindications:

1. There are no absolute contraindications to Capnography/Capnometry

Procedure:


1. Attach the colorimetric device to airway device (supraglottic or between facemask and BVM)

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2. Note presence or absence of color change.
 - a. If no change in color on device, verify placement of device.
3. Document findings in patient chart.
4. When ALS arrives, switch to capnography (if available) from capnometry.
5. Attach the CO₂ sensor to the monitoring device and to the advanced airway, or between the mask and the bag valve in the ventilated patient that does not have an advanced airway placed, or using the nasal cannula style sensor for patients not receiving assisted ventilation.
-  6. Note the CO₂ level and waveform characteristics
7. Any loss of CO₂ detection or waveform may indicate an airway or ventilation problem and should be investigated, corrected and documented.
8. Document the use and results in the Patient Care Record (PCR).

Note: If a “0” value, no value, or no color change is noted for a patient:

- Ensure that the patient has adequate spontaneous circulation and ventilation, or that effective CPR is being performed
- Verify that the tubing is properly connected to the monitor and that there are no kinks in the tubing.
- If the tubing is found not to be the problem and an advanced airway has been placed, remove the advanced airway immediately and assist ventilations as needed with manual ventilation techniques.

Naloxone Leave Behind Protocol

MCA Selection for Naloxone Leave Behind Protocol


MFR EMT EMT/S Paramedic

I. Indications

- A. Patients over age 18 who have received naloxone **and** had improvement in condition
- B. Patients over age 18 with opioid use disorder

*NOTE: Providing a naloxone kit does not preclude other treatment protocols nor the need for transportation to an emergency department. Oxygenation, ventilation, and then restoration of a patient's respiratory drive are the primary goals. Transport to an emergency department is preferred.

II. Procedure

- A. Naloxone kits should be offered to all patients who meet above indications.
- B. For patients who are transported, naloxone kits may either be provided to
 - 1. family and friends on scene OR
 - 2. to the patient when arriving at the hospital, if the patient is awake
- C. For patients who have naloxone administered and refuse transportation to the emergency department, contact medical control. 

Patient may not:

- a. Have sustained altered mental status
- b. Have intentionally overdosed
- c. Have any suicidal/homicidal ideations or thoughts of self-harm
- D. If medical control authorizes the refusal, document the name of the facility and physician in the PCR
- E. Provide a naloxone kit to patient or family/friends on scene, if accepted
- F. Document in PCR leaving behind a kit
- G. Other possible service offerings (optional) when leaving behind a kit:
 - 1. Offer to properly dispose of any used needles following your agency policy

2. Refer to a community peer support team, if available
 3. Provide literature outlining resources for Opioid Use Disorder or Substance Use Disorder treatment programs in the community
- III. For patients who have not suffered an acute overdose AND are willing to accept treatment for Opioid Use Disorder or Substance Use Disorder, the following may be offered if available:
- A. Alternate destination according to MCA approval (including inpatient or outpatient treatment facilities)
 - B. Mobile crisis teams
 - C. Other local treatment options