

Greater Miami Valley  
Emergency Medical Services Council



2010

Standing Orders  
Training Manual

Effective January 1, 2010

**Basic**



**GMVEMSC PREHOSPITAL BASIC STANDING ORDERS  
TRAINING MANUAL  
VERSION January 2010  
Adult: Patients 16 and Older  
Pediatric: Patients under 16 Years of Age  
All Pediatric Treatments will be in Pink and Bulleted with a “P”**

ADULT and PEDIATRIC ORDERS INDEX

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## STIPULATIONS

- This protocol is for use by those individuals operating in and under the authority of the Greater Miami Valley EMS Council (GMVEMSC) Drug Bag Exchange Program and certified by the State of Ohio as a(n):
  - First Responder
  - EMT-Basic
- This protocol is to be used in the field only. Communications must be attempted as soon as practical for unstable patients or hospitals that request contact on all patients being transferred to their facility.
- Procedures that are marked with a diamond (♦) are never to be performed without a MCP order. The diamond provides rapid identification of procedures and medications that require on-line MCP authorization.
- No procedures, techniques, or drugs will be used without the proper equipment or beyond the training or capabilities of the prehospital personnel. Nothing in this protocol may be used without specific pre-approval of the Medical Director for the local department or agency.
- Procedures for EMT-Basics include those listed under the First Responder level.
- Items enclosed in braces ( { } ) are at the option of the department and its medical director.
- EMS personnel of any level are not authorized to {intubate}, unless they have and can use appropriate confirmation devices (EtCO<sub>2</sub> detectors or monitors, and/or Esophageal Detection Devices).
- *Infrequently*, unusual patient situations and multiple complaints with competing priorities may prevent stepwise adherence to a specific section of this protocol. However, at no time should treatment options exceed those authorized here in without direct consultation with Medical Control. In all such cases, contact with Medical Control should be considered when logistically feasible.
- The Adult and Pediatric Orders (“Peds”) have been combined.
- There are a few sections which apply only to Adult or Peds, and are indicated as such.
- **G** There is also a section which is specific to Geriatrics.

## ADMINISTRATION

### Non-Initiation of Care

- Resuscitation will not be initiated in the following circumstances:
  - Burned beyond recognition
  - Decapitation
  - Deep, penetrating, cranial injuries
  - Massive truncal wounds
  - DNR Order - present and valid
  - Frozen body
  - Hemitorporectomy (body cut in half)
  - Rigor mortis, tissue decomposition, or severe dependent post-mortem lividity
  - Triage demands
  - Blunt trauma found in cardiac arrest *unless* one of the following conditions are present:
    - Patient can be delivered to an emergency department in 5 minutes.
    - If the arrest is caused by a medical condition.
    - Focused blunt trauma to the chest (such as a baseball to the chest).
      - The reason for this is that Commotio cordis is a form of sudden cardiac death, seen most often in boys and young men playing sports. It occurs as the result of a blunt, non-penetrating impact to the precordial region from a ball, bat or other projectile.
  - Penetrating trauma found in cardiac arrest when the patient cannot be delivered to an emergency department within 15 minutes.
    - Resuscitation will be initiated on victims of penetrating trauma who arrest after they are in EMS care.
- Once en route, continue care even if the above time limits cannot be met.

## **DNR: Comfort Care / Comfort Care Arrest**

**Ø GENERALLY DOES NOT APPLY TO PEDIATRICS**

### **DNR-Comfort Care (CC)**

*(Permits any medical treatment to diminish pain or discomfort that is not used to postpone the patient's death.)*

The following treatments are permitted:

- Suctioning
- Oxygen
- Splint/immobilization
- Control bleeding
- Pain control

The following treatments are **not** permitted:

- Chest compressions
- Airway adjuncts
- Resuscitative drugs
- Defibrillation/cardioversion/monitoring
- Respiratory assistance (oxygen, suctioning are permitted)

### **DNR-Comfort Care Arrest (CCA)**

*(Permits any medical treatment until the patient goes into cardiac or respiratory arrest.)*

- Any appropriate standing orders treatment until cardiac or respiratory arrest/agonal breathing occurs.

*Note: When a Durable Power of Attorney for Healthcare (DPA-HC) is present and the "Living Will and Qualifying Condition" box is checked, the DPA-HC cannot override the patient's DNR status. A patient may change their DNR status at anytime verbally, in writing or action.*

## **Field Termination of Resuscitation Efforts with No Available ALS**

**Ø DOES NOT APPLY TO PEDIATRICS**

### **EMT-BASIC**

- ♦ When EMS providers (**not** including First Responders) are faced with a patient in Cardiac Arrest, no ALS equipment is available at the scene, and Transport time to a medical facility will exceed 20 minutes, consider contacting a MCP for orders to terminate the resuscitation.
- ♦ MCP must be contacted and must speak directly with the EMS provider, and must give consent for the resuscitation effort to cease.
- This section does not normally apply to Paramedics; it may **only** be used when no Paramedics are available, **or** when Paramedics are present, but ALS equipment is not available.
- The intent of this section is to avoid the risks of emergency transport of patients who are almost certainly non-viable.
- **Ensure that the EMS Coordinator of the hospital that authorized the Field Termination receives a copy of the run sheet for his/her records.**

*Note: Pediatric patients may meet non-initiation of care criteria*

## **INITIAL CARE**

### **FIRST RESPONDER**

- Follow basic life support and airway algorithms as indicated based on current AHA Guidelines.
- Obtain chief complaint (OPQRST), SAMPLE history, vital signs per patient condition.

### **EMT-BASIC**

- Utilize monitoring device {pulse oximeter, etc.} as appropriate.

- ♦ In a patient with an existing IV pump who is experiencing an allergic reaction, the pump may only be discontinued after receiving approval from MCP. Otherwise, the IV pump must be maintained. Exception: hypoglycemic diabetic patients with an insulin pump (see “Maintenance of Existing Medication Pumps” section for details)
- Bring the patient's medications, or a list of the medications, to the hospital and include the dose, and frequency of administration.

*NOTE: Use Pedi-Wheel or length based resuscitation tape to reference pediatric vital signs.*

*NOTE: For patients with an insulin pump: take extra tubing and medication packet(s) to receiving facility with patient, if available.*

## AIRWAY MAINTENANCE

### FIRST RESPONDER

- **O<sub>2</sub>** as needed. Use the following rates as guidelines:
  - **2 LPM by NC** for patient with COPD.
  - **4 - 6 LPM by NC** for other patients.
  - **12 - 15 LPM by NRB** for severe trauma patients, distressed cardiac patients, patients with respiratory distress, and other patients who appear to need high flow **O<sub>2</sub>**.

*NOTE: COPD patients in severe respiratory distress or with chest pain need the same O<sub>2</sub> devices and flow rates as any other patient in such condition.*

- Ventilate patients who are symptomatic with an insufficient respiratory rate or depth.
- Consider BVM if airway compromise or insufficient ventilations are present.

### EMT-BASIC

- {Intubate} patient if pulseless and apenic
- Consider patient airway anatomy and condition for the appropriate selection of the proper airway adjunct.
  - If approved, adjuncts considered “rescue airways” such as the LMA or Dual Lumen Airways may be appropriate for a primary airway device.
- Confirm correct placement of advanced airway by at least five methods. Capnography is the Gold Standard. CO<sub>2</sub> detection methods are recommended.

<b>Respiratory Rates by Age</b>	
<b>Up to 1 year</b>	<b>30-60</b>
<b>1 – 3 years</b>	<b>20-40</b>
<b>4 – 6 years</b>	<b>20-30</b>
<b>7 – 9 years</b>	<b>16-24</b>
<b>10 – 14 years</b>	<b>16-20</b>
<b>15+ years</b>	<b>12-20</b>

### Assessment Methods:

- Physical assessment including auscultation of the epigastrium, anterior chest, midaxillary areas, and then the epigastrium again.
- Repeat visualization of the tube between the vocal cords.
- Condensation in the tube.
- Keeping an oral endotracheal tube at the 20-22 cm mark at the teeth will prevent inserting the ETT too far, greatly reduces the chances of a right mainstem bronchus intubations. Don't confuse right mainstem intubation for a pneumothorax.

**P** Proper depth placement of tracheal tube in the pediatric patient can be calculated by the following formula: Depth of Insertion (marking on tube at teeth or gum line) = tube size x 3.

### **Confirmation Devices:**

- {EtCO<sub>2</sub> Monitor}
- {EtCO<sub>2</sub> with waveform}
- {Esophageal Detection Device (EDD)}

### **End Tidal CO<sub>2</sub> Detector (ETCO<sub>2</sub>) -- Colorimetric**

#### **Limitations**

- EDD or Waveform EtCO<sub>2</sub> are preferred confirmation devices for patients in cardiac arrest. The Colorimetric EtCO<sub>2</sub> detector may be utilized as a confirmation device for patients in cardiac arrest. **IF** it shows the presence of CO<sub>2</sub> (color changes to yellow). If there is no color change, use other confirmation methods (e.g., revisualization). The absence of color change in a properly placed tube may be caused by a lack of perfusion, but it may indicate esophageal intubation.
- Secretions, emesis, etc., can ruin the device.
- A patient with large amounts of carbonated beverage (i.e., beer) in his stomach can give a false positive. The device may sense the CO<sub>2</sub> given off by that beverage and indicate that the tube in the trachea, when it is in the esophagus.
- Use the device for no more than two hours.
- For weight restrictions, follow manufactures' recommendations.

#### **Medication Issues:**

- If you administer medications via ETT, remove the EtCO<sub>2</sub> detector for several ventilations, until no medication returns through the tube during exhalation. Medications splashing up the tube can alter color change.
- Intravenous sodium bicarbonate will produce more carbon dioxide resulting in enhanced color.

### **Electronic End Tidal CO<sub>2</sub> (EtCO<sub>2</sub>) Monitors - Capnography**

These devices measure the amount of carbon dioxide in the exhaled ventilations of patients. They can use mainstream sensors, which are located directly on the endotracheal tube, or sidestream sensors, which samples the ventilation more remotely from the patient. Capnography can be used with patients who are not intubated. In-line EtCO<sub>2</sub> monitors can be used on patient with or without adequate perfusion. Electronic monitors are more sensitive, so changes can be seen in real-time.

Capnography or capnometry is considered the “gold standard” of tube placement confirmation. **If your department has this equipment, it should be used on EVERY intubation, and always be one of your five confirmation steps.**

### **Esophageal Detector Device (EDD)**

These devices confirm tube placement mechanically. It is based on the principle that the esophagus is a collapsible tube, while the trachea is rigid. An EDD looks like a bulb syringe. Collapse the bulb first and then place the device on the end of the ETT prior to first ventilation. As the bulb tries to refill with air, it creates suction. If the tube is in the esophagus, the soft tissues will collapse around the holes in the ETT preventing expansion of the bulb. When the bulb does not refill (or refills very slowly), the tube is presumed to be in the esophagus. If the tube is in the trachea, there is nothing to occlude the movement of air. The bulb will rapidly refill, indicating that the ETT is properly placed.

#### **Limitations:**

- A large amount of gastric air (i.e. caused by carbonated beverage, aggressive ventilations, misplacement of ETT) and late term pregnancy can give a false positive finding. According to the AHA, the EDD may yield misleading results in patients with morbid obesity, late pregnancy, or status asthmaticus, or when there are copious endotracheal secretions because with these conditions the trachea may be obstructed.
- A cold device may give a false negative result. (If the rubber bulb is stiff from the cold, it will fail to fill with air. The ETT will seem to be in the esophagus, when it is actually in the trachea).

- Cannot be used continuously. It must be removed after confirmation, though you may reuse it after patient movement.
  - Used only for confirmation of endotracheal tube placement, not for any other airways (LMA, King, etc.).
- P May only be used on pediatric patients who are older than 5 years of age and weigh at least 20 kg/44 pounds.

<b>Indications for Various Intubation Confirmation Devices</b>				
	<b>Nasopharyngeal ETT</b>	<b>Oral ETT</b>	<b>Pulseless Pt.</b>	<b>Apneic Patient</b>
<b>Colorimetric EtCO<sub>2</sub></b>	Useful	Useful	MAY be useful	Useful
<b>Electronic Waveform EtCO<sub>2</sub></b>	Useful	Useful	Useful	Useful
<b>EDD</b>	Relatively contraindicated	Useful	Useful	Useful
<b>Pulse-Ox</b>	Useful	Useful	May be useful	Useful

*NOTE: {Intubation} is not permitted unless at least one of the above devices is utilized and the Medical Director authorizes EMT-Basics to perform the procedure.*

- Always secure the ET tube in place as effectively as possible, preferably with a commercial tube-securing device.
- Cervical collar is effective in maintaining patient’s head in a neutral position.
- Re-assess ET tube placement every time the patient is moved.
- {Dual Lumen Airways (i.e., Combitube or Pharyngotracheal Lumen Airway (PtL)), King Airway or a Laryngeal Mask Airway (LMA)}, are acceptable rescue airway devices and satisfy the “rescue airway” component. Use of these devices is limited to patients who need an artificial airway and are in cardiac arrest.
- If routine ventilation procedures are unsuccessful, try to visualize obstruction with laryngoscope. If foreign body is seen, attempt to remove it using suction, if possible.

### **Maintenance of Existing IV Pumps**

Do not stop the flow of medication unless you receive direct orders from MCP. There are some drugs, such as Flolan that could kill the patient if stopped. If you think the patient is experiencing an allergic reaction, call MCP. A possible reason for MCP to have you shut off the pump would be a patient having an allergic reaction who is receiving a new antibiotic being administered IV with the pump.

◆*NOTE: The exception is a diabetic patient with an Insulin Pump who is hypoglycemic as confirmed by a blood glucose monitor. If you are NOT familiar with the device, disconnect the tubing from the pump (first choice) or remove needle assembly from the patient (second choice). Do NOT turn off the pump. You may hit the wrong button and, inadvertently bolus the patient with a large amount of Insulin. If you are familiar with the device it is permissible to “Suspend” the administration of Insulin.*

Further info: <http://www.ems.ohio.gov/policies/boardpolicypts%20preexistingmedicaldevices.pdf>

### **CARDIOVASCULAR EMERGENCIES**

#### **General Considerations:**

- CPR should not be interrupted for more than 10 seconds until spontaneous pulse is established.

## **CARDIAC ARREST: Basic Life Support**

### **FIRST RESPONDER / EMT- BASIC**

- Assess patient for respiratory and cardiac arrest
- Initiate CPR and {AED/Defibrillator} using most current American Heart Association Guidelines.
- Ratio of compressions to breaths of 30:2 at a rate of about 100 compressions per minute
- Consider {Impedence Threshold Device (i.e. Res Q Pod)}
- Transport patient as appropriate
- Consider treatable causes

<b>CPR</b>	<b>Adult and Older Child</b> (puberty and older)	<b>Child</b> (1 year old to puberty)	<b>Infant</b> (Less than 1 year old)
<b>Establish that the victim does not respond</b> Activate your emergency response system	Activate your emergency response system as soon as the victim is found.	Activate your emergency response system after giving 5 cycles of CPR.	
<b>Open the airway</b> Use Head tilt-chin lift.	Head tilt-chin lift (Suspected trauma: jaw thrust)		
<b>Check breathing</b> If the victim is not breathing, give 2 breaths that make the chest rise.	Open the airway, look, listen, and feel.  Take at least 5 seconds and no more than 10 seconds.		
<b>First 2 breaths</b>	Give 2 breaths (Delivered over 1 second each)		
<b>Check pulse</b> At least 5 seconds and no more than 10 seconds.	Carotid pulse (If no pulse, start CPR)	Carotid pulse If no pulse or pulse <60 bpm with signs of poor perfusion, start CPR	Brachial pulse If no pulse or pulse <60 bpm with signs of poor perfusion, start CPR
<b>Rescue Breaths</b> Victim has a pulse, but is not breathing	1 breath every 5-6 seconds delivered over 1 second each (1 breath every 6-8 seconds with an advanced airway)	1 breath every 3-5 seconds delivered over 1 second each	1 breath every 6-8 seconds with an advanced airway
<b>Start CPR</b>			
Compression location	Center of breastbone between nipples		Just below nipple line on breastbone 2 fingers
Compression method	Heel of 1 hand, other hand on top (or 1 hand for small victims)		(2 thumb-encircling hands for 2 rescuer CPR)
Compression depth	1 ½ to 2 inches	⅓ to ½ depth of chest	
Compression rate	100 per minute		
Compression to ventilation ratio	30:2 (1 or 2 rescuer CPR)	30:2 for 1 rescuer CPR 15:2 for 2 rescuer CPR	

**NOTE:** Current AEDs may not be programmed to the current AHA Guidelines. Utilize AED as it is programmed. AEDs are to be used only on patients over 1 year of age. If available, use AEDs or pads which are designed for pediatric use for children 1 – 8 years of age.

## Suspected Cardiac Chest Pain

- P Chest pain in the pediatric patient is rarely related to a cardiac event. Assessment of other causes (i.e. muscle pain, respiratory difficulties, injury) should be completed to ensure the cause of pain. Application of supplemental oxygen and transport should be the management of care for these patients. Contact MCP for further advice when needed.

**The rest of Chest Pain algorithm does not apply to Peds.**

### EMT-BASIC

- Ask male and female patients if they are taking Viagra, Cialis, Levitra, Revatio or similar medications within the last 24 hours. Do not administer Nitroglycerin if taking above medications.
- ♦ Give **Aspirin, 324 mg** to every patient with symptoms of ACS. Patient **MUST CHEW** the Aspirin. (Basics *must have an order to access the drug bag*). May assist with patients own aspirin without an order.
- ♦ If prescribed, SBP >100, and the patient is at least 25 years of age administer **NTG, 0.4 mg SL every 5 minutes x 3** with vital signs between doses. Basics may assist patients with their own initial dose of their prescribed NTG, subsequent doses require MCP.
- Patients > 25 years of age complaining of ACS symptoms shall have a {12-lead EKG} acquired and {transmitted}. If possible, prior to moving patient, acquire a supine {12 Lead} EKG on all patients with any of the following: ACS symptoms including anginal chest pain, shortness of breath, syncope, diaphoresis, weakness or patients with atypical signs and symptoms (i.e., women, elderly and diabetics).
- If a {12 – lead EKG} is obtained, it shall be transmitted to MCP. MCP shall determine the medical facility destination based upon patient condition.

*NOTE: Revatio is a drug approved for treatment of pulmonary arterial hypertension (same disease that may be treated with Flolan at end stage). The drug improves exercise ability and contains Sildenafil which is Viagra. For this reason, organic nitrates are contraindicated with Revatio as they are with Viagra. One major difference with Revatio is that it is indicated for both men and women. Fortunately, a history of pulmonary hypertension is more likely to be shared than one of erectile dysfunction. Providers should query patients, particularly PAH patients, about Revatio before giving nitro.*

## CARDIAC DYSRHYTHMIAS

### Bradycardia

#### EMT-BASIC

- Transport immediately unless ALS intercept is < 5 minutes

#### FIRST RESPONDER / EMT-BASIC

- P For adequate perfusion, observe, monitor, and apply oxygen if needed.
- P For poor perfusion,
- Perform CPR if HR <60/min

### Tachycardia

#### EMT-BASIC

- Transport immediately unless ALS intercept is < 5 minutes.

## SHOCK

#### FIRST RESPONDER / EMT-BASIC

#### Without Pulmonary Edema

*(No JVD, edema, or rales noted)*

- Transport if ALS > 5 minutes.

### Exsanguinating Hemorrhage

- Control external bleeding.
- Treat for hypovolemic shock as indicated.
- P Transport if ALS > 5 minutes.

**Orthostatic Vital Signs:** Consider evaluation of orthostatic vital signs in a conscious patient suspected of being volume depleted, provided that there is no suspicion of spinal injury or another condition precluding this assessment. A rise from a recumbent position to a sitting or standing position associated with a fall in systolic pressure (after 1 minute) of 10 to 15 mm HG and/or a concurrent rise in pulse rate (after 1 minute) of 10 – 15 beats per minutes indicates a significant (at least 10%) volume depletion (postural hypotension) and a decrease in perfusion status.

## STROKE

### FIRST RESPONDER

- Complete GMVEMSC Prehospital Suspected CVA/TIA Checklist.
- Be prepared to ventilate and/or assist ventilations with oral or nasal airway and BVM or {FROPVD}.

### EMT-BASIC

- Be prepared to ventilate at a rate of 20 respirations per minute (if signs of cerebral herniation are present) and/or assist ventilations with oral or nasal airway and BVM or {FROPVD}.
  - {If signs of cerebral herniation are present and quantitative (i.e., numeric) End Tidal CO<sub>2</sub> (EtCO<sub>2</sub>) readings are available, ventilate at a rate to maintain EtCO<sub>2</sub> readings at approximately 30 mmHg (30 torr)}.
- Complete Cincinnati Prehospital Stroke Scale. If one or more signs on the Cincinnati Prehospital Stroke Scale are abnormal, call a Stroke Alert.

#### **Cincinnati Prehospital Stroke Scale:**

Facial Droop (pt. shows teeth or smiles)

\_\_\_\_\_ Normal \_\_\_\_\_ Abnormal

Arm Drift (pt. closes eyes and holds both arms straight out for about 10 seconds):

\_\_\_\_\_ Normal \_\_\_\_\_ Abnormal

Abnormal Speech (have pt. say “you can’t teach an old dog new tricks”):

\_\_\_\_\_ Normal \_\_\_\_\_ Abnormal

#### **Glasgow Coma Component Scores** (Scores of 8 or less have poor prognosis and need ALS ASAP).

\_\_\_\_\_ EYE OPENING (1 – 4)

\_\_\_\_\_ BEST VERBAL RESPONSE (1 – 5)

\_\_\_\_\_ BEST MOTOR RESPONSE (1 – 6)

\_\_\_\_\_ **Total GCS** (3 – 15)

- Assess Glasgow Coma Scale and blood glucose.
- If glucose <60, or there is strong suspicion of hypoglycemia despite glucometer readings
  - {Oral Glucose}.
  - {Oral Glucose} may be repeated in ten minutes if blood sugar remains < 60.
- Contact hospital and advise them of a Stroke Alert **if** you can arrive within **two hours** of time patient was last seen behaving normally. Select groups of patients may receive thrombolytics after as much as six hours. Consider air transport for Stroke Patients with long transport times.
- Transport historian with patient.
- Complete the “EMS CHECKLIST: SUSPECTED Stroke/CVA/TIA” for every stroke/TIA patient. Copies can be found in emergency rooms.

### Disorders Mimicking Stroke

#### FIRST RESPONDER / EMT-BASIC

- Seizures
- Subdural hematoma
- Brain tumor
- Syncope
- Toxic or metabolic disorders (i.e., hypoglycemia)

## TRAUMA EMERGENCIES

### General Considerations

- Minor trauma patients may be transported to non-Trauma Centers.
- Major trauma patients are to be transported as soon as possible to the nearest appropriate facility, per destination protocols.
- Scene size-up, with rapid assessment and recognition of major trauma/multiple system trauma and effective evaluation of the mechanism of injury are essential to the subsequent treatment.
- Document Glasgow Coma Scale including the individual components.
- Hypothermia is a significant and frequent problem in shock and major trauma patients. Maintain patient's body temperature.
- If patient condition changes, notify hospital.
- When patient is transported by helicopter, the EMS run sheet should be faxed to receiving Trauma Center.
- The *only* procedures that should take precedence to transport of Major Trauma patients are:
  - Airway Management
  - Stabilization of neck/back or obvious femur and pelvic fractures on a backboard
  - Exsanguinating Hemorrhage Control
  - Extrication

### Triage and Transport Guidelines

#### Concepts

- After the trauma patient's extrication, the on-scene time should be limited to **10 minutes or less**, except when there are extenuating circumstances.
- Trauma Patients, as identified in the document, should be transported to the nearest appropriate trauma center.
- Use of on-line, active MCP for medical direction in the field, particularly for difficult cases, is encouraged in compliance with regional standing orders.
- **Pre-arrival notification of the receiving facility is essential!** Give Mechanism of Injury, Injuries, Vital Signs, Treatment (MIVT) and ETA.
- List in the EMS Run Report which of the State Trauma Triage Criteria was met by the patient.

#### Trauma Center/Facility Capabilities

- Level I and II Trauma Centers can care for the same trauma patients.
- Level III Trauma Centers offer services, based on individual hospital resources that provide for initial assessment, resuscitation, stabilization, and treatment for the trauma patient.
- In areas of the region where the Level III Trauma Center is the only verified trauma facility, (within 30 minutes ground transport time), this hospital may act as the primary receiving facility for the critically injured patient.
- In areas where the trauma patient is in close proximity to a Level III trauma center and a Level I or Level II trauma center is still within the 30 minute transport guidelines established in this document, the EMS Provider should exercise professional judgment as to whether the patient would benefit more from an immediate evaluation, stabilization treatment at the proximate Level III trauma center or from direct transport by EMS Provider to the Level I or Level II trauma center.
- Regional Trauma Centers
  - Level I Miami Valley Hospital Fax # 937-208-2521
  - Level II Children's Medical Center Fax # 937-641-3131
  - Level III Greene Memorial Hospital N/A Helicopter will take trauma Pt. to Level I
  - Level III Atrium Medical Center N/A Helicopter will take trauma Pt. to Level I
- In areas of the region where there are no verified Trauma Centers (within 30 minutes ground transport time), the acute care hospital may act as the primary receiving facility for the critically injured trauma patients. EMS Provider may arrange for air medical transport from the scene.
- If a pediatric patient meets the trauma triage guidelines, then they are taken to a pediatric trauma center. If transportation time is > 30 minutes to a pediatric trauma center, then transport to the nearest acute care hospital for stabilization and transfer. EMS Provider may arrange for air medical transport from the scene.

- All pregnant trauma patients should be transported to the Nearest Adult Trauma Center, unless transport time > 30 minutes.

### **Air Medical Transportation**

- Pre-arrival notification of the receiving facility is essential.
- Prolonged delays at the scene waiting for air medical transport should be avoided.
- Traumatic cardiac arrest due to blunt trauma is **not** appropriate for air transport.
- In the rural environment, direct transfer of trauma patients by air medical transport may be appropriate and should be encouraged.

### **Exceptions to Triage and Transportation Guidelines**

- It is medically necessary to transport the victim to another hospital for initial assessment and stabilization before transfer to an adult or pediatric trauma center.
- It is unsafe or medically inappropriate to transport the victim directly to an adult or pediatric trauma center due to adverse weather or ground conditions or excessive transport time.
- Transporting the victim to an adult or pediatric trauma center would cause a shortage of local emergency medical services resources.
- No appropriate trauma center is able to receive and provide trauma care to the victim without undue delay.
- Before transport of a patient begins, the patient requests to be taken to a particular hospital that is not a trauma center or, if the patient is less than 18 years of age or is not able to communicate, and such a request is made by an adult member of the patient's family or legal representative of the patient.

### **Pre-Hospital Field Triage**

#### **FIRST RESPONDER / EMT-BASIC**

- Patients to be taken to nearest hospital:
  - Unstable airway
  - Blunt trauma arrest, no pulse or respirations
- All pregnant trauma patients should be transported to the Nearest Adult Trauma Center, unless transport time >30 minutes.
- Drowning, near drowning, strangulation and asphyxia are considered trauma and should be transported to a trauma center.

### **Geriatric Trauma Criteria**

#### **FIRST RESPONDER / EMT-BASIC**

- G Patients 70 years of age or older will be triaged for evaluation in a trauma center for:
- G GCS < 15 with suspected traumatic brain injury
- G Systolic BP < 100 mm hg
- G Falls with evidence of traumatic brain injury (even from a standing position)
- G Pedestrians struck by motor vehicles
- G Known or suspected proximal long (femur/humerus) bone fracture sustained in MVA
- G Multiple body regions injured

**Additionally special consideration should be given to the geriatric trauma patient to be evaluated at a trauma center if they have diabetes, cardiac disease, clotting disorders (including anticoagulants i.e. Heparin, Coumadin, Plavix), immunosuppressive disorder or requiring dialysis**

### **Anatomy of Injury**

- All penetrating trauma to head, neck, torso, and extremities proximal to elbow and knee
- Abdominal injury with tenderness, distention, or seat belt sign
- Chest injury: Flail chest and/or tension pneumothorax
- Two or more proximal long bone fractures
- G One proximal long bone fracture in MVC only (*Geriatric Trauma*)

- Evidence of pelvic fracture (exception: isolated hip fracture)
- Spinal cord injury with signs and symptoms of paralysis
- Burns greater than 10% Total BSA or other significant burns involving the face, feet, hands, genitals or airway
- P Burns greater than 5% Total BSA or other significant burns involving the face, feet, hands, genitals or airway
- Amputation proximal to wrist and/or ankle
- Evidence of serious injury of 2 or more body systems
- Crush injury to head, neck, torso, or extremities proximal to knee or elbow

<b>YES = Transport to Trauma Center</b>	<b>NO – Assess Physiologic</b>
<b>Alert Trauma Team</b>	

### Physiological Adult

- **Glasgow Coma Scale (GCS) less than or equal to 13**, loss of consciousness at any time greater than five minutes or alteration in level of consciousness with evidence of head injury at time of exam or thereafter, or fails to localize pain.
- **Respirations < 10 or >29** or intubation or relief tension pneumothorax
- **Pulse >120** in combination with any other physiologic criteria
- **SBP < 90** or absent radial pulse with carotid pulse present

<b>YES = Transport to Trauma Center</b>	<b>NO = Evaluate Mechanism of Injury if high energy impact</b>
<b>Alert Trauma Team</b>	

### Physiological Pediatric

- **Glasgow Coma Scale (GCS) less than or equal to 13**, loss of consciousness at any time greater than five minutes or alteration in level of consciousness with evidence of head injury at time of exam or thereafter, or fails to localize pain.
- **Evidence of poor perfusion** (i.e., weak distal pulse, pallor, cyanosis, delayed capillary refill, tachycardia)
- **Evidence of respiratory distress or failure** (i.e., stridor, grunting, retractions, cyanosis, nasal flaring, hoarseness or difficulty speaking)

<b>YES = Transport to Pediatric Trauma Center</b>	<b>NO = Evaluate Mechanism of Injury if high energy impact</b>
<b>Alert Trauma Team</b>	

### Physiological Geriatric

- G **Glasgow Coma Scale (GCS) < 15**, with evidence of Traumatic Brain Injury, or loss of consciousness at any time greater than five minutes or alteration in level of consciousness with evidence of head injury at time of exam or thereafter, or fails to localize pain.
- G **Respirations < 10 or >29** or intubation or relief tension pneumothorax
- G **Pulse >120** in combination with any other physiologic criteria
- G **SBP < 100** or absent radial pulse with carotid pulse present

<b>YES = Transport to Trauma Center</b>	<b>NO = Evaluate Mechanism of Injury</b>
<b>Alert Trauma Team</b>	

### Mechanism of Injury Geriatric

- G Pedestrian thrown or run over

<b>YES = Transport to Trauma Center</b>	<b>NO = Evaluate other Mechanism of Injury</b>
<b>Alert Trauma Team</b>	

**Mechanism of Injury**

- Auto-pedestrian/auto-bicycle injury with significant (> 5 mph) impact
- Death in same passenger compartment
- Ejection from motor vehicle
- Extrication time > 20 minutes
- Falls > 20 feet
- P Falls greater than 3 x child's height
- High Speed Auto Crash
  - Initial speed > 40 mph
  - Intrusion into passenger compartment > 12 inches
- Major auto deformity > 20 inches
- Open motor vehicle crash > 20 mph or with separation of rider from vehicle
- Pedestrian thrown or run over (Geriatric see note above)
- Unrestrained rollover

<b>YES = Consider Trauma Center</b>	<b>NO = Check Special Situations</b>
May consult with Medical Control Physician if needed	

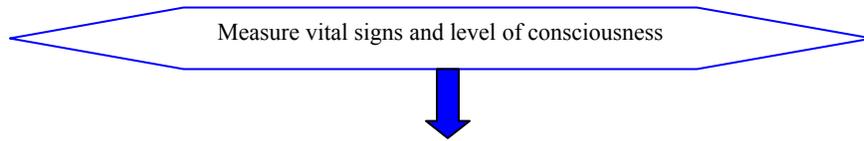
**Special Situations**

- Pre-existing cardiac and/or respiratory disease
- Insulin dependent diabetes, cirrhosis, morbid obesity, seizure
- Patient with bleeding disorder or on anticoagulants
- Immuno-suppressed patients (renal dialysis, transplant, cancer, HIV)
- All pregnant trauma patients should go to the Nearest Adult Trauma Center, if within 30 minutes transport time.

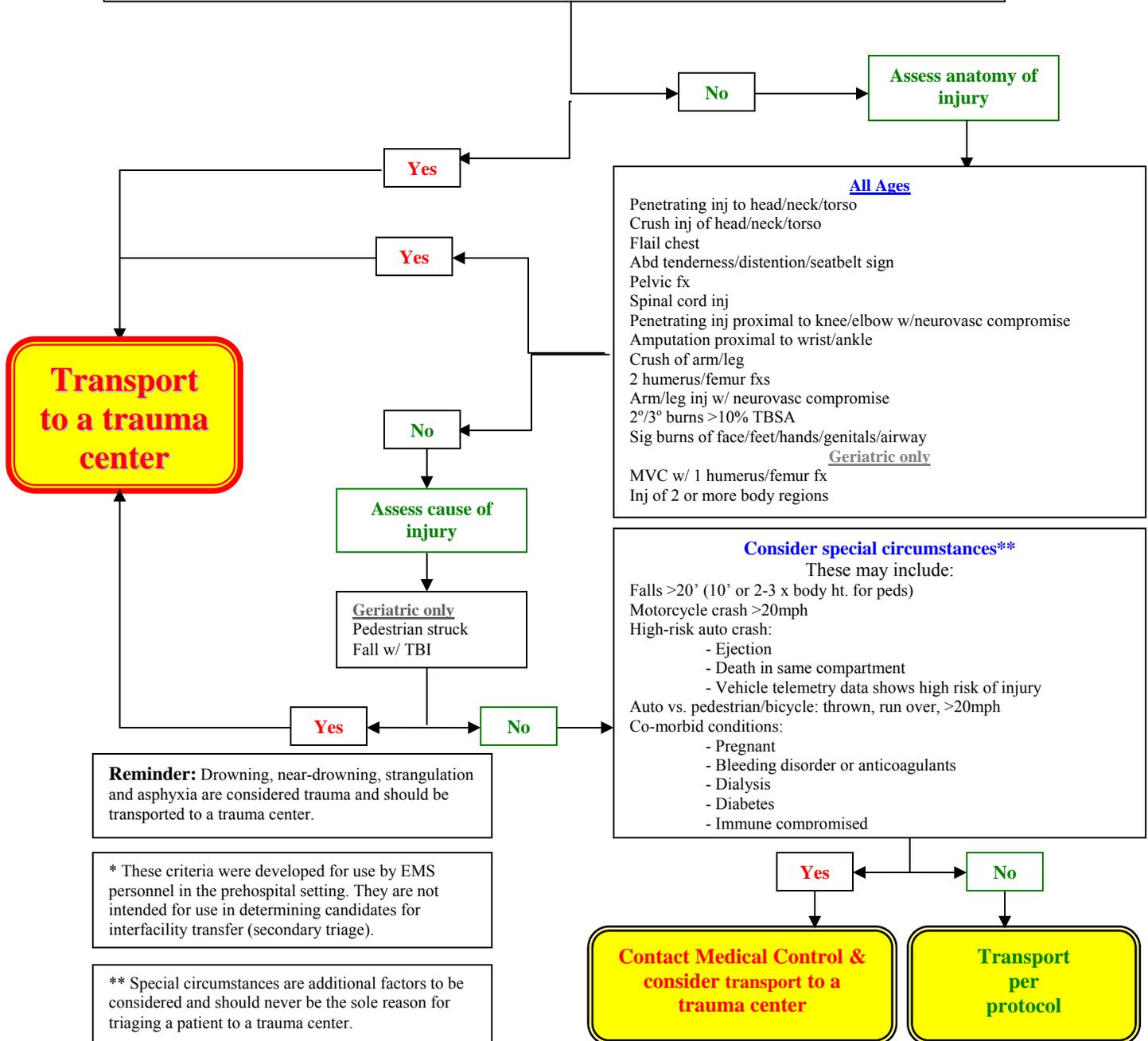
P Congenital disorders

<b>YES = Consider Trauma Center</b>	<b>NO = To Local Hospital</b>
May consult with Medical Control Physician if needed	

# Ohio Prehospital Trauma Triage Decision Tree\*



<b>Pediatric</b>	<b>Adult</b>	<b>Geriatric</b>
GCS <=13	GCS <=13	GCS <=13
Failure to localize pain	Failure to localize pain	Failure to localize pain
↓ing level of consciousness	↓ing level of consciousness	↓ing level of
consciousness		
Loss of consciousness >5 mins	Loss of consciousness >5 mins	Loss of consciousness >5 mins
Poor perfusion	Sys B/P <90	Sys B/P <100
Resp distress/failure	Pulse >120 w/shock	Pulse >120 w/shock
	Resp <10 or >29	Resp <10 or >29
	Tension PTX	Tension PTX
	Needs intubation	Needs intubation
		GCS <15 w/TBI



**Reminder:** Drowning, near-drowning, strangulation and asphyxia are considered trauma and should be transported to a trauma center.

\* These criteria were developed for use by EMS personnel in the prehospital setting. They are not intended for use in determining candidates for interfacility transfer (secondary triage).

\*\* Special circumstances are additional factors to be considered and should never be the sole reason for triaging a patient to a trauma center.

**When in doubt, transport to a trauma center!**

## Multiple Trauma

Patients meeting criteria for transport to a Trauma Center are considered “Load and Go”.

- Place the patient in correct position to maintain the airway.
- Open pneumothorax: cover with an occlusive dressing, tape three sides down.
- Tension pneumothorax
  - Lift one side of any occlusive dressing;
  - Use caution not to confuse right mainstem intubation for a pneumothorax.
- Flail chest: immobilize with a bulky dressing or towels taped to the chest.
- Contact MCP and advise of patient condition with MIVT and ETA, and need for Trauma Team.
- For pregnant patient in arrest consider need for manual uterine displacement and perform chest compressions slightly higher on the sternum than normal.

## Head Injury

### FIRST RESPONDER

- Evaluate patient condition:
  - Level of Consciousness
  - Pupillary size and reaction
  - Glasgow Coma Scale
- Be prepared to ventilate and/or assist ventilations with oral or nasal airway and BVM or {FROPVD}.
- P **Ventilate at a rate of ten faster than normal respiratory rate when the following signs of cerebral herniation are present:**
  - **Blown or unequal pupil(s), bradycardia, posturing, and decreased mental status.**

### EMT-BASIC

- Be prepared to ventilate at a rate of 20 respirations per minute (if signs of cerebral herniation are present) and/or assist ventilations with oral or nasal airway and BVM or {FROPVD}.
  - {If signs of cerebral herniation are present and quantitative (i.e., numeric) End Tidal CO<sub>2</sub> (EtCO<sub>2</sub>) readings are available, ventilate at a rate to maintain EtCO<sub>2</sub> readings at approximately 30 mmHg (30 torr)}.
  - Blown or unequal pupil(s), bradycardia, posturing, and decreased mental status.
- P **Ventilate at a rate of ten faster than normal respiratory rate when the following signs of cerebral herniation are present:**
- P **{Ventilate to maintain EtCO<sub>2</sub> readings of 30 mmHg (30 torr)}.**

### GLASGOW COMA SCALE

<b>EYES</b>	<b>SPONTANEOUSLY</b>	<b>4</b>
	<b>TO VERBAL COMMAND</b>	<b>3</b>
	<b>TO PAIN</b>	<b>2</b>
	<b>NO RESPONSE</b>	<b>1</b>
<b>VERBAL</b>	<b>ORIENTED &amp; CONVERSES</b>	<b>5</b>
	<b>DISORIENTED &amp; CONVERSES</b>	<b>4</b>
	<b>INAPPROPRIATE WORDS</b>	<b>3</b>
	<b>INCOMPREHENSIBLE SOUNDS</b>	<b>2</b>
	<b>NO RESPONSE</b>	<b>1</b>
<b>MOTOR</b>	<b>OBEYS VERBAL COMMAND</b>	<b>6</b>
	<b>PURPOSEFUL MOVEMENT TO PAIN</b>	<b>5</b>
	<b>WITHDRAWAL</b>	<b>4</b>
	<b>FLEXION</b>	<b>3</b>
	<b>EXTENSION</b>	<b>2</b>
	<b>NO RESPONSE</b>	<b>1</b>

## PEDIATRIC GLASGOW COMA SCALE

	< 2 Years Old		> 2 Years Old	
<b>Eyes</b>	SPONTANEOUSLY	4	SPONTANEOUSLY	4
	TO VOICE	3	TO VOICE	3
	TO PAIN	2	TO PAIN	2
	NO RESPONSE	1	NO RESPONSE	1
<b>Verbal</b>	COOS, BABBLES	5	ORIENTED	5
	IRRITABLE CRY, CONSOLABLE	4	CONFUSED	4
	CRIES TO PAIN	3	INAPPROPRIATE WORDS	3
	MOANS TO PAIN	2	GRUNTS, GARBLED SPEECH	2
	NO RESPONSE	1	NO RESPONSE	1
<b>Motor</b>	NORMAL MOVEMENTS	6	OBEYS COMMANDS	6
	WITHDRAWS TO TOUCH	5	LOCALIZES PAIN	5
	WITHDRAWS TO PAIN	4	WITHDRAWS TO PAIN	4
	FLEXION (DECORTICATE)	3	FLEXION (DECORTICATE)	3
	EXTENSION (DECEREBRATE)	2	EXTENSION (DECEREBRATE)	2
	NO RESPONSE	1	NO RESPONSE	1

Maintain good ventilation at rate of about one breath every 5-6 seconds, with high flow oxygen. Prophylactic hyperventilation for head injury is not recommended. Cerebral herniation syndrome is the only situation in which hyperventilation (rate of 20 per minute; **pediatric rate of 10 faster than normal rate**) is indicated.

An increase in the level of CO<sub>2</sub> (hypoventilation) promotes cerebral vasodilation and increased swelling, while lowering the level of CO<sub>2</sub> (hyperventilation) promotes cerebral vasoconstriction and cerebral ischemia. Hyperventilation causes a significant decrease in cerebral perfusion from vasoconstriction, which results in cerebral hypoxia. Thus, both hyperventilation and hypoventilation cause cerebral hypoxia and increase mortality.

The one time you may hyperventilate is cerebral herniation syndrome. In cerebral herniation, there is a sudden rise in intracranial pressure. Portions of the brain may be forced downward, applying great pressure on the brainstem. This is a life-threatening situation characterized by a decreased LOC that rapidly progresses to coma, dilation of the pupil and an outward-downward deviation of the eye on the side of the injury, paralysis of the arm and leg on the side opposite the injury, and/or decerebrate posturing. When this is occurring, the vital signs frequently reveal increased blood pressure and bradycardia. The patient may soon cease all movement, stop breathing, and die. If these signs are developing in a head injury patient, cerebral herniation is imminent and aggressive therapy is needed. Hyperventilation will decrease ICP. In this situation, the danger of immediate herniation outweighs the risk of ischemia.

### Extremity Fractures, Dislocations, Sprains

#### FIRST RESPONDER / EMT-BASIC

- Assess pulse, motor and sensation before/after splinting and during transport.
- For open fractures, control bleeding with direct pressure and cover with dry, sterile dressing.
- Apply appropriate splinting device.
- To reduce swelling, elevate extremity and {apply ice}.

#### Good Splinting Practices:

- Document distal sensation and circulation pre & post splinting and pre & post spinal immobilization.
- If the extremity is severely angulated and pulses are absent, you should apply gentle traction in an attempt to straighten it. If resistance is encountered, splint the extremity in the angulated position. When you are attempting to straighten an extremity, it is very important to be honest with yourself with regard to resistance. It takes very little force to lacerate the wall of a vessel or to interrupt the blood supply to a large nerve.

- Open wounds should be covered with a sterile dressing before you apply the splint.
- Apply a well-padded splint to immobilize above and below the injury.
- Do not attempt to push bone ends back under the skin. If you apply traction and the bone end retracts back into the wound, do not increase the amount of traction. Bone ends should be padded before pneumatic splints are applied. Keep bone ends moist to promote healing.
- If in doubt, splint a possible injury.

*Note: The patient who requires a load and go approach can be adequately immobilized by careful packaging on the long spine board. Do additional splinting en route to the hospital as time and the patient's condition permits.*

### **Drowning and Near Drowning**

#### **FIRST RESPONDER / EMT-BASIC**

- Consider spinal immobilization.
- Consider hypothermia.
- Evaluate neurological status.
- Near drowning patients should be transported to a trauma center.

### **Hypothermia with Arrest**

#### **FIRST RESPONDER**

- Move patient to warm environment, remove all wet clothing, dry the patient, and cover with blankets.
- Avoid any rough movement that may cause cardiac dysrhythmias. It may be beneficial to immobilize the patient on the backboard.
- Assess neurological status.
- It may be necessary to assess pulse and respirations for up to 30-45 seconds to confirm arrest.
- Consider possibility of other medical conditions (i.e. overdose, hypoglycemia)
- Hypothermic patients should be transported to a trauma center.
- If patient arrest:
  - CPR continuously
  - If severe hypothermia (<86°F (30°C)) is strongly suspected, limit defibrillation attempts to 1 except on orders from MCP.
  - If body temperature is >86°F (30°C), follow normal arrest protocols.

#### **EMT-BASIC**

- {Intubate} and oxygenate the patient with {warmed and humidified} 100% O<sub>2</sub>
- Continue resuscitative efforts while in transit, even if there is no response.

### **Hypothermia without Arrest**

#### **FIRST RESPONDER**

- Do not initiate CPR if there is any pulse present, no matter how slow.
- Rough handling and unnecessary stimulation may cause cardiac arrest.
- Minimize movement.
- Use the least invasive means possible to secure airway.

#### **EMT-BASIC**

- Consider other medical conditions (i.e. overdose, hypoglycemia, CVA)
- Transport to a trauma center.

### **Frostbite**

#### **FIRST RESPONDER / EMT-BASIC**

- Protect injured area(s). Remove clothing and jewelry from injured parts.
- Do not attempt to thaw injured part with local heat.

- Maintain core temperature.
- Severe frostbite injuries should be transported to a burn center.

## **Burns/Smoke Inhalation**

### **General Considerations**

- Stop the burning and minimize contamination.
- Severe burns should be transported to a burn center unless ETA >30 minutes.
- Keep patient warm.
- Superficial and partial thickness burns <10% may have wet dressings applied. Cover burn areas with clean, dry sheets or dressings after cooling burns < 10% first.
- Remove clothing and jewelry from injured parts. Do not remove items, which have adhered to the skin.
- Inhalation injuries with unsecured airway should be transported to the nearest facility.
- Chemical burns are Haz-Mat situations and must be grossly decontaminated at the scene.
- BP may be taken over damaged tissue if no other site is accessible.

### **Specific Care**

#### **FIRST RESPONDER**

- Assess for respiratory distress, stridor, hoarseness, sooty sputum, singed eyebrows and nares, or burns of the face or airway.
- Determine type of burn and treat as follows:
  - Radiation burns:
    - Treat as thermal burns except when burn is contaminated with radioactive source. Then treat as Haz-Mat situation
    - Consider contacting Haz-Mat team for assistance in contamination cases

#### **EMT-BASIC**

- Inhalation Burns:
  - Provide {humidified} O<sub>2</sub>.
- {CO oximeter}
- Consider Hyperbaric Oxygen Treatment for the following:
  - Underlying cardiovascular disease, or cardiovascular symptoms such as chest pain or shortness of breath.
  - > 60 years of age.
  - Obvious neurological symptoms, such as any interval of unconsciousness, loss of time, inability to perform simple motor tasks, or loss of memory.
  - Pregnancy.

## **Heat Exposure**

### **General Considerations**

- Geriatric patients, pediatric patients and patients with a history of spinal injury or diabetes mellitus are most likely to suffer heat-related illnesses. Other contributory factors may include heart medications, diuretics, cold medications and/or psychiatric medications.
- Heat exposure can occur either due to increased environmental temperatures, prolonged exercise or a combination of both. Environments with temperatures above 90°F and humidity over 60% present the most risk.

### **Specific Care**

- Move patient to a cool environment.
- Strip the patient of clothing, cool the patient, and apply water to the skin.
- If conscious and not vomiting or extremely nauseous provide oral fluids.
- Be prepared for seizures.
- Consider other medical conditions (i.e. overdose, hypoglycemia, CVA) and treat accordingly.
- Hyperthermia patients should be transported to a trauma center.

## Carbon Monoxide (CO) Poisoning

### FIRST RESPONDER

- Provide high flow O<sub>2</sub> to all suspected CO poisonings.

### EMT-BASIC

- Pulse Oximeter will give false readings and should not be utilized.
- {CO oximeter}
- Consider Hyperbaric Oxygen Treatment for the following:
  - Underlying cardiovascular disease, or cardiovascular symptoms such as chest pain or shortness of breath.
  - > 60 years of age.
  - Obvious neurological symptoms, such as any interval of unconsciousness, loss of time, inability to perform simple motor tasks, or loss of memory.
  - Smoke inhalation victims.
  - Pregnancy.
- Contact MCP to discuss transport considerations.

## Eye Injuries

### FIRST RESPONDER / EMT-BASIC

- If possible, contact lenses should be removed. Transport contacts with patient.
- Nasal cannula and IV tubing for irrigation.
- Chemical Burns:
  - Irrigate immediately with NS or water for a minimum of 30 minutes or until patient transport is completed.
  - Determine chemical involved. Bring MSDS, if available.
- Major Eye Trauma:
  - Do not irrigate if penetrating trauma.
  - Cover injured eye. Do not use a pressure or absorbent dressing on or near any eye that may have ruptured, or have any penetrating trauma.
  - Cover both eyes to limit movement.
  - Transport with head elevated at least 30°.

## {Spinal Injury Clearance}

### EMT-BASIC

Spinal injury clearance may be utilized for events minor in nature when authorized by the Medical Director and the patient is 16 or over. It is critical that each step be evaluated in sequence, since the steps proceed from the least to the greatest risk for the patient. It is just as critical that the patient be manually immobilized until the evaluation is complete.

1. If patient unconscious with potential mechanism of injury: Immobilize.
2. If patient not alert, is disoriented, or has GCS < 15: Immobilize.
3. If patient had loss of consciousness: Immobilize.
4. If suspicion of ETOH or drug intoxication: Immobilize.
5. If possible acute stress reaction: Immobilize.
6. If other painful or distracting injury: Immobilize.
7. If cervical pain or other spinal column pain (patient complaint) is present: Immobilize.
8. If neurological deficit (motor or sensory): Immobilize.
9. If cervical tenderness (on palpitation) or deformity: Immobilize.
10. If pain with cervical motion: Immobilize.

If none of the above are present, personnel may opt to transport the patient without spinal immobilization. In any case where there is the slightest doubt about the possible need for spinal immobilization, the patient is to be fully and effectively immobilized.

All of the above items must be documented, and the EMS agency must have a mechanism in place for Quality Improvement monitoring of each run where this procedure is employed.

### **START Triage System (MCIs)**

Use the **Simple Triage And Rapid Treatment** (START) method of triage to assess a large number of victims rapidly. It can be used easily and effectively by all EMS personnel.

#### Procedure

- Initial Triage
  - Utilize {Triage Ribbons [color-coded strips]}. One should be tied to an upper extremity in a **VISIBLE** location (wrist if possible, preferably on the right).
    - RED – Immediate
    - YELLOW – Delayed
    - GREEN – Ambulatory (minor)
    - BLACK – Deceased (non-salvageable)
  - If borderline decisions are encountered, always triage to the most urgent priority (i.e., GREEN/YELLOW patient, tag YELLOW). Move as quickly as possible.
- Secondary Triage
  - Will be performed on all victims in the Treatment Area.
  - Utilize the Triage Tags (METTAGS or START tags, SMART tags, etc.) and attempt to assess for and complete all information required on the tag. Affix the tag to the victim and remove ribbon. This is done after patients enter the Treatment Area, not at the initial triage site!
- The Triage priority determined in the Treatment Area should be the priority used for transport.
- Locate and remove all of the walking wounded into one location away from the incident, if possible. Assign someone to keep them together (i.e., PD, FD, or initially a bystander) and notify **COMMAND** of their location. *Do not forget these victims.* Someone should re-triage them as soon as possible.
- Begin assessing all non-ambulatory victims where they lie, if possible. Each victim should be triaged in 60 seconds or less, preferably much less.
- Assess **RESPIRATIONS**:
  - If respiratory rate is 30/min. or less, go to **PERFUSION** assessment.
  - If respiratory rate is > 30/min., tag RED.
  - If victim is not breathing, open airway, remove obstructions, if seen and assess for above.
  - If victim is still not breathing, tag BLACK.
- Assess **PERFUSION**:
  - Performed by palpating a radial pulse or assessing capillary refill (CR) time.
  - If radial pulse is present or CR is two seconds or less, go to **MENTAL STATUS** assessment.
  - No radial pulse or CR is > two seconds, tag RED.
- Assess **Mental Status**:
  - Assess the victim's ability to follow simple commands and their orientation to time, place and person.
  - If the victim follows commands and is oriented x3, tag GREEN. NOTE: Depending on injuries (i.e., burns, fractures, bleeding), it may be necessary to tag YELLOW.
  - If the victim does not follow commands, is unconscious, or is disoriented, tag RED.

#### Special Considerations

- Only correction of life-threatening problems (i.e., airway obstruction or severe hemorrhage) should be managed during triage.
- To help speed the process, consider utilizing colored (Red, Yellow, Green, Black) ribbons to initially mark patient categories. Triage Tags are then attached and filled out once the patient reaches the Treatment Area.
- When using Triage Tags, if the patient's condition or the triage priority changes, the bottom portion of the tag should be removed, leaving only the injury information. Add a new tag to identify the new triage priority, and if time permits, the reason for the change.

## JumpSTART Triage for (MCIs)

### Introduction

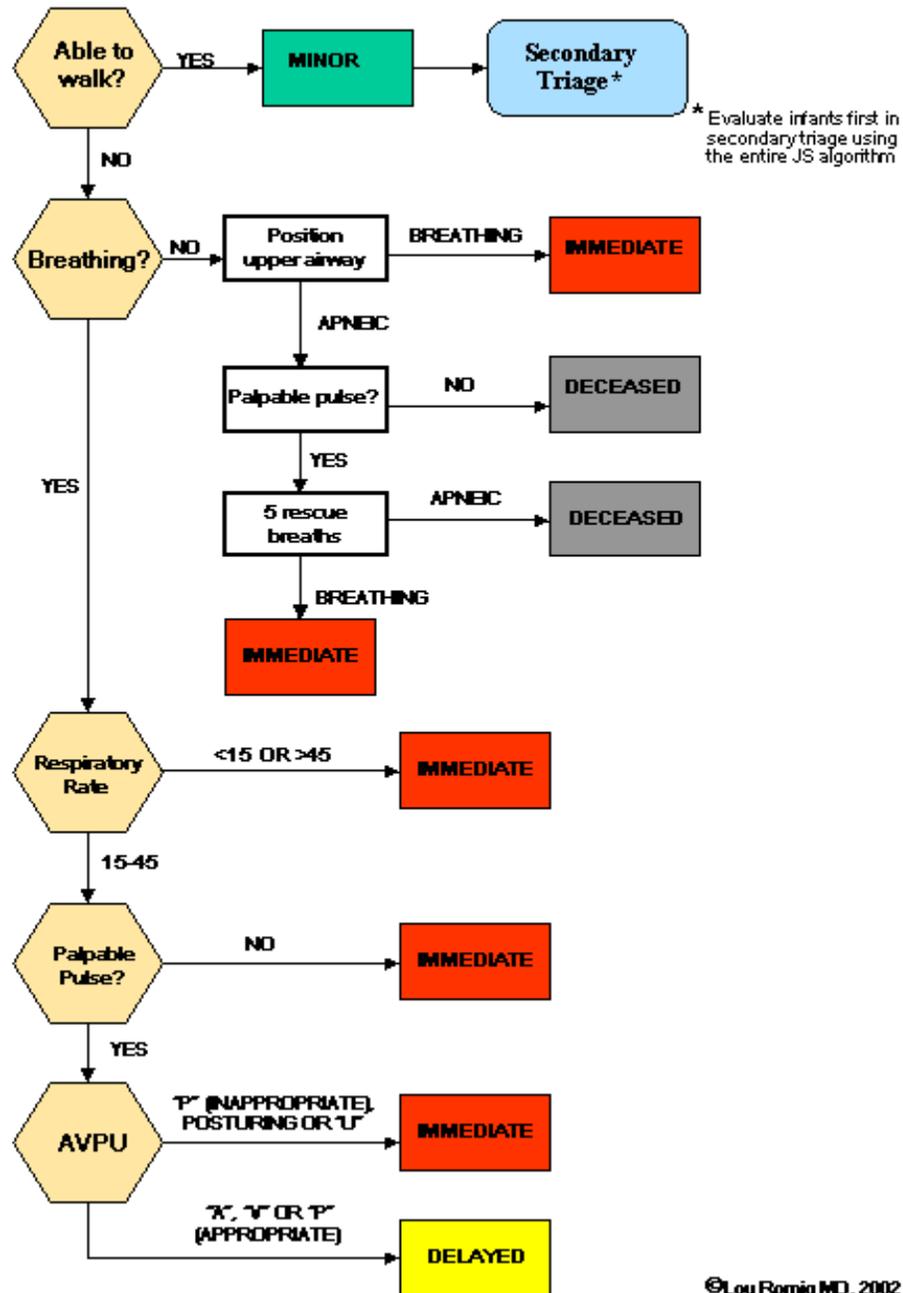
- P Use the Jump Simple Triage And Rapid Treatment (START) method of triage to assess a large number of pediatric victims rapidly. It is based on the START principles with considerations for pediatric response to trauma injury. It can be used effectively by all EMS personnel. However, there are limitations to JumpSTART

### Procedure

- P Initial Triage (Using the JumpSTART Method).
  - Utilize {Triage Ribbons [color-coded strips]}. One should be tied to an upper extremity in a VISIBLE location (wrist if possible, preferably on the right).
    - RED – Immediate
    - YELLOW – Delayed
    - GREEN – Ambulatory (minor)
    - BLACK – Deceased (non-salvageable)
- P If borderline decisions are encountered, always triage to the most urgent priority (i.e., GREEN/YELLOW patient, tag YELLOW). Move as quickly as possible.
- P Secondary Triage
  - Will be performed on all victims in the Treatment Area.
  - Utilize the Triage Tags (METTAGs or START tags) and attempt to assess for and complete all information required on the tag (as time permits). Affix the tag to the victim and remove ribbon. This is done after patients enter the Treatment Area, not at the initial triage site!
  - The Triage priority determined **in the Treatment Area** should be the priority used for transport.
- P JumpSTART
  - Locate and remove all of the walking wounded into one location away from the incident, if possible. Assign someone to keep them together (i.e., PD, FD, or initially a bystander) and notify COMMAND of their location. **Do not forget these victims.** Someone should re-triage them as soon as possible.
  - Begin assessing all non-ambulatory victims where they lie, if possible. Each victim should be triaged in 60 seconds or less, preferably much less. NOTE: Remember the mnemonic **RPM (Respirations, Perfusion, Mental Status)**.
  - Assess **RESPIRATIONS**:
    - If patient is breathing continue to assesses RESPIRATORY RATE, If not, position airway
    - If position corrects breathing, tag RED
    - If patient remains apneic, check pulse
    - If no pulse, tag BLACK
    - If pulse, Give 5 rescue breaths.
    - If rescue breaths return respirations, tag RED
    - If patient remains apneic, tag BLACK
    - Assess RESPIRATORY RATE
    - If rate is < 15 or > 45, tag RED
    - If rate is 15 to 45 assess pulse
  - Assess PULSE (Perfusion)
    - If no pulse is palpable, tag RED
    - If pulse is present, assess AVPU (Mental Status)
  - Assess AVPU
    - If patient is unconscious, posturing in response to pain, tag RED
    - If patient is alert, responds to verbal or pain without posturing, tag YELLOW
- P Special Considerations
  - The **first** assessment that produces a RED tag stops further assessment.
  - Only correction of life-threatening problems (i.e., airway obstruction or severe hemorrhage) should be managed during triage.

- To help speed the process, Departments should consider utilizing colored (Red, Yellow, Green, Black) {Ribbons} to initially mark patient categories. Triage Tags are then attached and filled out once the patient reaches the Treatment Area.
- When using Triage Tags, if the patient's condition or the triage priority changes, the bottom portion of the tag should be removed leaving only the injury information. Add a new tag to identify the new triage priority, and if time permits, the reason for the change.

## JumpSTART Pediatric MCI Triage®



## **ALTERED STANDARDS OF CARE IN MASSIVE EVENTS**

Some incidents are so large as to require extraordinary EMS procedures. Those scenarios are sometimes referred to as a Mass Casualty Events (MCEs), instead of Mass Casualty Incidents (MCIs). This Standing Order is at the awareness level, to introduce EMS procedures which could be utilized in very large emergency scenarios, or when the duration is extended.

“Altered Standards of Care” is a new term, but not a new concept. EMS uses altered standards whenever we triage. With concerns about pandemics, there is more planning for altered standards in settings from EMS to ICUs. Altered Standards of Care during an MCE may be partially issued by the State, and could result in a temporary expansion of the EMS scope of practice.

In some circumstances, EMS may be authorized to triage selected patients for transport to other healthcare facilities (e.g., urgent care centers). This could include an “Acute Care Center” (ACC) and/or a “Neighborhood Emergency Care Center” (NEHC), provided by Wright State University’s National Center for Medical Readiness (NCMR), by contract with the Ohio Department of Health.

Dayton MMRS, like other MMRS cities, is required to have a plan called, “Forward Movement of Patients.” The intent is to relieve the burden on local/regional hospitals by transporting patients, possibly directly from the scene, to more distant hospitals.

In the event of an MCE, especially one lasting days or longer, Greater Miami Valley EMS Council, with the approval of members of the Regional Physicians Advisory Board (RPAB), may promulgate “Just in Time” Standing Orders (JITSO). Those orders might include triage standards for transport to other healthcare facilities or forward patient movement, as well as other altered standards of care, possibly exceeding the standard scope of practice for EMS (with approval from Ohio Department of Public Safety).

## **RESPIRATORY DISTRESS**

### **EMT-BASIC**

- Evaluate breath sounds:
  - Clear: Treat cause (e.g. MI, pulmonary embolism, metabolic disturbance, and hyperventilation).
  - Wheezes: Treat cause (e.g. pulmonary edema, FBAO, asthma or allergic reaction).
  - Rales: Treat cause (e.g.. pulmonary edema or pneumonia)
  - Diminished or absent:
    - Unilateral: Treat cause (e.g. pneumothorax, hemothorax, pneumonia, surgically removed lung, asthma)
    - Bilateral: Treat cause (e.g. respiratory failure, end stage COPD or asthma)
    - Obtain {Pulse Oximeter and/or capnography} reading

### **Pulmonary Edema**

### **FIRST RESPONDER**

- Assess for and note cyanosis, clammy skin, *absence of fever*, coughing, wheezing, labored breathing, diaphoresis, pitting edema, rales in bilateral lower lung fields, tachypnea, apprehension, JVD, and inability to talk.

### **EMT-BASIC**

- {CPAP}

### **Asthma/Emphysema/COPD**

### **EMT-BASIC**

- If patient develops wheezing, assist them with taking their prescribed Proventil (Albuterol) metered dose inhaler, 2 puffs.

- ♦ The patient is currently prescribed Albuterol Metered Dose Inhaler but has outdated, damaged, or contaminated medication on hand, or does not have their own medication with them at the time of the Emergency, the EMT-Basic may administer {Albuterol Metered Dose Inhaler} only.
- Transport immediately, unless an ALS unit is en route and has an ETA of less than 5 minutes

### **ALTERED LEVEL OF CONSCIOUSNESS: Diabetic or Unknown Cause**

#### **EMT-BASIC**

- If glucose <60, or there is strong suspicion of hypoglycemia despite {glucometer} readings
  - {Oral Glucose}
  - ♦ In a diabetic patient with an insulin pump and a glucose <60, disconnect patient from the pump or “suspend” the device if you are familiar with its operation.
  - Maintain normothermia.

***Oral Glucose Administration:** Oral glucose is indicated for any awake but disoriented patient with BS <60 or strong suspicion of hypoglycemia despite blood sugar readings. Oral glucose may also be administered carefully under the tongue or between the gum and cheek of an unresponsive patient who must be placed in the lateral recumbent position to promote drainage of secretions away from the airway.*

### **DIABETIC EMERGENCIES: Refusal of Treatment**

#### **FIRST RESPONDER / EMT-BASIC**

- Patients 18 years of age or older may be permitted to refuse. Follow these guidelines:
  - Repeat physical examination and vital signs. Patient must be A&O X 3.
  - Warn the patient that there is a significant risk of going back into hypoglycemia, especially if on oral hypoglycemics.
  - Advise the patient to eat something substantial immediately.
  - Advise the patient to contact their family physician as soon as possible to minimize future episodes.
  - Advise the patient to stay with someone, if possible.
  - Follow normal patient refusal procedures.

*Note: Ensure that the EMS Coordinator of the hospital that replaces your Supplies receives a copy of the run sheet for his/her records.*

### **ALLERGIC REACTION/ANAPHYLAXIS**

#### **FIRST RESPONDER**

- If severe allergic reaction, assist patient in **administering {Epi-Pen}** if patient has his/her medication.

#### **EMT-BASIC**

- ♦ If patient is currently prescribed Epi-Pen, but has outdated, damaged, or contaminated medication or does not have their own medication with them at the time of the emergency, the EMT-B may access the BLS Drug Bag for **Epi-Pen only on orders from MCP**. The EMT-B may not administer Epi-Pen to a patient that is not currently prescribed Epi-Pen or epinephrine.
  - ♦ **Adult Epi-Pen – 0.3 mg for patient > 30 Kg (> 66 pounds)**
  - ♦ **Epi-Pen Jr – 0.15 mg for patients < 30 Kg (< 66 pounds)**
- IF MEDICATION IS NOT AVAILABLE – Transport immediately, unless ALS unit is en route and has an ETA of less than 5 minutes. Contact MCP.
- If patient develops wheezing, assist them with taking their prescribed Proventil (Albuterol) metered dose inhaler.
- ♦.The patient is currently prescribed **Albuterol** Metered Dose Inhaler but has outdated, damaged, or contaminated medication on hand, or does not have their own medication with them at the time of the Emergency, the EMT-Basic may administer {**Albuterol** Metered Dose Inhaler}
- If applicable, apply {ice pack} and/or constricting band.

### **Assisting with Epi-Pen:**

When assisting patient with severe allergic reaction with his/her own prescribed Epi-Pen, do the following:

- Assure medication is prescribed for patient
- Check medication for expiration date.
- Contact MCP, if possible.
- Administer medication in mid-thigh and hold injector firmly against leg for at least ten (10) seconds to assure all medication is injected.
- Record patient reaction to medication and relay to MCP – **Be sure to have vital signs.**

### **SEIZURES**

#### **FIRST RESPONDER**

- BVM and nasopharyngeal airway *during* seizure as needed.

#### **EMT-BASIC**

- If glucose <60, or there is strong suspicion of hypoglycemia despite {glucometer} readings
  - **Oral Glucose**
  - In a diabetic patient with an insulin pump and a glucose <60, disconnect patient from the pump or “suspend” the device if you are familiar with its operation.
  - Maintain normothermia.

*When obtaining history be sure to include the following:*

- *Description of seizures, areas of body involved, and duration*
- *Other known medical history; i.e. head injury, diabetes, drugs, alcohol, stroke, heart disease, recent fever/illness, possible toxicological agents.*

### **POISONING/OVERDOSE**

#### **FIRST RESPONDER**

- Manage Airway, gather appropriate history
- Thorough search for source substance

#### **EMT-BASIC**

- {Glucometer}
- Ingested Poison
  - Transport container and / or remaining medication to the hospital with the patient.

### **HAZ-MAT**

Important steps in field decontamination:

- Remove contaminated clothing.
- Thoroughly wash with {Dawn} paying special attention to skin folds and other areas where simple irrigation may not remove it.
- Do not transport a patient until gross decontamination is completed.
- Obtain permission from hospital personnel before entering hospital with a potentially contaminated patient and/or crew.
- Consider decontamination of vehicle prior to leaving.

Field decontamination must be initiated. An example of the often overlooked importance of decon is a patient soaked in diesel fuel. Diesel fuel can cause chemical burns when left in contact with the skin.

Contact receiving hospital immediately to allow for set up of decontamination equipment. If substance is determined, notify receiving facility as early as possible.

## **Guidelines for Dealing with Exposure to Hazardous Drug**

### **Hazardous Drug: Exposures and Spills**

#### **FIRST RESPONDER / EMT-BASIC**

- Hazardous drug situations include
  - Patients who have continuous IV chemotherapy at home
  - Patients who have just had IV chemotherapy at the clinic or hospital and their body fluids could have traces of hazardous drug for 48 hours
  - Patients taking oral chemotherapy drugs
- Potential routes of exposure include:
  - absorption through skin or mucous membranes
  - accidental injection by needle stick or contaminated sharps
  - inhalation of drug aerosols, dust, or droplets
  - ingestion through contaminated food, tobacco products, beverage, or other hand-to-mouth behavior
- PPE should be worn whenever there is a risk of hazardous drug being released into the environment. For EMS personnel, the situations might include:
  - Handling leakage from tubing, syringe, and connection sites
  - Disposing of hazardous drugs and items contaminated by hazardous drugs
  - Handling the body fluids of a patient who received hazardous drugs in the past 48 hours
  - Cleaning hazardous drug spills
  - Additional situations apply to healthcare workers who mix and administer hazardous drugs
- Guidelines for PPE:
  - Gloves: disposable, powder-free, latex or nitrile. Double gloves are recommended. Change gloves immediately after each use, if a tear, puncture, or drug spill occurs; or after 30 minutes of wear
  - Gowns: disposable, lint-free, low-permeability fabric. Solid front, long-sleeves, tight cuffs, back closure. Inner glove cuffs should be worn under the gown cuffs and the outer glove cuffs should extend over the gown cuffs
  - Respirators: Wear a NIOSH-approved respirator mask when cleaning hazardous drug spills. Surgical masks do not provide adequate protection
  - Eye and face protection: wear a face shield whenever there is a possibility of splashing
- Body Fluids – use universal (standard) precautions when handling the blood, emesis, or excreta of a patient who has received IV or oral chemotherapy within the previous 48 hours.
- Accidental skin exposure: Remove contaminated garments, place in leak proof plastic bag, and immediately wash contaminated skin with soap and water. Rinse thoroughly. Report to physician for examination and documentation.
- Accidental eye exposure: immediately flush eye with saline solution or water for at least 30 minutes or until patient transport is completed. Report to for examination and documentation.
- Contaminated Linen/Clothing – place linens in a plastic bag. Wash items twice in hot water, separately from other items. (Hospital linens are placed in a bag labeled “contaminated linen” and pre-washed before being added to other linen.)
- Spills, contaminated equipment: DO NOT touch the spill with bare hands. Post a sign or warn others to prevent spread of contamination and others from being exposed. Wipe up liquids with an absorbent pad or spill-control pillow. Clean the spill area from most contaminated to least contaminated three times, using a detergent solution followed by clean water. Rinse thoroughly.
- Disposal of hazardous drugs and materials contaminated with hazardous drugs - place items in a sealable, leak proof plastic bag or rigid cytotoxic waste container marked with a brightly-colored label that cites the hazardous nature of the contents. Dispose of needles and syringes intact – DO NOT break or recap needles or crush syringes.
- Report and document spills as required (consider EPA, OSHA, and Regional/local Haz-Mat team if more than 5 ml)

Who should you call for more help? (The patient should have these phone numbers)

- the homecare agency that is supplying/monitoring the infusion
- the physician who ordered the infusion (usually a medical oncologist)

- ask for pharmacy support from a hospital, if necessary (there should be a label on the IV bag with the name of the drug and the dosage/concentration)
- Consult with the Regional Haz-Mat team (or local Haz-Mat team for areas outside the Dayton area)

### **HAZ-MAT: Hydrofluoric Acid (HF)**

#### **FIRST RESPONDER / EMT-BASIC**

- Deaths have been reported after burns involving < 3% Body Surface Area. Assure safety of all personnel!
- Begin decon immediately, as soon as it can be accomplished without putting EMS personnel at risk! Strip the patient of any clothing, which may be contaminated.
- Irrigate the chemical burn with water as quickly as possible. **DON'T DELAY IRRIGATION/DECON!** Flush affected skin and eyes with copious amounts of water or **Saline** for a minimum of 30 minutes, or until patient transport is completed
- If ingested, do not induce vomiting. Dilute with water or milk, and give **{3-4 ounces of magnesium-containing antacid (e.g., Maalox or Mylanta)}**.
- {Intubate} if unconscious or at *first sign* of pulmonary edema or respiratory distress.
- {12-Lead EKG}

### **HAZ-MAT: Cyanide**

#### **FIRST RESPONDER / EMT-BASIC**

- **Unconscious Patients of Known or Strongly Suspected Cyanide Poisoning:**
  - Provide 100% O<sub>2</sub> by BVM, preferably via Endotracheal tube
  - CPR if indicated. In cases of cardiac arrest associated with cyanide poisoning, the cyanide antidotes must have a high priority.

### **HAZ-MAT: Organophosphate or Nerve Gas Poisoning**

#### **FIRST RESPONDER / EMT-BASIC**

- Any case of known or suspected organophosphate or carbamate (i.e., insecticides such as parathion or malathion); or nerve agent (i.e., Tabun, Sarin, Soman, VX, etc.) exposure should follow the following:
- Patients with severe poisoning may or may not be bradycardic.

### **CHEMPACKS and Resources for Mass Casualty Incidents (MCIs)**

In addition to our “WMD” medications in the GMVEMSC Drug Bags, there are now additional resources for use in mass casualty incidents (MCI). **CHEMPACKS: containers with enough antidotes to treat roughly 500 victims** have been placed by the Centers for Disease Control (CDC) in hospitals around the nation.

Ohio Law and Region 2 EMS Standing Orders now permit EMT-Intermediates, EMT-Basics, and First Responders to utilize WMD autoinjectors in a Mass Casualty Incident. **Personnel must understand that the CHEMPACK agents are antidotes used to treat symptomatic patients; they are not to be given prophylactically (i.e., to persons who do not have symptoms).**

CHEMPACKS contain three drugs:

- Atropine (which blocks the effects of excess acetylcholine at its site of action);
- Pralidoxime Chloride (2-PAM) (which reactivates acetylcholinesterase and therefore reduces the levels of acetylcholine); and
- Diazepam (which lessens the severity of convulsions that can contribute)

There are two types of CHEMPACKS: Hospital and EMS. Both contain **the same drugs**. The difference between the two is the ratio of drug packaging: autoinjectors to multi-dose vials. Hospital CHEMPACKS have more multi-dose vials to permit precise dosing of children and patients requiring prolonged treatment. EMS CHEMPACKS have more autoinjectors to ease administration at the site, and by personnel wearing high levels of Personal Protective Equipment (PPE).

There are five types of autoinjectors in CHEMPACKS. All five work just like the Epi-pens you are already familiar with.

- 0.5 mg Atropens – Pediatric dose of Atropine
- 1.0 mg Atropens – Pediatric dose of Atropine
- Mark 1 Kits containing a 2 mg Atropine autoinjector, and another autoinjector with 2-PAM
- CANA’s – (“Convulsive Antidote, Nerve Agent”) containing 10 mg Diazepam for seizures

“Job Aid” is NIMS-terminology for a step-by-step checklist. There are CHEMPACK Job Aids for Incident Commanders, EMS Sector Commanders, Dispatchers, public safety personnel who transport CHEMPACK Antidotes, hospital personnel, and MCPs.

The information following is excerpted from the RPAB Region 2 CHEMPACK Job Aids:

<b>Mnemonic for Signs &amp; Symptoms of Nerve Agents or Organophosphates: SLUDGEMM</b>	
Salivation	Gastrointestinal upset
Lacrimation	Emesis
Urination	Muscle twitching
Defecation	Miosis (abnormally constricted pupils)
<b>Initial Actions:</b>	
<b>Personnel safety</b> (Distance, Uphill/Upwind, PPE, etc.)	
Call for additional resources (Medic Units, Engines for personnel/resources/Decon, <b>Haz-Mat</b> , Law Enforcement, etc.)	
Consider potential for secondary devices	
<b>DECON!</b>	
<b>Antidotes in ALS Drug Bags and/or County Caches:</b>	
<ul style="list-style-type: none"> <li>• Mark I Kits or DuoDotes</li> <li>• Atropine</li> <li>• Oxygen</li> </ul>	<ul style="list-style-type: none"> <li>• CANA for seizures (Diazepam Autoinjectors)</li> <li>• Diazepam or Midazolam for seizures</li> </ul>
<b>Note: First Responders, EMT-B’s, and EMT-I’s may only administer O2 and Autoinjector WMD Drugs</b>	
<b>Contact Medical Control</b>	
Provide the following information: <ul style="list-style-type: none"> <li>▪ Estimated number of confirmed or potential adult and pediatric patients</li> <li>▪ Signs and symptoms exhibited by the patients</li> <li>▪ Name and/or identification information of the nerve agent if known</li> <li>▪ Form of the released nerve agent (liquid, gas, etc.) if known</li> <li>▪ Routes of exposure of the patients (percutaneous, inhalation, ingestion, etc.) if known</li> <li>▪ Additional anticipated decontamination needs if necessary</li> </ul>	
<b>Incident Is Appropriate for CHEMPACK Utilization <u>IF BOTH</u> of the following are present:</b>	
<ul style="list-style-type: none"> <li>• A mass casualty incident where the needs for antidotes are greater than available resources <b>AND</b></li> <li>• Nerve agent/Organophosphate identified or Patients are exhibiting signs or symptoms consistent with an exposure to a nerve agent</li> </ul>	
<b>If incident is less than 50 victims, or involves cyanide or bio agents, contact 937-333-USAR and request antidotes.</b>	
<b>If incident does meet the criteria in the box above, immediately have your Dispatch contact the Ohio Joint Dispatch Facility at 1-866-599-LERP, and request CHEMPACK deployment to the scene. Simultaneously, contact 937-333-USAR and request additional Nerve Agent Antidotes.</b>	
<b>Receive CHEMPACK from Transporting Law Enforcement Agency</b>	
Sign the “CHEMPACK CONTROLLED SUBSTANCE TRANSFER FORM” and receive copy	
Obtain authorization <b>from Medical Control to administer</b> CHEMPACK antidotes.	

	<p><b>To avoid the need for numerous calls to Medical Control in a Mass Casualty Incident, request an “Antidote Free” order, allowing you to treat all patients on the scene</b></p> <ul style="list-style-type: none"> <li>▪ Region 2 EMS personnel need authorization from a MCP to administer CHEMPACK drugs, as well as cyanide antidotes.</li> <li>▪ Calling for separate orders for each individual patient is impractical.</li> <li>▪ This terminology (“Antidote Free”) has been adopted from law enforcement and the military for this type of medical scenario. It is a blanket order to allow EMS to treat Mass Casualty victims as needed. “Weapons free” (as opposed to weapons tight) is a weapon control order whereby weapons systems may be fired at any target not positively recognized as friendly.</li> </ul>
<p><b>Once Authorized, Administer Antidotes to Patients as Needed</b></p>	
	<p><b>Antidote dosing and administration of treatment (field, transport, and hospital):</b></p> <ul style="list-style-type: none"> <li>◆ Administer <b>1-2 mg. Atropine (Atropine Sulfate)</b> every 3 - 5 minutes, as available until lungs are clear to auscultation. <b>Atropine</b> may be given IV or IM, or IM by <b>Mark I or DuoDote</b> auto-injector <ul style="list-style-type: none"> <li>➢ Atropine is administered as 1-2 mg in conventional form, or by the 2 mg Autoinjector, for adults and children weighing over 90 pounds</li> <li>➢ Children weighing 40 - 90 pounds should be give 1 mg Atropine, or the 1 mg Atropen autoinjector</li> <li>➢ Children weighing less than 40 pounds should be given 0.5 mg Atropine, or the 0.5 mg Atropen autoinjector</li> <li>➢ <u>Or</u> children may be given IV/IM Atropine 0.02 mg/kg every 5 minutes until excessive airway secretions diminish</li> </ul> </li> <li>◆ Follow Atropine with <b>2-PAM (Pralidoxime)</b> 600 mg IM, <b>which is Mark I autoinjector Item 2 for older children and adults, or 1 gram IV drip or IM.</b> If <b>DuoDote</b> was used, no second autoinjector is needed. <ul style="list-style-type: none"> <li>➢ Infants and young children should receive Pralidoxime, 25-50 mg/kg IV drip or IM</li> </ul> </li> </ul> <p>Treat any seizures with <b>Diazepam, Midazolam, or {Diazepam Autoinjector}</b></p>
	<p><b>Rules of Thumb:</b></p> <ul style="list-style-type: none"> <li>• Mild to moderate cases should be treated with one or two doses of Atropine and 2-PAM</li> <li>• Severe doses will generally require repeating every 5 minutes up to 3 doses</li> <li>• Organophosphate poisonings will require more Atropine (&gt; 3 Mark I Kits or 3 DuoDotes) than Nerve Agent poisonings, but no more 2-PAM than the 3 Mark I’s or DuoDotes.</li> <li>• Atropine in these circumstances is <b>not</b> for bradycardia, which may or may not be present</li> <li>• Primary endpoints for treatment are diminished airway secretions, hypoxia improves, airway resistance decreases, and dyspnea improves</li> </ul>

- ◆ Administer 2 mg **Atropine** by auto-injector every 3-5 minutes, as available, until lungs are clear to auscultation.
- P ◆ **Atropine by auto-injector, weight dependent as above, every 3-5 minutes, as available, until lungs are clear to auscultation.**
- In some cases, the Mark I Kits have been replaced by “**DuoDotes**”. **DuoDotes** have the same drugs as Mark I Kits, but administered through a single autoinjector.
- Treat seizures with **Diazepam, Midazolam, or Diazepam Autoinjector.**

### Administering the Nerve Agent Antidote Auto-Injector Kit (Mark I)

#### FIRST RESPONDER / EMT-BASIC

When first responder arrives on a scene potentially contaminated with nerve agents, s/he must don appropriate PPE. If symptoms of nerve agent exposure manifest:

1. Grasp the unit and position the green tip of the AtroPen on victim’s outer thigh
2. Push firmly until auto-injector fires. Hold in place for 10 seconds to ensure Atropine has been properly delivered.
3. Remove 2-PAM. Grasp the unit and position the black tip of the Combo Pen on victim’s outer thigh.
4. Push firmly until auto-injector fires. Hold in place for 10 seconds to ensure Pralidoxime has been properly delivered

5. If nerve agent symptoms are still present after 15 minutes, repeat injections. If symptoms still exist after an additional 15 minutes, repeat injections for a third time. If after the third set of injections, symptoms remain, do not give any more antidotes but seek medial help

Recommended Autoinjector Site: Anterolateral thigh. Hold in place for 10 seconds.

CHEMPACK antidotes are only useful against nerve agents or chemical pesticides. There is no provision for biological releases, cyanide incidents, etc. Furthermore, CHEMPACKS may **only** be utilized when other resources (antidotes in regional Drug Boxes and area hospitals) are inadequate for the number of victims.

Our region does have other resources for cyanide and biological incidents. In addition to the drugs in regional Drug Bags, all area hospitals have antidotes. EMS can access regional WMD Drug Caches for Mass Casualty Incidents by calling the “Regional Rescue Coordination Center” at **937-333-USAR (8727)**. You will see that information listed in the Job Aids. Contact 333-USAR when you need additional antidotes for Cyanide, Nerve Agent, or Organophosphate Mass Casualty Incidents.

If a hospital opens its own CHEMPACK, it also must notify 866-599-LERP, so they are aware the resources are not available for use elsewhere. Hospital CHEMPACKS have been partitioned into thirds. Each third is marked with colored dots (Red, Blue, and Yellow). Hospitals keep at least the materials with the Red dots for potential use at the Storing Hospital.

### **HAZMAT: Pepper Spray**

#### **FIRST RESPONDER / EMT-BASIC**

- **{Sudecon Wipes}** can assist in the decontamination of patients or public safety personnel who have been sprayed with Pepper Spray.

### **ABDOMINAL PAIN**

#### **FIRST RESPONDER / EMT-BASIC**

- Use inspection, auscultation and palpation to assess the patient with abdominal pain.
- Assess and document pain using the OPQRST acronym:
  - O = Onset
    - Was the onset sudden or gradual?
  - P = Provocation and Palliation
    - What causes it?
    - What makes it better or worse?
  - Q = Quality
    - What kind of pain is it?
  - R = Region and Radiation
    - Where is the pain located?
    - Does it radiate?
  - S = Severity and Scale
    - Does it interfere with activities?
    - How does it rate on a severity scale of 1 to 10?
  - T = Timing and Type of Onset
    - How often does it occur?
    - When did it begin?
- Position of comfort
- Give nothing by mouth
- Assess for trauma, pregnancy, illness or potential ingestion.
- Pregnant patients of any age  $\geq 20$  weeks gestation should be taken to maternity department;  $< 20$  weeks should go to the emergency department.

***Orthostatic Vital Signs:*** Consider evaluation of orthostatic vital signs in a conscious patient suspected of being volume depleted, provided that there is no suspicion of spinal injury or another condition precluding this

assessment. A rise from a recumbent position to a sitting or standing position associated with a fall in systolic pressure (after 1 minute) of 10 to 15 mm HG and/or a concurrent rise in pulse rate (after 1 minute) of 10 – 15 beats per minutes indicates a significant (at least 10%) volume depletion (postural hypotension) and a decrease in perfusion status.

## FEVER

### FIRST RESPONDER / EMT-BASIC

- P Transport all infants < 2 months of age with a history or reported temperature of > 38.0 C. (100.4 F.) or < 35.6 C. (96.0 F.).

## OBSTETRICAL EMERGENCIES

### FIRST RESPONDER / EMT-BASIC

- Aggressively treat for hypovolemic shock (do not rely on standard vital sign parameters).
- Give psychological support to patient and family.
- Be sure to take all expelled tissue with you to the hospital.
- Ask for first day of last menstrual period.
- Pregnant patients of any age  $\geq$  20 weeks gestation should be taken to maternity department; < 20 weeks gestation should go to the emergency department.

### Cardiac Arrest In Pregnancy

### FIRST RESPONDER / EMT-BASIC

- Precipitating events for cardiac arrest include: Pulmonary embolism, trauma, hemorrhage or congenital or acquired cardiac disease.
- Load and go to closest hospital and follow all cardiac arrest protocols en route.
- To minimize effects of the fetus pressure on venous return, apply continuous manual displacement of the uterus to the left, or place a wedge (pillow) under the right abdominal flank and hip.
- Administer chest compressions slightly higher on the sternum than normal.

### Third Trimester Bleeding

### FIRST RESPONDER / EMT-BASIC

- Place patient in left lateral recumbent position.
- Apply continuous manual displacement of the uterus to the left, or place a wedge (pillow) under the right abdominal flank and hip.

## Childbirth

### General Considerations

- Unless delivery is imminent, transport to a hospital with obstetrical capabilities. Imminent delivery is when the baby is crowning during a contraction.
- Visualize the perineal area only when contractions are less than five minutes apart.
- Place a gloved hand inside the vagina only in the case of breech delivery with entrapped head, or a prolapsed umbilical cord.
- During delivery, gentle pressure with a flat hand on the baby's head should be applied to prevent an explosive delivery.
- Separate run reports must be completed for each patient. The newborn is a separate patient from the mother.

### Specific Care

- Obtain history of patient condition and pregnancy, including contraction duration and interval, due date, first day of last menstrual period, number of pregnancies, number of live children, prenatal care, multiple births and possible complications, and drug use.
- After delivery, keep infant warm.

- Cut the umbilical cord and then place the baby to suckle at the mother's breast.
- Obtain one and five minute APGAR scores if time and patient condition permits.

*NOTE: Fundal Height refers to the level of the upper part of the uterus. Fundal height changes as the uterus enlarges during the course of pregnancy. You can palpate the top of the uterus and get a general idea of the weeks of gestation by relating fundal height with anatomical landmarks of the mother.*

Changes in fundal height during pregnancy:  
 Above the symphysis pubis: >12-16 weeks gestation  
 At the level of the umbilicus: 20 weeks  
 Near the xiphoid process: within a few weeks of term

**APGAR scores at 1 minute and 5 minutes post delivery**

SCORE	0	1	2
Appearance	Blue or pale	Body pink; extremities blue	Completely pink
Pulse	Absent	Slow (< 100)	> 100
Grimace	No response	Grimace	Cough or sneeze
Activity	Limp	Some flexion of extremities	Active motion
Resp. effort	Absent	Slow or Irregular	Good crying

**Newborn Care & Resuscitation**

**General Considerations**

- P As soon as the baby is born, dry, warm, maintain airway.
  - o Place in the sniffing position (1" towel under shoulders).
  - o Suction infant until all secretions are clear of airway.
- P If the newborn delivers with meconium-stained amniotic fluid and is vigorous, with strong respirations, good muscle tone, and heart rate > 100 BPM, suction the mouth and nose in the same way as for infants with clear fluid.
- P If the newborn delivers with meconium-stained amniotic fluid and is depressed, has poor respiratory effort, decreased muscle tone, or heart rate < 100 BPM, suction *before* taking other resuscitative steps.
- P Mechanical suction may be used on infants, but only if the suction pressure does not exceed 100 mmHg or 136 cm H<sub>2</sub>O. Bulb suctioning is preferred.
- P If drying and suctioning has not provided enough tactile stimulation, try flicking the infant's feet and/or rubbing the infant's back. If this stimulation does not improve the infant's breathing, then BVM may be necessary.
- P Avoid direct application of cool oxygen to infant's facial area as may cause respiratory depression due to a strong mammalian dive reflex immediately after birth.
- P Use length/weight-based resuscitation tape (e.g., Broselow Tape).

**Specific Care**

**FIRST RESPONDER / EMT-BASIC**

- P After delivery of the infant, assess the airway and breathing while drying and positioning head down.
- P If HR <100, BVM ventilation is necessary to increase heart rate.
  - o Ventilation is also indicated for apnea and/or persistent central cyanosis.
  - o Ventilate at 40-60/min.
  - o Despite adequate ventilation, if HR <60 begin CPR.
    - Compress at 120/min. (Compression to Ventilation ratio of 3:1)
- P If spontaneous HR absent or <60 despite adequate ventilation and stimulation:
  - o Compress at 120/min. (Compression to Ventilation ratio of 3:1)

## Delivery Complications

### FIRST RESPONDER / EMT-BASIC

- Place mother on O<sub>2</sub> by NRB.
- **Cord around baby's Neck:**
  - As baby's head passes out of the vaginal opening, feel for the cord.
  - Initially try to slip cord over baby's head.
  - If too tight, clamp cord in two places and cut between clamps.
- **Breech Delivery:**
  - When the appendage(s) or buttocks first become visible, transport patient *immediately* to the nearest facility.
  - If the head is caught, support the body and insert two fingers forming a "V" around the mouth and nose.
- **Excessive Bleeding:**
  - Treat for shock
  - Post delivery, massage uterus firmly and put baby to mother's breast.
- **Prolapsed Cord:**
  - When the umbilical cord is exposed, prior to delivery, check cord for pulse.
  - Transport *immediately* with hips elevated and a moist dressing around cord.
  - Insert two fingers to elevate presenting part away from the cord, distribute pressure evenly if/when occiput presents.
  - Do not attempt to reinsert cord.

### PATIENT COMPETENCY/CONSENT, PSYCHIATRIC and COMBATIVE PATIENTS

There are times when a "pink slip" or Involuntary Committal Form should be used. This **REQUIRES** coordination with and support from on scene law enforcement or health department officials, physician, or psychiatrist to "pink slip". Consult local rules, laws, policies, and / or guidelines.

- Determine patient competency and consent.
- Obtain medical history:
  - Suicidal or violent history
  - Previous psychiatric hospitalization, when and where
  - Location that patient receives mental health care
  - Medications
  - Recreational drugs/alcohol – amount, names
- Do not judge, just treat.
- Transport all patients who are not making rational decisions and who are a threat to themselves or others for medical evaluation. Threat of suicide, overdose of medication, drugs or alcohol and/or threats to the health and well being of others are not considered rational.
- Consider a patient may be incapable to make medical decisions if they are:
  - Suicidal
  - Confused
  - Severely developmentally or mentally disabled and injured/ill
  - Intoxicated and injured/ill with an altered mental status
  - Physically/verbally hostile
  - Unconscious
- Consider and treat possible medical causes for patient's condition:
  - Hypoxia
  - Hypoglycemia
  - Drug intoxication/side effects/drug withdrawal
  - Seizures and postictal states
  - Intracranial hemorrhages
- Consider staging until police have assured scene safety
- Have patient searched for weapons

- Do not transport restrained patients in a prone position with the hands and feet behind the back or sandwiched between backboards or other items.
- Recheck a restrained patient’s ability to breathe often
- Have the ability to remove/cut restraints if the patient vomits or develops respiratory distress
- Explain the need for restraint to the patient
- Document the restraints used and on which limbs and your justification for the restraints thoroughly

Per Ohio Revised Code 5122.01 and 5122.10, an EMTB, I or P may not “pink slip” an individual (transport a person to the hospital against their will for mental health evaluation) who is alert and oriented even if they are threatening harm to themselves or others. Only a health officer (such as a police officer, crisis worker, psychiatrist, licensed physician) can “pink slip” a person. The GMVEMSC strongly recommends that your fire/EMS department, in consultation with your medical director/advisor and local law enforcement, have a procedure to deal with these types of situations.

This does not preclude you from taking action to prevent imminent harm to the patient or others, if it is safe for you to do so.

### ELDER ABUSE NEGLECT

#### FIRST RESPONDER / EMT-BASIC

- You MUST, by law, report all alleged or suspected adult abuse or neglect to the appropriate agency. Ohio Revised Code 5101.61 requires providers to report incidents of abuse to their county’s adult protective services agency or local law enforcement as soon as possible. **Simply notifying hospital personnel about concerns of maltreatment does NOT meet the mandated EMS reporting responsibilities.**
- Hospitals have copies of the EMS Social Services Referral Form, supplied by GDAHA, for documenting cases of abuse. Use this form to provide information to the appropriate agency and so the receiving hospital social services staff can provide a continuum of care. GDAHA (228-1000 or [www.gdaha.org](http://www.gdaha.org)) can also send this form to your department to have on hand.
  - White copy of the form – send to the appropriate agency (as well as call)
  - Yellow copy of the form – leave with the hospital records
  - Pink copy of the form – retain with your department EMS report
- Document on your run sheet or an addendum if you fill out a Social Services Referral form or if you inform local law enforcement concerning the abuse / neglect. Include the names of the personnel at the protective services or law enforcement agency that you contacted.

<b>Adult Public Social Services Agencies</b>			
<b>County</b>	<b>Phone</b>	<b>After Hours Phone</b>	<b>Fax</b>
Butler	(513) 887-4081	Not Listed (County SO: 513-785-1000)	(513) 785-5969
Champaign	(937) 484-1500	Contact County SO (937) 484-6092	(937) 484-1506
Clark	(937) 327-1700	(937) 324-8687	(937) 327-1910
Darke	(937) 548-7129	(937)-548-2020	(937) 548-4928
Greene	(937) 562-6315	Not Listed (County SO: 937-562-4800)	(937) 562-6177
Miami	(937) 440-3471	Contact County SO (937) 440-3965	(937) 335-2225
Montgomery	(937) 225-4906	Not Listed (County SO: 937-225-4357)	(937) 496-7464
Preble	(937) 456-1135	(937) 456-1135 (same as daytime)	(937) 456-6086
Shelby	(937) 498-4981	Contact County SO (937) 498-1111	(937) 498-1492
Warren	(513) 695-1420	(513) 425-1423	(513) 695-2940

### Child Abuse/Neglect

- Report all alleged or suspected child abuse or neglect to the appropriate agency. Ohio Revised Code 2151.421 requires providers to report incidents of abuse to their county’s public children services agency or a municipal or county peace officer. Hospitals have copies of the EMS Social Services Referral Form, supplied by GDAHA, for documenting cases of abuse. Use of this form can help providers in providing information needed to their reporting agency, as well as provide for a continuum of care with hospital social services departments.
- Simply notifying hospital personnel about concerns of maltreatment do not meet mandated EMS reporting responsibilities. If any maltreatment is suspected, the EMS provider MUST, by law, notify the local public children services agency or law enforcement as soon as possible.

<b>Pediatric Public Social Services Agencies</b>			
<b>County</b>	<b>Phone</b>	<b>After Hours Phone</b>	<b>Fax</b>
Butler	(513) 887-4055	(513) 868-0888	(513) 887-4260
Champaign	(937) 484-1500	Contact County SO (937) 484-6092	(937) 484-1506
Clark	(937) 327-1700	(937) 324-8687	(937) 327-1910
Darke	(937) 548-7129	(937)-548-2020	(937) 548-8723
Greene	(937) 562-6600	(937) 372-4357	(937) 562-6650
Miami	(937) 335-4103	Contact County SO (937) 440-3965	(937) 339-7533
Montgomery	(937) 224-5437	(937) 224-5437 (same as daytime)	(937) 276-6597
Preble	(937) 456-1135	(937) 456-1135 (same as daytime)	(937) 456-6086
Shelby	(937) 498-4981	Contact County SO (937) 498-1111	(937) 498-1492
Warren	(513) 695-1558	(513) 659-2698	(513) 695-1800

### SAFE HARBOR

- Voluntary Separation of Newborn Infant
- Safe Harbor (Ohio House Bill 660) is designed to allow desperate parents to separate from their babies confidentially to hospitals, EMS, or law enforcement agencies.
- Stipulations of separation:
  - Infant must be 30 days old or less
  - No signs of abuse or neglect
- History which should be obtained:
  - Date and time of birth
  - Any family medical history
  - Information regarding prenatal care
  - Information concerning the birth.
- Information should be obtained in a manner, which will not lead to the revealing of the identity of the parents. Information collected should be based on patient (infant) care needs and assure confidentiality.
- Transport the infant to the hospital

## ABBREVIATIONS

Some abbreviations are case sensitive while others are content sensitive. Any words that can be readily abbreviated using a period have been left out of this list.

<b>A</b>	<b>A</b>		
Abdomen	ABD	bag-valve-mask	BVM
abdominal aortic aneurysm	AAA	basic life support	BLS
Abortion	Ab	beats / breaths per minute	bpm
above the elbow	AE	Before	a
Acetaminophen	APAP	below the elbow	BE
acquired immune def syndrome	AIDS	below the knee	BK
activities of daily living	ADL	below the knee amputation	BKA
acute coronary syndrome	ACS	birth control (pills)	BC(P)
acute myocardial infarction	AMI	births, number of	para
acute pulmonary edema	APE	Black	B
acute renal failure	ARF	blood alcohol concentration	BAC
acute respiratory distress syndrome	ARDS	blood glucose	bG
acute respiratory distress	ARD	blood pressure	BP
administer rectally	p.r.	blood sugar	BS
advanced cardiac life support	ACLS	body substance isolation	BSI
advanced directive	AD	body surface area	BSA
advanced life support	ALS	both ears	AU
After	P	both eyes	OU
Afternoon	P.M.	bowel movement	BM
against medical advice	AMA	Bradycardia	brady
AIDS related complex	ARC	breath or bowel sounds	BS
Airborne	A/B	by mouth	PO
Alcohol	ETOH	by or through	per
alert & oriented	A&O	by way of	via
alert/verbal/pain/unresponsive	AVPU	<b>C</b>	<b>C</b>
all terrain vehicle	ATV	Calcium	Ca <sup>++</sup>
antecubital fossa	AC	Canceled	CANX
aortic valve replacement	AVR	Cancer	CA
Approximately	(~)	capillary refill time	CRT
arterial blood gas	ABG	carbon dioxide	CO <sub>2</sub>
arteriosclerotic heart disease	ASHD	carbon monoxide	CO
as desired	ad lib	cardiac care unit	CCU
as necessary or needed	Prn	cardiac output	co
as soon as possible	ASAP	cardiopulmonary resuscitation	CPR
Aspirin	ASA	carotid sinus massage	CSM
Assessment & Plan	A/P	Centimeter	cm.
at	@	central nervous system	CNS
at bedtime	h.s.	central venous pressure	CVP
atrial fibrillation	a-fib	Cerebral palsy	CP
atrial flutter	AF	cerebrospinal fluid	CSF
atrial tachycardia	AT	cerebrovascular accident	CVA
Atrioventricular	AV	Cervical (1,2,3,4,5,6,7)	C
atrioventricular node	AV node	Cervical immobilization device	CID
auscultation & percussion	A&P	Cervical spine	C-spine
automatic external defibrillator	AED	Change	D
automatic transport ventilator	ATV	chest pain	CP
<b>B</b>	<b>B</b>	chest x-ray	CXR
backboard	BB	chief complaint	CC
		Chloride	Cl <sup>-</sup>

Chronic obstructive lung disease	COLD
chronic obstructive pulmonary disease	COPD
chronic renal failure	CRF
circulatory/sensory/motor	CSM
clear to auscultation	CTA
complaining of	c/o
complete blood count	CBC
computerized tomography	CAT/CT
congestive heart failure	CHF
conscious alert & oriented	CAO
consistent with	C/w
coronary artery bypass graft	CABG
coronary artery disease	CAD
cubic centimeter	cc.
<b>D</b>	<b>D</b>
daily	q.d.
date of birth	DOB
day	D
dead on arrival	DOA
decibel(s)	dB
decreasing	↓
deep tendon reflex	DTR
degree(s)	°
delirium tremens	DT's
dextrose in water - 25%	D25
dextrose in water - 5%	D5W
dextrose in water - 50%	D50
diabetes insipidus	DI
diabetes mellitus	DM
diabetic ketoacidosis	DKA
diagnosis	Dx
diastolic blood pressure	DBP
dilation & curettage	D&C
discontinue	d/c
disease	DZ
do not resuscitate	DNR
dressing	dsg.
drops	gtt(s)
dry sterile dressing	DSD
due to	d/t
dyspnea on exertion	DOE
<b>E</b>	<b>E</b>
ear, nose, & throat	ENT
ectopic pregnancy	EP
electrocardiogram	ECG / EKG
electroencephalogram	EEG
emergency department	ED / ER
emergency department physician	EDP
emergency medical services	EMS
endotracheal (tube)	ET(T)
epinephrine	EPI
equal	(=)

Equal to or greater than	≥
Equal to or less than	≤
esophageal detection device	EDD
esophageal gastric tube airway	EGTA
esophageal obturator airway	EOA
Estimated	Est.
estimated blood loss	EBL
estimated date of confinement	EDC
estimated date of delivery	EDD
estimated time of arrival	ETA
Evaluation	eval.
Every	Q
every evening	q.p.m.
every morning	q.a.m.
every other day	q.o.d.
external jugular vein	EJV
extraocular movement	EOM
<b>F</b>	<b>F</b>
Fahrenheit	F
family history	FH
fetal heart rate	FHR
fever of unknown origin	FOU
flow restricted O <sub>2</sub> powered ventilation device	FROPVD
fluid	Fld
follow-up	f/u
foot / feet	Ft.
for example	e.g.
foreign body	FB
four times a day	q.i.d.
fracture	Fx
french	Fr.
front to back	AP
full range of motion	FROM
full term normal delivery	FTND
full weight bearing	FWB
funny looking beats (ECG)	FLB's
<b>G</b>	<b>G</b>
gallbladder	GB
gastrointestinal	GI
gauge	Ga
genitourinary	GU
Glasgow coma score / scale	GCS
grain	Gr
gram	Gm
grand mal or grandmother	GM
grandfather	GF
grandmother or grand mal	GM
greater than	>
gun shot wound	GSW
gynecology	GYN
<b>H</b>	<b>H</b>
hazardous materials	HazMat

head, ears, eyes, nose, throat	HEENT
headache	H/a
headblocks	HB's
health related facility	HRF
heart block	HB
heart rate	HR
heart sounds	HS
head of bed	HOB
hematocrit	Hct.
hemoglobin	Hgb.
hepatitis A(BC) virus	HA(BC)V
history	Hx
history & physical	H&P
history of	h/o
history of present illness	HPI
hour	H or hr.
human immunodeficiency virus	HIV
hydrochlorothiazide	HCTZ
hydrogen ion concentration	pH
hypertension	HTN
<b>I</b>	<b>I</b>
identity or identification	ID
if necessary	Sos
immediately	STAT
increasing	↑
inferior	inf.
insulin dependent diabetes	IDDM
intake & output	I&O
intensive care unit	ICU
intercostal space	ICS
intermittent positive pressure breathing	IPPB
intraaortic balloon pump	IABP
intracranial pressure	ICP
intramuscular	IM
Intranasal	IN
intraosseous	IO
intravenous	IV
intravenous drip (or IVPB)	IVD
intravenous piggyback	IVPB
intravenous push	IVP
iron	Fe
<b>J</b>	<b>J</b>
joule	J
jugular venous distension	JVD
junctional rhythm	JR
<b>K</b>	<b>K</b>
keep vein open	KVO
Kendrick extrication device	KED
Kendrick traction device	KTD
kilogram	kg.
kilometer	km.
kilometers per hour	Kph

knee, above the	AK
knee, below the	BK
<b>L</b>	<b>L</b>
L lower extremity	LLE
L lower lobe (lung)	LLL
L upper extremity	LUE
L upper lobe (lung)	LUL
labor & delivery	L&D
large	lg.
laryngotracheal mask airway	LMA
last menstrual period	LMP
last normal menstrual period	LNMP
law enforcement	LE
lead	Pb
leading to or progressing	→
left	(L)
left bundle branch block	LBBB
left ear (auris sinistra)	AS
left eye (oculus sinister)	OS
left heart failure	LHF
left lower quadrant	LLQ
left upper quadrant	LUQ
less than	<
licensed practical nurse	LPN
lidocaine	LIDO
liters per minute	LPM
litre / liter	L.
liver, kidney & spleen	LK&S
longboard	LB
loss or limit of motion	LOM
loss or level of consciousness	LOC
low back pain	LBP
lower back	LB
lower extremity	LE
lumbar vertebrae (1,2,3,4,5)	L
lung sounds	LS
<b>M</b>	<b>M</b>
magnesium	Mg.
magnetic resonance imaging	MRI
mass casualty event	MCE
MAST	PASG
mean arterial pressure	MAP
mechanism of injury	MOI
medial	med.
medical antishock trousers	MAST
medical control physician	MCP
medical doctor	MD
medications	Meds
mercury	Hg.
meter	m.
metered dose inhaler	MDI
methicillin resistant staphylococcus aureus	MRSA

microgram	mcg.
mid-clavicular line	MCL
miles per hour	Mph
milk of magnesia	MOM
milliequivalent	mEq
milligram	mg.
milligrams per deciliter	mg/DL
milliliter (same as cc.)	ml.
millimeter	Mm
millimeters of mercury	mmHg
minute	min.
mitral valve prolapse	MVP
month(s)	mo(s).
morning	AM
motor vehicle accident	MVA
motor vehicle collision	MVC
multiple casualty incident	MCI
multiple sclerosis	MS
musculoskeletal	MS
myocardial infarction	MI
<b>N</b>	<b>N</b>
nasal cannula	NC
nasogastric (tube)	NG(T)
nasopharyngeal airway	NPA
nasotracheal	NT
nausea & vomiting	N&V
nausea, vomiting, & diarrhea	NVD
negative / no / absent	(-)
neuro-muscular blockade (RSI)	NMB
newborn	NB
nitroglycerine	NTG
nitroprusside	NTP
no apparent distress	NAD
no known drug allergies	NKDA
non weight bearing	NWB
non-insulin dependent diabetes	NIDDM
non-rebreather mask	NRBM
nonsteroidal anti-inflammatory	NSAID
normal saline	NS
normal saline lock	NSL
normal sinus rhythm	NSR
not applicable / available	n/a
nothing by mouth	NPO
number	#
nurse practitioner	NP
<b>O</b>	<b>O</b>
O <sub>2</sub> % of arterial blood	SpO <sub>2</sub>
obstetrics	OB
of each	Aa
ointment	Ung
once a day	Od
operating room / suite	OR
orogastric (tube)	OG(T)

oropharyngeal airway	OPA
ounce	oz.
over the counter	OTC
overdose	OD
oxygen	O <sub>2</sub>
<b>P</b>	<b>P</b>
packs per day	p/d
pain	pn.
pair	pr.
paroxysmal atrial tachycardia	PAT
paroxysmal nocturnal dyspnea	PND
paroxysmal SVT	PSVT
partial pressure of CO <sub>2</sub>	PCO <sub>2</sub>
partial pressure of O <sub>2</sub>	PO <sub>2</sub>
partial rebreather mask	PRBM
partial weight bearing	PWB
parts per million	Ppm
past medical history	PMH
past medical illness	PMI
patient	Pt.
peak expiratory flow	PEF
pediatric intensive care unit	PICU
pelvic inflammatory disease	PID
penicillin	PCN
peptic ulcer disease	PUD
per	/
percent	%
percutaneous coronary intervention	PCI
peripheral inserted central cath	PICC
peripheral vascular resistance	PVR
pharyngo tracheal lumen airway	PtL
physical exam	PE
physician on scene	POS
physician's assistant	PA
physician's desk reference	PDR
police (department)	PD
positive / yes / present	(+)
positive end expiratory pressure	PEEP
positive or negative	(+/-)
post-operative diagnosis	PODx
potassium	K <sup>+</sup>
pound	lb.
pounds per square inch	Psi
pregnancies, number of	Gravida
premature rupture of membranes	PROM
premature atrial contraction	PAC
premature junctional complex	PJC
premature nodal contraction	PND
premature ventricular complex	PVC
premenstrual syndrome	PMS
primary care physician	PCP
primary / 1 <sup>st</sup> degree	1°
prior to my arrival	PTA

pulmonary edema / embolism	PE
pulmonary function test	PFT
pulse	P=
pulse oximetry	POX/SPO <sub>2</sub>
pulse rate	PR
pulse, motor, sensation	PMS
pulseless electrical activity	PEA
pupils (=) & reactive to light	PERL
pupils (=) round reactive to light & accomodation	PERRLA
<b>Q</b>	<b>Q</b>
QRS complex	QRS
quart	Qt.
questionable / possible	?
<b>R</b>	<b>R</b>
R bundle branch block	RBBB
R lower extremity	RLE
R lower lobe (lung)	RLL
R middle lobe (lung)	RML
R upper extremity	RUE
R upper lobe (lung)	RUL
range of motion	ROM
rapid sequence induction	RSI
Rate	R
red blood cell / count	RBC
red lights & siren	RLS
Regarding	re:
registered nurse	RN
respiratory rate	RR
respiratory syncytial virus	RSV
returned to service	RTS
rheumatic heart disease	RHD
Right	(R)
right ear (auris dextra)	AD
right eye (oculus dexter)	OD
right heart failure	RHF
right lower quadrant	RLQ
right upper quadrant	RUQ
rule out	r/o
<b>S</b>	<b>S</b>
sacral vertebrae (1-5)	S
secondary / second degree	2°
sexually transmitted disease	STD
shortness of breath	SOB
signs & symptoms	S&S
sino-atrial	SA
sinus bradycardia	SB
sinus tachycardia	ST
small	sm.
small volume nebulizer	SVN
sodium	Na <sup>+</sup>
sodium bicarbonate	NaHCO <sub>3</sub>
sodium chloride	NaCl

solution	soln.
spinal cord	sp.cd.
stable angina	SA
standard	std.
standard operating procedure	SOP
standing orders	SO
stand-by	S/B
stroke volume	SV
subcutaneous	SC or SQ
sublingual	SL
sudden death	SD
sudden infant death syndrome	SIDS
supraventricular tachycardia	SVT
surgical intensive care unit	SICU
symmetry	sym.
symptoms	Sx
systemic vascular resistant	SVR
systolic blood pressure	SBP
<b>T</b>	<b>T</b>
tablespoon	Tbsp.
tachycardia	tach(y)
teaspoon	Tsp.
telephone order	TO
temperature	T
temperature, pulse, & respiration	TPR
temporomandibular joint	TMJ
tender loving care	TLC
therefore / in conclusion	\
thoracic vertebrae (1-12)	T
three times a day	t.i.d.
tibia	Tib
tidal volume	TV
times	×
to keep open	TKO
tourniquet	TQ
tracheal deviation	TD
traction or transport	Tx
transcutaneous pacing	TCP
transfer	x-fer
transient ischemic attack	TIA
transplant	Txp
transport or traction	Tx
treatment / medication	Rx
tuberculosis	TB
turned over to	TOT
twice a day	b.i.d.
Tylenol™	APAP
tympanic membrane	TM
<b>U</b>	<b>U</b>
ultra-high frequency	UHF
umbilical vein	UV
unconscious	unc.
unknown	unk. or u/k

unstable angina	USA
upper & lower	U+L
upper extremity	UE
upper respirator infection	URI
urinary tract infection	UTI
US pharmacopeia	USP
<b>V</b>	<b>V</b>
vancomycin resistant enterococcus	VRE
vein	V
ventricular fibrillation	VF/ VFIB
ventricular tachycardia	VT/ VTACH
verbal order	VO
versus	vs.
very high frequency	VHF
vital signs	VS
vital signs stable	VSS
<b>W</b>	<b>W</b>
warm & dry	w/d
water	H <sub>2</sub> O
watt/seconds (joules)	w/s
week	wk.
weight	wt.
white	W
white blood count	WBC
with	c
within normal limits	WNL
without	s or w/o
Wolff Parkinson-White	WPW
work of breathing	WOB
<b>X</b>	<b>X</b>
x-ray	XR
<b>Y</b>	<b>Y</b>
year	yr.
years old	y/o - y.o
<b>Z</b>	<b>Z</b>

**Greater Miami Valley EMS Council & Ohio EMS Region 2  
EMS CHECKLIST: SUSPECTED Stroke/CVA/TIA**

**Patient Name:** \_\_\_\_\_ **EMS Agency/Unit:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Run #:** \_\_\_\_\_ **Time Onset of S/S:** \_\_\_\_\_

(Y)es or (N)o

- \_\_\_\_\_ **1. HISTORY compatible with CVA?**  
\_\_\_\_\_ **2. PHYSICAL EXAM compatible with acute CVA?**

**Cincinnati Prehospital Stroke Scale:**

Facial Droop (pt. shows teeth or smiles)

\_\_\_\_\_ Normal \_\_\_\_\_ Abnormal

Arm Drift (pt. closes eyes and holds both arms straight out for about 10 seconds):

\_\_\_\_\_ Normal \_\_\_\_\_ Abnormal

Abnormal Speech (have pt. say “you can’t teach an old dog new tricks”):

\_\_\_\_\_ Normal \_\_\_\_\_ Abnormal

**Glasgow Coma Component Scores** (Scores of 8 or less have poor prognosis and need ALS ASAP).

\_\_\_\_\_ EYE OPENING (1 – 4)

\_\_\_\_\_ **Total GCS** (3 – 15)

\_\_\_\_\_ BEST VERBAL RESPONSE (1 – 5)

\_\_\_\_\_ BEST MOTOR RESPONSE (1 – 6)

- \_\_\_\_\_ **3. Time of onset of signs and symptoms:** \_\_\_\_\_  
\_\_\_\_\_ **4. INITIAL THERAPY per Standing Orders:**

**Oxygen, Blood Sugar, EKG, Monitor, IV or Saline Lock.**

**Intubate if indicated. Hyperventilation if signs of herniation.**

- \_\_\_\_\_ **5. TRANSPORT patient and HISTORIAN WITHOUT DELAY to most appropriate hospital. NOTIFY hospital ASAP**

Contact hospital and advise them of a “Stroke Alert” *if* you can arrive within **two hours** of time patient was last seen normal. Select groups of patients may receive thrombolytics after as much as six hours.

Consider air transport for Stroke patients with long transport times.

- \_\_\_\_\_ **6. POTENTIAL CONTRAINDICATIONS to Thrombolytic Therapy (i.e. tPA) to be communicated to hospital (no influence on transport destination):** (Check only those with a positive history.)

- \_\_\_\_\_ a) Active internal bleeding.  
\_\_\_\_\_ b) Hx of CVA in past three months.  
\_\_\_\_\_ c) Spinal or intracranial surgery or trauma within three months.  
\_\_\_\_\_ d) Intracranial neoplasm, AV malformation or aneurysm.  
\_\_\_\_\_ e) Known bleeding disorder  
\_\_\_\_\_ f) Pregnancy (certain lytic agents)  
\_\_\_\_\_ g) Seizure at time of onset of symptoms.  
\_\_\_\_\_ h) History of intracranial hemorrhage.  
\_\_\_\_\_ i) Abnormal blood glucose (< 60 or > 400 mg/dl).  
\_\_\_\_\_ j) Recent major surgery or trauma (< 2 months).  
\_\_\_\_\_ k) BP > 200/ > 120.  
\_\_\_\_\_ l) Active peptic ulcer or guaiac positive stools (GI or GU bleeding).  
\_\_\_\_\_ m) Recent prolonged or traumatic CPR.  
\_\_\_\_\_ n) Hx of CVA, or brain tumor/injury/surgery.  
\_\_\_\_\_ o) Current use of anticoagulants (i.e., Coumadin)

## **RIGHTS OF MEDICATION ADMINISTRATION**

1. Right Medication
  - a. Make sure that the medication is the correct medication indicated by the GMV Standing Orders and check it against the medication label.
  - b. Double-check the generic vs. non-generic names of medications. Many names are similar and have a potential for error. If you aren't sure, reference your SO Manual or Quick Reference Guide!
  - c. Check the expiration date on the label
2. Right Patient:
  - a. Confirm patient ID and confirm absence of allergies or other contraindications for your patient.
  - b. Confirm that the medication is appropriate for your patient per the GMV Standing Orders.
  - c. In multiple patient or mass casualty situations, confirm that the medication is being delivered to the correct patient.
3. Right Dose:
  - a. Check the SO dose against the medication label for the correct concentration.
  - b. Recheck dosage calculations and verify accuracy.
  - c. Confirm that the correct dose has been drawn up.
  - d. If you aren't familiar with the medication, use your references!
4. Right Route:
  - a. Check the standing order and the medication label for the correct route.
  - b. Confirm the route of administration for the medication; IM, SQ, IV, PO, IN, ETT, Neb
  - c. Confirm that the dose is correct for the chosen route, since some dosages will vary depending on the route.
  - d. Make sure the route is accessible; is the IV site patent?
5. Right Time:
  - a. Give the medication over the proper time duration per the Standing Orders.
6. Right Documentation:

Document medication, dose, time of administration and duration of administration, route and patient response.

**DRUG CHART: BASIC – Adult and Pediatrics Combined**

SPECIAL INFO	DRUG NAME	INDICATION	DOSAGE	REQUIRES MCP
	Albuterol (Proventil) Metered Dose Inhaler  NOTE: This drug is no longer included in the drug bags.  EMTs may assist patients with administration of the drug.	Asthma/Emphysema/COPD	<b>ADULT</b> 2 puffs from Inhaler	Assist with patients own – No  From BLS Fanny Pack only or Dept. supply - Yes
		Asthma/Emphysema/COPD	<b>PEDIATRIC</b> 2 puffs from Inhaler	Assist with patients own – No  From BLS Fanny Pack only or Dept. supply - Yes
	Aspirin (abbreviated as ASA)	Suspected Cardiac Chest Pain	<b>ADULT ONLY</b> 324 mg 4 chewable 81 mg tablets – MUST CHEW	Assist with patients own – No  From Drug Bag - Yes
		Suspected Cardiac Chest Pain	<b>PEDIATRIC</b> 324 mg 4 chewable 81 mg tablets – MUST CHEW	No
Atropine is one component of the DuoDotes (in Haz-Mat Drugs in GMVEMSC Drug Bags), and first autoinjector in Mark I Kits (contained in CHEMPACKs)	Atropine	Organophosphate or Nerve Agent Poisoning (regardless of cardiac rate)	<b>ADULT</b> <u>Organophosphate or Nerve Gas Poisoning:</u> Mark 1 Item 1, 2 mg until lungs are clear to auscultation	Organophosphate, Nerve Agent Poisoning – Yes

**DRUG CHART: BASIC – Adult and Pediatrics Combined**

SPECIAL INFO	DRUG NAME	INDICATIONS	DOSAGE	REQUIRES MCP
Atropine is one component of the DuoDotes (in Haz-Mat Drugs in GMVEMSC Drug Bags), and first autoinjector in Mark I Kits (contained in CHEMPACKs)	Atropine	Organophosphate or Nerve Agent Poisoning (regardless of cardiac rate)	<p align="center"><b>PEDIATRIC</b></p> <p><u>Organophosphate or Nerve Gas Poisoning</u>                      &lt;40 lbs: 0.5 mg IV/IO/IM or 0.5 mg Atropine (Atro-Pen) Auto-injector</p> <p>&gt;40 lbs: 1.0 mg IV/IO/IM or 1.0 mg Atropine (Atro-Pen) Auto-injector</p> <p>&gt; 90 lbs: 2.0 mg IV/IO/IM or 2.0 mg Atropine Auto-injector</p> <p>Atropine concentration in multiple-dose vial is 0.4 mg/ml.</p>	Organophosphate, Nerve Agent Poisoning – Yes
			<p align="center"><b>ADULT</b></p> <p>Solution of {Dawn} soap &amp; water</p>	No
	{Dawn} Soap	Decontamination of tenacious hazardous material on skin	<p align="center"><b>PEDIATRIC</b></p> <p>Solution of {Dawn} soap &amp; water</p>	No
Diazepam (Valium) CANA		Seizures associated with Organophosphate or Nerve Agent MCI	<p align="center"><b>ADULT</b></p> <p>10 mg IM Autoinjector</p>	Organophosphate or Nerve Agent Poisoning - Yes
		Seizures associated with Organophosphate or Nerve Agent MCI	<p align="center"><b>PEDIATRIC</b></p> <p>10 mg IM Autoinjector</p>	Organophosphate or Nerve Agent Poisoning - Yes
	Duodote	Organophosphate or Nerve Agent Poisoning	<p align="center"><b>ADULT</b></p> <p>Single auto injector with 2 mg. Atropine and 600 mg 2-Pam (See individual drug listing for specific information on drugs)</p>	Organophosphate or Nerve Agent Poisoning - Yes

**DRUG CHART: BASIC – Adult and Pediatrics Combined**

<b>SPECIAL INFO</b>	<b>DRUG NAME</b>	<b>INDICATIONS</b>	<b>DOSAGE</b>	<b>REQUIRES MCP</b>
	Duodote	Organophosphate or Nerve Agent Poisoning  Organophosphate or Nerve Agent Poisoning	<b>PEDIATRIC</b> Single auto injector with 2 mg. Atropine and 600 mg 2-Pam (See individual drug listing for specific information on drugs)	Organophosphate or Nerve Agent Poisoning - Yes
	EpiPen	Severe symptomatic allergic reaction or asthma in severe distress	<b>ADULT</b> 0.3 mg Auto injector	Assist with patients own - No  From Drug Bag; Yes
	EpiPen Junior  EpiPen Adult	Severe symptomatic allergic reaction or asthma in severe distress	<b>PEDIATRIC</b> Patients < 30 kg – 0.15 mg Auto injector  Patients > 30 kg - 0.3 mg Auto injector	Assist with patients own - No  From Drug Bag; Yes
	Nitroglycerine (abbreviated as NTG in the orders) (Nitrostat)	Chest pain in pt. who is at least 25 yrs. Old or has prescribed Nitro, or pulmonary edema with BP over 100	<b>ADULTS ONLY</b> 0.4 mg SL q 5 min for continued chest pain up to a total of 3 tablets.	Assist with initial dose of patients own – No Repeat – Yes  From Drug Bag – Yes
	Oral Glucose	Hypoglycemia if no IV access or available Glucagon. Stroke, generalized hypothermia without arrest, altered level of consciousness of unknown cause, or seizures with BS < 60, no BS monitor available, or strong suspicion of hypoglycemia despite BS reading, if no IV access.	<b>ADULT</b> 1 tube  May be repeated in 10 mins. If BS remains < 60.	No

**DRUG CHART: BASIC – Adult and Pediatrics Combined**

SPECIAL INFO	DRUG NAME	INDICATIONS	DOSAGE	REQUIRES MCP
	Oral Glucose	Hypoglycemia if no IV access or available Glucagon. Stroke, generalized hypothermia without arrest, altered level of consciousness of unknown cause, or seizures with BS < 60, no BS monitor available, or strong suspicion of hypoglycemia despite BS reading, if no IV access.	<p align="center"><b>PEDIATRIC</b></p> 1 tube  May be repeated in 10 mins. If BS remains < 60.	No
	Pralidoxime (2-PAM)  Component of DuoDotes  (Mark I Auto-injector, from CHEMPACKS, Item 2) to be used following Atropine	To be used following Atropine in Organophosphate, or Nerve Gas Poisoning.  Both for treatment of civilian patients at the scene, as well as for protection of public safety personnel who walk into scene & become unexpectedly contaminated as well as for treatment of civilian patients at the scene.	<p align="center"><b>ADULT</b></p> 600 mg IM AutoInjector	Organophosphate or Nerve Poisoning - Yes
		To be used following Atropine in Organophosphate, or Nerve Gas Poisoning.  Both for treatment of civilian patients at the scene, as well as for protection of public safety personnel who walk into scene & become unexpectedly contaminated as well as for treatment of civilian patients at the scene.	<p align="center"><b>PEDIATRIC</b></p> Children > 20 kg: 600 mg IM AutoInjector	Organophosphate or Nerve Poisoning - Yes

**DRUG CHART: BASIC – Adult and Pediatrics Combined**

SPECIAL INFO	DRUG NAME	INDICATIONS	DOSAGE	REQUIRES MCP		
	Sudecon Wipes	Pepper Spray	<table border="1"> <tr> <th align="center" data-bbox="980 239 1258 275">ADULT</th> </tr> <tr> <td data-bbox="980 275 1258 403">Use as needed to assist with decontamination</td> </tr> </table>	ADULT	Use as needed to assist with decontamination	No
		ADULT				
Use as needed to assist with decontamination						
Pepper Spray	<table border="1"> <tr> <th align="center" data-bbox="980 415 1258 451">PEDIATRIC</th> </tr> <tr> <td data-bbox="980 451 1258 579">Use as needed to assist with decontamination</td> </tr> </table>	PEDIATRIC	Use as needed to assist with decontamination	No		
PEDIATRIC						
Use as needed to assist with decontamination						

**BASIC - Therapeutic Actions, Contraindications, and Precautions**

<b>DRUG NAME</b>	<b>THERAPEUTIC ACTION</b>	<b>CONTRAINDICATION</b>	<b>PRECAUTIONS/SIDE EFFECTS</b>
Albuterol (Proventil)	Bronchodilator	Prior hypersensitivity reaction to Albuterol, cardiac dysrhythmias associated with tachycardia.	Usually dose related, restlessness, apprehension, dizziness, palpitations, tachycardia, dysrhythmias.  May precipitate angina pectoris and dysrhythmias.
Aspirin (ASA)	Anti platelet	Hypersensitivity to salicylates, GI bleeding, active ulcer disease, hemorrhagic stroke, bleeding disorders, children with flu-like symptoms.	Stomach irritation, heartburn or indigestion, nausea or vomiting, allergic reaction.  Should be given as soon as possible to the patient with AMI.
Atropine  Mark 1 / AutoInjector	Anticholinergic as a result of WMD MCI	Tachycardia, hypersensitivity to atropine, obstructive disease of GI tract, obstructive uropathy, unstable cardiovascular status in acute hemorrhage with myocardial ischemia, narrow angle glaucoma, thyrotoxicosis.	Tachycardia, paradoxical bradycardia when pushed too slowly or when used at doses less than 0.5 mg, palpitations, dysrhythmias, headache, dizziness, anticholinergic effects (dry mouth/nose/skin/photophobia, blurred vision, urinary retention, constipation), nausea, vomiting, flushed, hot, dry skin, allergic reactions.  Atropine causes papillary dilation rendering the pupils nonreactive. Pupil response may not be useful in monitoring CNS status.
Diazepam (Valium)  CANA AutoInjector	Treats seizure activity as a result of WMD MCI.	Hypersensitivity to the drug, substance abuse (use with caution), coma (unless the patient has seizures or severe muscle rigidity or myoclonus), shock, CNS depression as a result of head injury, respiratory depression.	Hypotension, reflex tachycardia (rare), respiratory depression, ataxia, psychomotor impairment, confusion, nausea.

**BASIC - Therapeutic Actions, Contraindications, and Precautions**

<b>DRUG NAME</b>	<b>THERAPEUTIC ACTION</b>	<b>CONTRAINDICATION</b>	<b>PRECAUTIONS/SIDE EFFECTS</b>
Duodote	Anticholinergic as a result of WMD MCI. Also Reactivates cholinesterase	Tachycardia, hypersensitivity to atropine, obstructive disease of GI tract, obstructive uropathy, unstable cardiovascular status in acute hemorrhage with myocardial ischemia, narrow angle glaucoma, thyrotoxicosis. Hypersensitivity to 2-PAM	Tachycardia, paradoxical bradycardia when pushed too slowly or when used at doses less than 0.5 mg, palpitations, dysrhythmias, headache, dizziness, anticholinergic effects (dry mouth/nose/skin/photophobia. blurred vision, urinary retention, constipation), nausea, vomiting, flushed, hot, dry skin, allergic reactions.  Atropine causes papillary dilation rendering the pupils nonreactive. Pupil response may not be useful in monitoring CNS status.  Use with caution in myasthenia gravis, renal impairment, pregnancy, lactation or children.
EpiPen or EpiPen Jr	Causes bronchodilation	Hypersensitivity (not an issue especially in emergencies) hypovolemic shock (as with other catecholamines, correct hypovolemia prior to use), coronary insufficiency (use with caution).	Headache, nausea, restlessness, weakness, dysrhythmias, including ventricular tachycardia and ventricular fib., hypertension, precipitation of angina pectoris, tachycardia.  May increase myocardial oxygen demand.  Syncope has occurred following epinephrine administration to asthmatic children.
Nitroglycerine (Nitrostat) (NTG)	Vasodilator which decreased preload and to a lesser extent, afterload.	Hypersensitivity, hypotension, head injury, cerebral hemorrhage.	Transient headache, reflex tachycardia, hypotension, nausea & vomiting, postural syncope, diaphoresis.
Pralidoxime (2-PAM)  (Mark I Auto-injector, Item 2) to be used following Atropine	Reactivates cholinesterase after poisoning with anticholinesterase agents as a result of WMD MCI	Hypersensitivity	Use with caution in myasthenia gravis, renal impairment, pregnancy, lactation or children.

**GREATER MIAMI VALLEY EMS COUNCIL  
YEAR 2010 FIRST RESPONDER SKILL SHEETS**

**Revised: 9/2009**

**FIRST RESPONDERS:** Use these skill sheets and protocol to study for Skills Testing.

**SKILLS TESTERS:** Record Pass/Fail on Individual's Test Summary Sheet. Use these and additional adult/pediatric mega code sheets as guidelines for grading. It is only necessary to make enough copies of this packet for testers (those who have gone through Train the Trainer sessions).

**Adult Mega Code** - Separate First Responder Mega Code sheets used for testing.

Automated External Defibrillator ----- 53

**Oxygen Administration**

Non-rebreather mask----- 54

Nasal Cannula ----- 54

Bag Valve Mask----- 54

**Medications**

Medication:

Epipen ----- 55

**ADULT PROTOCOL SKILL EVALUATION**  
**SUBJECT: AUTOMATED EXTERNAL DEFIBRILLATORS**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

LEVEL:    \_\_\_\_\_ Paramedic    \_\_\_\_\_ Intermediate    \_\_\_\_\_ Basic    \_\_\_\_\_ First Responder

<b>STEPS</b>	<b>1st Test</b>	<b>2nd Test</b>	<b>3rd Test</b>
A. Perform an initial assessment of the patient.			
B. Begin CPR with 100% oxygen while preparing AED.			
a. If witnessed arrest, defibrillate.			
b. If unwitnessed arrest, two minutes of CPR prior to defibrillation.			
c. CPR continuously until AED is attached to patient.			
C. Turn on the AED.			
D. Place the defibrillator pads onto the patient.			
E. Stop CPR. Allow AED to analyze rhythm.			
F. If shock is advised, clear all personnel from around the patient.			
G. Resume CPR if no response to the shocks.			
H. Repeat steps E, F and G in two minutes if needed.			

**EQUIPMENT**

1. A.E.D. per organization type
2. Simulator

**ADULT PROTOCOL SKILL EVALUATION  
SUBJECT: OXYGEN ADMINISTRATION**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

LEVEL: \_\_\_\_\_ First Responder

**NONREBREATHER MASK**

<b>STEPS</b>	<b>1st Test</b>	<b>2nd Test</b>	<b>3rd Test</b>
A. List indications for oxygen delivery by nonrebreather mask.			
B. Assure regulator is on tank, open tank and check for leaks.			
C. Check tank pressure			
D. Attach nonrebreather mask to oxygen.			
E. Prefill reservoir			
F. Adjust liter flow to 12 - 15 LPM.			
G. Apply and adjust mask to patient's face.			

**NASAL CANNULA**

<b>STEPS</b>	<b>1st Test</b>	<b>2nd Test</b>	<b>3rd Test</b>
A. List indications for oxygen delivery by nasal cannula.			
B. Assure regulator is on tank, open tank and check for leaks.			
C. Check tank pressure			
D. Attach nasal cannula to oxygen.			
E. Adjust liter flow to 4 - 6 LPM.			
F. Apply and nasal cannula to patient.			

**BAG-VALVE-MASK**

<b>STEPS</b>	<b>1st Test</b>	<b>2nd Test</b>	<b>3rd Test</b>
A. List indications for oxygen delivery by bag-valve-mask			
B. Assure regulator is on tank, open tank and check for leaks.			
C. Check tank pressure			
D. Assemble bag-valve-mask with appropriately sized mask.			
F. Connect reservoir and set oxygen at 12 - 15 LPM.			
G. Create a proper mask-to-face seal while maintaining open airway position.			
H. Ventilate @ appropriate rate and check for chest rise.			

**ADULT PROTOCOL SKILL EVALUATION**  
**SUBJECTS: ASSISTING WITH EPIPEN ADMINISTRATION**

NAME \_\_\_\_\_ DATE \_\_\_\_\_

LEVEL:    \_\_\_ Basic       \_\_\_ First Responder

<b>STEPS</b>	<b>1st Test</b>	<b>2nd Test</b>	<b>3rd Test</b>
A. Evaluate the patient, with attention to S&S of anaphylaxis.			
B. Obtain the patient's EpiPen auto-injector.			
C. Assure that it is prescribed to the patient.			
D. Check the medication for expiration date and for cloudiness or discoloration.			
E. Remove the safety cap.			
F. Select the injection site.			
G. Push the injector firmly against the site.			
H. Properly discard the injector.			
I. Monitor the patient and record the results of the treatment.			

Note: First Responders may only assist patient with their own EpiPen. Under the direction of a Physician, the EMT-Basic may access the BLS Bag for a patient who has currently prescribed EpiPen but has outdated, damaged, or contaminated medication on hand, or does not have their own medication with them at the time of the emergency. . EMT-Intermediates may administer EpiPen if indicated to patients who do NOT have prescribed EpiPen.

**EMT-BASICS:** Use these skill sheets and protocol to study for Skills Testing.

**SKILLS TESTERS:** Record Pass/Fail on Individual's Test Summary Sheet. Use these and additional adult/pediatric mega code sheets as guidelines for grading. It is only necessary to make enough copies of this packet for testers (those who have gone through Train the Trainer sessions).

**Adult Mega Code** - Separate Basic Mega Code sheets used for testing.

Orotracheal Intubation of Nontrauma Patient -----	57
Automated External Defibrillator -----	58

**Pediatric Mega Code** - Separate Basic Mega Code sheets used for testing.

Orotracheal Intubation-----	59
Laryngeal Mask Airway-----	60
Use of Length / Weight Based Tape (covered in Mega Code)	

**Medications**

Medication	
Aspirin -----	61
Nitroglycerine -----	61
Epipen -----	61

**Trauma**

Inline Orotracheal Intubation of the Trauma Patient -----	62
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**ADULT PROTOCOL SKILL EVALUATION**  
**SUBJECT: OROTRACHEAL INTUBATION OF THE NON-TRAUMA PATIENT**

NAME \_\_\_\_\_ DATE \_\_\_\_\_

LEVEL:    \_\_\_ Paramedic    \_\_\_ Intermediate    \_\_\_ Basic

STEPS	1st Test	2nd Test	3rd Test
A. List the indications for endotracheal intubation, with emphasis on situations in addition to cardiac arrest.			
B. List the equipment required to perform endotracheal intubation.			
C. List the potential complications of endotracheal intubation.			
D. Open the airway.			
E. Pre-oxygenate patient during preparations to intubate.			
F. Demonstrate the performance of cricoid pressure.			
G. Assemble equipment.			
H. Insert Laryngoscope			
I. Elevate the mandible			
J. Insert the ET tube			
K. Remove the stylet			
L. Document ETT at 20-22 cm at front teeth.			
M. Inflate the cuff with 5 to 10 ml. of air.			
N. Ventilate the patient.			
O. Confirm tube placement, using the End Tidal CO <sub>2</sub> Detector for patients with a perfusing rhythm, or the Esophageal Detection Device for patients in cardiac arrest. Be able to discuss the indications and limitations of each device.			
a. *NOTE: EDDs will fill more slowly in humans than in manikins			
b. Compress EDD first, then place it on the ETT before ventilating pt.			
c. If bulb fills in <5 seconds, ETT is likely successful			
....d. If bulb fails to fill, or takes >5 seconds, or fills with emesis, esophageal placement is probable.			
e. Contraindicated in pregnancy or children less than 5 y/o or 20 kg.			
P. Confirm tube placement with at least 5 methods of verification and document the outcomes.			
Q. Secure tube in place & reassess placement after any movement of patient.			
R. Consider applying cervical collar to prevent extubation			

**EQUIPMENT**

- |                                  |                            |  |
|----------------------------------|----------------------------|--|
| 1. Proper size Endotracheal tube | 5. 10 ml. syringe          | 9. Commercial tube holder or proper taping method. |
| 2. Stylet                        | 6. Suction equipment       | 10. Confirmation Device                            |
| 3. Laryngoscope Blade & handle   | 7. Stethoscope             | 11. C-collar                                       |
| 4. Magill forceps                | 8. Gloves & Eye protection | 12. Adult Intubation Manikin                       |

When preparing for this skill evaluation, be sure that you are able to meet the objectives A, B, C, G, and O. If you need a reminder, the material is readily available in any standard textbook.

**ADULT PROTOCOL SKILL EVALUATION**  
**SUBJECT: AUTOMATED EXTERNAL DEFIBRILLATORS**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

LEVEL:    \_\_\_\_\_ Paramedic    \_\_\_\_\_ Intermediate    \_\_\_\_\_ Basic    \_\_\_\_\_ First Responder

<b>STEPS</b>	<b>1st Test</b>	<b>2nd Test</b>	<b>3rd Test</b>
A. Perform an initial assessment of the patient.			
B. Begin CPR with 100% oxygen while preparing AED.			
a. If witnessed arrest, defibrillate.			
b. If unwitnessed arrest two minutes of CPR prior to defibrillation.			
c. CPR continuously until AED is attached to patient.			
C. Turn on the AED.			
D. Place the defibrillator pads onto the patient.			
E. Stop CPR. Allow AED to analyze rhythm.			
F. If shock is advised, clear all personnel from around the patient.			
G. Resume CPR if no response to the shocks.			
H. Repeat steps E, F and G in one minute if needed.			

**EQUIPMENT**

1. A.E.D. per organization type
2. Simulator

**PEDIATRIC PROTOCOL SKILL EVALUATION**  
**SUBJECT: PEDIATRIC OROTRACHEAL INTUBATION**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

LEVEL:    \_\_\_\_\_ Paramedic    \_\_\_\_\_ Intermediate    \_\_\_\_\_ Basic

<b>STEPS</b>	<b>1st Test</b>	<b>2nd Test</b>	<b>3rd Test</b>
A. List the indications for endotracheal intubation, with emphasis on situations in addition to cardiac arrest.			
B. List the equipment required to perform endotracheal intubation.			
C. List the potential complications of endotracheal intubation.			
D. Open the airway.			
E. Pre-oxygenate patient during preparations to intubate.			
F. Assemble equipment, selects proper size ETT and laryngoscope blade (Uses Length / Weight Based Tape)			
G. Insert Laryngoscope			
H. Elevate the mandible			
I. Insert the ET tube			
J. Remove the stylet			
K. Document ETT depth at front teeth.			
L. Ventilate the patient.			
M. Confirm tube placement, using the End Tidal CO <sub>2</sub> Detector for patients with a perfusing rhythm, or the Esophageal Detection Device for patients in cardiac arrest (only if weight appropriate). Be able to discuss the indications and limitations of each device.			
a. Contraindicated in pregnancy or children less than 5 y/o or 20 kg.			
N. Confirm tube placement with at least 5 methods of verification and document the outcomes.			
O. Secure tube in place & reassess placement after any movement of patient.			
P. Consider applying cervical collar / towel roll to prevent extubation			

**EQUIPMENT**

- |                                  |  |                             |
|----------------------------------|--|-----------------------------|
| 1. Proper size Endotracheal tube | 5. Suction equipment                               | 9. Confirmation Device      |
| 2. Proper size Stylet            | 6. Stethoscope                                     | 10. C-collar or towel roll  |
| 3. Laryngoscope Blade & handle   | 7. Gloves & Eye protection                         | 11. Pedi intubation manikin |
| 4. Magill forceps                | 8. Commercial tube holder or proper taping method. |                             |

When preparing for this skill evaluation, be sure that you are able to meet the objectives A, B, C, F, and M. If you need a reminder, the material is readily available in any standard textbook.

**PEDIATRIC PROTOCOL SKILL EVALUATION (Adult is an Optional Skill)**  
**SUBJECT: LARYNGEAL MASK AIRWAY**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

LEVEL:    \_\_\_\_\_ Paramedic    \_\_\_\_\_ Intermediate    \_\_\_\_\_ Basic

<b>STEPS</b>	<b>1st Test</b>	<b>2nd Test</b>	<b>3rd Test</b>
A. List the indications for insertion of an LMA			
B. Select correct size LMA (See guidelines below)			
C. Check cuff by inserting air, then withdraw air.			
D. Deflate the cuff so that it forms a smooth "Spoon-Shape"			
E. Lubricate the posterior surface of the mask with water-soluble lubricant.			
F. Hold the LMA like a pen, with the index finger placed at the junction of the cuff and tube.			
G. NonTrauma Patient - With the head extended and the neck flexed, carefully flatten the LMA tip against the hard palate. Trauma Patient - With second person maintaining inline stabilization, carefully flatten the LMA tip against the hard palate.			
H. Use the index finger to push cranially, maintaining pressure on the tube with the finger.			
I. Advance the mask until definite resistance is felt at the base of the hypopharynx.			
J. Gently maintain cranial pressure with the non-dominant hand while removing the index finger.			
K. Without holding the tube, inflate the cuff with just enough air to obtain a seal (to a pressure of approximately 60 cm. H2O). See the instructions for appropriate volumes. Never overinflate the cuff.			
L. Ventilate & check breath sounds			
M. Confirm sufficient cuff inflation using the End Tidal CO2 Detector (EDD cannot be used) CAUTION: Do Not give medications via the LMA.			

**EQUIPMENT:**

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| <b>1. LMA (correct size)</b>      | <b>5. Stethoscope</b>            |
| <b>2. Water-Soluble Lubricant</b> | <b>6. End Tidal CO2 Detector</b> |
| <b>3. 50 ml. Syringe</b>          | <b>7. Suction</b>                |
| <b>4. Bag-valve-Mask</b>          |                                  |

<b>LMA SELECTION GUIDELINES</b>		
<b>LMA Airway Size</b>	<b>Patient Size</b>	<b>Maximum Cuff Inflation Volumes</b>
1	Neonates/Infants up to 5 kg. (11 lb.)	4 ml. air
1.5	Infants 5 - 10 kg. (22lb.)	7 ml. air
2	Infants/Children 10 - 20 kg. (44 lb.)	10 ml. air
2.5	Children 20 - 30 kg. (66 lb.)	14 ml. air
3	Children 30 - 50 kg. (110 lb.)	20 ml. air
4	Adults 50 - 70 kg. (154 lb.)	30 ml. air
5	Adults 70 - 100 kg. (220 lb.)	40 ml. air
6	Adults > 100 kg. (>220 lb.)	50 ml. air

**ADULT PROTOCOL SKILL EVALUATION  
SUBJECT: MEDICATION ADMINISTRATION**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

LEVEL: \_\_\_\_\_ Basic

<b>STEPS – Focus is achieving the “Rights” which is expanded to six.</b>	<b>1st Test</b>	<b>2nd Test</b>	<b>3rd Test</b>
<b><u>ASPIRIN</u></b>			
A. <b>RIGHT PATIENT</b> - List the indications for the medication.			
B. <b>RIGHT MEDICATION</b> - Check the medication for; medication name, expiration date and for cloudiness or discoloration.			
C. <b>RIGHT DOSE</b> – Discuss cardiac arrest vs. non-arrest			
D. <b>RIGHT ROUTE</b> - List the routes of administration.			
E. <b>RIGHT TIME</b> – List duration of infusion or frequency of repeat dose.			
F. <b>RIGHT DOCUMENTATION</b>			
<b><u>EPIPEN ADMINISTRATION</u></b>			
A. <b>RIGHT PATIENT</b> - List the indications for the medication.			
B. <b>RIGHT MEDICATION</b> - Check the medication for; medication name, expiration date and for cloudiness or discoloration.			
C. <b>RIGHT DOSE</b> – Discuss cardiac arrest vs. non-arrest			
D. <b>RIGHT ROUTE</b> - List the routes of administration.			
E. <b>RIGHT TIME</b> – List duration of infusion or frequency of repeat dose.			
F. <b>RIGHT DOCUMENTATION</b>			
<b><u>NITROGLYCERIN</u></b>			
A. <b>RIGHT PATIENT</b> - List the indications for the medication.			
B. <b>RIGHT MEDICATION</b> - Check the medication for; medication name, expiration date and for cloudiness or discoloration.			
C. <b>RIGHT DOSE</b> – Discuss cardiac arrest vs. non-arrest			
D. <b>RIGHT ROUTE</b> - List the routes of administration.			
E. <b>RIGHT TIME</b> – List duration of infusion or frequency of repeat dose.			
F. <b>RIGHT DOCUMENTATION</b>			
<b><u>MARK I KITS</u></b>			
A. <b>RIGHT PATIENT</b> - List the indications for the medication.			
B. <b>RIGHT MEDICATION</b> - Check the medication for; medication name, expiration date and for cloudiness or discoloration.			
C. <b>RIGHT DOSE</b> – Discuss cardiac arrest vs. non-arrest			
D. <b>RIGHT ROUTE</b> - List the routes of administration.			
E. <b>RIGHT TIME</b> – List duration of infusion or frequency of repeat dose.			
F. <b>RIGHT DOCUMENTATION</b>			

**ADULT PROTOCOL SKILL EVALUATION**  
**SUBJECT: INLINE OROTRACHEAL INTUBATION OF THE TRAUMA PATIENT**

NAME \_\_\_\_\_ DATE \_\_\_\_\_

LEVEL:    \_\_\_ Paramedic    \_\_\_ Intermediate    \_\_\_ Basic

<b>STEPS</b>	<b>1st Test</b>	<b>2nd Test</b>	<b>3rd Test</b>
A. List the indications for endotracheal intubation, with emphasis on situations in addition to cardiac arrest.			
B. List the equipment required to perform endotracheal intubation.			
C. List the potential complications of endotracheal intubation.			
D. Open the airway with C-Spine precautions.			
E. Pre-oxygenate patient during preparations to intubate.			
F. Demonstrate the performance of cricoid pressure.			
G. Assemble equipment.			
H. Insert Laryngoscope			
I. Elevate the mandible			
J. Insert the ET tube			
K. Remove the stylet			
L. Document ETT at 20-22 cm at front teeth.			
M. Inflate the cuff with 5 to 10 ml. of air.			
N. Ventilate the patient.			
O. Confirm tube placement, using the End Tidal CO <sub>2</sub> Detector for patients with a perfusing rhythm, or the Esophageal Detection Device for patients in cardiac arrest. Be able to discuss the indications and limitations of each device.			
a. *NOTE: EDDs will fill more slowly in humans than in manikins			
b. Compress EDD first, then place it on the ETT before ventilating pt.			
c. If bulb fills in <5 seconds, ETT is likely successful			
d. If bulb fails to fill, or takes >5 seconds, or fills with emesis, esophageal placement is probable.			
e. Contraindicated in pregnancy or children under 5 y/o or 20 kg.			
P. Confirm tube placement with at least 3 other methods of verification and document the outcomes.			
Q. Secure tube in place & reassess placement after any movement of patient.			
R. Apply cervical collar.			

**EQUIPMENT**

1. Proper size Endotracheal tube
2. Stylet
3. Laryngoscope Blade & handle
4. Magill forceps
5. 10 ml. syringe
6. Suction equipment
7. Stethoscope
8. Gloves & Eye protection
9. Commercial tube holder or proper taping method.
10. Confirmation Device
11. C-collar
12. Adult Intubation Manikin

When preparing for this skill evaluation, be sure that you are able to meet the objectives A, B, C, G, and O. If you need a reminder, the material is readily available in any standard textbook.

## **DRUG BAG EXCHANGE PROGRAM**

### **PURPOSE**

To administer and monitor a drug bag exchange program between participating Fire/EMS/ Private Ambulance departments and hospitals to improve the level and quality of pre-hospital care by ensuring that participating members are in full-service at all times.

### **DRUG BAG EXCHANGE COMMITTEE**

Co-Chairpersons: 1 Hospital EMS coordinator  
1 Hospital pharmacy representative from each participating county

Members: EMS Coordinator from each participating hospital  
Pharmacy representative from each participating hospital  
Any interested GMVEMS Council member

### **MEETINGS**

Scheduled: Two meetings per year: March and September  
Unscheduled: As needed to discuss problem areas

### **OPERATING GUIDELINES**

#### **GENERAL**

- There are two types of drug bags: **ALS/BLS** and **BLS** (fanny pack style).
- All drug bags, both ALS/BLS and BLS, are the property of the Greater Miami Valley EMS Council.
- There is an initiation fee for each new bag added to the program.
- There is an annual maintenance fee for each ALS/BLS bag and BLS bag.
- There is an approved policy for the replacement of lost or stolen drug bags (see Addendum A).
- To maintain the integrity of the drug bag contents, pharmacy departments seal stocked drug bags with a blue plastic device. The only time the seal should be broken is for the administration of pre-hospital emergency medical treatment by approved EMS personnel. After pre-hospital emergency medical treatment use, the drug bag should be cleaned and re-sealed with the red plastic device contained inside the drug bag.
- The following action will be taken for any department found to be in non-compliance with the Drug Bag Exchange Program Operating Guideline regarding opening and resealing the drug bag:
  - Notification of the Fire Chief, EMS Administrator, or Private Ambulance Administrator.
  - The governing agency, i.e. city council, trustees, OMTB for private ambulance service, etc., will be notified that action is being initiated for the Fire/EMS/Private ambulance service.
  - All drug bags will be removed from all locations of said Fire/EMS/Private ambulance service.
  - The GMVEMS Council will distribute written notification to the following that the said service is in violation of the operating policy of the Drug Bag Exchange Program:
    - Medical Director
    - Regional Physician Advisory Board
    - OH State Pharmacy Board
    - OH Division of EMS
    - All hospitals participating in the drug bag exchange program
- GMVEMS Council maintains an information database for all EMS personnel authorized to participate in the Drug Bag Exchange Program.
- Rosters with certification expiration dates for EMS providers are available via an online database for review and updates.

#### **PARTICIPATION REQUIREMENTS**

- Active membership in the GMVEMS Council.
- Medical advisor approval for the use of the GMVEMS Council Operating Protocols. Approval consists of a signed, notarized letter, which is attached to the drug license renewal application form

with a copy submitted to Council. Notarized letter is not required for renewal unless new medication or a change in Medical Director from previous year.

- Signed agreement to abide by the GMVEMS Council Operating Guidelines for the Drug Bag Exchange Program.
- Agreement to complete an annual skills check and annual written test after 1 January and before 31 May unless otherwise scheduled by Council (see Non-Compliance Procedures).
- Maintain all drugs in a clean and temperature-controlled environment per Rule 4729-33-03(E) of the OH State Pharmacy Board Administrative Code. The rules can be seen at: <http://pharmacy.ohio.gov/rules/4729-33-03.pdf>
- The ideal temperature span is 59-86 degrees F.
- In order to utilize an ALS/BLS or BLS drug bag in the pre-hospital emergency setting, the following equipment should be immediately available:
  - BLS Provider:
    - Oxygen
    - Suction (non-powered is acceptable)
    - AED & Intubation Equipment (only if Medical Advisor approved)
    - Submission of a copy of the annual OH State Board of Pharmacy drug license(s) for each location(s) with vehicles that carry drug bags no later than 1 February to **GMVEMS Council**
  - ALS Provider:
    - Oxygen
    - Suction (non-powered is acceptable)
    - Monitor/Defibrillator or AED & Intubation Equipment
    - Submission of a copy of the annual OH State Board of Pharmacy drug license(s) for each location(s) with vehicles that carry drug bags no later than 1 January to GMVEMS Council. *Council will verify all licenses no later than January 1<sup>st</sup>.*
  - ***Submission of a copy of a current DEA license to GMVEMS Council office. It is the responsibility of the Agency to keep the DEA license current and submit a renewed copy to Council.***
  - EMS providers are required to inventory each opened pouch, discard any used sharps and clean any contaminants from bag used and apply a red seal before exchanging for replacement bag. Any discrepancies (missing meds, expired meds, wrong meds or dose, altered or tampered meds, drug bag number discrepancy, etc.) that are identified shall be reported to the GMVEMSC using the Drug Bag Discrepancy Report. (See discrepancy procedure)

The EMS provider will discard any used sharps and clean any contaminants from bag used and will then take the red seal from inside the bag (supplied by pharmacy when restocking the ALS/BLS or BLS bag) and seal the appropriate bag used. The red seal will be looped through the proximal portion of the zipper tab (not the outermost portion of the zipper tab).

## LEVELS OF PARTICIPATION

### Paramedic Level

- Each drug bag consists of a navy, standard issue drug bag. A Paramedic can access any of the compartments of bag to obtain medications per his/her protocol.
- Each standard issue bag is labeled with a metal tag from 850 – up.
- Upon completion of a transport, the entire bag is exchanged at the receiving hospital *with the appropriate paperwork.*
- When you open a controlled drug compartment, keep the blue seal in your possession until you have verified the contents are accounted for. Once you have verified the contents, seal compartment with RED tag. DO NOT throw blue seals in drug bag.

## Intermediate Level

- *A side compartment labeled "intermediate"*  
The Intermediate can access all outside compartments to obtain medications per their protocol. They cannot access the Center inside compartment or Center Controlled medication compartment.  
**When you open a controlled drug compartment, keep the blue seal in your possession until you have verified the contents are accounted for. Once you have verified the contents, seal compartment with RED tag. DO NOT throw blue seals in drug bag.**

## Basic Life Support

- **The RED BLS compartment on a ALS/BLS bag** or BLS fanny-pack style bag will carry the following medications ONLY: Nitrostat, EpiPen, EpiPen Jr. and baby Aspirin. The Basic EMT can only access this compartment to treat his/her patient per protocol.
- Each bag is labeled with a numeric code.
- Upon completion of a transport, the bag is exchanged at the receiving hospital *with the appropriate paperwork*.
- DO NOT throw the blue seal in drug bag. Once you have verified the contents and seal compartment with RED tag you can then dispose of blue seal.

## EXCHANGE PROCESS

- Each department is assigned to a "home" hospital. The assigned hospital is the central resource for initial fulfillment of medications for the drug bags and wholesale exchanges/replacement/additions as required by revisions to the GMVEMS Council Standing Orders/Protocols. Under normal operating parameters, drug bags can be exchanged at any participating hospital.
- ALS/BLS bags may be exchanged one-for-one with another ALS/BLS bag. BLS bags may be exchanged one-for-one with another BLS bag.
- Each hospital designates a specific location for the exchange of drug bags. EMS personnel are **required** to complete the Sign In/Out log when exchanging a drug bag.
- EMS Providers are responsible for ensuring that all blue seals are intact when logging out an exchanged bag.
- When you open a controlled drug compartment, keep the blue seal in your possession until you have verified the contents are accounted for. Once you have verified the contents, seal compartment with RED tag. DO NOT throw blue seals in drug bag.

## Documentation of Drug Usage

- Morphine, Versed and Valium are scheduled drugs, which means they must be tracked from the time they are dispensed into the drug bag through the time of administration.
- To insure the medications are properly accounted for, all Intermediate/Paramedics will document:
  - The drug name
  - The amount used
  - The amount wasted
  - The signature of the two witnesses if wastage (the person wasting the medication can sign as a witness).
- The GMVEMSC run sheets have a dedicated area for this documentation and required signature lines. Those using other *types* of run sheets should document the above information and the required signatures. **Some hospitals also require the use of the GMVEMSC approved Controlled Drug Usage Form in addition to documentation on the run sheet. This GMVEMSC approved form must be filled out for any scheduled drug use, even if there is no wastage.** This information shall be on both the original EMS department form and the hospital copy for reference if needed.

## WASTED DRUG PROCEDURE

- Morphine, Versed and Valium are scheduled drugs. If a medication is partially administered then all of the unused portion must be accounted for.
- The provider shall have a nurse or physician witness the waste of the drug. A pharmacist can also be a witness if a nurse or physician is not available. Using another EMS provider to witness wastage

- should be avoided unless the EMS provider cannot obtain a nurse, physician, or pharmacist to witness same. If an EMT does witness the wastage, he/she shall be at the same certification level or higher.
- To insure the medications are properly accounted for, all Paramedics and Intermediates will document:
    - The drug name
    - The amount used
    - The amount wasted
    - The signature of the two witnesses
  - One witness will be the paramedic or Intermediate wasting the medication and the second witness signature will be the nurse/physician/pharmacist who witnessed the disposal of the medication. Both witnesses will sign the run sheet.
  - The GMVEMSC run sheets have a dedicated area for this documentation and required signature lines. Those using other *types* of run sheets should document the above information and the required signatures. Some hospitals also require the use of the GMVEMSC approved Controlled Drug Usage Form in addition to documentation *on* the run sheet. This GMVEMSC approved form must be filled out for any scheduled drug use even if there is no wastage. This information shall be on both the original EMS department form and the hospital copy for reference if needed.

### **GENERAL NON-COMPLIANCE PROCEDURES**

- Each department and department medical director(s) will be notified that the annual written test and skills check-off has not been completed within the prescribed time period.
- The Ohio State Board of Pharmacy will be notified that a department or individual members of a department have not completed the annual written test and skills check-off within the prescribed time period.
- Hospital EMS coordinators and pharmacy departments will receive a list of departments or individuals within a department that are not in compliance with the operating guidelines. At the end of the testing season, if a department does not have 100% of their personnel completing both skills and written test and information about individual reasons for non-compliance noted in the Standing Orders database, then appropriate action, up to and including the removal of department from the Drug Bag program by the chair of the drug bag committee, may be taken
- If copy of drug license(s) is not received by due date, GMVEMS Council notifies EMS department medical director. GMVEMS Council reserves the right to initiate the non-compliance action process for any Fire/EMS/Private Ambulance service that does not provide documentation for drug license(s) renewal.
- If a department does not have a current DEA license (it is the responsibility of the EMS Department to submit a copy of the DEA renewal license when the license on file has expired), GMVEMS Council notifies EMS department medical director. GMVEMS Council reserves the right to initiate the non-compliance action process for any Fire/EMS/Private Ambulance service that does not provide documentation for drug license(s) renewal.

### **DRUG BAG DISCREPANCIES**

- **EMS providers are required to inventory each opened pouch prior to applying the red seal.**
- All discrepancies (missing meds, expired meds, wrong med or dose, altered or tampered meds, drug bag number discrepancy, etc.) that are identified shall be reported to the GMVEMSC using the Drug Bag Discrepancy Report (Addendum B).
- **If at any time, an EMS provider encounters a discrepancy he/she will:**
  - Notify his/her EMS Officer of the discrepancy.
  - If the discrepancy was discovered after opening the bag, retain the blue seal and the hospital sticker that was attached to the drug bag in question.
  - If the EMS provider is at the hospital, s/he will log the bag in using the normal procedure at that hospital.

- S/he will advise the pharmacist or EMS Coordinator of the discrepancy and that s/he will be initiating the Discrepancy form as described below (pharmacist may request a copy of the Discrepancy form).
- The EMS Officer may contact the EMS Coordinator if assistance is needed.

**Discrepancies Involving Controlled Drugs and/or Potential Tampering:**

- When an issue arises concerning:
  - A controlled drug (Valium, Versed, or Morphine)
  - A stolen, missing or lost bag
  - Any medication that appears to have been altered or tampered with
- A collaborative effort between the EMS organization/provider and the Hospital EMS Coordinator/Pharmacist shall be made in an attempt to resolve the issue.
- If the issue cannot be resolved the following steps shall be taken:
  - If the discrepancy was discovered by the EMS organization/provider, the person designated by the organization/provider shall comply with the requirements of OAC 4729-9-15 and GMVEMSC requirements as indicated below.
  - If the discrepancy was discovered by the hospital, the person designated by the hospital shall comply with the requirements of OAC 4729-9-15 and GMVEMSC requirements as indicated below.
- Required reporting for unresolved issued involving Controlled Drug or potential/suspected tampering or lost or stolen drug bags pursuant Federal and State Laws and GMVEMSC Protocol:
  - Contact the Ohio State Board of Pharmacy by telephone at (614) 466-4143. Advise them you want to report a dangerous drug discrepancy. They will connect you with the appropriate person. (OAC 4729-9-15)
  - File a report with the appropriate law enforcement authorities (ORC 2921.22).
  - Notify the Drug Enforcement Agency (DEA) within 30 days of discovery using DEA Form 106 available electronically at: <https://www.deadiversion.usdoj.gov/webforms/app106Login.jsp> a 30-day extension may be requested in writing from the DEA. (CFR 1301.76(b)).
  - Submit a completed GMVEMSC Drug Bag Discrepancy Report located at Addendum B, with appropriate supporting documentation, to the GMVEMSC.

**Discrepancies Not involving Controlled Drugs and/or Potential Tampering**

- Examples may include:
  - Non-controlled drugs not in the bag
  - Wrong number of medications doses
  - Wrong drug concentration
  - Expired medications found
  - No expiration date on tag
  - Medications improperly labeled
  - Empty vials/packaged left in bag
  - Unsealed medications
  - Wrong medication administered
  - Unsealed pouch discovered
  - Bag logged out with red seal (used bag)
- If discovered by EMS, the EMS Officer will initiate the Discrepancy form. He/she shall provide a copy of the form and the Blue Seal to the Hospital EMS Coordinator and shall fax a copy of the report to the GMVEMSC (937.586.3699).
- If the Hospital discovers the discrepancy, the EMS Coordinator will initiate the Discrepancy Form and submit to GMVEMSC. If the EMS Coordinator is able to determine which EMS agency/hospital is responsible for the discrepancy, the agency/hospital will be notified and will receive a copy of the Discrepancy Form and the Blue Seal if applicable.

**The GMVEMSC will:**

- Maintain a record of all discrepancies that occur.
- Follow up with the agencies involved as needed.
- Advise the Drug Bag Chairperson of any and all discrepancies and action taken.

**The Drug Bag Committee Chairperson will:**

- Will report all at the bi-annual Drug Bag Committee meetings for discussion and resolutions to discrepancies encountered.
- Will assist the Council and or affected departments with any issues or questions that may result.

**DRUG BAG BLUE SEALS**

• **Blue seals:**

- Blue seals are used by the pharmacy that inventories and restocks the ALS/BLS drug bags. The blue seals will have a hospital sticker attached to the seal that identifies the hospital and pharmacist that inventoried the bag and the expiration date of the next drug to expire. The inner compartment of the ALS bag and Intermediate will be sealed with a blue seal and will have the expiration date noted. The blue seal will be looped through the proximal portion of the zipper tab (not the outermost portion of the zipper tab). EMS should verify the blue seal is intact and has an expiration date before accepting. When EMS opens a controlled drug compartment keep the blue seal in your possession until you have verified the contents are accounted for. Once you have verified the contents, seal compartment with RED tag. **DO NOT throw used blue seals in drug bag.**

• **Red Seals:**

- Red seals identify ALS/BLS bags as being used. EMS providers are required to inventory each opened pouch, discard any used sharps and clean any contaminants from bag used and will then take red seal from the inside compartment (supplied by pharmacy when restocking the ALS/BLS bag and seal the appropriate bag used. The red seal will be looped through the proximal portion of the zipper tab (not the outermost portion of the zipper tab).

Hospital Pharmacies should use the same style colored seals to maintain continuity of the system. Hospital pharmacists can purchase these seals through the GMVEMSC office.

## ADDENDUM A

### Lost or Stolen Drug Bag Policy

RE: Lost or Stolen Drug Bags  
APPROVED: June 1994  
PURPOSE: To provide a uniform mechanism for the investigation and reporting of lost or stolen drug bags.

#### EMS DEPARTMENT SHALL:

- Develop and implement an internal investigation mechanism for lost or stolen drug bags. The internal investigation mechanism should include:
  1. Determine if drug bag was left at the scene.
  2. Determine if drug bag was not exchanged on last run.
  3. Determine if drug bag is in the wrong vehicle.
  4. Interview all personnel who had access to the drug bag.

The GMVEMSC will seek the assistance of the Drug Bag Co-Chair to check with all hospitals to determine if the bag might be in inventory or be alerted if it shows up at one of the hospitals.

EMS Officer will initiate the Drug bag discrepancy Form and follow instructions for reporting lost or stolen drug bags.

Completed paperwork and reports will be submitted to GMVEMSC.

The GMVEMSC will contact the hospital EMS Coordinator with whom the EMS Department is assigned to work out a drug bag replacement. *The EMS Coordinator will contact GMVEMSC for a drug bag replacement after all paperwork is submitted and GMVEMSC will assess a fee for replacement bag to be paid for by the EMS Department receiving the replacement bag.*

**ADDENDUM B**

**GMVEMSC Drug Bag Discrepancy Report**

If at any time an EMS provider encounters a discrepancy he/she will notify their EMS Officer of the discrepancy. If the discrepancy was discovered after opening the bag, retain the blue seal and the hospital sticker that was attached to the drug bag in question. If the EMS provider is at the hospital, they will log the bag in using the normal procedure at that hospital. They will advise the pharmacist or EMS Coordinator of the discrepancy and that they will be initiating the Discrepancy form as described below (pharmacist may request a copy of the Discrepancy form).

Date of report: \_\_\_\_\_ Bag Number: \_\_\_\_\_ Date Discrepancy discovered: \_\_\_\_\_  
 Discovered by: \_\_\_\_\_ Hospital/EMS Dept making discovery: \_\_\_\_\_

Have blue Hospital seal? YES/NO If yes - Attach seal to report

**Tracking:**

Date bag was logged out: \_\_\_\_\_ from (hospital) \_\_\_\_\_ To (ems agency) \_\_\_\_\_ Date  
 Bag turned in: \_\_\_\_\_ to (hospital) \_\_\_\_\_

**Description of the discrepancy:** (Attach addendum if additional space needed)

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**Describe efforts to resolve the discrepancy:** (Attach addendum if additional space needed)

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Was the discrepancy satisfactorily resolved? \_\_\_\_\_ If not, what steps are to be taken: \_\_\_\_\_

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Who will be responsible for any required reporting: \_\_\_\_\_

**Reporting requirements:**

Was a police report filed? \_\_\_\_\_ Date: \_\_\_\_\_ By whom? \_\_\_\_\_

Was a DEA report filed? \_\_\_\_\_ Date: \_\_\_\_\_ By whom? \_\_\_\_\_

Required documents submitted to GMVEMSC By: \_\_\_\_\_ Date: \_\_\_\_\_

For Drug Bag committee use:

Wrong Med stocked		Bag logged out with red seal	
Expired meds found		Empty vials/packages found	
Wrong dose packaged		Open pouch found	
Missing Meds		Unsealed bottles found	
Wrong number packaged		Med found in wrong compartment	
No exp date on tag		Wrong med administered	
Atrovent/Albuterol not labeled		Lost or stolen bag	
Damaged medications		Other:	
Other:			

*GMVEMSC – White*

*Pharmacy - Yellow*

*EMS Department - Blue*

**ADDENDUM C**  
**OAC 4729-9-15**

**Report of theft or loss of dangerous drugs, controlled substances, and drug documents.**

(A) Each prescriber, terminal distributor of dangerous drugs, or wholesale distributor of dangerous drugs shall notify the following upon discovery of the theft or significant loss of any dangerous drug or controlled substance, including drugs in transit that were either shipped from or to the prescriber, terminal distributor of dangerous drugs, or wholesale distributor of dangerous drugs:

- (1) The state board of pharmacy, by telephone immediately upon discovery of the theft or significant loss;
- (2) If a controlled substance, the drug enforcement administration (DEA) pursuant to section 1301.76(b), Code of Federal Regulations;
- (3) Law enforcement authorities pursuant to section 2921.22 of the Revised Code.

(B) Controlled substance thefts must also be reported by using the federal DEA report form whether or not the controlled substances are subsequently recovered and/or the responsible parties are identified and action taken against them. A copy of the federal form regarding such theft or loss shall be filed with the state board of pharmacy within thirty days following the discovery of such theft or loss.

- (1) An exemption may be obtained upon sufficient cause if the federal form cannot be filed within thirty days.
- (2) A request for a waiver of the thirty-day limit must be requested in writing.

(C) Each prescriber, terminal distributor of dangerous drugs or wholesale distributor of dangerous drugs immediately upon discovery of any theft or loss of:

- (1) Uncompleted prescription blank(s) used for writing a prescription, written prescription order(s) not yet dispensed, and original prescription order(s) that have been dispensed, shall notify the state board of pharmacy and law enforcement authorities.
- (2) Official written order form(s) as defined in division (Q) of section 3719.01 of the Revised Code shall notify the state board of pharmacy and law enforcement authorities, and the drug enforcement administration (DEA) pursuant to section 1305.12(b), Code of Federal Regulations.

**ADDENDUM D**  
**OAC 4729-33-03 Security and storage of dangerous drugs**

- (A) Overall supervision and control of dangerous drugs is the responsibility of the responsible person. The responsible person may delegate the day-to-day tasks to the emergency medical service (EMS) organization personnel who hold appropriate certification to access the dangerous drugs for which they are responsible.
- (B) All dangerous drugs must be secured in a tamper-evident setting with access limited to EMS personnel based on their certification status except for sealed, Tamper-evident solutions labeled for irrigation use. All registrants shall provide effective and approved controls and procedures to deter and detect theft and diversion of dangerous drugs.
- (C) Only emergency medical technician-paramedics, emergency medical technician-intermediates, registered nurses, physicians, and pharmacists who are associated with that EMS organization may have access to any controlled substances maintained by the EMS organization. Other persons employed by the EMS organization may have access to controlled substances only under the direct and immediate supervision of an emergency medical technician-paramedic, an emergency medical technician-intermediate as defined in rules 4765-16-01 and 4765-16-02 of the Administrative Code, a registered nurse, or a physician in emergency situations.
- (D) Administration of dangerous drugs by EMS personnel is limited to the scope of practice, as determined by the state board of emergency medical services, for the individual's certification level and the protocols as established by the medical director or when the individual is acting within their certification level pursuant to direct prescriber's orders received over an active communication link.
- (E) All dangerous drugs will be maintained in a clean and temperature-controlled environment.
- (F) Any dangerous drug that reaches its expiration date is considered adulterated and must be separated from the active stock to prevent possible administration to patients.
- (G) Any non-controlled dangerous drug that is outdated may be returned to the supplier where the drug was obtained or may be disposed of in the proper manner.
- (I) Destruction of outdated controlled substances may only be done by a state board of pharmacy agent or by prior written permission from the state board of pharmacy office.
- (J) Destruction of partially used controlled substances can be accomplished, with the appropriate documentation, by two licensed health care personnel, one of which must have at least an emergency medical technician-intermediate, as defined in rules 4765-16-01 and 4765-16-02 of the Administrative Code, level of training.
- (K) Any loss or theft of dangerous drugs must be reported upon discovery, by telephone, to the state board of pharmacy, local law enforcement and, if controlled substances are involved, to the drug enforcement administration. A report must be filed with the state board of pharmacy of any loss or theft of the vehicle or storage cabinets containing dangerous drugs used by the EMS organization.
- (L) Any dangerous drug showing evidence of damage or tampering shall be removed from stock and replaced immediately.

**GREATER DAYTON AREA HOSPITAL ASSOCIATION**  
**GREATER MIAMI VALLEY EMERGENCY MEDICAL SERVICES COUNCIL**  
**GREATER MONTGOMERY COUNTY FIRE CHIEFS' ASSOCIATION**

**POLICY STATEMENT FOR**  
**TEMPORARY REROUTING OF EMERGENCY PATIENTS**

To avoid misunderstanding, all parties are cautioned to use the word “**rerouting,**” never “**closed.**”

Patients are never rerouted for patient’s economic considerations.

The following patients are NOT rerouted:

**RESPIRATORY AND/OR CARDIAC ARREST**  
**CARDIAC & STROKE ALERT CRITERIA PATIENTS**  
**MAJOR TRAUMA**  
**MATERNITY**  
**SERIOUS BURNS**  
**HIGH RISK NEONATAL**  
**DIALYSIS PATIENT**  
**AIR MEDICAL TRANSPORT**  
**HYPERBARIC**  
**RECENTLY DISCHARGED PATIENTS (48 hours)**

When conditions exist that may hinder the timely treatment of additional emergency cases, the Designated Hospital Official will declare the “Rerouting of Emergency Patients to be in Effect.” The hospital will update the “GDAHA SurgeNet Web Page.” The Hospital will notify their appropriate dispatch center, identify the hospital, name and title of caller, as needed. The hospital will then notify (by prior agreement, this can be via the SurgeNet Web Page) at least the following organizations:

1. The emergency department of each metropolitan hospital:
  - a. The Children’s Medical Center
  - b. Good Samaritan Hospital
  - c. Grandview Medical Center
  - d. Kettering Medical Center
  - e. Miami Valley Hospital
  - f. Miami Valley Hospital South
  - g. Southview Medical Center
  - h. Sycamore Medical Center
  
2. The appropriate emergency medical services – refer to individual hospital call list

3. The emergency department of non-metropolitan hospitals:
  - a. Wayne Hospital, Greenville
  - b. Atrium Medical Center, Middletown
  - c. Wilson Memorial Hospital, Sidney
  - d. Springfield Regional Medical Center – High Street Campus (Community)
  - e. Springfield Regional Medical Center - Fountain Boulevard Campus (Mercy)
  - f. Mercy Memorial Hospital, Urbana
  - g. Upper Valley Medical Center, Troy
  - h. Greene Memorial Hospital, Xenia
  - i. Department of Veterans Affairs - Medical Center
  - j. 88<sup>th</sup> Medical Center, WPAFB

Communicate the following information:

Rerouting of emergency patients is requested by \_\_\_\_\_ name \_\_\_\_\_ hospital due to overcrowding. One of the following categories of rerouting may be requested. Hospitals MUST specify what category is being rerouted using the following options:

**Reroute all Emergency Patients**  
**Reroute all but major trauma (Trauma Centers Only)**  
**Reroute Intensive and/or Coronary Care Patients Only.**

*After two (2) hours hospitals will be notified by page and/or email to review their reroute status.*

It will be the responsibility of the **rerouting hospital to cancel their rerouting status and:**

1. Update the GDAHA SurgeNet Web Page
2. Use the same notification protocols used to initiate the rerouting procedure as appropriate

**LOCKDOWN:** the hospital has activated its disaster plan because of an internal emergency, bomb threat, or other situation rendering it unable to accept patients.

**INFORMATIONAL CATEGORIES:**

On occasion, hospitals will not be able to handle a certain category of patients. For example:

- CAT Scan is not available; stroke or head trauma patients should be diverted;
- Haz-mat patients should be diverted;
- A physician specialty is not available;

The hospital that is diverting this certain category of patients will not be considered rerouting in these circumstances. This will be shown on the web page as SPECIAL SITUATION – see Notes/Call.

### **THREE HOSPITALS NEED TO REROUTE**

In the event that overcrowding and rerouting exists at the same time at two (2) hospitals in close geographic proximity (Addendum A) and the third hospital in the same geographic area needs to reroute, by prior agreement, all hospitals will terminate their rerouting **for a minimum of two hours (Forced Open)**. It will be the responsibility of the third hospital to initiate communication with the other rerouting hospitals' individuals responsible for reroute to review the situation. If any of the rerouted hospitals can stop rerouting they will do so, to avoid all hospitals having to stop rerouting.

### **REROUTING EMERGENCY**

**If none of the three hospitals can stop rerouting, then a “rerouting emergency” will be declared and the following procedures will be followed.**

1. Update the GDAHA SurgeNet Web Page
2. All three hospitals will call previously notified agencies and inform them that rerouting emergency has been declared.
3. When a rerouting emergency is declared, Children’s Medical Center will remain available to accept patients up to 21 years of age (*no maternity patients*).
4. Squads should transport patients to their assigned reroute emergency “home base” hospital(s) (See Addendum B):

*Note: During mutual aid or out of district transport as aided agency/district.*

When emergency medical service personnel respond to an emergency call and the patient and/or physician requests him to proceed to a hospital which is rerouted, the emergency medical services personnel will have the responsibility of advising the patient and/or physician that “due to overcrowding of the hospital patient care may be jeopardized.” **If the patient and/or physician still requests to be transported to the rerouted hospital, the emergency medical services personnel will contact and consult with a Medical Control physician in the emergency department of the rerouted hospital.**

**All concerned parties should acknowledge the situation in which emergency medical services personnel (in the absence of a physician’s judgment) may determine the victim to be in critical need of immediate medical care and decide to transport the victim to the nearest hospital, even though overcrowded conditions exist in the hospital. Any discussion concerning the decision of the emergency medical services personnel should be done privately and after the patient care has been initiated.**

Emergency medical service personnel should use their radios, cellular phone or dispatcher to notify the rerouting hospital in unusual circumstances (critical illness or injury, multi-victim incidents, etc.).

**GREATER DAYTON AREA HOSPITAL ASSOCIATION**

**POLICY STATEMENT FOR  
TEMPORARY REROUTING OF EMERGENCY PATIENTS**

**ADDENDUM A**

**Geographic Areas:**

1. In the event that overcrowding and rerouting exists at the same time at two (2) hospitals in the list below and a third hospital in the list below needs to reroute, by prior agreement no hospitals will reroute for two (2) hours.
  - a. Good Samaritan Hospital
  - b. Grandview Medical Center
  - c. Kettering Medical Center
  - d. Miami Valley Hospital
  
2. In the event that overcrowding and rerouting exists at the same time at two (2) hospitals in the geographic groups below and a third hospital needs to reroute, by prior agreement no hospitals will reroute for two (2) hours.
  - a. Greene Memorial and two (2) of the following: Miami Valley, Kettering, Grandview, Southview or Miami Valley Hospital South.
  - b. Upper Valley Medical Center and two (2) of the following: Good Samaritan, Grandview, Miami Valley, or Wilson Memorial Hospital in Sidney.
  - c. Any three (3) of the following: Atrium Medical Center, Southview, Sycamore, Kettering and Miami Valley South.
  - d. Wayne Hospital, Good Samaritan and Grandview.

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**Addendum B**  
**GREATER DAYTON AREA HOSPITAL ASSOCIATION**

**REROUTE EMERGENCY**  
**EMS – HOSPITAL PROPOSED PAIRING**

Reroute Emergency is declared when three or more hospitals in the same geographic area are extremely overcrowded and none of the three hospitals feel that they can stop rerouting. When a rerouting emergency is declared the following procedures will be followed.

1. The third rerouting hospital will coordinate communications with the designated administrative person in charge, at the other rerouting hospitals.
2. **Each GDAHA hospital** will notify the home base EMS agencies assigned to them, as well as other squads that they normally notify out of the GDAHA service area, and inform them that a **Rerouting Emergency** has been declared. Squads should transport patient to their assigned “home base” hospital. Only Good Samaritan Hospital will notify Harrison Township. Only Miami Valley Hospital will notify Dayton Fire Department. Only Sycamore Hospital will notify Miami Township.
3. Following notification of EMS, hospitals able to maintain Normal Operation should not change their status on the web page to Reroute Emergency, until conditions warrant that change.
4. Squads should CONSIDER utilizing outlying hospitals or other hospitals in normal status\*
5. Children’s Medical Center will remain available to accept patients up to 21 years of age. (*No maternity patients.*)
6. Rerouting Emergency **DOES NOT** apply to the following categories of patients: respiratory and/or cardiac arrest; Trauma\*, maternity, serious burns, high risk neonatal, dialysis patient, air medical transport, hyperbaric, **cardiac or stroke** alert patients, or recently discharged patients (48 hours).\*
7. **After a maximum of two (2) hours all hospitals in Reroute Emergency must reevaluate their status.**
8. ***Squads should transport patients to their assigned reroute emergency “home base” hospital(s) as follows:***  
***Note: During mutual aid or out of district transport as aided agency/district.***

Good Samaritan Hospital  
Brookville  
Clayton, Englewood, Union  
Dayton Fire Department #16  
Dayton Fire Department #14  
Harrison – Turner Road  
New Lebanon  
Lewisburg  
Trotwood  
West Alexandria  
North Central  
Phillipsburg

Grandview Medical Center  
Butler Township  
Dayton Fire Department #8  
Dayton Fire Department #13  
Harrison – I-75 & Needmore  
Huber Heights  
Vandalia

Kettering Medical Center  
Dayton Fire Department #15  
Dayton Fire Department #18  
Kettering (4 units)  
Miami Township #48  
Moraine (4 units)

Miami Valley Hospital  
Dayton Fire Department #11  
Dayton Fire Department #10  
Fairborn  
Jefferson Township  
Oakwood  
Riverside  
University of Dayton Public Safety

Miami Valley Hospital South\*  
Beavercreek 4  
Bellbrook  
Kettering #36  
Sugarcreek (2 units)  
Washington Township #44  
Wayne Township

Southview Medical Center  
Clearcreek Township  
Miami Township – #50  
Washington Township #41, 42, 43, 45

Sycamore Medical Center  
Farmersville  
Miamisburg (2units)  
Miami Township - #49  
Miami Township- #47  
West Carrollton  
Germantown  
JEMS

Greene Memorial Hospital  
Beavercreek (except #4)  
Cedarville Twp.  
Cedarville University  
Central State University  
Fairborn  
Jefferson Twp.  
Miami Twp.  
New Jasper Twp.  
Silvercreek Twp.  
Spring Valley \*  
Xenia  
Xenia Twp.

Springfield Reg. Med Ctr–High St. (CH)  
Hustead EMS  
Madison Twp.  
Harmony Twp.  
Springfield Twp. Station 1 & 2  
Pleasant Twp.  
SFRD Medic 3, 6, 8

Springfield Reg. Med Ctr–Fountain B (Mercy)  
German Twp.  
New Carlisle  
Pike Twp.  
Bethel Twp.  
Springfield Twp. Station 3  
Mad River Twp.  
Moorefield Twp.  
SFRB Medic 2, 7, 10

Upper Valley Medical Center  
Miami County Squads

Wayne Hospital  
Darke County Squads

Wilson Memorial Hospital  
Shelby County Squads

Atrium Medical Center  
Gratis  
Lebanon  
Mason  
Turtlecreek  
Middletown

Clinton Memorial Hospital – Wilmington  
Massie Township

McCullough Hyde Hospital - Oxford  
Camden

Reid Hospital – Richmond, Indiana  
Eaton  
NW Fire – New Paris

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8-24-09

## **Addendum C**

### **GREATER DAYTON AREA HOSPITAL ASSOCIATION EMS REROUTE PAGER**

A summary of the hospital reroute status is sent every 15 minutes. The following is an explanation of the abbreviations used

#### **HOSPITAL NAME ABBREVIATIONS**

- CMC** – Children’s Medical Center
- SHS** – Springfield Regional Medical Center – High Street Campus (Community)
- GSH** – Good Samaritan Hospital
- GVH** – Grandview Medical Center
- GMH** – Greene Memorial Hospital
- KMC** – Kettering Medical Center
- SFB** – Springfield Regional Medical Center – Fountain Boulevard Campus (Mercy)
- MVH** – Miami Valley Hospital
- MVS** – Miami Valley Hospital South\*
- AMC** – Atrium Medical Center, Franklin
- SVH** – Southview Medical Center
- SYC** – Sycamore Medical Center
- UV** – Upper Valley Medical Center
- VA** – Department of Veterans Affairs Medical Center
- WAY** – Wayne Hospital, Greenville
- WMH** – Wilson Memorial Hospital
- WP** – 88<sup>th</sup> Medical Center, WPAFB

#### **HOSPITAL STATUS ABBREVIATIONS**

- NORM** – Normal Operations
- ALL** – Reroute all Emergency Patients
- MTO** – Reroute all but major trauma (Major Trauma Only)
- ICOR** - Reroute Intensive and/or Coronary Care Patients Only
- FO** – Forced Open
- EMR** – Emergency Reroute
- CALL** – Special Situation Call the ED
- LOCK** – Internal Emergency ED is Closed

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8-24-09

### Hospitals Capabilities List

Below is a list of hospitals, and the specialty capabilities of each (Stroke, PCI, Trauma, etc.).

Hospital	Adult Trauma Center & Level	Pedi Trauma Center & Level	Inpt. Burn Servc	Interventional Cath Lab 24/7	If Cath Lab, Cardiac Alert Program	Labor & Delivery Srvcs	Stroke Protocol with Thrombolytics	Other (see below)
Atrium	Level 3			YES	YES	YES	YES	** ***
Children's		Level 2	YES					**
Good Sam				YES	YES	YES	YES	** ***
Grandview				YES	YES		YES	* ** ***
Greene Memorial	Level 3					YES	YES	* ** ***
Kettering				YES	YES	YES	YES	*
Springfield Regional Medical Center				YES	YES		YES	**
Miami Valley	Level 1 &		YES	YES	YES	YES	YES	**
Miami Valley Hospital South							YES	** Ø
Southview						YES	YES	* # ***
Sycamore							YES	* #
Upper Valley						YES	YES	***
Wayne						YES		***
Wilson						YES	YES	
WPAFB						YES		**

\* Accredited Chest Pain Eval Center

\*\* Sexual Assault Nurse Examiners 24/7

\*\*\* Treats superficial/minor burns.

& Pediatric Capability

Ø No Alerts to MVHS

# Has a "cardiac alert program" but no cath lab on site

**Hospitals' Guide for Public Safety Workers' (PSW) Exposures**  
 Updated 7-7-09 (Data subject to change – check periodically to ensure most current)

Step	Atrium	CMC	DHVV	GSH	GVH/SVH	GMH	KMH/SYC	MVH	MVH South	UVMC	SRMC -High St	SRMC Fountain & MMH	Wayne	Wilson
Updated	May-09	Sep-04	Jun-06	Sep-07	Sep-07	Sep-07	Sep-07				Sep-07	Sep-07	Sep-07	Jul-09
Wash Area	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Notify EMS Supervisor	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Report to hospital	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hospital Contact	ED Charge Nurse > EMS Coordinator	NICU Charge Nurse	ED Staff	ED staff or Infection Control	ED Staff -> EMS Coord.	ED Staff -> EMS Coord.	ED Staff -> Infection Control	Security -> AOC	Charge Nurse	Resource Supervisor	Infection Control	Infection Control	Infection Control	ED Staff
Complete "Request for Information Form for HCWs"	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Register w/ ED	Encouraged	If desired	If desired	If desired	Y	Y	If desired	If desired	If desired	Y	Y	Y	Y	Y
Have your lab drawn	If Desired	If source is high risk (not routine)	If desired	If indicated	Y	Y	If desired	If desired	If desired	If desired	If Indicated	If indicated	If indicated	If indicated
Have source lab drawn (HIV, Hep B, Hep C)	Y (Rapid HIV Available)	Y	Y	Y (Rapid HIV avail.)	Y (Rapid HIV avail.)	Y	Y	Y (Rapid HIV avail)	Y (Rapid HIV avail)	Y (Rapid HIV avail.)	Y (Rapid HIV avail.)	Y	Y	Y (Rapid HIV available)
Follow-up Consult <b><u>YOUR Fire/EMS</u></b> Dept policies/procedures	EMS Coordinator	Follow dept policy	Follow dept policy	Infection Control	EMS Coord. or designee & Follow dept policy	Work Plus Dept	Infection Control & Follow dept policy	Infection Control or Admin Officer	Infection Control or Admin Officer	Occupational Health	Infection Control	Infection Control	Infection Control	Follow EMS policy
Comments	Have request for information forwarded to EMS Coordinator Anti-Viral medication available in ER if indicated	Infection Control Doc available 24/7 for RN contact if needed	Infection Control is to be paged 24/7 by ED or Prehospital provider	Infection Control is notified of Exposure Incident by EMS coordinator	EMS Coord. is to be paged 24/7 by ED or Prehospital care provider	Give form to EMS Coord. Who forwards to Infection Control for follow up	Infection Control to 24/7 by ED	Security page Infection Control Mon-Fri 8-4. Admin Officer to be paged at all other times including holidays	Charge Nurse to page Infection Control M-F 8-4 Admin officer to be paged at all other times including holidays	Place form in locked box in EMS Room for EMS Managr to forward to Occupational Health	Give form to EMS Coord who forwards to Infection Control for follow up	Give form to EMS Coord who forwards to Infection Control for follow up	Give form to Infection Control, ED Manager or House Supervisor	Hosp ED sends white copy of "Request for Info by EMS Worker" to Inf. Preventionist. Yellow copy to EMS coordinator. Inf. Preventionist oversees communication of results & related documentation has been completed per policy.

## **2009 CHANGES**

### EMT-P Manual

1. EDD or Waveform EtCO<sub>2</sub> is preferred confirmation devices for intubation of cardiac arrest patients, but Colorimetric EtCO<sub>2</sub> may be utilized if color changes occur.
2. The addition of Midazolam 4mg. IM as an additional route for treatment of the seizure patient and violent patient.
3. The removal of the number of 50 or more to obtain CHEMPACKs – changed to a MCI where antidotes are greater than available resources.
4. Change the Midazolam pediatric IN dose from 0.1 mg./kg. to 0.2 mg./kg.
5. Change the PR dose of Diazepam for the pediatric patient from 0.1 mg./kg. to 0.5 mg./kg. (Maximum dose 5 mg.)

### EMT-I Manual

1. EDD or Waveform EtCO<sub>2</sub> is preferred confirmation devices for intubation of cardiac arrest patients, but Colorimetric EtCO<sub>2</sub> may be utilized if color changes occur.
2. The addition of a section to allow 12 lead EKG acquisition and transmission\*\*\*\*updated in 2010 changes.
3. The removal of the number of 50 or more to obtain CHEMPACKs –changed to a MCI where antidotes are greater than available resources.
4. Removal of IM route of for Diazepam administration for the chemical restraint patient.

### EMT-B Manual

1. EDD or Waveform EtCO<sub>2</sub> is preferred confirmation devices for intubation of cardiac arrest patients, but Colorimetric EtCO<sub>2</sub> may be utilized if color changes occur.
2. The addition of a section to allow 12 lead EKG acquisition and transmission\*\*\*\*updated in 2010 changes.
3. The removal of the number of 50 or more to obtain CHEMPACKs –changed to a MCI where antidotes are greater than available resources.
4. The addition of {CPAP} for the Asthma/Emphysema/COPD patient to meet the scope of practice change.

## **2010 MAJOR CHANGES**

### EMT-P Manual

1. Deletion of drug overdose as indication not to initiate field termination
2. PEA rate equal to or greater than 40 should be given additional consideration before field termination is initiated as patient may not be in true cardiac arrest, but not have palpable pulses due to not being hemodynamically stable.

3. Increase fluid challenge to 500 cc's (was 250 cc's) for the hypovolemic cardiac patient without pulmonary edema. (Consistent with remainder of protocol)
4. Clarification of Defibrillation for Monophasic devices at 360 joules/biphasic units should follow manufacture suggested guidelines.
5. {12 lead EKG Transmission}
  1. EMT-P has discretion to transmit 12 lead EKG but is encouraged to transmit any 12 lead that meets Cardiac Alert Criteria or that is questionable. If EMT-P transmits an EKG the medical control physician shall be contacted after the EKG is transmitted, just as is presently done with Cardiac Alert candidates.
6. Added verbiage to stroke section (stroke alert) to indicate that select patients may benefit from thrombolytic therapy up to 6 hours from last time patient seen normal, but maximum benefit derived within 2 hours.
7. Trauma section updated to reflect adoptions made by state with geriatric trauma criteria added.
8. Eye flushing will be changed to 30 minutes or until medical destination is reached to ensure consistency.
9. Encourage use of { CPAP/Bipap} devices for initial treatment of Pulmonary Edema rather than drug therapy.
10. Addition of IV Pediatric Ondansetron (Zofran) for persistent and retractable vomiting.
11. Adoption of "Just in Time" orders for MCI events lasting several days.
12. Change criteria in abdominal pain section to allow for pain relief administration for patient suffering from unilateral flank pain.
13. Violent patient protocol heading changed to "Combative" patient to allow for sedation for either medical or trauma patient. (Pediatric Combative Patient to be call for order prior to administration)
14. Increase number of days from 3 to 30 to meet the Safe Harbor Law that was recently adopted.
15. Notation is chest decompression skills sheet to indicate 2 ¼ " catheter may not be long enough for decompression of certain patients.
16. The administration of Diphenhydramine (Benadryl) for Extra-pyramidal Reactions (call for order)
17. Medical Control approval not necessary for administration of Sodium Thiosulfate for patients in cardiac arrest due to suspected smoke inhalation or Cyanide poisoning.
18. Allow EMT-P to administer auto-injector for single incidents of Organophosphate Poisoning rather than having to utilize for only WMD/MCI Incidents. (Change to OAC). This is a call for order regardless.
19. Scope of Practice Changes for EMT-I will require re-location of Midazolam to the EMT-I controlled drug pouch.
20. All slow IV drug administration would be over 2 minutes.(This includes Sodium Thiosulfate and Sodium Nitrate.)
21. Training Manual to have combined Adult/Pediatric Orders. Quick Reference Guide to remain unchanged

#### EMT-I Manual

1. Increase fluid challenge to 500 cc's (was 250 cc's) for the hypovolemic cardiac patient without pulmonary edema. (Consistent with remainder of protocol.)
2. Clarification of Defibrillation for Monophasic devices at 360 joules/biphasic units should follow manufacture suggested guidelines.
3. EMT-I must transmit any EKG obtained. Medical Control must be contacted to determine medical facility destination based on pt. condition and 12 lead EKG obtained.
4. Added verbiage to stroke section (stroke alert) to indicate that select patients may benefit from thrombolytic therapy up to 6 hours from last time patient seen normal, but maximum benefit derived within 2 hours.
5. Trauma section updated to reflect adoptions made by state with geriatric trauma criteria added.
6. Eye flushing will be changed to 30 minutes or until medical destination is reached to ensure consistency.

7. Encourage use of { CPAP/Bipap} devices for initial treatment of Pulmonary Edema rather than drug therapy.
8. Adoption of “Just in Time” orders for MCI events lasting several days.
9. Change criteria in abdominal pain section to allow for pain relief administration for patient suffering from unilateral flank pain.
10. Violent patient protocol heading changed to “Combative” patient to allow for sedation for either medical or trauma patient. (Pediatric Combative Patient to be call for order prior to administration)
11. Increase number of days from 3 to 30 to meet the Safe Harbor Law that was recently adopted.
12. Allow EMT-I to administer auto-injector for single incidents of Organophosphate Poisoning rather than having to utilize for only WMD/MCI Incidents. (Change to OAC). This is a call for order regardless.
13. Amend Benzo administration to allow EMT-I and EMT-P administration to be the same (scope of practice changes)
  1. Will require drug bag changeover to take place for drug re-location
  2. Con. Ed. Committee will be tasked with educating EMT-I in drug administration routes.
14. Training Manual to have combined Adult/Pediatric Orders. Quick Reference Guide to remain unchanged.

### EMT-B Manual

1. EMT-B must transmit any EKG obtained. Medical Control must be contacted to determine medical facility destination based on pt. condition and 12 lead EKG obtained.
2. Added verbiage to stroke section (stroke alert) to indicate that select patients may benefit from thrombolytic therapy up to 6 hours from last time patient seen normal, but maximum benefit derived within 2 hours.
3. Trauma section updated to reflect adoptions made by state with geriatric trauma criteria added.
4. Eye flushing will be changed to 30 minutes or until medical destination is reached to ensure consistency.
5. Adoption of “Just in Time” orders for MCI events lasting several days.
6. Increase number of days from 3 to 30 to meet the Safe Harbor Law that was recently adopted.
7. Allow EMT-B/First Responder to administer auto-injector for single incidents of Organophosphate Poisoning rather than having to utilize for only WMD/MCI Incidents. (Change to OAC). This is a call for order regardless
8. Training Manual to have combined Adult/Pediatric Orders. Quick Reference Guide to remain unchanged.

## 2010 CALL FOR ORDER DRUGS: BASIC

<b><u>DRUG</u></b>	<b><u>INDICATION</u></b>	<b><u>ADULT/PEDIATRIC</u></b>
Albuterol (When accessing drug bag)	Asthma/Emphysema/COPD	Adult/Pediatric
Aspirin	Suspected Cardiac Chest Pain	Adult
Atropine	Organophosphate/Nerve Agent Poisoning	Adult/Pediatric
Diazepam	Organophosphate/Nerve Agent Poisoning	Adult/Pediatric
Duodote	Organophosphate/Nerve Agent Poisoning	Adult/Pediatric
EpiPen (When accessing drug bag)	Allergic Reaction/Asthma in severe distress	Adult/Pediatric
Nitroglycerin (When accessing drug bag)	Chest pain	Adult
Pralidoxime(2 Pam)	Organophosphate/Nerve Agent Poisoning	Adult/Pediatric

## NOTES

## NOTES

## NOTES





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