April 21, 2007

To whom it may concern,

The following standing orders /protocols have been reviewed and approved for use by EMT/CT/Paramedics of Central EMS, Inc. (CENTRAL EMS) following the guidelines of the privileges granted.

Every EMT/CT/Paramedic will become familiar with these protocols and use them when contact with Medical Control is not readily available, or in situations when delaying patient care would be detrimental to the patient.

If you have any questions, please feel free to contact me at anytime.

Sincerely,

Heather Henry, M.D.

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Medical Director
PURPOSE:

To establish a uniform approach and a minimum standard of pre-hospital treatment provided to patients by Emergency Medical Service (EMS) personnel. Current medical practices will supersede these guidelines as approved by the Medical Director.

AUTHORIZATION:

Emergency Medical Technicians (EMTs), Cardiac Technicians (CTs) and Paramedics employed by Central EMS, Inc. or providing volunteer services are authorized to function under their appropriate scope of practice and within the written protocols contained herein.

DEFINITIONS:

MEDICAL CONTROL:

(a) The immediate and concurrent clinical guidance from a physician to emergency medical services personnel regarding the pre-hospital management of a patient; or (b) the physician responsible for providing immediate and concurrent clinical guidance to emergency service personnel.

STANDING ORDER:

The written authorization to follow a given treatment guideline and provide specified interventions to a patient experiencing a medical emergency prior to establishing direct voice communication with a physician.

PROTOCOL:

Prehospital treatment guidelines outlining the permissible and appropriate medical treatments that may be rendered by emergency medical services personnel to a patient experiencing a medical emergency.
SCOPE OF PRACTICE: OVERVIEW

SUBJECT: Scope of Practice for Emergency Medical Technicians-Basic, Emergency Medical Technicians-Intermediate, Cardiac Technicians, and Paramedics

PROCEDURE

This procedure identifies the approved scope of practice for Emergency Medical Services (EMS) personnel at each level of EMS licensure as established by the Office of EMS / Trauma (OEMS/T).

GENERAL PROVISIONS

A. Pre-hospital scope of practice, Resource Section: R-P01-Scope of Practice is recommended by the Georgia Emergency Medical Services Medical Directors Advisory Council (EMSMDAC) and the Georgia Emergency Medical Services Advisory Council (EMSAC) for each level of EMT licensure. Approval is granted by the department.

B. The Scope of Practice for EMS personnel will be reviewed periodically and updated by the OEMS/T.

C. EMS personnel may perform these procedures after successful completion of training and approved by their service Medical Director.

D. The Scope of Practice for EMS personnel cannot be expanded by approval of the service Medical Director, Service Director or medic. Additional skills training and verification does NOT allow for expansion of the EMS Scope of Practice.

E. All licensed EMS personnel must have approval from their Service Medical Director to perform pre-hospital procedures at his/her level of license prior to beginning work for an ambulance service.

As stated by the policy of the Georgia Office of EMS the Scope of Practice can not be expanded however, in an effort to provide the highest level of care, Central EMS has opted to further restrict some levels of licensure

See Appendix A for the current Central EMS Scope of Practice
STANDARD OF CARE:

1. All Central EMS personnel who are paid or volunteer will be expected to conduct themselves in a professional manner.
2. All Central EMS personnel will treat all patients with dignity and respect. Patient’s medical information will be CONFIDENTIAL.
3. EMS personnel’s first priority in the field will be SCENE SAFETY for themselves, patients and the public. This may include staging a safe distance away until the scene is safe. This will include the use of appropriate personal protective equipment.
4. Patients with the most severe or life threatening injuries or illnesses will be treated first, except in the event of multiple patients, or mass casualty incidents where the field resources are overwhelmed.
5. Patient care will include documentation in a professional and timely manner to facilitate further evaluation and treatment.
6. To provide for the safest transport possible all patients shall be transported on a stretcher utilizing the five (5) point harness system. Do Not Walk a patient, or allow a patient to sit on a seat during transport. The ONLY exceptions to this rule is in a disaster situation or when directed by a supervisor with the rank of Captain or higher.
7. Differences of opinion and criticism of agencies or personnel will not interfere with patient care. If not quickly, quietly and easily resolvable in the field such matters should be referred to the agencies involved or Shift-Supervisor and/or on-line Medical Control.
SCENE AUTHORITY:

1. The highest-level EMT on the scene shall be responsible for patient care and transport decisions until release to an EMT of equal or higher level. When contact with Medical Control has been attained, a physician/patient relationship has been established between the patient and the physician providing Medical Control. The physician is responsible for the management of the patient and the EMT acts as an agent of Medical Control unless a patient’s physician is present.

2. Standing Medical Orders should direct treatment when disputes arise over patient care.
MEDICAL PROFESSIONALS ON SCENE:

1. Medical professionals at the scene of an emergency may provide assistance to Central EMS Personnel, and shall be treated with professional courtesy.

2. Medical professionals who offer their assistance at the scene should be asked to identify themselves and their level of training.

3. If an intervening physician (other than the patient’s private-physician) gives orders, he must accompany the patient to the hospital and must document his intervention by signing the pre-hospital care report. If the intervening physician refuses to travel with the patient, Central EMS Personnel should continue to take orders from the Medical Control Physician.

4. If there is disagreement between the intervening physician and the Medical Control physician, or if the intervening physician refuses to speak with Medical Control, Central EMS Personnel should continue to take orders from the Medical Control physician.

5. When the patient’s private physician is present, Central EMS Personnel should defer to the orders of that physician. However, Central EMS Personnel may seek medical direction from the on-line physician if the provider believes that the emergency care rendered by the physician is inconsistent with quality patient care. Central EMS Personnel shall not comply with orders that exceed their scope of practice. Central EMS Personnel responsibility reverts to medical control if the private physician is no longer in attendance.
MEDICAL CONTROL:

OFF-LINE MEDICAL CONTROL:

1. Standing Medical Orders (SMO) approved by the Medical Director.
2. Written patient orders and protocols pertaining to a specific transport.

ON-LINE MEDICAL CONTROL:

1. Direct radio and/or phone communications with a hospital emergency physician.
2. On-line Medical Control may override written protocols when:
   
   Directing medical care for patients within Central EMS Personnel scope of practice.
   Routing patients to an appropriate hospital destination considering the number of
   patients, patient needs or hospital availabilities of specialty beds, operating rooms, or
   imaging procedures.

STANDING ORDERS AND PROTOCOLS:

1. Standing Medical Orders may be performed without contacting Medical Control; however,
   Medical Control may be utilized at any time prior to implementing or completion of SMO’s.
   If direct voice contact cannot be made with Medical Control, Central EMS Personnel will
   perform only those procedures outlined within appropriate protocols.

2. Unless specific conditions are outlined in a protocol, OROTRACHEAL and
   NASOTRACHEAL INTUBATION (Contraindicated in the presence of suspected
   maxillofacial trauma) may be performed under standing orders whenever it is required for
   advanced airway management. Other methods of advanced airway management (e.g.,
   EOA/Combitube) are permitted as an alternative to endotracheal intubation.

3. Protocols shall apply to all age groups, unless specified within the Pediatric Protocols.

4. There will be at least an annual review of these Protocols/Standing Medical Orders by the
   Medical Director with input from all concerned parties. A group of the Medical Director and
   other interested parties may be formed periodically for recommending revisions to the
   Protocols/Standing Medical Orders.

5. The Training Division with assistance from the Medical Director will organize education
   programs to update Central EMS Personnel as to pertinent changes in and additions to the
   standing orders within a reasonable period of time after release of any revisions to the
   standing orders.
MEDICAL CONTROL OPTIONS:

No Central EMS Personnel shall proceed with any intervention titled “Medical Control Option,” “Contact Medical Control” or “With MD Approval” without authorization from on-line ED physician.
CONTINUOUS QUALITY IMPROVEMENT:

With the goal of providing a high level of patient care, it is important that all areas of delivered care be monitored and improved. A review of prehospital care (PCR) reports will be conducted.

ALTERNATE REVIEWS: As designated by Medical Director

1. Direct observation of EMT field performance
2. Monitoring Radio Communications
3. Conducting Post-Run Interviews
4. Conducting Periodic Case Reviews
5. Investigation of Complaints
RESUSCITATION AND FIELD PRONOUNCEMENT:

ALL patients found in cardiac arrest will receive cardiopulmonary resuscitation unless an exception is met as outlined:

Advanced Directives / Do Not Resuscitate Order
Determination of Death
Discontinuance of CPR
MASS CASUALTY INCIDENTS ARE NOT COVERED BY THESE GUIDELINES

Patients with valid DNR orders or advance medical directives should receive medical treatment per appropriate Protocol/SMO and supportive care prior to cardiac arrest.
DO NOT RESUSCITATE (DNR) ORDER:

Personnel, whether at a Basic or Advanced Life Support Level, are required to immediately initiate Cardiopulmonary Resuscitation whenever clinical signs of death are present. A DO NOT RESUSCITATE (DNR) order is designed for the pulseless, non breathing patient who has been diagnosed with a terminal illness in which initiation of CPR or other lifesaving measures may be withheld. THIS POLICY DOES NOT APPLY TO TRAUMATIC INJURIES.

Initiation of CPR or other life saving measures may be withheld if one of the following conditions is met:

1. Georgia code 31-39-4 states that it shall be lawful for the attending physician to issue an order not to resuscitate pursuant to the requirements of this chapter. Any written order issued by the attending physician using the term 'do not resuscitate,' 'DNR,' 'order not to resuscitate,' 'no code,' or substantially similar language in the patient’s chart shall constitute a legally sufficient order and shall authorize a physician, health care professional, or emergency medical technician to withhold or withdraw cardiopulmonary resuscitation. Such an order shall remain effective, whether or not the patient is receiving treatment from or is a resident of a health care facility, until the order is canceled as provided in Code Section 31-39-5 or until consent for such order is revoked as provided in Code Section 31-39-6, whichever occurs earlier. An attending physician who has issued such an order and who transfers care of the patient to another physician shall inform the receiving physician and the health care facility, if applicable, of the order.

2. The Patient’s Attending Physician is on the scene and produces identification that he or she is licensed in the State of Georgia, pronounces that patient dead as a result of a terminal medical illness and is willing to sign the Pre-Hospital Care Report. If the Do Not Resuscitate documents are not clear, then personnel will initiate appropriate resuscitation measures unless the patient’s personal physician is present and pronounces the patient dead.

3. **A LIVING WILL WITHOUT AN ACCOMPANYING DNR ORDER** signed by the attending physician and the patient surrogate WILL NOT BE VALID FOR PREHOSPITAL CARE.

4. When one (1) of the following explicit signs of biological death exists:
   a. Patient who has suffered decapitation
   b. Patient without a pulse or respiration who exhibits one (1) or more of the following signs of being dead.
      i. Rigor mortis without profound hypothermia
      ii. Body tissue decomposition
      iii. Profound dependent lividity
DO NOT RESUSCITATE (DNR) ORDER: (con’t)

Except in the conditions listed above, CPR is to be initiated immediately and continued until one (1) of the following occurs:

1. Effective spontaneous circulation and ventilation have been restored.
2. Resuscitation efforts have been transferred to other persons of equal or greater skill, training and experience.
3. The rescuer is exhausted and is physically unable to continue resuscitation.

References to the Do Not Resuscitate (DNR) order refers to the following procedures:

1. Do Not do chest compressions
2. Do Not ventilate (e.g., mouth to mouth, BVM, pocket mask, BVM-endotracheal tube, Combitube/EOA, or by tracheotomy site)
3. Do Not treat asystole
4. Do Not treat ventricular fibrillation
5. Do No treat agonal rhythm
6. Do Not Treat PEA.

REVOCATION OF A WRITTEN DNR ORDER shall be made only in one (1) of the following ways:

1. The order is physically destroyed or verbally rescinded by the physician who signed the order, and who must be physically present at the scene.
2. The order is physically destroyed or verbally rescinded by the person who gave the written informed consent to the order (patient or the patient’s surrogate). If a surrogate made consent, the surrogate must be physically present in order to revoke the order, and EMS personnel must be able to confirm the surrogate’s identity.
3. A member of the immediate family or authorized person who is present and request initiation of resuscitation contrary to the written DNR order.

AUTHORIZED PERSONS ARE:

A spouse
A court appointed guardian
A son or daughter 18 years of age or older
A parent
A brother or sister 18 years of age or older

Should the situation arise in which two (2) or more family members are present and disagree on whether the DNR order should be honored, personnel shall begin ACLS treatment and transport to the nearest hospital.
Except for obvious biological death, MEDICAL CONTROL is to be contacted in any case where the patient’s status is unclear and there is a question of the validity of the DNR order. Communication with MEDICAL CONTROL shall be made if:

Bystanders and/or family members are hampering the NON RESUSCITATION of a patient with a VALID DNR ORDER when there is no consensus by family members. Bystanders and/or family members are hampering the RESUSCITATION of a patient with a NON-VALID DNR ORDER.

Initiation of CPR or lifesaving measures may be withheld for a person who is not a patient in a hospital, nursing home, or licensed hospice if the following information is present on a DNR order form:

Initiation of CPR or lifesaving measures may be withheld for a person who is not a patient in a hospital, nursing home, or licensed hospice and who is wearing an IDENTIFYING ANKLE OR WRIST BRACELET, OR IDENTIFYING NECKLACE.
DETERMINATION OF DEATH:

Patients with suspected hypothermia, barbiturate overdose, or electrocution will require FULL ALS resuscitation unless there is evidence of injuries that are incompatible with life or presence of tissue decomposition.

The PARAMEDIC or most senior member of a crew shall make the determination of death and decide to resuscitate under the following guidelines.

The patient may be determined to be dead and will not be resuscitated or transported if all four (4) presumptive signs of death and at least one (1) conclusive sign of death are identified.

Presumptive signs of death

Unresponsiveness
Apnea
Pulseless
Fixed-dilated pupils

Conclusive signs of death:

Injuries incompatible with life (e.g., decapitation, massive crush injury, incineration, etc.)
Tissue decomposition
  Rigor mortis of any degree with warm air temperature
    a. Hardening of the muscles of the body, making the joints rigid.
Liver mortis (lividity) of any degree and/or general cyanosis.
    a. Venous pooling of blood in dependent body parts causing purple discoloration of the skin, which blanches with pressure.

Any trauma victim who does not meet the listed criteria may be determined to be dead based on the following:

BLUNT TRAUMA
  Blunt trauma to the head, neck, or torso AND
  No spontaneous pulse or respiration AND
  Asystole confirmed by two leads OR
  Prolonged extrication time (>15 minutes) where no resuscitative measures could be initiated prior to extrication.

PENETRATING TRAUMA
  No spontaneous pulse or respirations AND
  Asystole confirmed by two leads OR
  ALS has been unavailable for at least 20 MINUTES.
  Research data shows that a significant number of victims of penetrating trauma to the neck or torso, which are found without signs of life, may be successfully resuscitated.
DISCONTINUANCE OF CPR:

Resuscitation that is started in the field by EMS personnel cannot be stopped without an order from medical direction. EMS personnel are not obligated to continue resuscitation efforts that were started inappropriately by others at the scene. However, contact with MEDICAL CONTROL is necessary to cease resuscitative efforts in ALL situations.

When there is a delay in presenting a valid DNR order to EMS personnel, resuscitation must begin. However, once a valid DNR order is presented to EMS personnel, the PARAMEDIC with an order from Medical Control may terminate resuscitation.

Provide appropriate grief counseling or support to the patient’s immediate family, bystanders, or other at the scene.

Patient Preparation:

1. Once it has been determined that the patient expired and resuscitation will not continue, cover the body with a sheet or other suitable item. DO NOT remove any property from the body or the scene.
2. Immediately notify Central Communications Center and request the coroner and law enforcement to the scene. Local law enforcement has jurisdiction and will be responsible for the body once death has been determined.
3. Complete a prehospital care report. Document the above criteria, with attached EKG strip and leave a copy with the Coroner.
4. Endotracheal tube placement should be verified by two (2) methods for a patient who is determined dead in the field or in which resuscitation measures have ceased. The ET tube should be left in place.
TRANSPORTATION DECISIONS:

1. **According to rules set forth DHR policy, 290-5-30-05(8)(k),** patients should be transported to the hospital of their choice provided that the hospital chosen is within a reasonable distance from the patient’s location and is capable of meeting the patient’s immediate needs. Central EMS, Inc. has established **50 Miles** as a reasonable distance for rendition of pre-hospital emergency care.

2. If the patient’s choice of hospitals is not within a reasonable distance, Medical Control will determine the closest hospital capable of meeting the patient’s immediate needs. A reasonable effort should be made to convince the patient to consent for transport to another hospital before contact with Medical Control.

3. If the patient’s choice of hospitals is within a reasonable distance but Medical Control and/or the EMT determines that:
   
   a. The patient’s condition is too critical to risk excessive time necessary to reach the hospital chosen and a nearer hospital is capable of meeting the patient’s immediate needs. **or**
   
   b. The hospital chosen is unable to meet the patient’s immediate needs. **or**
   
   c. The hospital chosen by the patient has notified Central EMS Personnel that it is unable to receive the patient, then Medical Control and/or Central EMS Personnel should make a reasonable effort to convince the patient that a hospital other than the one chosen is more capable of meeting the patient’s immediate needs. **or**
   
   d. In the opinion of the Central EMS Personnel, the patient appears competent and continues to insist on being transported to the hospital of his/her choice then the patient shall be transported to that hospital.
   
   e. If the patient does not, cannot or will not express a choice of hospitals, the Central EMS Personnel shall transport the patient to the nearest hospital believed capable of meeting the patient’s immediate medical needs.
TRANSPORTATION OF MAJOR TRAUMA/ARREST:

If the mechanism of illness/injury and/or historical/physical findings indicate major trauma, transport the patient to the nearest appropriate hospital.

1. If any of the following conditions for MAJOR TRAUMA are present, consider the need for transport to a Level I or Level II Trauma Center.

   MECHANISM OF INJURY
   1. All patients who with a fall of two stories (15 feet) or more
   2. All patients surviving fatal or high-speed motor vehicle crashes, who have complaints of significant injury.
   3. All pedestrians who have sustained significant injuries as the result of being struck by a moving vehicle.

   PHYSICAL FINDINGS:
   1. Glasgow Coma Scale of less than 13
   2. All Blunt trauma to the head with a history or presence ANY of the following:
   3. Loss of consciousness
   4. Posturing or seizure
   5. Open cranial injury
   6. Paralysis
   7. Significant symptoms such as severe headache, vomiting, dizziness, or double vision

   Patients with BLUNT trauma to the chest with a history or the presence of any of the following:
   1. Respiratory insufficiency
   2. Decreased breath sounds
   3. A deviated trachea
   4. Distended neck veins
   5. Subcutaneous emphysema
   6. Signs of multiple rib fractures

   ALL BLUNT traumas of the extremities with hypotension

   ALL PENETRATING trauma of head, neck, chest, abdomen, groin or buttocks

   ALL PENETRATING trauma of extremities with hypotension

   Trauma to the extremities with vascular compromise

   Pelvic fracture or two or more long bone fractures

   Pelvic fracture or one long bone fracture associated with head, chest, or abdominal injury

   Major burns or inhalation injury

   Traumatic amputation
TRANSPORTATION OF MAJOR TRAUMA/ARREST (con’t):

If the following conditions are met, then transport the patient to the NEAREST HOSPITAL:

1. The patient has an unmanageable airway
2. The patient is in cardiac arrest
3. An on-line Medical Control physician so directs

LOAD AND GO SITUATIONS:

The following trauma situations require that field evaluation and care be interrupted for immediate loading and transport to the appropriate facility. Lifesaving procedures may be needed but should be done during transport.

- Airway obstruction that cannot be relieved quickly
- Trauma-related respiratory or cardiac arrest
- Tension pneumothorax
- Pericardial tamponade
- Penetrating wounds to the chest with shock
- Head injury with a unilaterally dilated pupil
- Head injury with rapidly deteriorating condition
- Any trauma victim in shock that does not rapidly respond to shock resuscitation efforts. DO NOT DELAY TO SEE IF THERAPY WORKS.

SCENE TIME:

1. If at any time an EMT cannot provide or protect a patent airway to a patient, IMMEDIATE transport is required.
2. For LOAD-AND-GO situations scene times should be <10 minutes unless necessary for extrication.
3. Establishing an IV line in the field should not delay transport unless there is an immediate need for IV therapy (e.g., hypoglycemia, seizures, narcotic overdose, cardiac arrest, or unstable arrhythmia’s).
AEROMEDICAL TRANSPORT:

1. Consider the use of a medical helicopter when presented with:
   a. Any patient who has one or more conditions for major trauma.
   b. Multiple-system trauma patient with prolonged extrication and/or transport time.
   c. Multiple casualty incident and ground transport units are unable to manage and transport all patients in a timely manner.
   d. Inability or difficulty in transporting a patient using conventional means.

3. Make your decision to transport by air early. Even if you are not sure that your patient meets established criteria for air transport, place a medical helicopter on standby status. You can always cancel the standby.

4. Establish a safe landing zone (LZ). Give Central Communications Center the scene location, LZ, weather and scene ground contact and radio frequency information. Most of the time Law Enforcement or the Fire Department will establish the LZ for the air medical service.

5. Geographic limitations may prohibit a medical helicopter from landing in close proximity to the scene.

6. Continue patient care and stabilization per Central Protocols/SMO while awaiting the helicopter’s arrival.

7. Once the patient is ready for transport, **DO NOT WAIT, OR DELAY PATIENT CARE OR TRANSPORT FOR THE AIR MEDICAL UNIT. IF THE PATIENT IS READY FOR TRANSPORT, AND THE AIR UNIT HAS NOT LANDED, PREPARE TO GROUND TRANSPORT THE PATIENT. WAITING ON THE AIR MEDICAL UNIT IS A DELAY IN PATIENT CARE AND TRANSPORT.**

8. Absolutely no personnel will approach the helicopter unless cleared “in” by the medical helicopter crew.

9. Do not approach the helicopter with a patient unless escorted by the helicopter crew.

10. Do not compromise time for invasive procedures other than securing an airway. Most invasive procedures can be done while enroute to the trauma center.
HAZARDOUS MATERIALS RESPONSE:

1. When responding to a reported and/or known hazardous materials incident, YOUR SAFETY IS THE HIGHEST PRIORITY.

2. Senses are one of the best ways to detect chemicals, particularly the sense of smell. IF you smell something, you are TOO CLOSE.

3. Seek a position uphill and upwind and in a position to make a hasty retreat. This may require you to leave the scene to seek safety as well as leave patients and bystanders in a hazardous situation.

4. Observe the site from a distance, if possible with binoculars. Look for danger signs such as vapor clouds, fire and smoke, placards, shape of vehicle or container, leaking substances, frost lines on cylinders, injured personnel, and dead or distressed animals.

5. If the fire department is already on the scene, report to the Incident Commander. If you are first on the scene and a hazardous material is suspected, request a Hazardous Material Response Team.

6. The initial assessment, treatment, and decontamination of patients are to be performed by the Hazardous Material Response Team. Decontaminated patients will be brought to the EMS unit. EMS personnel SHOULD NOT be participating in patient decontamination unless trained and equipped to do so.

7. Once the situation has been assessed, notify the receiving hospital of the following information:

   - Location of the incident
   - Names of the chemicals/products involved
   - Number of injured and contaminated
   - Extent of the injuries/contamination
   - Extent that the patients will be decontaminated in the field
   - Estimated time of arrival
   - Any other pertinent information that is available

Follow appropriate patient treatment guidelines per CENTRAL EMS protocols. Contact Medical Control for specific treatment guidelines.

For Medical Treatment or Problems Caused by Hazardous Materials Call CHEMTREC 1-800-424-9300
INTRA HOSPITAL TRANSFER

1. A patient is identified for INTRA HOSPITAL transfer when an attending physician determines that more appropriate facilities or services are available and consent for the transfer has been obtained from the patient or family.

2. The patient’s attending physician must contact the physician accepting the patient and the receiving hospital.

3. The patient must be STABILIZED prior to transfer.

4. The patient must have an adequate airway and ventilation.

5. Control of hemorrhage must have been initiated.

6. The patient’s spine and fractures have been appropriately stabilized.

7. An adequate access route for fluid administration has been established and appropriate fluid therapy has been initiated.

8. Responsibilities for arrangement and details of the transfer, including transportation, are those of the physicians at the transferring hospital.

9. Proper equipment and trained personnel (Respiratory Therapy, etc.) will be utilized to handle problems specific to the patient’s condition.

10. Instructions will be given to the personnel transferring the patient by the transferring physician or nursing staff.

11. Medical Control during an INTRA HOSPITAL transfer shall rest with the written orders pertaining to patient care of the receiving hospital/physician. In the event of a serious deterioration in the patient’s condition the nearest appropriate medical facility will be utilized.

12. Written records of the problems, treatment given and status at the time of transfer will accompany the patient. The record will include, but not be limited to:
   a. Patient Information
   b. History of injury or illness
   c. Patient Condition:
      i. Vital signs
      ii. pertinent physical findings
      iii. neurological status
      iv. treatment rendered, including medication and fluids
      v. Diagnostic findings: laboratory, EKG, CT Scan and x-ray films
      vi. Pre-Hospital care reports
Non-Transport or Patient/Refusals:

For patients refusing transport and treatment:

Assess the patient to the extent possible. Look for objective causes of injuries/illnesses that may impair decision-making. Evaluate mechanism/history, scene and potential for unseen injuries/illnesses. DO NOT DIAGNOSE.

Inform the patient of findings, possible injuries or illnesses that warrant treatment and transport, and the risks associated with delaying examination and treatment by a physician.

If the patient still refuses treatment/transport, then determine the patient’s ability to understand the medical severity and need for treatment.

Contact with Medical Control is STRONGLY URGED for any patient who continues to refuse treatment and transport.

The Medical Control Physician may: Determine that patient’s decision-making capacity is impaired and instruct transport of the patient.

The patient may be transported under the basis of a medical emergency, (i.e., patient is incapacitated and transported under implied consent)

The patient may be transported for their protection. Law enforcement should be requested to place the patient in protective custody.

Determine that the patient has decision-making capacity, in which case, the patient may refuse treatment and transport, but must be advised of the risks of non transport.

Central EMS Personnel must warn the patient that non transport is against medical advice (AMA) The patient should be urged to seek medical attention and transport.

A patient may refuse prehospital medical care and ambulance transport under these conditions:

1. Legal age: 18 years old or older
2. Emancipated minor (usually female that is married or anyone <18 years with court documents declaring them emancipated.)
3. Guardian over the person they care for:
   a. Parent for child
   b. Police for prisoners
   c. Legal guardian to an incompetent person
If the patient or legal representative refuses treatment, the EMT must evaluate and document:

1. Level of consciousness
2. Level of orientation
3. Ability to reason
4. Presence of head injury or other injury affecting the patient’s ability to reason
5. Whether the patient is apparently under the influence of drugs and/or alcohol
6. Any past medical history that may impact on the patient’s ability to reason
7. Medical Control’s advise, if contacted, AND
8. Patients’ condition at termination of contact (i.e., ambulatory, with family)
9. At least one set of Vital Signs

The on-line MEDICAL CONTROL must be contacted when there is any question regarding a patient’s competency to refuse care.
COMMUNICATIONS

1. Communication may be established by med-radio, cell phone, or through Central EMS Dispatch.

2. Radio Communications should be short and concise providing enough information so that the hospital’s emergency personnel will have a good understanding of the patient’s condition and type of illness or injury.

3. Communication with the receiving hospital should be established as soon as possible.

4. Consider requesting Central Communications to notify the receiving facility of any incoming patients.

5. The report should only relay essential patient care information. Patients’ name is not appropriate to be given on the radio (acceptable via a phone). Patient initials may be used for direct admission and routine transfers.

6. The following is the recommended radio report:

   Unit Identification
   En route or location (emergency/non emergency)
   The patient’s age & sex
   Chief complaint-mechanism of injury
   Level of consciousness
   Pertinent clinical findings (vital signs)
   History/Medications (if pertinent)
   Care given (standing orders)
   Response to treatment
   Additional orders
   ETA
DOCUMENTATION:

1. Use only black or blue ink

2. The Pre-Hospital Care Report must be filled out completely with all pertinent information. The report is a record that reflects on you and the profession as a whole, so be concise, write legibly, spell correctly, and use accepted terminology and abbreviations.

3. The Pre-Hospital Care Report provides written documentation of a patient’s condition and treatment for medical and legal purposes. It also adds to the continuity of patient care after arrival to the hospital.

4. Courts have interpreted improper documentation as a failure of treatment and monitoring of a patient. This may create the presumption of inadequate care.

5. If the Pre-Hospital Care Report is not chronologically correct and appears confused, it may be interpreted that you were confused. This open doors for questions pertaining to your ability to treat and take care of patients.

6. Marking out entries, scratching out entries, or writing over entries has been interpreted as attempts to conceal facts. Any error should have a one line drawn through it with your initials.

For every patient transport, the following must be documented:

A clear history of the present illness, including chief complaint, time of onset, associated complaints, pertinent negatives, the mechanism of injury, etc.

A complete physical exam, a chest exam, a head exam, an extremity exam, etc.

An exact level of consciousness using AVPU method.

At least one complete set of vital signs (pulse, respiration, and auscultated blood pressure).

Vital signs should always be repeated after all administration of medication.

For drug administration, the dosage of the drug, the route of administration, time of administration, and response to drug therapy.

A complete listing of treatments performed in chronological order. Any response to these treatments should be listed.

For extremity injuries, neurovascular status must be noted before and after immobilization.

For potential spinal injuries, document motor function before and after immobilization.

For IV administration, note the size of IV catheters, placement of IV, number of attempts, types of IV fluid, and flow rate.
An EKG lead II strip should be attached to the pre-hospital care report for all patients placed on the cardiac monitor. Any significant rhythm changes should be documented. For cardiac arrest, attach the initial strip, ending strip pre and post defibrillation, pacing attempts, etc. When performed, attach the EKG to the pre-hospital care report, or obtain a sheet of white paper from the ER, and place the strips on the sheet. Place the name of the patient and the PCR number.

For intubation, document the centimeter mark at teeth, methods that confirm placement (equal breath sounds, chest wall movement, absent gastric sounds, etc.), size of ET tube, and number of attempts.

Any orders requested whether approved or denied.
INTRODUCTION:

Patients have the right to refuse treatment and/or transport if they are of legal age and are competent. Competence is defined as the capacity or ability to understand the nature and effects of one’s acts or decisions. A person is considered to be competent until proven otherwise. There are situations, however, in which the interests of the general public outweigh an individual’s right to liberty:

1. The individual is threatening self-harm or suicide.

2. The individual presents a threat to the community because of a contagious disease or other physical dangerousness.

3. The individual presents a specific threat to innocent third parties.

4. The patient has been evaluated and is being transferred under a 1013 or 2013 order.

Certain medical, traumatic and psychological conditions can cause incompetence and behavior that interferes with the ability of EMS personnel to care for the patient, or that threatens the physical well being and safety of the patient or others. These conditions include, but are not limited to: drugs, metabolic disturbances, Central nervous system injury or insult, infections, hypo/hypertension, hypo/hyperthermia, hypoxia, psychological disorders, poisons and toxins. The law authorizes the use of "reasonable force" upon or toward the person of another without the other’s consent when the following circumstances exist or the care provider reasonably believes them to exist: Restraints may also be used to restrain a mentally ill or mentally defective person from self injury or injury to another or when used by one with authority to do so to compel compliance with reasonable requirements for the person’s control, conduct or treatment." If an EMS provider feels uncomfortable with any patient, even when they have not been actively combative, the provider has the right and duty to provide the patient and others with the security of patient restraint. Verbal threats are a legitimate reason for restraint. The following is a guideline for the safe transport of 1013 / 2013 patients and the use of restraints in the prehospital care setting. It is not intended to dictate police action that may be necessary to subdue someone.
General Guidelines for transport of 1013 / 2013 Patients
These Guidelines MUST be adhered to on all 1013 / 2013 patients

1. All Patients shall be transported on a stretcher from the patient’s room to the location inside the receiving facility as designated by staff.

2. When at all possible patients shall be transported utilizing hospital attire (gown and footwear). Make every attempt NOT to transport the patients in street clothes and shoes.

3. Complete five (5) point harness shall be used on all patients.

4. Cover sheet and blanket(s) when used shall be placed under the harness so to leave the buckles exposed to view.

5. The camera in the patient compartment shall be utilized when transporting 1013 / 2013 patients.

6. The attendant shall remain on the squad bench during transport.

7. The door handle covers shall be utilized at all times when transporting 1013 / 2013 patients.

8. All 1013 / 2013 patients MUST be turned over to a staff member at the receiving facility.

9. Restraints are to be used as outlined in the restraint section.
RESTRAINTS:

INDICATIONS:

1. Behavior or threats that create or imply a danger to the patient or others.
2. Safe and controlled access for medical procedures.
3. Change in behavior that results from improvement or deterioration of patient condition, i.e. hypoglycemia, overdose, intubation.

PRECAUTIONS:

1. Be aware of items at the scene or medical equipment that may become a weapon.
2. Assure that the scene is safe before approaching the patient.
3. Patients that are actively seizing should never be restrained.
4. The patient should be restrained in the prone position only as a last resort and only with continuous monitoring. This position may interfere with the patient’s ability to breathe.
5. Restraining a patient’s hands and feet together behind the patient (hog-tying) is not allowed. The only exception is a prisoner or suspect in the custody of law enforcement or prison authorities.

The following principles should be followed:

1. The need for physical restraint can be minimized by a calming approach to the patient, which makes it clear that the purpose of EMS involvement is to help with a medical issue. Consideration should be given to medical conditions that can cause delirium such as intoxication with prescription or illicit drugs, hypoxia, head injury, renal or liver failure, chronic dementia, hypoglycemia, etc.
2. The least restrictive method possible should be employed to safely restrain a patient.
3. Forceful restraint in the prone position (face down) must be avoided whenever possible because of its association with positional asphyxia, the inability to adequately monitor a patient’s airway, and the delay that would entail if the patient were to need immediate respiratory or cardiac resuscitation. A preferred method is to restrain one arm by the side with the other arm over the head with the patient supine (on their back). An oxygen mask connected to oxygen may be used to cover the patient’s mouth if they are spitting or attempting to bite.
4. Restraint use must be fully documented. Documentation must include the reasons and events that led up to patient restraint, the time of initial application, frequent assessments of the patient (Airway, Breathing, and Distal PMS), and the means of restraint.
5. If key lock restraints are used (such as handcuffs), law enforcement personnel must ride with the patient in the ambulance so that, if needed, the restraints can be quickly removed.
Patient Restraint During Inter-facility Transport:

1. The decision regarding use of restraints is the responsibility of the sending physician, but the resources of the transporting EMS agency should be taken into consideration.
2. Restraint should be considered for those patients who are felt to be at risk for elopement or harm to themselves or others. The method of restraint should be sufficient to keep the patient from freeing themselves but should not be unnecessarily restrictive.
3. Cooperative patients who are felt to be at low risk for elopement or self-injury can be transported without restraint.
4. During transport, all patients require constant visual evaluation. An EMT/EMT-P must be in the patient compartment with the patient at all times.
5. If a patient’s behavior changes during transport and the patient presents any action that could be harmful to themselves or others restraints may be utilized under these standing orders.
6. Patient dignity should be maintained during restraint.
7. Restraints should be periodically reevaluated to assess level of discomfort and neurovascular status in the distal part of the extremity.
8. Physician’s Restraint Orders expire 4 hours after being issued for patients 18 or older, and 2 hours for patients under 18.

Documentation should include the above evaluation in addition to the method of restraint and the need for restraint.

Use of weapons, including pepper spray, by EMS providers is not appropriate.

Documentation Requirements (Use of restraints):

1. The need for treatment / reason for restraint were explained to the patient (regardless of competence).
2. A copy of the 1013/2013 form if applicable.
3. A physician signed restraint order.
4. The type / method of restraints utilized.
5. Any / all injuries that occur during the restraint procedure.
6. Continuously assess the PMS (distal to the restraints) and the patient’s ability to breathe. The use of pulse oximetry does NOT take the place of PMS exam.
GENERAL PATIENT ASSESSMENT

Primary

Primary surveys must be completed in 45 - 60 seconds or one (1) minute maximum unless interrupted for resuscitation or “load and go” situations. Do not proceed to the next step unless stable at the current step. Detect a life threat, correct it and move on.

1. Survey the scene for hazards, need for backup.
2. Personal Protective Equipment
3. LOC (AVPU) with C-Spine control (trauma patients)
4. Orientation (if awake)
5. Pupils
6. Airway (open in a non awake patient)
7. Breathing (presence)
   a. Rate
   b. Rhythm
   c. Character
8. Peripheral Pulse - Radial, etc.
   a. Rate
   b. Rhythm
   c. Character
9. CRT
10. Skin
    a. Temperature
    b. Moisture
11. Assess major bleeding
    a. Control hemorrhage
12. Inspect the neck (trauma)
13. JVD
14. Tracheal Deviation
15. Inspect Chest (trauma & symmetry)
16. Palpate the chest
17. Breath sounds
18. Heart sounds
19. Inspect & Palpate the abdomen
20. Pelvis
21. Genitalia
22. Lower Extremities
   a. Distal Pulse
   b. Sensory / Motor
23. Manual stabilization of fractures (PRN)

“Load & Go?” (Yes = transport; No = 2° survey)
GENERAL PATIENT ASSESSMENT

Secondary

1. Check Vital Signs
   a. Pulse
   b. Respirations
   c. Blood Pressure
2. Skin Temperature and Color
3. Oxygen saturation
4. Check LOC (Glasgow Coma Scale)
5. Check Scalp
6. Check face
   a. Check eyes/pupils
   b. Check ears
   c. Check the nose
   d. Check the mouth
7. Check the neck
8. Check the chest
   a. Palpate
   b. Breath sounds
9. Check Abdomen
10. Check the pelvis / genitalia
11. Check legs (both)
    a. Distal pulses
    b. Motor
    c. Sensory
12. Check arms (both)
    a. Distal pulses
    b. Motor
    c. Sensory
13. Check Back
Emergency Stabilization

LOAD AND GO SITUATIONS:

The following situations require that field evaluation and care be interrupted for immediate loading and transport to the appropriate facility. Lifesaving procedures may be needed but should be done during transport.

- Airway obstruction that cannot be relieved quickly
- Trauma-related respiratory or cardiac arrest
- Medically related Cardiac Arrest
- Tension pneumothorax
- Pericardial tamponade
- Penetrating wounds to the chest with shock
- Head injury with a unilaterally dilated pupil
- Head injury with rapidly deteriorating condition
- Any trauma victim in shock that does not rapidly respond to shock resuscitation efforts. DO NOT DELAY TO SEE IF THERAPY WORKS.

SCENE TIME:

1. If at any time an EMT cannot provide or protect a patent airway to a patient, IMMEDIATE transport is required. – DO NOT DELAY TO MAKE NUMEROUS ATTEMPTS TO SECURE THE AIRWAY.

2. For LOAD-AND-GO situations scene times should be <10 minutes unless necessary for extrication.

3. If during a transport the patient become unstable to the point that a unit has to stop so that the EMT driving can assist in stabilization there should be no more than a five (5) delay in transport.

4. Establishing an IV line in the field should not delay transport unless there is an immediate need for IV therapy (e.g., hypoglycemia, seizures, narcotic overdose, cardiac arrest, or unstable arrhythmia’s). An immediate need should NOT result in more than a five (5) delay in transport.
PRIMARY MEDICAL CARE

Loosen tight clothing and reassure the patient
Sit the patient in semi-Fowler’s or position of comfort (if applicable)

OXYGEN in an amount appropriate for patient condition
(2-6 lpm nasal cannula or 10-15 lpm non-rebreather)

Complete a patient survey

Monitor oxygen saturation

Place the patient on a cardiac monitor and evaluate cardiac rhythm (CT and paramedic ONLY)

If a patient’s condition warrants, initiate IV of Normal Saline at KVO rate or establish an INT.

Attempt X3 only, unless requested to continue

** SEE EXCEPTIONS

Obtain vital signs (BP, Pulse, Oxygen sat, Resp. rate, and temp if indicated)

Attempt radio contact with medical control as soon as patient condition permits.
Transmit assessment information and any request for orders.

If no radio contact can be established or patients’ condition requires immediate treatment, refer to the appropriate standing order and begin intervention immediately

Re-assess patient response after each intervention and follow appropriate standing order

Recheck vital signs and monitor other pertinent signs at least every 5 - 10 minutes.
Record all assessment information, including the times they were obtained.

TRANSPORT to the appropriate facility.
**EXCEPTIONS to standard IV fluid requirements:**

1. Starting an IV is contraindicated in Croup/Epiglottitis
2. The only time there is to be a delay on the scene to establish an IV is the presence of life threatening illness / injury that requires immediate treatment. If such condition exists and IV access can not be established in two (2) attempts then the patient becomes a load and go patient.

**STANDARDS FOR MEDICATION ADMINISTRATION**

All medications must be checked for the following prior to administration:

A. Right Drug
B. Right Amount
C. Right Route
D. Expiration Date
E. Clarity

Morphine **MUST** be diluted prior to administration.

Morphine 10mg/1cc + 9cc NS = 10mg/10cc or 1mg/cc
PRIMARY TRAUMA CARE

Prehospital personnel shall take all reasonable precautions to prevent exposure to blood and/or body fluids of any patient. Put on fluid repellent gowns, gloves, masks, and goggles according to standard operating procedures.

Transport directly to a trauma center should be considered for all major traumas, that does not require immediate hospital stabilization.

The Primary Survey and Resuscitative Phase take priority in major trauma victims. The Secondary Survey IS NOT TO BE DONE if airway, ventilation, or circulatory status cannot be established and/or maintained. TRANSPORT IMMEDIATELY, documenting the reasons why field intervention was abbreviated.

PRIMARY SURVEY AND RESUSCITATION: Evaluate and intervene as necessary.

**A=Airway**

1. Secure airway with manual maneuvers; modified jaw thrust, chin lift.
2. Determine the need for C-Spine immobilization and perform as necessary.
3. Airway Adjunct Options:
   A. With gag reflex - Nasopharyngeal airway
   B. Without gag reflex - Oropharyngeal airway
   C. Apneic - Intubation with C-Spine immobilization.  
   D. Hypoventilation - Intubation with C-Spine immobilization - if no maxilla/face trauma, blind nasotracheal intubation. Then if unsuccessful, in line C-Spine with oral endotracheal intubation.
   E. Upper Airway Obstruction - Needle cricothyroidotomy
   F. See Trauma Airway protocol

**B=Breathing**

Assessment - Respiratory rate, chest expansion. If labored, check breath sounds, heart tones, trachea position, jugular vein distension.

Management-
1. OXYGEN - 15 lpm via NRB
2. Assist ventilation as needed with BVM and Oxygen
3. Monitor Oxygen saturation
4. Stop to treat:
   A. Tension pneumothorax - pleural decompression of affected side
   B. Sucking chest wound - occlusive dressing (3 sided)
   C. Flail Chest - stabilize flail segment and assist ventilation with BVM of intubate as needed (Use bulky dressing or a pillow to stabilize - DO NOT use sandbag or IV fluid bag)
Circulation / Cardiac Status

Assessment-
1. Compare quality of carotid vs. radial pulses
2. Capillary refill
3. Systolic B/P

Management -
1. Control bleeding with direct pressure
2. Monitor EKG for dysrhythmias
3. Determine need for IV fluid therapy. IV guidelines: Initiate = 1000 cc Normal Saline with large bore.
   - Volume replacement is 3 cc IVF for every 1 cc estimated blood loss.
     A. Attempt IV once on scene, taking no more than 5 minutes, attempt again en route times 2.
     B. Do not attempt on scene if:
        1. ETA > 15 minutes to hospital; patient not in shock.
        2. Patient is in traumatic arrest.

PROCEED TO SECONDARY SURVEY ONLY IF TRANSPORT IS NOT ALREADY INDICATED

SECONDARY SURVEY

1. Perform secondary survey (60 - 90 seconds only) only in patients who were not LOAD & GO.
   A. Head - palpate and inspect. Monitor LOC and pupils. See Head Injury Protocol
   B. Neck - Complete total spinal immobilization. Note presence or absence of carotid pulse, subcutaneous emphysema and tracheal deviation prior to placing collar. See spinal injury protocol.
   C. Chest - Inspect, palpate, and auscultate breath sounds bilaterally and heart tones. See Chest Injury protocol.
   D. Abdomen - Note tenderness, evisceration, penetration.
   E. Extremities - Note deformities, tenderness, pulses, motor and sensory functions.

2. Splint and dress major injuries
   A. See Extremity protocol
   B. Impaled objects
      a. DO NOT remove
      b. Stabilize
   C. Recheck vital signs.
      D. Contact Medical Control
      E. TRANSPORT
Adult Tachycardia
# 2007-A001

1. TACHYCARDIA With Pulses
   - Assess and support ABCs as needed
   - Give oxygen
   - Monitor ECG (identify rhythm), blood pressure, oximetry
   - Identify and treat reversible causes

2. Symptoms Persist
   - Establish IV access
   - Obtain 12-lead ECG (when available) or rhythm strip
   - Is QRS narrow (<0.12 sec)?
   - Is patient stable?
     - Unstable signs include altered mental status, ongoing chest pain, hypotension or other signs of shock
     - Note: rate-related symptoms uncommon if heart rate <150/min
   - Perform immediate synchronized cardioversion
     - Establish IV access and give sedation if patient is conscious; do not delay cardioversion
     - Consider expert consultation
     - If pulseless arrest develops, see Pulseless Arrest Algorithm

3. Narrow
   - NARROW QRS*: Is Rhythm Regular?
     - Regular
       - Attempt vagal maneuvers
       - Give adenosine 6 mg rapid IV push. If no conversion, give 12 mg rapid IV push; may repeat 12 mg dose once
     - Irregular
       - Irregular Narrow-Complex Tachycardia
         Probable atrial fibrillation or possible atrial flutter or MAT (multifocal atrial tachycardia)
         - Consider expert consultation
         - Control rate (eg, diltiazem, β-blockers; use β-blockers with caution in pulmonary disease or CHF)
       - Does rhythm convert?
         - Note: Consider expert consultation
         - Converst
           - If rhythm converts, probable reentry SVT (reentry supraventricular tachycardia):
             - Observe for recurrence
             - Treat recurrence with adenosine or longer-acting AV nodal blocking agents (eg, diltiazem, β-blockers)
           - Does Not Convert
             - If rhythm does NOT convert, possible atrial flutter, ectopic atrial tachycardia, or functional tachycardia:
               - Control rate (eg, diltiazem, β-blockers; use β-blockers with caution in pulmonary disease or CHF)
               - Treat underlying cause
               - Consider expert consultation

4. Wide (>0.12 sec)
   - WIDE QRS*: Is Rhythm Regular?
     - Expert consultation advised

5. Evaluating Tachycardia
   - Secure, verify airway and vascular access when possible
   - Consider expert consultation
   - Prepare for cardioversion

During Evaluation
- Secure, verify airway and vascular access when possible
- Consider expert consultation
- Prepare for cardioversion

Treat contributing factors:
- Hypoventilation
- Hypoxia
- Hyperkalemia
- Hypoglycemia
- Hypothermia
- Toxins
- Tamponade, cardiac
- Tension pneumothorax
- Thrombosis (coronary or pulmonary)
- Trauma (hypovolemia)
Adult Bradycardia

# 2007-A002

1. **BRADYCARDIA**
   Heart rate <60 bpm and inadequate for clinical condition

2. • Maintain patent airway; assist breathing as needed
   • Give oxygen
   • Monitor ECG (identify rhythm), blood pressure, oximetry
   • Establish IV access

3. **Signs or symptoms of poor perfusion caused by the bradycardia?**
   (eg, acute altered mental status, ongoing chest pain, hypotension or other signs of shock)

4A. **Observe/Monitor**

4. **Adequate Perfusion**
   • Prepare for transcutaneous pacing;
     use without delay for high-degree block
     (type II second-degree block or third-degree AV block)
   • Consider atropine 0.5 mg IV while awaiting pacer. May repeat to a
     total dose of 3 mg. If ineffective, begin pacing
   • Consider epinephrine (2 to 10 µg/min)
     or dopamine (2 to 10 µg/kg per minute)
     infusion while awaiting pacer or if pacing ineffective

4. **Poor Perfusion**
   • Prepare for transvenous pacing
   • Treat contributing causes
   • Consider expert consultation

**Reminders**
- If pulseless arrest develops, go to Pulseless Arrest Algorithm
- Search for and treat possible contributing factors:
  - Hypovolemia
  - Hypoxia
  - Hydrogen ion (acidosis)
  - Hypo-/hyperkalemia
  - Hypoglycemia
  - Hypothermia
  - Toxins
  - Tamponade, cardiac
  - Tension pneumothorax
  - Thrombosis (coronary or pulmonary)
  - Trauma (hypovolemia, increased ICP)
**Pediatric Tachycardia**

# 2007-A004

1. **TACHYCARDIA**
   - With Pulses and Poor Perfusion
     - Assess and support ABCs as needed
     - Give oxygen
     - Attach monitor/defibrillator

2. Evaluate QRS duration
   - Narrow QRS (≤0.08 sec)
   - Wide QRS (>0.08 sec)

3. Evaluate rhythm with 12-lead ECG or monitor

4. **Probable Sinus Tachycardia**
   - Compatible history consistent with known cause
   - P waves present/normal
   - Variable R-R; constant P-R
   - Infants: rate usually <220 bpm
   - Children: rate usually <180 bpm

5. **Probable Supraventricular Tachycardia**
   - Compatible history (vague, nonspecific)
   - P waves absent/abnormal
   - HR not variable
   - History of abrupt rate changes
   - Infants: rate usually ≥220 bpm
   - Children: rate usually ≥180 bpm

6. Search for and treat cause

7. Consider vagal maneuvers (No delays)

8. **If IV access readily available:**
   - Give adenosine 0.1 mg/kg (maximum first dose 6 mg) by rapid bolus
   - May double first dose and give once (maximum second dose 12 mg)
   - or
   - Synchronized cardioversion: 0.5 to 1 J/kg; if not effective, increase to 2 J/kg
   - Sedate if possible but don’t delay cardioversion

9. Possible Ventricular Tachycardia

10. **Synchronized cardioversion:**
    - 0.5 to 1 J/kg; if not effective, increase to 2 J/kg
    - Sedate if possible but don’t delay cardioversion
    - May attempt adenosine if it does not delay electrical cardioversion

11. **Expert consultation advised**
    - Amiodarone 5 mg/kg IV over 20 to 60 minutes
    - or
    - Procaïnamide 15 mg/kg IV over 30 to 60 minutes
    - Do not routinely administer amiodarone and procaïnamide together

**During Evaluation**
- Secure, verify airway and vascular access when possible
- Consider expert consultation
- Prepare for cardioversion

**Treat possible contributing factors:**
- Hypovolemia
- Hypoxia
- Hyperkalemia
- Hypoglycemia
- Hypothermia
- Toxins
- Tamponade, cardiac
- Tension pneumothorax
- Thrombosis (coronary or pulmonary)
- Trauma (hypovolemia)
Pediatric Bradycardia

1. BRADYCARDIA With a Pulse Causing cardiorespiratory compromise

2. • Support ABCs as needed
   • Give oxygen
   • Attach monitor/defibrillator

3. Bradycardia still causing cardiorespiratory compromise?
   - No
     • Support ABCs; give oxygen if needed
     • Observe
     • Consider expert consultation
   - Yes
     • Perform CPR if despite oxygenation and ventilation HR <60/min with poor perfusion

4. Persistent symptomatic bradycardia?
   - No
   - Yes
     • Give epinephrine
       - IV/IO: 0.01 mg/kg
         (1:10000: 0.1 mL/kg)
       - Endotracheal tube:
         0.1 mg/kg
         (1:1000: 0.1 mL/kg)
       - Repeat every 3 to 5 minutes
     • If increased vagal tone or primary AV block:
       Give atropine, first dose: 0.02 mg/kg, may repeat. (Minimum dose: 0.1 mg; maximum total dose for child: 1 mg.)
       • Consider cardiac pacing

5A. Reminders
   - During CPR, push hard and fast (100/min)
   - Ensure full chest recoil
   - Minimize interruptions in chest compressions
   - Support ABCs
   - Secure airway if needed; confirm placement
   - Search for and treat possible contributing factors:
     - Hypovolemia
     - Hypoxia or ventilation problems
     - Hydrogen ion (acidosis)
     - Hypo-/hyperkalemia
     - Hypoglycemia
     - Hypothermia
     - Toxins
     - Tamponade, cardiac
     - Tension pneumothorax
     - Thrombosis (coronary or pulmonary)
     - Trauma (hypovolemia, increased ICP)

7. If pulseless arrest develops, go to Pulseless Arrest Algorithm
Pediatric Pulseless Arrest

# 2007-A006

PULSELESS ARREST
- BLS Algorithm: Continue CPR
- Give oxygen when available
- Attach monitor/defibrillator when available

1. Check rhythm
- Shockable rhythm?

2. Shockable
- Give 5 cycles of CPR

3. Shockable rhythm?
- Yes: Go to Box 4
- No: Resume CPR immediately

4. Give 1 shock
- Manual: 2 J/kg
- AED: >1 year of age
- Use pediatric system if available for 1 to 8 years of age
- Resume CPR immediately

5. Check rhythm
- Shockable rhythm?
- Yes: Go to Box 4
- No: Continue CPR while defibrillator is charging

6. Give 1 shock
- Manual: 4 J/kg
- AED: >1 year of age
- Resume CPR immediately
- Consider antiarrhythmics (e.g., amiodarone 5 mg/kg IV/I/O or lidocaine 1 mg/kg IV/I/O)
- Consider magnesium 25 to 50 mg/kg IV/I/O, max 2 g for torsades de pointes
- After 5 cycles of CPR go to Box 5 above

7. Check rhythm
- Shockable rhythm?
- Yes: Go to Box 4
- No: Continue CPR while defibrillator is charging

8. Give 1 shock
- Manual: 4 J/kg
- AED: >1 year of age
- Resume CPR immediately
- Consider antiarrhythmics (e.g., amiodarone 5 mg/kg IV/I/O or lidocaine 1 mg/kg IV/I/O)
- Consider magnesium 25 to 50 mg/kg IV/I/O, max 2 g for torsades de pointes
- After 5 cycles of CPR go to Box 5 above

9. Not Shockable
- Asystole/PEA

10. Resume CPR immediately
- Give epinephrine
  - IV/I/O: 0.01 mg/kg
  - Intravenous: 0.1 mL/kg
  - Inotropic support

11. Check rhythm
- Shockable rhythm?
- Yes: Go to Box 4
- No: If asystole, go to Box 10

12. Not Shockable
- If electrical activity, check pulse. If no pulse, go to Box 10
- If pulse present, begin postresuscitation care

13. Shockable
- Go to Box 4

During CPR
- Push hard and fast (100/min)
- Ensure full chest recoil
- Minimize interruptions in chest compressions
- One cycle of CPR: 15 compressions then 2 breaths; 5 cycles <1 to 2 min
- Avoid hyperventilation
- Secure airway and confirm placement.
- After an advanced airway is placed, rescuers no longer deliver "cycles" of CPR. Give continuous chest compressions without pauses for breaths. Give 8 to 10 breaths/minute. Check rhythm every 2 minutes.
- Rotate compressors every 2 minutes with rhythm checks
- Search for and treat possible contributing factors:
  - Hypovolemia
  - Hypoxia
  - Hypoglycemia
  - Hypothermia
  - Toxins
  - Tamponade, cardiac
  - Tension pneumothorax
  - Thrombosis (coronary or pulmonary)
  - Trauma
NEAR DROWNING
STABLE
# 2007-A007

ABC’s - treat as needed
↓
Primary Trauma Care
↓
Suction as needed
↓
Consider immobilization
↓
Awake, alert, with purposeful response
to pain, normal respirations, & pupil response.
↓
Monitor airway and vital signs en route
↓
Transport
NEAR DROWNING

UNSTABLE

# 2007-A008

ABC’s - treat as needed
↓
Primary Trauma Care
↓
Suction as needed
↓
Consider immobilization
↓
Comatose or semi-conscious, unresponsive to verbal stimuli, abnormal response to pain, abnormal respirations or pupil response.
↓
Begin CPR as needed
↓
Intubate as needed
↓
Immobilize C-Spine in suspected diving injuries.
↓
Assess patient for increased intracranial pressure. Elevate head 30 degrees if possible and hyperventilate.
↓
Monitor Cardiac closely and treat arrhythmias per protocol
↓
Remove wet clothes
↓
Warm patient as needed
↓
Monitor V/S
↓
Handle patient carefully to avoid precipitating V-fib in hypothermia
↓
Monitor Cardiac and treat arrhythmias per protocol
↓
Transport ASAP

SPECIAL NOTES AND PRECAUTIONS:

The rule of six to ten minutes for brain death is not prevalent in cases of cold water drowning. Depending on the circumstances, near drowning victims in cold water have had complete recovery without any neurological deficit following documented periods of drowning in excess of 45-50 minutes. For this reason, it is better to initiate CPR on these patients while attempting to increase their core body temperature rather that assuming that these patients are “Dead”. CONSIDER TRANSPORT OF DIVING ACCIDENT PATIENTS TO THE CLOSEST HYPERBARIC CHAMBER.
HYPOTHERMIA
# 2007-A009

ABC’s - treat as needed
↓
Primary Trauma Care
  (Large Bore IV’s)
↓
Remove patient from cold environment
↓
Remove wet clothes from patient
↓
Wrap in warm blankets
↓
Avoid excessive manipulation in moving the patient
↓
Closely monitor cardiac and treat arrhythmias per protocol
↓
Check Blood Glucose and treat as needed

SPECIAL CONSIDERATIONS
1. Use least invasive airway maneuver since manipulation may induce V-Fib
2. Patient cannot be pronounced dead until warmed
HEAT CRAMPS / EXHAUSTION
# 2007-A010

ABC’s - treat as needed↓
Primary Trauma Care↓
(Large bore IV)↓
Begin gradual cooling procedure (see below)↓
Titrate IV fluids to maintain SBP >90↓
Monitor for change

Gradual Cooling Procedure

Move patient to air-conditioned environment

Remove as much clothing as possible to facilitate cooling

Douse towels or sheet with cool water and place on patient

Assess patient for shivering. Cover with blanket if this occurs and transport.
HEAT STROKE  
# 2007-A011

(Temp > 104, severe alteration in level of conscious, coma, red hot, dry skin may or may not always be present)

ABC’s - treat as needed
↓
Primary Trauma Care
  (Large bore IV’s)
↓
Remove patient to a cool environment
↓
Begin Rapid cooling procedure
↓
Titrate IV fluids to maintain SBP >90
↓
Closely monitor cardiac and treat arrhythmias per protocol
↓
Monitor Vital Signs
↓
Closely monitor patient for pulmonary edema

RAPID COOLING PROCEDURE

Remove all clothing!

Douse body with cool water

Apply cold packs to underarms, nap of neck and groin (Do not apply ice)

Keep ambulance well ventilated
**ELECTRICAL BURNS**

# 2007-A012

Have source of electricity shut off
↓
C-Spine Control
↓
ABC’s - treat as needed
↓
Primary Trauma Care
↓
Closely monitor cardiac rhythm and treat arrhythmias per protocol
↓
Assess for entrance and exit wounds including neurovascular status
Of affected part
↓
Cover wound with dry sterile dressing
↓
Transport to most appropriate facility

**NOTE:**
Consider Morphine Sulfate in 2 mg increments IV Push up to 10 mg total for relief of severe pain with DIRECT M.D. approval.
CHEMICAL BURNS
POWDER AND LIQUIDS
# 2007-A013

ABC’s - Treat as needed
↓
Primary Trauma Care
↓
Wear sterile gloves, and mask until burns are covered
↓
Brush off excess chemical
↓
Remove clothing if possible
↓
Irrigate with copious amounts of sterile water of saline solution through-out transport
↓
Apply sterile saline soaked dressing to burned areas of skin after copious irrigation.
↓
Transport to most appropriate facility

NOTE:
Consider Morphine Sulfate in 2 mg increments IV Push up to 10 mg total for relief of severe pain with DIRECT M.D. approval.
THERMAL BURNS / First Degree
# 2007-A014

ABC’s - Treat as needed

Primary Trauma Care

Wear sterile gloves, and mask until burns are covered

Remove clothing, jewelry, etc.

Do not pull away clothing that is stuck to burn wound.

Cut around or moisten with normal saline then attempt to remove.

If burn occurred within last 10 minutes

Cool burn for 1 minute with normal saline or sterile water.

Open sterile sheet on stretcher before placing patient for transport.

Cover patient with dry, sterile sheets and blanket to maintain body temperature.

Transport to most appropriate facility

NOTE:

Consider Morphine Sulfate in 2 mg increments IV Push up to 10 mg total for relief of severe pain with DIRECT M.D. approval.
THERMAL BURNS / Second or Third Degree

# 2007-A015

ABC’s - Treat as needed

Primary Trauma Care

Wear sterile gloves, and mask until burns are covered

Remove clothing, jewelry, etc.
Do not pull away clothing that is stuck to burn wound.
Cut around or moisten with normal saline then attempt to remove.

Cover with sterile burn dressing moistened with normal saline.
Do not break blisters.

Open sterile sheet on stretcher before placing patient for transport.
Cover patient with dry, sterile sheets and blanket to maintain body temperature.

Transport to most appropriate facility.

NOTE:

Consider Morphine Sulfate in 2 mg increments IV Push up to 10 mg total for relief of severe pain with DIRECT M.D. approval.
[ RULE OF 9’S ]

ANTERIOR

INFANT

POSTERIOR

PALMAR METHOD
(Patient’s palm)
INHALATION BURNS

ABC’s - treat as needed

Primary Trauma Care

Note presence of hoarseness, wheezing, stridor, carbonaceous sputum, cough, and singed facial hair. Document.

Consider Albuterol as needed for bronchospasm

Closely monitor Respiratory status and be prepared to intubate

Treat wounds per protocol

Transport EMERGENCY

NOTE:

Consider Morphine Sulfate in 2 mg increments IV Push up to 10 mg total for relief of severe pain with DIRECT M.D. approval.
Obstetrical Emergencies
Labor, Delivery, Normal Emergency Childbirth
# 2007-A017

Phase I – Labor

Obtain history and determine if there is adequate time to transport.
  Gravida (# of previous pregnancies)
  Para (# of live births)
  Due Date
  Contractions
    How far apart are contractions?
    Duration of contractions?
    Involuntary pushing with contractions?
  Bag of water intact?
    Time when membrane ruptured.
    Color of Fluid.
  High risk concerns.

If mother is hyperventilating.
  Encourage slow deep breaths.
  Administer 10 – 15 L oxygen via NRB mask.
Start IV of Normal Saline at KVO
Check for bulging perineum.
  If crowning occurs en route, prepare for delivery.
DO NOT ATTEMPT TO RESTRAIN OR DELAY DELIVERY
Place mother in a supine position.
Put on sterile gloves
Open OB pack.
Drape mother’s abdomen and perineum.
Transport to hospital ASAP.
Phase II – Delivery

Control delivery of head with palm on occiput so it doesn’t emerge too quickly. Support infant’s head as it emerges and protect perineum with gentle hand pressure. Tear amniotic membrane if it is still intact and visible through the vagina.

Check for cord around the neck and gently remove if present. If unsuccessful, double clamp cord and cut between. Suction MOUTH FIRST then the nose of infant as soon as it is delivered with bulb syringe. Note presence or absence of meconium.

As shoulders emerge, guide head and neck downward to deliver uppermost shoulder. Support and lift head and neck slightly to deliver posterior shoulder.

Rest of the infant should deliver with passive participation. Get a firm hold on baby.

Keep newborn level with mother’s vagina until cord is clamped.

Administer post-partum care (See appropriate protocol)

TRANSPORT to appropriate hospital ASAP.

HIGH RISK CONCERNS:
Alcohol/Drug abuse
Teenage pregnancy
Diabetes Mellitus
Hypertension
OBSTETRICAL EMERGENCIES
LABOR, DELIVERY, NORMAL EMERGENCY CHILDBIRTH
Documentation

The following should be documented on the Trip Report:

- Sex of Baby
- Presentation (such as head or feet)
- Time of birth
- Date of birth
- Cord around neck (Nuchal): YES/NO
- Membranes rupture at (time)
- Appearance of fluid (clear or cloudy)
- Meconium stained or blood stained
  - Apgar score at 1 Min
  - Apgar score at 5 Min
  - Time placenta delivered:
- Infant resuscitation (If Initiated)
  Stimulation/Oxygen
  Assist respirations
  CPR Time begun
# Apgar Scoring

<table>
<thead>
<tr>
<th>Apgar Scoring</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>1 MINUTE</th>
<th>5 MINUTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A – Appearance (color)</td>
<td>BLUE / PALE</td>
<td>BODY PINK</td>
<td>FULLY PINK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P – Pulse (heart rate)</td>
<td>ABSENT</td>
<td>BELOW 100 BPM</td>
<td>ABOVE 100 BPM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G – Grimace (Reflex / Irritability)</td>
<td>NO RESPONSE</td>
<td>GRIMACE</td>
<td>COUGH OR SNEEZE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A – Activity (Muscle Tone)</td>
<td>LIMP</td>
<td>SOME FLEXION</td>
<td>ACTIVE MOTION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R – Respiratory Effort</td>
<td>ABSENT</td>
<td>WEAK CRY / HYPOVENTILATION</td>
<td>GOOD, STRONG COUGH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
POST-PARTUM CARE FOR INFANT

# 2007-A019

Begin documentation of events.

↓

Note time of delivery

↓

Continue to suction infant’s mouth and nose. Spontaneous respirations should begin within 30 seconds after stimulating reflexes. If not, begin artificial ventilation at 28-30 breaths a minute. If no apical pulse or brachial pulses, or pulse < 100, begin CPR and transport.

↓

Obtain 1 minute APGAR

↓

Wait for cord pulsations to stop. Clamp cord 6" and 8" from infants body and cut with sterile knife or scissors between clamps. Dry the baby and wrap in a blanket to preserve body warmth. Utilize infant hats if available. Keep infants head covered. If in cold environment, wrap in tin foil to insulate body. May use placenta as heat source, if necessary. Place placenta in plastic bag, place next to infant’s body and then wrap all in blankets and foil.

↓

Place infant on side; preferably head lower than trunk, suction as needed. If infant is cyanotic, but breathing spontaneously, place adult face mask next to infant’s face and run oxygen at 6 lpm.

↓

Obtain 5 minute APGAR score and document

**** Continue do APGAR scores every 5 minutes until you get 2 scores that are above 7.

**** If Meconium present:

Before stimulating infant to cry, use appropriately sized ET Tube attached to suction and suction infants airway 3 times. This is done by intubating the patient, attaching the suction tubing to the ET tube and suctioning while extubating the patient.
POST-PARTUM FOR MOTHER
# 2007-A020

Placenta should deliver in 20 - 30 minutes. If delivered, collect placenta in a plastic bag and transport it to the hospital. DO NOT pull on cord to facilitate delivery. DO NOT delay transport if placenta does not deliver spontaneously.

↓
If perineum is torn and bleeding, apply direct pressure with sanitary pads, and have mother bring her legs together.

↓
Observe for excessive bleeding.

If estimated blood loss is greater than 500 - 1000 cc - treat as follows:

Increase IV rate or give fluid bolus.

↓
Massage top of uterus (fundus) every 5 minutes until firm.

↓
Allow to nurse - this will contract uterus.
PROLAPSED CORD
# 2007-A021

ABC’s - treat as needed
↓
Primary Medical Care
↓
Elevate mother’s hips
↓
Place gloved hand in vagina between pubic bones and presenting part and exert counter-pressure against presenting part
↓
Keep exposed cord moist and warm
↓
Keep hand in position
↓
TRANSPORT EMERGENCY
BREECH BIRTH
# 2007-A022

ABC’s - treat as needed
  ↓
Primary Medical Care
  ↓
Never attempt to pull the baby from the vagina by the legs of trunk
  ↓
As soon as the legs are delivered, support baby’s body, wrapped in a towel. After shoulders are delivered, gently elevate the trunk and legs to aid in the delivery of the head (if face down).

Head should deliver in 30 seconds. IF NOT, reach two gloved fingers into the vagina to locate the infant’s mouth. Press the vaginal wall away from the baby’s mouth to form an airway. Apply gentle pressure to mother’s fundus. If head does not deliver in 2 minutes, keep your hand in place and transport EMERGENCY.
PREMATURE BIRTH
# 2007-A023

Before 38 weeks gestation or under 5.5 lbs

Initial delivery procedure and post-partum infant care.

↓
If cyanotic with spontaneous ventilation.
Place face mask at 6 lpm next to infants face.

↓
Wrap baby in cleanest, warmest material available.

↓
KEEP BABY WARM!!
Use aluminum foil or silver swaddler as an outer wrapping for extra insulation.

KEEP BABY WARM!!

↓
Leave infant’s face uncovered.

↓
Suction as necessary.

↓
Assist ventilation at 28-30 times/min with Pediatric BVM just enough to see chest rise.

↓
If there is any bleeding from the cord
Re-clamp in another place close to the original place.

↓
Avoid unnecessary handling of infant

↓
TRANSPORT ASAP
THIRD TRIMESTER BLEEDING
OCCURRING DURING THE 6TH - 9TH MONTH
# 2007-A024

ABC’s - treat as needed
↓
Primary Medical Care
(Large Bore IV)
↓
Place mother on her left side
↓
Note type and amount of bleeding and/or discharge.
↓
Palpate uterus for tonicity.
↓
Treat shock per protocol if present
↓
TRANSPORT EMERGENCY
PRE-ECLAMPSIA OR TOXEMIA
# 2007-A025

ABC’s
↓
Primary Medical Care
↓
Gentle handling of mother
↓
Check Blood Glucose and treat per protocol
↓
Minimal CNS stimulation - DO NOT check pupillary light reflex
↓
** Seizure precautions
↓
TRANSPORT ASAP without the use of lights and sirens when possible

** NOTE:

Treat active seizures with Magnesium Sulfate 2 gms IV Push with Direct M.D. approval
Consider Valium 5 mg IV Push with Direct M.D. approval
TRAUMA IN PREGNANCY

# 2007-A026

ABC’s - treat as needed

↓

Primary Trauma Care

↓

Check externally for uterine contractions, vaginal bleeding and/or leaking amniotic fluid

↓

If C-Spine injury is suspected with associated hypotension, manually displace uterus to the left side to minimize uterine compression of the inferior Vena Cava.

↓

If mother has suspected C-Spine injury and becomes hypotensive while supine on a backboard, elevate right side of the backboard 30 degrees to relieve pressure on the vena cava from uterus.

↓

CONTACT MEDICAL CONTROL / If indicated

NOTE: Most common cause of fetal death is maternal death.

Fetus may be in jeopardy while mother’s vital signs remain stable
ABDOMINAL / PELVIC TRAUMA

# 2007-A027

ABC’s - treat as necessary
↓
Primary Trauma Care
↓
Treat Shock per protocol
↓
Control any hemorrhage
(Use moist dressing if evisceration)
(Do not attempt to reinsert eviscerated tissue)
↓
Stabilize Pelvic fractures as needed
Lift the dressing to vent excess pressure
POISONING / OVERDOSE

POISON CONTROL 1-800-282-5846

ABC’s - treat as needed
↓
Primary Medical Care
↓
Treat as follows:
** Contact Poison Control for Advice **

1. External (Skin, eyes) contamination
   A. Wear protective gloves to protect the rescuer
   B. Remove all clothing and solid contaminants (Place in plastic bag)
   C. Re-evaluate ABC’s
   D. Assess and treat any associated injuries
   E. Flush affected area (skin, eyes) with running water for 20 minutes prior to transport if the patient is stable.
   F. Remove all rings, bracelets, and constricting bands
   G. Treat burns and inhalation as per protocol
   H. Evaluate for systemic symptoms from chemical exposure and contact Medical Control for treatment
   I. Wrap affected areas in clean, dry sheets for transport

2. Absorbed or Internal Ingestion
   A. Altered mental status, inadequate ventilation or ingestion of cardiotoxic drugs
      1. Primary Medical Care
      2. Monitor cardiac and treat arrhythmias appropriately
      3. Treat shock per protocol
      4. Check Blood Glucose and treat as per protocol
      5. Administer Narcan 2.0 mg IV Push for altered mental status or decreased ventilation.
      6. Consider serum alkalization with sodium bicarbonate 1 meq/kg in a tricyclic antidepressant overdose with M.D. approval
   B. Asymptomatic Ingestion
      1. Primary Medical Care
      2. Monitor cardiac and treat arrhythmias appropriately
      3. Treat shock per protocol
      4. Check Blood Glucose and treat as per protocol
      5. Consult Medical Control on the administration of Ipecac
   C. Organophosphates (Absorbed)
      1. Primary Medical Care
      2. Monitor cardiac and treat arrhythmias appropriately
      3. Treat shock per protocol
      4. Check Blood Glucose and treat as per protocol
      5. Administer Atropine 2 mg IV Push with M.D. approval
SEIZURE

# 2007-A029

ABC’s - treat as needed

↓

Protect from injury (especially head)

↓

Suction the airway as needed

↓

Primary Medical Care

↓

Check Blood Glucose and treat per protocol if hypoglycemia present

↓

Cool the patient if needed

↓

Treat as follows:

↓

Administer Narcan 2.0 mg IV Push if a narcotic overdose suspected

↓

If active seizure >2 - 3 minutes consider Valium 2 - 5 mg IV slowly

(Valium can be given rectally @ 0.5 mg / kg; max dose 5 mg)

↓

Contact Medical Control for higher doses

↓

After Seizure stops monitor v/s, LOC, and cardiac rhythm

NOTE: If alcohol withdrawal seizure is suspected, treat as above and consider simultaneous administration of Thiamine 100 mg IV Push and Dextrose 50% - 25 grams IV Push
DIABETIC EMERGENCIES
# 2007-A031

ABC’s - treat as needed
↓
Primary Medical Care
↓
Check Blood Glucose and treat:

1. If no mental status change is present and
   a. Blood glucose 80 to 120
   b. Monitor

2. If mental status change and:
   a. Blood Glucose is <60
      i. If patient is conscious and able to self administer then Oral Glucose - one (1) tube
      ii. REASSESS
      iii. If step # 1 is not appropriate or doesn’t bring up the blood glucose level then Dextrose 50% - 25 gms IV Push
      iv. D50 may be repeated if needed
   b. Blood Glucose is >60 but <120
      i. Monitor Level of Consciousness
      ii. If patient is conscious and able to self administer then Oral Glucose - one (1) tube
      iii. If patient has altered LOC then administer Dextrose 50% - 25 gms IV Push

3. Blood Glucose >400 with signs of dehydration
   a. Large Bore IV
   b. Administer 1000 cc bolus of Normal Saline followed by 250 cc/hr
   c. Treat shock per protocol
   d. Monitor for change
ABDOMINAL PAIN
# 2007-A032

ABC’s
↓
Primary Medical Care
   (Large Bore IV)
   ↓
EKG
   ↓
NPO
   ↓
NO PAIN Rx in field

If BP <90 then:

Trendelenburg Position
↓
Administer 250 cc Bolus of Normal Saline
↓
Consider second IV of Normal Saline
   ↓
Monitor for change
SYNCOPE

# 2007-A033

ABC’s - treat as needed
  ↓
Primary Medical Care
  ↓
Treat Cardiac Arrhythmias appropriately
  ↓
Treat for shock as needed
  ↓
Check Blood Glucose and treat per protocol
  ↓
Monitor for change
ABC’s - treat as needed
↓
Primary Medical Care
 (Large bore IV’s)
↓
Control any hemorrhage
↓
Warm Patient if needed
↓
Trendelenburg position
↓
Administer 250 cc Bolus of Normal Saline (repeat as needed) if no Pulmonary Edema / CHF present.
↓
If no response, consider Dopamine infusion at 2 - 10 mcg/kg/min and titrate
↓
Transport rapidly and monitor V/S and response to treatment
CARDIOGENIC SHOCK
# 2007-A035

ABC’s - treat as needed
↓
Primary Medical Care
(Large bore IV’s)
↓
Control any hemorrhage
↓
Warm patient if needed
↓
Treat tachy (P>150) and brady (P<60) rhythms per protocol
↓
Administer 250 cc Bolus of Normal Saline if no Pulmonary Edema / CHF present
↓
If no response, consider Dopamine infusion at 2 - 10 mcg/kg/min and titrate
↓
Consider and assess for tension pneumothorax & pericardial tamponade and treat per protocol.
↓
Transport rapidly and monitor V/S and response to treatment
ALLERGIC REACTION
# 2007-A036

Defined as: swelling, itching, rash or hives with NO respiratory distress, wheezing, or hypotension

ABC’s - treat as needed
↓
Primary Medical Care
↓
If bite or sting apply ice to the site
↓
CLOSELY MONITOR AIRWAY & BLOOD PRESSURE
(Move to Anaphylaxis protocol if necessary)
↓
Benadryl 1 mg/kg (max 50mg) IM or IV Push
ANAPHYLAXIS
# 2007-A037

Defined as: respiratory distress / wheezing and/or hypotension

ABC’s - treat as needed
↓
Primary Medical Care
↓
If bite or sting apply ice to the site
↓
CLOSELY MONITOR AIRWAY
(Prepare to intubate)
↓
Benadryl 1 mg/kg (max 50mg) IM or IV Push
↓
If systemic reaction present administer Epinephrine 1:1000, 0.3 mg SQ
(Use with caution in patients over 35)
↓
If SEVERE systemic reaction, consider Epinephrine 1:10,000, 0.5 - 1 mg IV Push
(Use with caution in patients over 35)
↓
Solumedrol 125mg IVP
PNEUMOTHORAX
# 2007-A038

ABC’s - treat as necessary
↓
Primary Trauma Care
↓
High Flow Oxygen
Assist ventilation or Intubate as needed

CLOSED
Closely Monitor Patient
Treat Shock as indicated

OPEN
Treat as per Sucking Chest Wound Protocol
Treat Shock as indicated

TENSION
Perform Needle Decompression to the effected side
Treat Shock as indicated
PERICARDIAL TAMPONADE

# 2007-A039

ABC’s - treat as necessary
↓
Primary Trauma Care
↓
Assist ventilation (Intubate) as needed
↓
Transport EMERGENCY
FLAIL CHEST
# 2007-A040

ABC’s - treat as necessary  
  ↓
Primary Trauma Care  
  ↓
Assist ventilation as needed  
  ↓
Stabilize flail segment using pillow, pad, or hand.
No heavy objects should be placed on flail segment (i.e., Liter of IV fluids, Sandbags)  
  ↓
Transport EMERGENCY
SUCKING CHEST WOUND

# 2007-A041

ABC’s - treat as necessary

↓

Primary Trauma Care

↓

Assist ventilation as needed

↓

Apply occlusive dressing taped only on three sides to formulate a flutter valve

↓

Transport EMERGENCY

↓

If patient deteriorates during transport, suspect tension pneumothorax.
Lift the dressing to vent excess pressure
EXTREMITY INJURIES

# 2007-A042

ABC’s
↓
Primary Trauma Care
↓
Control hemorrhage by direct pressure and elevation
↓
Splint injured site
(Traction splint for femur fx’s)
↓
Treat shock per protocol

DO NOT MANIPULATE FRACTURES UNLESS THERE IS LOSS OF DISTAL PULSES

AMPUTATED / AVULSED TISSUE

Wrap in saline moistened dressing or towel
↓
Place in plastic bag and seal. Do not immerse tissue directly in water
↓
Place bag in second container filled with ice water or wrap in cold pack and transport with patient
↓
NOTE: Consider Morphine 2 - 4 mg IV Push for pain with DIRECT M.D. approval.
TRAUMA SHOCK
# 2007-A043

ABC’s - treat as needed
↓
Primary Trauma Care
(Large bore IV’s)
↓
Control any hemorrhage
↓
Administer 250 cc of Normal Saline (repeat as needed)
↓
Warm patient if needed
↓
Consider and Treat Specific Causes
1. Initial trauma care.
   
   A. If unconscious and unresponsive to verbal commands:
      2. Ventilate with BVM at 24 /min (Intubate as needed) (High Flow Oxygen)
      3. If isolated head injury, elevate head of backboard 15 - 30 degrees, if B/P > 90 mmHg
      4. Establish IV of Normal Saline @ KVO unless BP < 90 mmHg

2. Continuous reassessment of level of consciousness using the Glasgow Coma Scale

3. Check pupil size, shape, equality and reactivity to light; respiratory patterns


5. Apply semi-rigid cervical collar

6. Spinal immobilization may be accomplished by using one or more or the following:
   A. Long board with lateral head immobilization devices.
      (Pad occiput of head to prevent cervical extension)
   
      B. Spider Straps or Board Straps

   ** DO NOT use tape to immobilize a patient to a LSB (with the exception of taping the head down)

   **** Always strap the patient’s torso before securing head to the LSB

NOTE: All attempts should be made to maintain C-Spine stabilization in neutral alignment. However, establishment of airway takes precedence over neck injury protection in respiratory compromised patients.
1. Immobilize C-Spine in patients with suspected C-Spine injuries.
   A. All head or facial trauma, i.e., injuries above the clavicles.
   B. All patients with decreased or altered level of consciousness.
   C. All patients with suspected deceleration injuries, auto wrecks, fall, etc.
   D. All patients with complaints of neck and back pain.
   E. All patients with physical finding suggesting neck or back injury.

2. Assist ventilation as needed:
   A. Spontaneously breathing:
      a. Administer 100% oxygen at 15 lpm via NRB
   B. Difficulty breathing:
      a. Chin lift or jaw thrust - oral/nasopharyngeal airway
      b. Assist with BVM - 100% oxygen
      c. Consider blind nasal intubation only if there is NO evidence of maxillofacial trauma.
   C. Non-Breathing
      a. Chin lift or jaw thrust - oral/nasopharyngeal airway
      b. Oral endotracheal intubation with visualization of vocal cords.
      Maintain in-line cervical stabilization. Confirm placement with all methods available.
      1. If unsuccessful - Attempt Combitube.
      2. If unsuccessful - BVM and rapid transport
      3. If unable to ventilate with BVM or combitube due to massive facial trauma or obstruction:
         A. Attempt digital intubation
         B. Consider Needle cricothyroidotomy with M.D. approval

Consider:  Valium 5 - 10 mg IV Push when indicated to facilitate intubation with DIRECT M.D. Order

NOTE: Nasopharyngeal airways should NEVER be inserted when there is any maxillofacial trauma.
HYPERTENSION
# 2007-A046

ABC’s - treat as needed
↓ Primary Medical Care
↓ Calm Patient
↓ Monitor cardiac rhythm and treat arrhythmias appropriately
↓ Treat per protocol: Chest Pain Pulmonary Edema Seizures
↓ If diastolic BP remains above 130 mmHg on repeated determinations and any signs of encephalopathy, or hypertensive emergency, contact medical control and consider:
↓ Nitroglycerin 1/150 g SL Q5 minutes until diastolic BP <110 - (Max 3)
↓ Lasix 40 mg IV Push or double patient’s normal daily dose
↓ If no response from NTG and Emergency exists consider Morphine 2 - 4 mg IV Push with DIRECT M.D. approval

NOTE: Hypertension associated with severe head trauma and intracranial bleeding may be protective, and field treatment should be aimed at the head injury and not BP control.
CVA
# 2007-A047

ABC’s - treat as needed
↓
Primary Medical Care
↓
Treat for shock as needed
↓
Check Blood Glucose and treat hypoglycemia with MD approval
↓
Monitor cardiac rhythm and treat arrhythmias appropriately
↓
Monitor vital signs and LOC during transport
↓
Perform prehospital Stroke Assessment Table 1 & 2

*** Consider if patient is candidate for thrombolytics and notify Emergency Department as soon as possible. Rapid transport is suggested for candidates.

TABLE 1
The Cincinnati Prehospital Stroke Scale

<table>
<thead>
<tr>
<th>Facial Droop (have patient show teeth or smile):</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Normal—both sides of face move equally</td>
</tr>
<tr>
<td>• Abnormal—one side of face does not move as well as the other side</td>
</tr>
</tbody>
</table>

Left: normal.
Right: stroke patient with facial droop (right side of face).

<table>
<thead>
<tr>
<th>Arm Drift (patient closes eyes and holds both arms straight out for 10 seconds):</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Normal—both arms move the same or both arms do not move at all (other findings, such as pronator drift, may be helpful)</td>
</tr>
<tr>
<td>• Abnormal—one arm does not move or one arm drifts down compared with the other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abnormal Speech (have the patient say &quot;you can’t teach an old dog new tricks&quot;):</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Normal—patient uses correct words with no slurring</td>
</tr>
<tr>
<td>• Abnormal—patient slurs words, uses the wrong words, or is unable to speak</td>
</tr>
</tbody>
</table>

Interpretation: If any 1 of these 3 signs is abnormal, the probability of a stroke is 72%.
This is for the evaluation of acute, noncomatose, nontraumatic neurologic complaint. If items 1 through 6 are all checked "Yes" (or "Unknown"), provide pre-arrival notification to hospital of potential stroke patient. If any item is checked "No," return to appropriate treatment protocol.

Interpretation: 93% of patients with stroke will have a positive LAPSS score (sensitivity=93%)
97% of those with a positive LAPSS score will have a stroke (specificity=97%)

Note that the patient may still be experiencing a stroke if LAPSS criteria are not met.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Yes</th>
<th>Unknown</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age &gt;45 years</td>
<td></td>
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<tr>
<td>2. History of seizures or epilepsy absent</td>
<td></td>
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<tr>
<td>3. Symptom duration &lt;24 hours</td>
<td></td>
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<tr>
<td>4. At baseline, patient is not wheelchair bound or bedridden</td>
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<tr>
<td>5. Blood glucose between 60 and 400</td>
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<tr>
<td>6. Obvious asymmetry (right vs. left) in any of the following 3 exam categories (must be unilateral):</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Equal</td>
<td></td>
<td>R Weak</td>
<td>L Weak</td>
</tr>
<tr>
<td>Facial smile/grimace</td>
<td>Droop</td>
<td>Droop</td>
<td></td>
</tr>
<tr>
<td>Grip</td>
<td>Weak grip No grip</td>
<td>Weak grip No grip</td>
<td></td>
</tr>
<tr>
<td>Arm strength</td>
<td>Drifts down Falls rapidly</td>
<td>Drifts down Falls rapidly</td>
<td></td>
</tr>
</tbody>
</table>

One-sided motor weakness (right arm).
CHEST PAIN SUSPICIOUS OF CARDIAC ORIGIN

# 2007-A048

ABC’s - treat as needed

↓

Primary Medical Care

↓

If Systolic B/P is <90 treat as Cardiogenic Shock
If Systolic B/P is 90-110 contact Medical control for orders
     If Systolic B/P is >110 then treat as follows:

↓

Administer Aspirin 324 mg PO **
     If the patient takes ASA daily then administer 81 mg PO

↓

Administer Nitroglycerin 1/150 g SL (Q5 minutes times 3)

↓

If no relief: consider Morphine 2 - 4 mg’s IVP with DIRECT M.D. Order

↓

Closely monitor cardiac rhythm and treat as appropriate

↓

Obtain 12 lead EKG if possible

↓

If severe nausea: consider Phenergan 6.25 - 12.5 mg’s IVP

***** Reassess the patient and recheck vital signs after each medication administration ****

Note: Higher doses of Morphine may be given as approved by Medical Control with a DIRECT M.D. Order
Asthma, COPD

# 2007-A049

ABC’s - treat as needed

Primary Medical Care

Administer Albuterol treatments as needed

Solumedrol 125 mg slow IV if refractory to Albuterol

Consider Magnesium Sulfate with M.D. Approval

If severe asthma, consider Epinephrine 1:1000, 0.3 mg’s SQ with M.D. approval

Use with extreme caution in patients over 35

Assist Ventilation and intubate if needed
Pulmonary Edema, CHF
# 2007-A050

ABC’s - treat as needed
↓
Primary Medical Care
↓
Ensure that 100% oxygen is being delivered
↓
Administer Albuterol treatment
↓
Administer Nitroglycerin 1/150 g SL (May repeat times 2) if BP > 110
↓
Administer Lasix 40 mg or double the patient’s normal daily dose IVP
↓
Consider Morphine 2 - 4 mg IV Push with DIRECT M.D. ORDER
↓
Assist ventilation and intubate if needed.
↓
Contact Medical Control for additional orders.

*** Note: Always utilize a small bore IV and limit fluid. Medical Control should be contacted and Dopamine should be considered for the treatment of hypotension in a CHF patient
PEDIATRIC CROUP / EPIGLOTTITIS
# 2007-A051

Primary Medical Care
(Do not attempt IV access)
↓
High Flow oxygen with NRB or blow by
↓
Assist with removal of secretions in the anterior mouth only
↓
Do not manipulate airway or look down the throat with a tongue blade, a laryngoscope, etc.
↓
Consider nebulized Saline
↓
Epinephrine (1:1000, 0.3 mg’s + 3cc NS) with MD approval
↓
If child fatigues and is unable to maintain adequate ventilation, assist with:
  1. BVM applied tight with positive pressure if available
  2. Attempt intubation ONLY if unable to ventilate by simpler means.
  3. If all ventilatory adjuncts fail then consider needle cricothyroidotomy with 14 gauges catheter with M.D. approval.
1. Maintain oxygen flow rate for an oxygen saturation of greater than or equal to 92%.
2. Attach cardiac monitor.
3. Assess and record vital signs, to include temperature, prior to transfer and every 5 to 10 minutes enroute.
4. Reassess patient frequently during transport and document findings.
5. Collect all transfer documentation: transfer sheet, EKG’s, lab, other pertinent information.
7. For the transport medication, be familiar with the signs, symptoms and treatment of any major adverse drug reactions.
8. Continue administration of medications initiated in the hospital such as antibiotics, steroids, ACLS drugs, vitamins, non-OB magnesium, fractionated heparin, etc. via subcutaneous, intramuscular, intraosseous, and/or intravenous (peripheral or central) routes.
PACKED RED CELLS
# 2007-T102

1. Maintain oxygen flow rate for an oxygen saturation of greater than or equal to 92%.
2. Attach cardiac monitor.
3. Assess and record vital signs, to include temperature, prior to transfer and every 5 to 10 minutes enroute.
4. Reassess patient frequently during transport and document findings.
5. Collect all transfer documentation: transfer sheet, EKG’s, lab, other pertinent information.
6. Document the unit blood bank number of all units to be transferred with the patient.
7. Instruct patient to report onset of any unusual symptoms that might indicate a transfusion reaction:
   a. Chills
   b. dizziness
   c. back pain
   d. restlessness
   e. nausea
   f. chest pain
   g. headache
   h. anxiety
   i. dyspnea
8. Watch for signs of a transfusion reaction:
   a. temperature elevation
   b. rash
   c. facial flushing
   d. cyanosis
   e. sweating
   f. bradycardia
   g. tachycardia
   h. hypotension
   i. distended neck veins
9. If a transfusion reaction is suspected:
   a. Discontinue the transfusion, save the remaining blood, bag and tubing.
   b. Maintain IV with normal saline
   c. Notify online medical director
   d. Draw a blue top tube from a site other than the transfusion site
   e. Treat hypotension with normal saline infusion
HEPARIN
# 2007-T1013

1. Maintain oxygen flow rate for an oxygen saturation of greater than or equal to 92%.
2. Attach cardiac monitor.
3. Assess and record vital signs, to include temperature, prior to transfer and every 5 to 10 minutes enroute.
4. Reassess patient frequently during transport and document findings.
5. Collect all transfer documentation: transfer sheet, EKG’s, lab, other pertinent information.
7. Drip rate change during transport:
8. If patient develops an unexplained decrease in blood pressure, discontinue drip and contact the online medical director (medical control).
9. If patient develops unexplained neurological symptoms such as headache, numbness, weakness, seizure, etc., discontinue drip and contact the online medical director (medical control).
MAGNESIUM SULFATE
# 2007-T104

(10 grams/100ml NS)

1. Maintain oxygen flow rate for an oxygen saturation of greater than or equal to 92%.
2. Attach cardiac monitor.
3. Assess and record maternal vital signs, to include temperature, patellar reflex and fetal heart rate prior to transfer and every 5 to 10 minutes enroute.
4. Reassess patient frequently during transport and document findings.
5. Collect all transfer documentation: transfer sheet, EKG’s, lab, other pertinent information.
6. Transport patient on their left side.
7. Indwelling urinary catheter should be in place for patients with Pregnancy Induced Hypertension (PIH); this is optional for non-PIH patients.
10. Drip rate changes during transport:
11. If patient experiences a decreasing respiratory rate or other evidence of respiratory difficulty, discontinue drip, prepare to manage airway, consider calcium chloride, contact the online medical director (medical control).
12. Decrease the drip rate by half and contact the online medical director (medical control) for any of the following:
   a. Decrease in systolic pressure of 20mm from baseline
   b. Decrease in diastolic pressure of 10mm from baseline
   c. Decrease in patella reflex.
   d. Change in mental status
1. Maintain oxygen flow rate for an oxygen saturation of greater than or equal to 92%.
2. Attach cardiac monitor, and end-tidal CO2 monitor if patient not stable.
3. Attach Pulse Oximetry
4. Assess and record vital signs, to include temperature, prior to transfer and every 5 minutes enroute.
5. Reassess patient frequently during transport and document findings.
6. Reassess breath sounds after every patient move.
7. Collect all transfer documentation: transfer sheet, EKG’s, lab, other pertinent information.
8. Document ventilator settings and patient response. Including: Rate, Tidal Volume, Peep, etc
9. Document correct tracheal tube placement and secure appropriately
10. Maintain chemical paralysis if utilized pre-transport.
1. Maintain oxygen flow rate for an oxygen saturation of greater than or equal to 92%.
2. Attach cardiac monitor.
3. Assess and record vital signs, to include temperature, prior to transfer and every 5 to 10 minutes enroute.
4. Reassess patient frequently during transport and document findings.
5. Collect all transfer documentation: transfer sheet, EKG’s, lab, other pertinent information.
7. Drip rate changes during transport:
   a. If chest pain present, increase the nitroglycerine drip 5 mcg/min (1.5 ml/hr) or 3.3 mcg/min (1.0 ml/hr) depending on your pump, every five minutes until the chest pain resolves or systolic blood pressure drops below 100.
   b. If systolic blood pressure drops below 100, decrease the nitroglycerine by 5 mcg/min (1.5 ml/hr) or 3.3 mcg/min (1.0 ml/hr) depending on your pump and contact the online medical director (medical control).
   c. If systolic blood pressure drops below 90, stop the nitroglycerine drip, place patient in trendelenburg, consider a fluid bolus and contact the online medical director (medical control).
1. Maintain oxygen flow rate for an oxygen saturation of greater than or equal to 92%.

2. Attach cardiac monitor.

3. Assess and record vital signs, to include temperature, prior to transfer and every 5 to 10 minutes enroute.

4. Reassess patient frequently during transport and document findings.

5. Collect all transfer documentation: transfer sheet, EKG’s, lab, other pertinent information.


7. Concentration of potassium not to exceed 40 milliequivalents per 1000ml fluid.

8. Potassium must be administered via a pump at a rate not to exceed 250 ml per hour.
1. Maintain oxygen flow rate for an oxygen saturation of greater than or equal to 92%.
2. Attach cardiac monitor.
3. Assess and record vital signs, to include temperature, prior to transfer and every 5 to 10 minutes enroute.
4. Reassess patient frequently during transport and document findings.
5. Collect all transfer documentation: transfer sheet, EKG’s, lab, other pertinent information.
6. Document order to maintain tube to gravity or to mechanical suction (specify amount of suction to be maintained during transport) and patient response.
7. If possible elevate head of gurney to 45 degrees.
8. Tape all tube connections securely.
9. In the event of an air leak, recheck all connections.
10. Do not pull on the tube.
11. Secure the collection chamber to the side of the gurney (do not tip over)
12. Keep the collection chamber below the level of the chest.
13. Avoid clamping or kinking of the tube and avoid dependent loops of fluid filled tubing.
14. If chest tube is partially pulled out:
   a. Do not push tube back into chest.
   b. Secure the tube in place.
15. If chest tube is pulled out, place occlusive dressing over the insertion site.
   a. If patient becomes dyspnea:
      i. Assess breath sounds.
      ii. Needle thoracostomy may need to be performed.
PEDIATRIC MEDICATIONS / DOSAGES

Adenosine 0.1 mg/kg (maximum 6 mg)
  Repeat: 0.2 mg/kg (maximum 12 mg) Rapid IV/IO bolus

Amiodarone 5 mg/kg IV/IO
  Repeat up to 15 mg/kg
  Maximum: 300 mg (give more slowly when perfusing rhythm present)

Atropine 0.02 mg/kg IV/IO
  0.03 mg/kg ET
  Higher doses may be used with organophosphate poisoning
  Minimum dose: 0.1 mg
  Maximum single dose:  Child 0.5 mg - Adolescent 1 mg

Calcium chloride (10%) 20 mg/kg IV/IO (0.2 ml/kg) Slowly

Epinephrine 0.01 mg/kg (0.1 ml/kg 1:10 000) IV/IO
  0.1 mg/kg (0.1ml/kg 1:1000) ET
  May repeat q 3–5 min to a maximum dose: 1 mg IV/IO - 10 mg ET

Glucose 0.5–1 g/kg IV/IO
  D10W: 5–10 ml/kg
  D25W: 2–4 ml/kg
  D50W: 1–2 ml/kg

Lidocaine Bolus: 1 mg/kg IV/IO - Maximum dose: 100 mg
  Infusion: 20–50 µg/kg per minute
  ET*: 2–3 mg

Magnesium sulfate 25–50 mg/kg IV/IO over 10–20 min; faster in Torsades de Pointes
  Maximum dose: 2g

Naloxone <5 y or 20 kg: 0.1 mg/kg IV/IO/ET*
  Use lower doses to reverse respiratory depression associated with therapeutic opioid use (1–15 µg/kg)
  5 y or >20 kg: 2 mg IV/IO/ET*

Procainamide 15 mg/kg IV/IO over 30–60 min Monitor ECG and blood pressure

Sodium bicarbonate 1 mEq/kg per dose IV/IO slowly

IV indicates intravenous
IO indicates intraosseous
ET indicates Endotracheal tube.
*Flush with 5 mL of normal saline and follow with 5 ventilations.