

LORAIN
COUNTY
EMS
PROTOCOLS
2006
FOR THE
FIRST
RESPONDER

LORAIN COUNTY EMS PROTOCOLS

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INTRODUCTION

The following Protocols have been adopted for use in Lorain County by members of the Lorain County EMS Counsel Protocol Subcommittee. If you have any questions about the use of these protocols, please refer them to your medical director. At this time, the first responder protocols have been printed separately from the protocols for the EMT-B, EMT-I, and the EMT-P. However, these protocols should be viewed as one protocol encompassing all providers at all levels.

Although these guidelines are derived from the Ohio State EMS guidelines, There are some changes to get them in line with the needs for Lorain County.

The main protocols consist of two parts:

Adult: Disease and injury processes with emergency treatment in adults
Pediatrics: Guidelines written by the EMSC committee for care of the pediatric patient.
The last page includes a full list of pediatric medications.

The bottom of the page shows when the current version was printed from its program. Older versions are automatically considered obsolete.

Higher levels of certification will perform lower level evaluations and procedures when interpreting the algorithms.

Procedures that are in protocol are subject to the EMS provider having that equipment available. Specifically, first responders do not carry the full equipment that an EMS squad will have. Therefore, they are held to the protocols based on the equipment they immediately available to them.

Administrative Protocols

COMMUNICATIONS

A member of the pre-hospital care team must contact the responding EMS agency at the earliest time conducive to good patient care.

When possible, the member of the team most knowledgeable about the patient should be the one calling in the report.

Reports should be as complete but concise as possible to allow the responding EMS agency to understand the patients condition. It is not an insult for the responding EMS agency to ask questions after the report is given. This is often more efficient than giving a thorough report consisting mostly of irrelevant information.

If multiple victims are present on the scene, it is advisable to give an overview of the scene, including the number of victims and the seriousness of the injuries. This allows preparation for receiving the victims and facilitates good patient care.

When calling in a report it should be by

1. Identification of the personnel calling, and the level of care which is able to be provided to the patient. (i.e. First response, basic), and the nature of the call.
2. Age and Sex of patient:
3. Type of situation: Injury and/or Illness
4. Specific Complaint: Short and to the point (i.e. chest pain, skull fracture)
5. Mechanism: MVA/MCA/Fall
6. Vital Signs: BP/Pulse/Resp./LOC/EKG
7. Patient Care: Airway Management, Circulatory Support, Drug Therapy
8. General Impression: Stable/Unstable
9. ETA to Medical Facility

PROTOCOL FOR DOA

GENERAL STATEMENT

When a DOA is encountered, the EMS providers should avoid disturbing the scene or the body as much as possible, unless it is necessary to do so in order to care for and assist other victims. Once it is determined that the victim is, in fact, dead the EMS providers should move as rapidly as possible to transfer responsibility or management of the scene to the Police Department and/or Coroner's Office. It is the EMS provider's responsibility to notify the Coroner's Office directly or to ensure that the Coroner's Office has been notified by a police officer on the scene.

A determination that the victim is dead rests with the First Responder. Any of the following may be used as guidelines to support the determination that a victim is deceased.

1. There is an injury which is incompatible with life (i.e. decapitated, or burned beyond recognition).
 - a. Cardiac arrest, secondary to massive blunt trauma without signs of exsanguinating hemorrhage (i.e. limb amputation).
 - b. The victim shows signs of decomposition, rigor mortis, or extremely dependent lividity.
 - c. If the patient is an adult with an unwitnessed cardiac arrest, has a history of an absence of vital signs for greater than 20 minutes, and is found in asystole, not secondary to hypothermia or cold water drowning.
 - d. If the patient is an infant or child with an unwitnessed cardiac arrest and is found in Asystole, except in hypothermic patients with a downtime of less than 30 minutes.
2. In cold water drowning if recovered in less than 1 hour.
 - a. If there are valid DNR (Do Not Resuscitate) orders, see DNR Protocol.
 - b. If the patient has a history of terminal disease, the family refuses resuscitation and permission to pronounce the patient dead is given by Medical Control.

CAUTION: IF ANY DOUBT EXISTS THAT THE VICTIM IS DEAD AT THE TIME OF ARRIVAL OF THE EMS PROVIDERS, RESUSCITATIVE MEASURES SHOULD BE INSTITUTED IMMEDIATELY. WHENEVER RESUSCITATIVE MEASURES ARE INSTITUTED, THEY MUST BE CONTINUED UNTIL ARRIVAL AT A HOSPITAL OR UNTIL A PHYSICIAN HAS PRONOUNCED THE VICTIM DEAD OR A VALID DNR IS PRONOUNCED.

DO NOT RESUSCITATE/COMFORT CARE GUIDELINES

BACKGROUND

Pre-hospital (out of hospital) providers are called to care for patients who are known to have incurable or terminal illnesses on an ever-increasing basis. Examples of such patients include those with metastatic cancer, AIDS, or severe CVA's. Many patients and/or their families have intelligently and consciously altered their consent for treatment, made out a living will, or entered into Hospice care arrangements.

EMS providers and Medical control physicians often find these encounters confusing, frustrating, and charged with emotion. This is especially true when there is no prearranged document or consistent, rational or standardized approach by which to care for these patients and their families.

**Living Will & Durable Power of Attorney
Does NOT Mean DNR!**

DNR does NOT mean “do not treat”!



The State of Ohio Do-Not-Resuscitate Protocol

Approved by the Ohio Department of Health

IDENTIFICATION

Patients can be either DNR Comfort Care patients or DNR Comfort Care-Arrest patients. The difference is that for a DNR Comfort Care patient, the State of Ohio DNR Protocol is activated immediately when a DNR order is issued or when a Living Will requesting no CPR becomes effective, but for a DNR Comfort Care—Arrest patient, the protocol is activated only when the patient experiences a cardiac arrest or a respiratory arrest. Be careful to check the patient's DNR order to DNR identification to determine which applies.

A DNR Comfort Care or DNR Comfort Care- Arrest patient's status is confirmed when the patient has one of the following:

1. A DNR Comfort Care card or form completed for the patient.
2. A completed State of Ohio living will (declaration) form that states that the patient does not want CPR (in the case of a patient who has been determined by two doctors to be in a terminal or permanently unconscious state.)
3. A DNR Comfort Care necklace or bracelet bearing the DNR Comfort Care official logo.
4. A DNR order signed by the patient's attending physician or, when authorized by section 2133.211 of the Ohio Revised Code, a certified nurse practitioner (CNP) or clinical nurse specialist (CNS).
5. A verbal DNR order is issued by the patient's attending physician, CNP, or CNS.
 - Copies of these items are sufficient.

EMS workers are not required to search a person to see if they have DNR identification.

If an EMS or other health care worker discovers one of these items in the possession of a patient, the worker must make a reasonable effort to identify DNR patients in appropriate circumstances.

Examples of ways to verify identity are:

- ❖ The patient or a family member, caregiver, or friend gives the patient's name.
- ❖ The health care worker knows the patient personally. Institution identification band.
- ❖ Drivers License, passport or other picture ID.

If you cannot verify the identity of a patient with DNR identification after reasonable efforts, you still should follow this protocol.

Verification of identity is not required for patients or residents of health care facilities when a DNR order is present on the person's chart.

EMS personnel who receive a verbal DNR order from a doctor or CNP/CNS must verify the identity of the person issuing the order. Some examples of verification are:

- ❖ Personal knowledge of the doctor / CNP/ CNS.
- ❖ List of practitioners with other identifying information such as addresses.
- ❖ A return telephone call to verify information provided.

Activation

When this protocol is activated for a given DNR Comfort Care patient depends on whether the patient is a DNR Comfort Care patient or a DNR Comfort Care-Arrest patient. For a DNR Comfort Care patient, this protocol is activated when the DNR order is issued or the living will specifying no CPR becomes effective. For a DNR Comfort Care-Arrest patient, the protocol is activated when the patient experiences a cardiac arrest or a respiratory arrest.

“Cardiac arrest” means absence of a palpable pulse “Respiratory arrest” means absence of spontaneous respirations or presence of agonal breathing.

Actions

For patients for whom the DNR Comfort Care protocol is activated, you:

Will:

- ❖ Suction the airway
- ❖ Administer oxygen
- ❖ Position for comfort
- ❖ Splint or immobilize
- ❖ Control Bleeding
- ❖ Provide pain medication
- ❖ Provide emotional support
- ❖ Contact other appropriate health care providers such as hospice, home health, attending physician/CNP/CNS

Will Not:

- ❖ Administer chest compressions
- ❖ Insert artificial airway
- ❖ Administer resuscitative drugs
- ❖ Defibrillate or cardiovert
- ❖ Provider respiratory assistance (other than that listed below) * Initiate resuscitative IV
- ❖ Initiate cardiac monitoring

If you have responded to an emergency situation by initiating any of the “will not” actions prior to confirming that the DNR Comfort Care Protocol must be activated, discontinue them when you activate the protocol. You may continue respiratory assistance, IV medications etc., that have been part of the patient’s ongoing course of treatment for an underlying disease.

Interaction with the Patient, Family, and Bystanders

The patient may request resuscitation even if he or she is a DNR Comfort Care patient and this protocol has been activated. The request for resuscitation amounts to a revocation of DNR Comfort Care status.

If family or bystanders request or demand resuscitation for a person for whom the DNR Comfort Care Protocol has been activated, do not proceed with resuscitation. Provide comfort measures as outlined above and try to help the family understand the dying process and the patient's choice not to be resuscitated.

Documentation

EMS or other health care personnel who implement the DNR Protocol for a DNR Comfort Care patient should document in their records, in accordance with the policy of their agency or facility:

- ❖ The item that identified the person as DNR Comfort Care (as listed in the Identification portion of this protocol).
- ❖ The method of verifying the person's identity, if any was found through reasonable efforts.
- ❖ Whether the person was a DNR Comfort Care or DNR Comfort Care-Arrest patient.
- ❖ The actions taken to implement the DNR Protocol.

The Following minimum data should be recorded on the run sheet:

- ❖ Name, age, gender
- ❖ Attending/Hospice physician's name
- ❖ Date, Time, location
- ❖ Event, description, history
- ❖ Assessment
- ❖ Treatment, if applicable
- ❖ Revocation, if applicable

When a DNR order is Current

A DNR order for a patient of a health care facility shall be considered current in accordance with the facility's policy. A DNR order for a patient outside a health care facility shall be considered current unless discontinued by the patient's attending physician/CNP/CNS, or revoked by the patient. EMS personnel are not required to research whether a DNR order that appears to be current has been discontinued.

ACCOMPANIMENT

It is imperative that a copy of, or the original DNR/Comfort Care order and identification accompany the patient wherever the patient goes. This will help to alleviate any confusion between health care givers at multiple sites.



DNR IDENTIFICATION FORM

DNRCC

(If this box is checked the DNR Comfort Care Protocol is activated immediately.)

DNRCC - Arrest

(If this box is checked, the DNR Comfort Care Protocol is implemented in the event of a cardiac arrest or a respiratory arrest.)

Patient Name: _____]

Address: _____

City _____ State _____ Zip _____

Birthdate _____ Gender M F

Signature _____ (optional)

Certification of DNR Comfort Care Status (to be completed by the physician)

(Check only one box)

Do-Not-Resuscitate Order – My signature below constitutes and confirms a formal order to emergency medical services and other health care personnel that the person identified above is to be treated under the State of Ohio DNR Protocol. I affirm that this order is not contrary to reasonable medical standards or, to the best of my knowledge, contrary to the wishes of the person or of another person who is lawfully authorized to make informed medical decisions on the person’s behalf. I also affirm that I have documented the grounds for this order in the person’s medical record.

Living Will (Declaration) and Qualifying Condition – The person identified above has a valid Ohio Living Will (declaration) and has been certified by two physicians in accordance with Ohio law as being terminal or in a permanent unconscious state, or both.

Printed name of physician _____

Signature _____ Date _____

Address: _____ Phone _____

City/State _____ Zip _____

*A DNR order may be issued by a certified nurse practitioner or clinical nurse specialist when authorized by section 2133.211 of the Ohio Revised Code.

GUIDELINES FOR PATIENT REFUSAL OF TREATMENT OR TRANSPORT

GENERAL STATEMENT

- A. Permission not to treat or transport a patient must come from the base station physician. The First Responder may not accept a refusal unless it is authorized by the base station. This decreases the First Responder's liability. Direct communication between the physician and the patient may resolve many questions and often convinces the patient of the importance of treatment and transport. The following is an outline of legal principles, which may help the First Responder to understand patient refusal.

1. Consent

- a. The patient has the responsibility and right to consent to or refuse treatment. If he or she is unable to do so, a legal guardian has this right.
- b. A durable power of attorney is an authorization that allows a patient's wishes to be followed even when he or she becomes incompetent.
- c. When waiting to obtain lawful consent from the person authorized to make such consent would present a serious risk of death, serious impairment of health or would prolong severe pain or suffering of the patient, treatment may be undertaken to avoid those risks without consent. In no event should legal consent procedures be allowed to delay immediately required treatment.
- d. In non-emergency cases involving minors, consent should be obtained from the parent or legal guardian prior to undertaking any treatment. All children must be evaluated for acuity of illness, regardless of obtaining parental consent.
- e. AGE: Patient must be over 18 years of age or "emancipated: to be permitted to consent or refuse treatment. A child under 18 years of age who is married or is living away from home and is financially independent of his/her parents, may consent for their own care and may consent to medical or surgical care for his/her child.
- f. If the patient is under age, consent should be from:
 1. Legal guardian
 2. Natural parent
 3. Adopted parent
- g. NOTE: There has not been a single reported decision that held a physician liable where beneficial care was provided to a minor without obtaining consent.

2. Mental Competence- Decision Making Capability

- a. A person is mentally competent if he:
 1. Is capable of understanding the nature and consequences of the proposed treatment.
 2. Has sufficient emotional control, judgment, and discretion to manage his own affairs.

Patient Refusal (cont.)

- b. Ascertaining that the patient is oriented, has an understanding of what happened and may possibly happen if treated or not treated, and a plan of action-such as whom he will call for transportation home should be adequate for these determinations.
- c. Patients with impaired cerebral perfusion, in shock, postictal, or under the influence of drugs will unlikely to fulfill these criteria.
- d. If the patient is not mentally competent under these guidelines, consent should be obtained from another responsible party-who must also be mentally competent and must be 21 years of age, in the following order of preference:
 - 1. Legal guardian
 - 2. Spouse
 - 3. Adult son or daughter
 - 4. Parent
 - 5. Adult brother or sister
- e. If the patient is not mentally competent and none of the above persons can be reached, the person should be treated and transported to a medical facility. It is preferable under such circumstances to obtain concurrence of a police officer in this course of action
- f. If the patient himself is not competent to consent and a legal guardian as defined under “d” is present, and if that person is competent, he or she has the same right to consent or refuse treatment as the patient himself. Those wishes cannot be ignored in a non-life-threatening situation.

3. Code 1 (non transport) for minors

- a. If after evaluation of a minor, the EMT and medical control agree that the patient is a Code 1, that minor can be left in the care of a responsible adult that is not the parent or legal guardian. The responsible adult may be a family friend, neighbor, school bus driver, teacher, school official, police officer, social worker, or other person at the discretion of medical control and the EMT.

PROCEDURE FOR REFUSAL

If a patient wishes to refuse either treatment, examination or transportation, the following steps will be taken.

- 1. The EMT will complete a Patient Refusal Checklist (see enclosed example) prior to contacting medical control.
- 2. Medical control must be contacted and the refusal checklist reviewed. This contact and the orders that were given must be documented. If unable to contact medical control, document why.
- 3. The patient must be advised of the benefits of treatment and transport as well as the specific risks of refusing treatment and transport.
- 4. The patient must be able to relate to the EMT in his or her own words what these risks and benefits are.
- 5. The patient will be provided with a refusal information sheet, also attached. A copy of this refusal information sheet or the refusal section of the checklist will be signed by the patient, dated and both will be kept with the patient's file.

HEAVY PATIENTS

GENERAL CONSIDERATION

Less than one percent of the population has a weight in excess of 300 lbs. This means that in any community there may be one or more individuals who fall into this extreme. As patients, these individuals are frequently classed as high risk because of the increased medical complications associated with their excess weight. In the EMS System they present the additional problem of movement and transportation. These individuals have the right to expect prompt and expert emergency medical care. Therefore in order to facilitate the care of these individuals without risking the health of EMS workers, the following protocol is established.

- A. In managing a patient with weight over 300 lbs., but less than 500 lbs, consider moving the patient with at least 6 individuals. At the scene, as many EMS personnel as can be mobilized may be supplemented by police or other safety personnel as appropriate. Consider Mutual Aid if necessary.
- B. Make sure the transfer devices are adequate for the job. Two backboards can be used. Cots should be kept in the DOWN position during the entire transfer.
- C. In managing a patient with weight over 500lbs., engineering a safer transfer to the ED becomes as important as medical care. Tugging on the limbs of a truly obese patient causes dislocations fractures and tears. These patients may require a vehicle other than an ambulance for transfer. The primary receiving facility may also not be able to handle a patient of that size, requiring further transfer. It may be necessary to remove doors, walls or windows. Consider asking for help from people experienced in the transfer of obese patients. Bringing an ED physician to the scene may be an option if the extrication time is extended or if the medic feels that the patient will not require admission to a hospital.
- D. It is NECESSARY TO NOTIFY THE HOSPITAL WELL IN ADVANCED of arrival so that preparations can be completed.
- E. If individuals in the community are known to fall within this special category it is appropriate to inform them in advance of the type of assistance they can expect from the EMS system and help them make plans well in advance to assist you. When calling for the squad and if they identify themselves and their special needs, it will promote the timeliness of your efforts.

Truly obese people often live a very private life. Please do not forget to treat these people with the same dignity and respect your other patients receive.

ON SCENE EMT INTERVENER

On A EMS run where an unknown EMS provider from outside the responding EMS agency wishes to intervene in the care of patients, the following steps should be initiated:

1. Ideally, if no further assistance is needed, the offer should be declined.
2. If the intervener's assistance is required or may significantly contribute to the care of the patient.

Obtain proper identification of a valid Ohio EMT card. Acceptance of borderline states' EMT cards are at the discretion of individual EMS services. Notation of intervener name, address and certification numbers must be documented on the run report.
3. Significant involvement with patient care or variance from protocols will require the intervener to accompany the patient to the hospital.

PHYSICIAN AT THE SCENE

GOOD SAMARITAN PHYSICIAN

This is a physician with no previous relationship to the patient, who is not the patient's private physician, but is offering assistance in caring for the patient. The following criteria must be met for this physician to assume any responsibility for the care of the patient:

1. Medical Control must be informed and give approval.
2. The physician must have proof they are a physician. They should be able to show you their medical license. Notation of physician name, address and certification numbers must be documented on the run report.
3. The physician must be willing to assume responsibility for the patient until relieved by another physician, usually at the emergency department.
4. The physician must not require the EMS providers to perform any procedures or institute any treatment what would vary from protocol and/or procedure.

If the physician is not willing or able to comply with all the above requirements, his assistance must be courteously declined.

RESTRAINT POLICY

GENERAL GUIDELINES

- A. Soft restraints, if available, are to be used only when necessary in situations where the patient is potentially violent and may be of danger to themselves or others. EMS providers must remember that aggressive violent behavior may be a symptom of medical conditions such as but not limited to:
 - 1. Head Trauma
 - 2. Alcohol/Drug related problems
 - 3. Metabolic disorders (i.e., hypoglycemia, hypoxia, etc.)
 - 4. Psychiatric/Stress related disorders
- B. Patient health care management remains the responsibility of the EMS provider. The method of restraint shall not restrict the adequate monitoring of vital signs, ability to protect the patient's airway, compromise peripheral neurovascular status or otherwise prevent appropriate and necessary therapeutic measures, It is recognized that evaluation of many patient parameters requires patient cooperation and thus may be difficult or impossible.
- C. All restraints should have the ability to be quickly released, if necessary.
- D. Restraints applied by law enforcement (i.e., handcuffs) require a law enforcement officer to remain available to adjust restraints as necessary for the patient's safety. This policy is not intended to negate the need for law enforcement personnel to use appropriate restraint equipment to establish scene control.
- E. Patient shall not be transported in a face down prone position to ensure adequate respiratory and circulatory monitoring and management.
- F. Restrained extremities should be monitored of color, nerve and motor function, pulse quality and capillary refill at the time of application and every 15 minutes thereafter.
- G. Restraint documentation on the EMS report shall include:
 - 1. Reason for restraint
 - 2. Agency responsible for restraint application (i.e., EMS, Police)
 - 3. Documentation of cardio-respiratory status and peripheral neurovascular status

ABDOMINAL PAIN

GENERAL CONSIDERATIONS

- A. It is important to remember that abdominal pain can be caused by a large number of different disease processes. The organ systems that may be involved in abdominal pain include the esophagus, stomach, intestinal tract, liver, pancreas, spleen, kidneys, male and female genital organs, bladder, as well as referred pain from the chest that can involve the heart, lungs or pleura, Abdominal pain may also be caused by muscular and skeletal problems.
- B. There are a limited number of problems that present with abdominal pain that are life-threatening or may become life-threatening.
1. Myocardial Infarction
 2. Perforated stomach, gallbladder, or bowel
 3. Gastrointestinal bleeding with pain – usually due to an ulcer
 4. Hemorrhagic pancreatitis
 5. Appendicitis
 6. Diabetic ketoacidosis
 7. Ruptured esophagus (this usually presents with chest pain)
 8. Dissecting or ruptured abdominal aortic aneurysm
 9. Certain toxic mushrooms ingested and other toxic ingestion
 10. Ectopic pregnancy
- C. Abdominal pain emergencies are likely to lead to death due to blood or fluid loss with resultant shock. There may also be severe electrolyte abnormalities that can cause arrhythmias.

Myocardial Infarction may present as abdominal pain especially in the diabetic and elderly.

First Responder

- A. Secure airway
1. Administer oxygen as needed to treat shock and/or respiratory distress
 2. Apply Pulse Oximeter and treat per Pulse Oximeter procedure, if available.
- B. Evaluate patient's general appearance, relevant history of condition and determine:

Onsset
Provokes
Quality
Radiates
Severity
Time
Interventions

Allergies
Medications
Past Medical History – especially, diabetic, seizures, stroke, head injury, drug abuse
Last Meal
Events leading to present illness

Abdominal Pain (cont.)

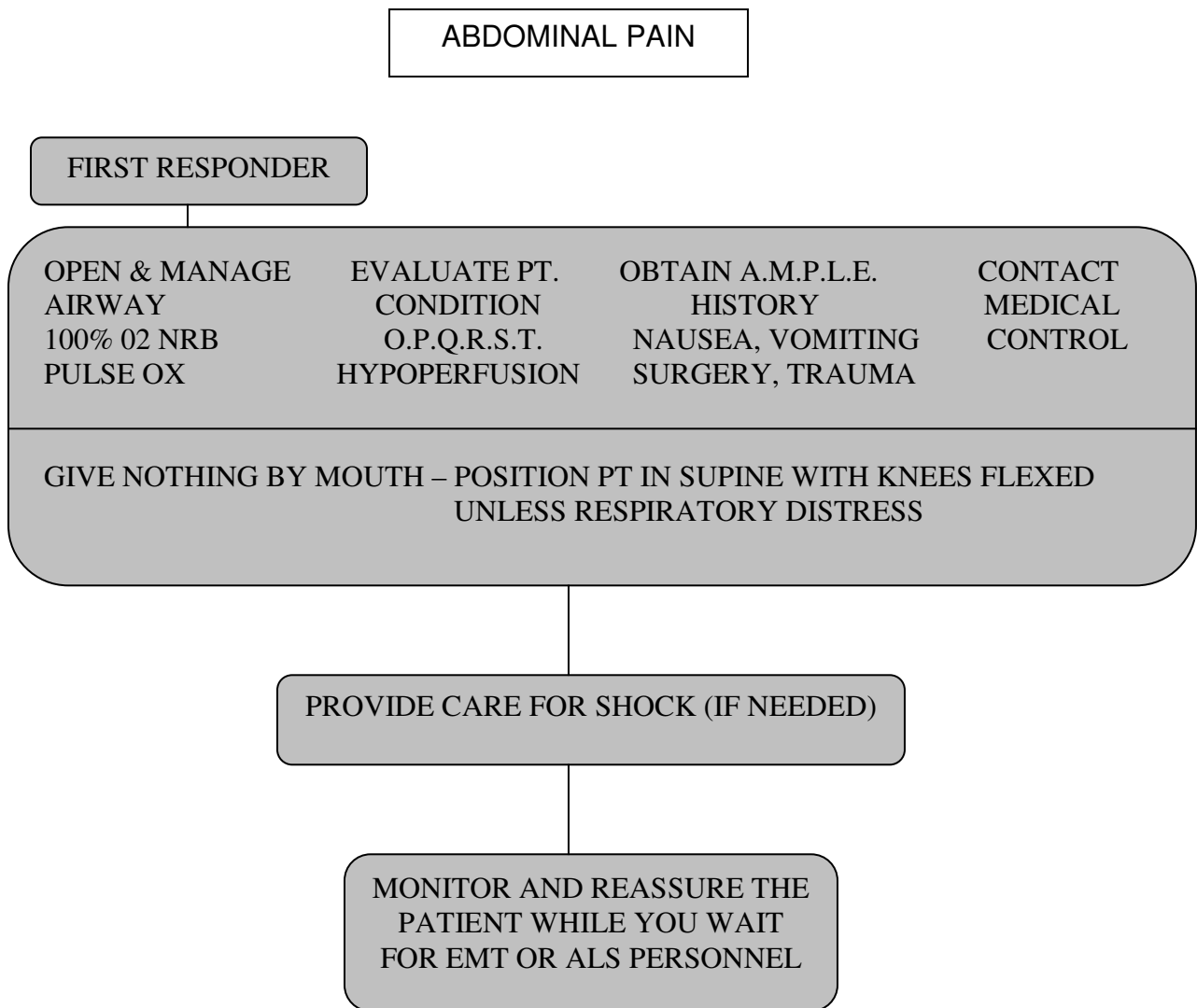
C. Assess additional associated signs and symptoms:

1. Nausea / vomiting blood or coffee grounds
2. Constipation / diarrhea – black, tarry or bloody bowel movements
3. Problems with urination
4. Menstrual abnormality
5. Fever
6. Tenderness, rigidity, and presence or absence of bowel sounds.
7. Cardiac associated symptoms: Dyspnea, Diaphoresis, SOB

D. Place in position of comfort, preferable supine with knees flexed, unless there is respiratory distress

E. Give nothing by mouth

F. Monitor and reassure the patient while you wait for EMT or ALS personnel.



ALTERED LEVEL OF CONSCIOUSNESS

GENERAL CONSIDERATIONS

- A. Several conditions may cause a patient to experience an altered mental status, or altered level of responsiveness. This would be characterized by the patient's alertness and responsiveness to his surroundings
- B. An alerted mental status may be caused by seizures, strokes, diabetic emergencies, poisonings, breathing problems, and cardiac events.

First Responder

- A. Secure airway, and consider cervical spine injury
 - 1. Administer 100% oxygen by NRB mask
 - 2. Apply Pulse Oximeter and treat per Pulse Oximeter procedure
 - 3. Be prepared to hyperventilate and/or assist ventilation with oral or nasal airway and BVM or PPV
- B. Evaluate patient's general appearance, relevant history of condition and determine:

<u>O</u> nset	<u>A</u> llergies
<u>P</u> rovokes	<u>M</u> edications
<u>Q</u> uality	<u>P</u> ast Medical History – especially, diabetic, seizures, stroke, head injury, drug abuse
<u>R</u> adiates	
<u>S</u> everity	<u>L</u> ast Meal
<u>T</u> ime	<u>E</u> vents leading to present illness
<u>I</u> nterventions	

Assess the unresponsive patient using the Glasgow Coma scale. Patients with scores of 8 or less have poor prognosis and need ALS as soon as possible.

In possible stroke patients who are alert, assessment of language, motor responses and sensation must be completed to establish baselines for future changes.

- C. Monitor and reassure patient while you wait until EMT's or ALS personnel.

ALTERED LEVEL OF CONSCIOUSNESS

FIRST RESPONDER

OPEN & MANAGE AIRWAY 100% O2 NRB CONSIDER C-SPINE	EVALUATE PT. CONDITION VS, LOC, PUPILS. PULSE OX MED ALERT	OBTAIN MEDICAL HISTORY SEIZURES, STROKE DIABETIC DRUG ABUSE	CONTACT MEDICAL CONTROL
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GIVE NOTHING BY MOUTH – POSITION PT IN SUPINE WITH KNEES FLEXED UNLESS RESPIRATORY DISTRESS

PROVIDE CARE FOR SHOCK (IF NEEDED)

MONITOR AND REASSURE THE PATIENT WHILE YOU WAIT FOR EMT OR ALS PERSONNEL

BURNS

GENERAL INSTRUCTIONS

- A. The first priority is to assure scene safety and then remove the patient from heat and flame, electrical or chemical exposure.
- B. Airway, Breathing, and Circulation must be stabilized before attending to the burn.
- C. Patient with extensive burns must be monitored for hypothermia avoid use of ice and /or prolonged cold compresses. When in doubt, always cover with dry dressing.
- D. In caring for the burn, the EMS provider should:
 - Stop the Burning
 - Reduce the Pain
 - Prevent Contamination
- E. Patients with critical burns only, transport per local protocol.
- F. When dealing with contaminated environments, EMS provider must have appropriate protective clothing. If not available, contact appropriate Hazardous Materials service for such equipment.
- G. Gross decontamination must be done at the scene. Advise receiving facility if complete decontamination was not done at the scene, and be prepared to transport to decontamination area.

First Responder

- A. Open and manage airway and provide 100% oxygen by NRB mask or bag valve mask (BVM), if available
- B. Determine type of burn and treat as follows:
 - 1. Thermal (dry and moist)
 - a. Stop burning process: i.e. remove patient from heat source, cool skin, remove clothing.
 - b. If patient starts to shiver or skin is cool, stop cooling process.
 - c. Estimate extent (%) and depth of burn (see chart). Determine seriousness (see chart) of burn.
 - d. Cover burn areas with DRY bulky dressing.
 - e. Monitor and reassure the patient while you wait for EMT or ALS personnel.
 - 2. Radiation Burns:
 - a. Treat as thermal burns except when burn is contaminated with radioactive source, then treat as chemical burn.
 - b. Wear appropriate protective clothing when dealing with contamination.
 - c. Contact HAZMAT TEAM for assistance in contamination cases.

BURNS (cont.)

3. Chemical Burns:

- a. EMS providers must wear appropriate protective clothing and respirators.
- b. Remove patient from contaminated area to decontamination site (NOT SQUAD).
- c. Determine chemicals involved: contact appropriate agency for chemical information.
- d. Remove patient's clothing and flush skin.
- e. Leave contaminated clothes at scene. Cover patient over and under before loading into squad.
- f. Patient should be transported by personnel not involved in decontamination process.
- g. Determine severity (see chart)
- h. Monitor and reassure the patient while you wait for EMT or ALS personnel
- i. Relay type of substance involved to EMT.

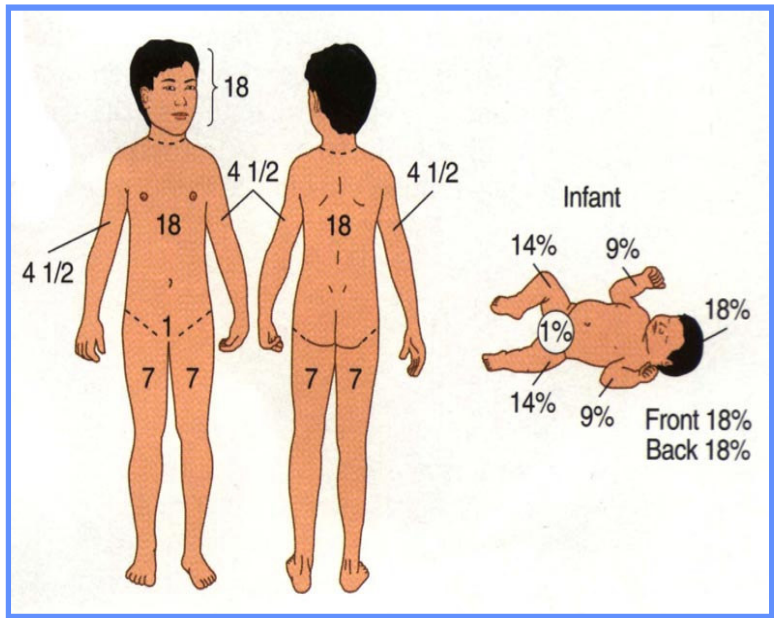
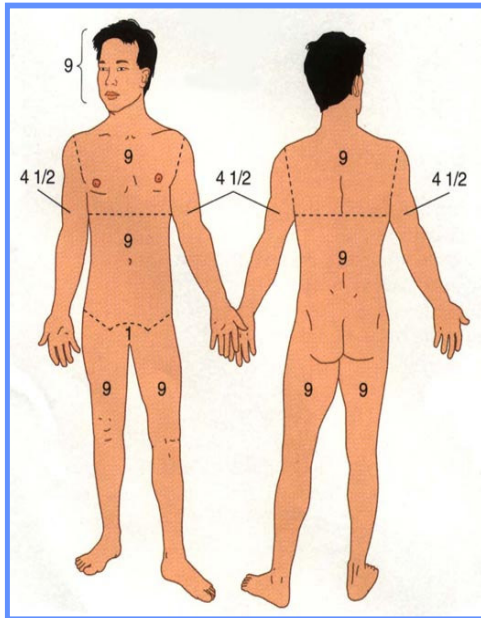
4. Electrical Burns:

- a. Shut down electrical source: do not attempt to remove patient until electricity is CONFIRMED to be shut off.
- b. Assess for visible entrance and exit wounds and treat as thermal burns
- c. Assess for internal injury, i.e., vascular damage, tissue damage, fractures, and treat accordingly.
- d. Determine severity of burn.
- e. Monitor and reassure the patient while you wait for EMT or ALS personnel.

5. Inhalation Burns:

- a. Always suspect inhalation burns when the patient is found in closed smoky environment and/or exhibits any of the following: burns to face/neck, singed nasal hairs, cough and/or stridor, soot in sputum.
- b. Provide oxygen therapy if available.
- c. Monitor and reassure the patient while you wait for EMT or ALS personnel.

RULES OF NINES



1% is equal to the surface of the palm of the patient's hand. If unsure of %, describe injured area.

SERIOUSNESS OF BURNS

MINOR

- 1st degree < 70%
- 2nd degree < 10%
- 3rd degree < 2%

Only if hands, face, feet or genitalia and NOT involved

MODERATE

- 1st degree > 70%
- 2nd degree 10-30%

CRITICAL

- 2nd degree > 30%
- 3rd degree > 2%
- Any burns with trauma
- Any burns with head, face, feet, genitalia involved

BURNS

FIRST RESPONDER

PROTECT SELF
REMOVE PT FROM ENVIRONMENT

OPEN AIRWAY
100% O2
PULSE OX

DETERMINE TYPE, %, DEPTH SEVERITY

CONTACT MEDICAL CONTROL

THERMAL BURN

COVER WOUND
DRY DRESSINGS

CHEMICAL BURN

DETERMINE CHEMICAL TYPE

REDUCE CONTAMINATION BEFORE TRANSPORT

COVER WOUNDS
DRY DRESSINGS

ELECTRICAL BURN

COVER WOUND
DRY DRESSING

RADIATION BURN

DETERMINE EXPOSURE OR CONTAMINATION

IF CONTAMINATED

REDUCE CONTAMINATION BEFORE TRANSPORT

COVERWOUND
DRY DRESSINGS

MONITOR AND REASSURE THE PATIENT WHILE YOU WAIT FOR EMT OR ALS PERSONNEL

CARDIAC ARREST

GENERAL INSTRUCTIONS

- A. CPR should not be interrupted for more than 15 seconds until spontaneous pulse is established.
- B. When a defibrillator (Automated or Manual) is immediately available three shocks should be administered, if indicated, after assessment and ventricular fibrillation identified.

First Responder

- A. If an Automated External Defibrillator (AED) is available:
 1. Assess patient for respiratory and cardiac arrest
 2. Apply AED and activate device. If the unit is equipped with a voice recorder, start verbal documentation which must include:
 - EMS delivering care, unit number and ID of FR
 - Initial call information (i.e. man down, drowning, etc.)
 - Initial patient assessment, findings and impression
 - Care given to this point
 - Ongoing outcomes of care delivered to patient
 - a. "NO Shock Advised"
 - j. CPR as recommended by the American Heart Association
 - ii. Ventilate with 100% oxygen by two-person bag valve mask or oxygen powered manually triggered ventilation device and oral or nasal airway.

Ventilation should be delivered over two seconds and cricoid pressure can be considered to help reduce gastric distention.

CARDIAC ARREST (cont.)

- b. "Shock Advised"
 - i. Deliver three stacked shocks (shocks without pulse checks)
 - 1. Defibrillate 200 joules (automatic)
 - 2. No Change – Second defibrillation 300 joules (automatic)
 - 3. No Change – Third defibrillation 360 joules (automatic)
 - ii. After third shock – CPR as recommended by the American Heart Association for one minute.
 - iii. Ventilate with 100% oxygen by two-person bag valve mask or oxygen powered, manually triggered ventilation device and oral or nasal airway.

Ventilation should be delivered over two seconds and cricoid pressure should be considered to help reduce gastric distention.
 - iv. Establish communications with Medical Control and advise of cardiac arrest.
 - v. After one minute of CPR – Activate AED to assess rhythm and deliver three stacked shocks, if indicated.
 - 1. Defibrillate 360 joules (automatic)
 - 2. No Change – Second defibrillation 360 joules (automatic)
 - 3. No Change – Third defibrillation 360 joules (automatic)
 - vi. After third shock – CPR as recommended by the American Heart Association. Transport patient to ambulance.

"TURN AED OFF DURING MOVEMENT OF PATIENT"

CARDIAC ARREST
V-FIB / PULSELESS V-TACH

FIRST RESPONDER

ASSESS PATIENT FOR RESPIRATORY AND CARDIAC ARREST
ACTIVATE ACLS SYSTEM / CONTACT MEDICAL CONTROL

APPLIES AED
IF UNIT HAS VOICE RECORDER
START VERBAL DOCUMENTATION

DELIVERS THREE STACKED SHOCKS
200J / 300-360J / 360J
NO PULSE CHECKS BETWEEN

MANAGES AIRWAY – ORAL/NASAL
BVM / PPV
CPR FOR ONE MINUTE

DELIVERS THREE STACKED SHOCK
360J
NO PULSE CHECKS BETWEEN

AFTER THIRD SHOCK
CPR
TRANSPORT PT. TO AMBULANCE

SPECIAL RESUSCITATION SITUATIONS

Special resuscitation situations are cardiopulmonary arrest or other life-threatening emergencies that require modification or extension of conventional life support techniques.

NEAR DROWING

GENERAL INFORMATION

- A. The key to success is the provision of early, effective ventilatory support.
- B. It is essential that the EMS provider exercise caution and take steps to insure their own safety while retrieving the victim from the water.

First Responder

- A. Open airway and start rescue breathing as soon as possible, even if the victim has not been removed from the water.
- B. Ventilate with 100% oxygen by two-person bag valve mask or oxygen powered, manually triggered ventilation device and oral or nasal airway. Oxygen should be warmed to 42 degree C, if available.

Ventilation should be delivered over two seconds and cricoid pressure should be considered to help reduce gastric distention.
- C. It is not recommended to drain fluid from lungs unless ventilation is impaired. If ventilation impairment should occur, suction the airway for not more than 15 seconds.
- D. Start chest compressions as soon as victim is removed from the water and onto a hard surface if the patient has no pulse .
- E. Patient may show signs of hypothermia, Handle patient VERY gently; rough handling or movement can cause cardiac arrhythmia. Warm the patient by removing wet clothes and covering with blankets.
- F. Provide care for shock and check again to make certain that the EMS system has been activated.

**CARDIAC ARREST
NEAR DROWNING**

FIRST RESPONDER

START AIRWAY SUPPORT ASAP (IN WATER)	REMOVE PT. FROM WATER ON TO FIRM SURFACE FOR CPR	HANDLE PT. GENTLY C-SPINE CONTROL
VENTILATE PT. BVM/PPV	CONSIDER RE-WARMING PROVIDE OXYGEN	CONTACT MEDICAL CONTROL

PROVIDE CARE FOR SHOCK (IF NEEDED)

**MONITOR AND REASSURE THE
PATIENT WHILE YOU WAIT
FOR EMT OR ALS PERSONNEL**

CARDIAC CHEST PAIN

GENERAL INFORMATION

- A. Heart attacks is a general term used to indicate a failure of circulation to the heart muscle that damages or destroys a portion of the heart.
- B. Early symptoms generally include chest or upper abdominal sensations of pressure or burning and are often mistaken for indigestion.
- C. As an attack worsens, pain may localize behind the sternum and radiate to either of the arms or shoulders (usually the left). In some cases, the pain may extend to the hand, neck, jaw, and teeth: back: or upper abdomen.
- D. Many times, the chest pain is associated with other signs and symptoms that are also suggestive of a heart attack in progress. They include:
 - Shortness of breath
 - Nausea
 - Sweating
 - Weakness

First Responder

- A. Open and manage the airway and provide oxygen by nasal cannula 4 lpm and increase as needed with respirator distress. Apply pulse Oximeter and treat per procedure, if available.
- B. Make patient comfortable and provide reassurance.
- C. Evaluate patient's general appearance, relevant history of current condition and determine:

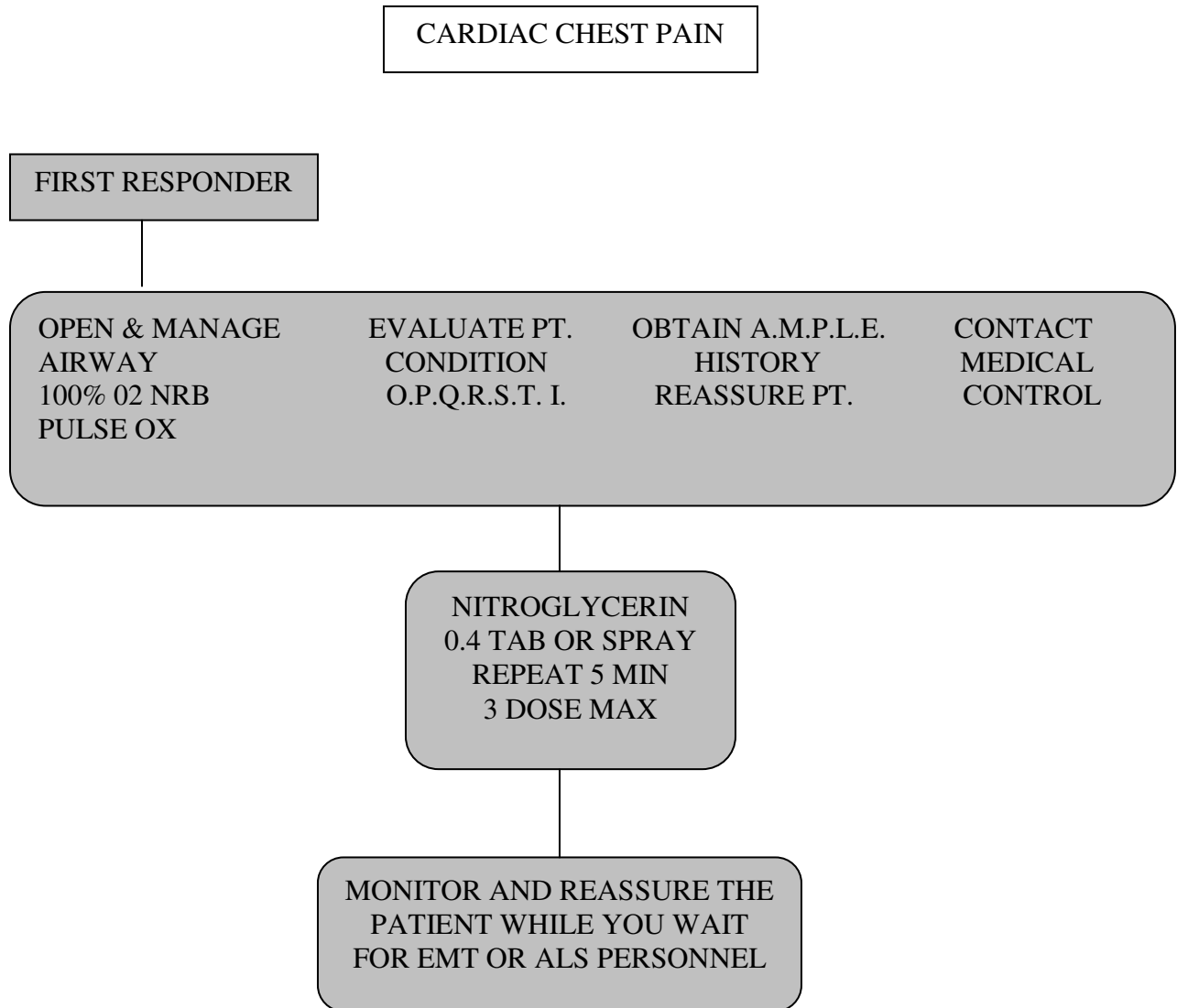
<u>O</u> nset	<u>A</u> llergies
<u>P</u> rovokes	<u>M</u> edications
<u>Q</u> uality	<u>P</u> ast Medical History – especially cardiac, stroke, recent surgeries, bleeding problems, CNS problems, and/or pregnancy
<u>R</u> adiates	
<u>S</u> everity	
<u>T</u> ime	<u>L</u> ast Meal
<u>I</u> nterventions	<u>E</u> vents leading to present illness
- D. Assess the patient to determine if pain is cardiac in origin. Patients with pain of cardiac origin and have the following signs and/or symptoms are likely candidates for thrombolytic therapy:
 - Previous myocardial infarction
 - Age over 30
 - Systolic pressure less than 180 and diastolic less than 110
 - Persistent pain for 15 minutes or longer
 - Lack of stroke, bleeding or CNS problem history
 - Lack of trauma or surgery in the last two weeks
 - No pregnancy

If the patient answers yes to the above, notify EMS patient fits profile.

- E. If patient is conscious and alert with previous history of angina pain and is taking nitroglycerin or nitrostat, assist to administer 0.4 mg tablet or spray of nitroglycerin sublingually. Assure medication is prescribed for patient and is not out of date.

Monitor patient's condition, especially blood pressure, Dosage may be repeated in 5 minutes if pain does not subside, B/P does not drop below 100 systolic and there is no change in level of consciousness.

- F. Reassure the patient while you wait for EMT or ALS personnel.



CHILDBIRTH/OBSTETRICAL EMERGENCIES

GENERAL INSTRUCTIONS

- A. Imminent delivery is when the baby's head is visible in the vaginal opening during a contraction (crowning).
- B. A visual inspection of the perineal area should only be done when contractions are less than 5 minutes apart and/or there is bleeding or fluid discharge.
- C. The EMS provider should not place a gloved hand inside the vagina except in the case of breech delivery with entrapped head or a prolapsed umbilical cord.
- E. During delivery, gentle pressure with a flat hand on the baby's head should be applied to prevent an explosive delivery.
- E. A mother in active labor should be placed on the floor to prevent the newborn from falling after delivery.

First Responder

- A. Obtain history of patient condition and pregnancy: Contraction duration and interval, due date, number of pregnancies and number of live children, pre-natal care and possible complications.
- B. Place mother on left side with head slightly elevated to relieve pressure on mother's vena cava created by baby. Pressure could cause a decrease in mother's and baby's heart rate.
- C. If delivery is imminent, prepare equipment and follow guidelines for delivery
 - 1. Equipment: OB Kit, Oxygen and BVM, towels and blankets, cot, large dressings.
- D. Keep mother and child warm and monitor airways and signs of shock.
- E. Monitor mother and child while you wait for EMT or ALS personnel.

EMERGENCY CHILDBIRTH
NORMAL DELIVERY

FIRST RESPONDER

OBTAIN HISTORY
OF
PREGNANCY

VISUAL EXAM
IF
CONTRACTION < 5 MIN
APART OR
BLOOD / FLUID DISCHARGE

CONTACT
MEDICAL
CONTROL

YES

DELIVERY IMMINENT
(CROWNING)

NO

GATHER EQUIPMENT
PREPARE MOTHER
FOR DELIVERY

FOLLOW DELIVERY
GUIDELINES
02, 5L, NC

ASSESS FOR
COMPLICATION

IF PRESENT
FOLLOW OB
COMPLICATIONS
PROTOCOL

AFTER DELIVERY
CLAMP & CUT CORD

ASSESS
MOTHER & CHILD

IF COMPLICATIONS
PRESENT FOLLOW
APPROPRIATE
PROTOCOL

KEEP MOTHER &
CHILD WARM &
WELL OXYGENATED

MONITOR AND REASSURE THE
PATIENTS WHILE YOU WAIT
FOR EMT OR ALS PERSONNEL

POSITION
MOTHER ON
LEFT SIDE

DELIVERY COMPLICATIONS

First Responder

- A. Cord Around Baby's Neck:
1. As baby's head passes out the vaginal opening, feel for the cord. Initially try to slip cord over baby's head; if too tight, clamp cord in two places and cut between clamps.
- B. Breech Delivery:
1. Footling Breech, which is one or both feet delivered first.
 2. Frank Breech, which is the buttocks first presentation.
 - a. When the feet or buttocks first become visible, there is normally time to transport patient to nearest facility.
 - b. If upper thighs or the buttock have come out of the vagina, delivery is imminent.
 - c. If the child's body has delivered and the head appears caught in the vagina, the FR must support the child's body and insert two fingers into the vagina along the child's neck until the chin is located. At this point, the two fingers should be placed between the chin and the vaginal canal and then advanced past the mouth and nose.
 - d. After achieving this position a passage for air must be created by pushing the vaginal canal away from the child's face. This air passage must be maintained until the child is completely delivered.
- C. Excessive Bleeding Pre-delivery:
1. If bleeding is excessive during this time and delivery is imminent, in addition to normal delivery procedures, the FR should use the Hypovolemic shock guidelines.
 2. If delivery is not imminent, patient should be on her left side and shock guidelines followed.
- D. Excessive Bleeding Post-delivery:
1. If placenta has been delivered, massage uterus and put baby to mother's breast
 2. Follow hypovolemia shock guidelines.
- E. Prolapsed Cord:
1. When the umbilical cord passes through the vagina and is exposed, the EMS provider should check cord for a pulse.
 2. The patient should be positioned with hips elevated or in the knee chest position and a moist dressing around cord.
 3. If umbilical cord is seen or felt in the vagina, insert two fingers to elevate presenting part away from cord, distribute pressure evenly when occiput presents.
 4. DO NOT attempt to push the cord back in.

OBSTETRICAL EMERGENCIES

First Responder

- A. Miscarriage: Premature termination of a pregnancy
 - 1. Assess for shock and treat per shock guidelines.
 - 2. Give psychological support to patient and/or family.
 - 3. All expelled tissue needs to go with the patient to the hospital
- B. Ectopic Pregnancy: When growth and development of a fertilized egg occurs outside the uterus.
 - 1. Patient may experience severe abdominal pain.
 - 2. May have intra-abdominal and/or vaginal bleeding and discharge.
 - 3. Patient may not know she is pregnant.
 - 4. Treat for hypovolemic shock.
 - 5. Place supine with knees flexed.
 - 6. All expelled tissue needs to go with the patient to the hospital.
- C. Cardiac Arrest: Cardiac resuscitation of the expectant mother is unique due to the changes in the maternal cardiovascular and respiratory physiology.
 - 1. Precipitating events for cardiac arrest include: Pulmonary embolism, trauma, hemorrhage or congenital or acquired cardiac disease.
 - 2. Standard resuscitative guidelines should be carried out.
 - 3. When the mother is supine, the fetus may compress the iliac vessels, the inferior vena cave, and the abdominal aorta. To minimize effects of the fetus pressure on venous return:
 - a. Place a wedge (pillow) under the right abdominal flank and hip, or
 - b. Apply continuous manual displacement of the uterus to the left
- D. Third Trimester Bleeding:
 - 1. Abruptio placenta – premature separation of placenta from uterine wall. Characterized by abdominal pain and vaginal bleeding:
 - a. Bleeding may be dark
 - b. Uterus tender
 - 2. Placenta previa – placenta partially or completely covers the cervical (birth) canal. Characterized by painless vaginal bleeding:
 - a. Bleeding may be bright red
 - b. Uterus may be non-tender
 - 3. Never do vaginal exam

DIABETIC EMERGENCIES

GENERAL INSTRUCTIONS

- A. Hyperglycemia is usually a gradual event, taking several days to develop.
- B. The diabetic who has taken too much insulin, has eaten too little sugar, or is overexerted may develop hypoglycemia, which usually comes on suddenly.

First Responder

- A. Secure and maintain airway. Support with 100% O₂ by NRB mask, if available
- B. Obtain relevant medical history: OPQRST
 1. Has patient eaten today?
 2. Has patient taken insulin?
 3. Onset
 4. Medication – Type and time taken
- C. If patient is alert provide sugar
- D. Monitor patient while you wait for EMT or ALS personnel.

DIABETIC EMERGENCIES

FIRST RESPONDER

OPEN & MANAGE AIRWAY 100% O2 NRB PULSE OX	EVALUATE PT. CONDITION VS, LOC. PUPILS MED ALERT	OBTAIN A.M.P.L.E. HISTORY O.P.Q.R.S.T. I	CONTACT MEDICAL CONTROL
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BLOOD SUGAR
LESS THAN 70

IF PATIENT
ALERT
ORAL GLUCOSE

MONITOR AND REASSURE THE
PATIENT WHILE YOU WAIT
FOR EMT OR ALS PERSONNEL

EYE INJURY

GENERAL CONSIDERATIONS

TRAUMA

- A. Do not allow eye injury to distract you from the basics of trauma care.
- B. Do not remove any foreign body imbedded in the eye or orbit. Stabilize any large protruding foreign bodies.
- C. With blunt trauma to the eye, if time permits, examine the globe briefly for gross laceration as the lid may be swollen tightly shut later. Scleral rupture may lie beneath an intact conjunctiva.
 - 1. Exert no pressure on the globe when doing the exam or when covering for transport.
 - 2. A light sterile wet dressing may be used to cover the eye for transport – avoid pressure directly to the eye.
 - 3. Do not delay transport by covering the eye if the patient has other life-threatening injuries.
- D. Covering both eyes when only one eye is injured may help to minimize trauma to the injured eye, but in some cases the patient is too anxious to tolerate this.
- E. Position patient sitting upright unless other life threats prohibit this from being done.

CHEMICAL BURNS

- A. When possible determine type of chemical involved first. The eye should be irrigated with copious amount of water or saline, using IV tubing wide open for a minimum of 15 minutes started as soon as possible. Any delay may result in serious damage to the eye
- B. Always obtain name and, if possible, a sample of the contaminant or ask that they be brought to the hospital as soon as possible.

CONTACT LENSES

- A. If possible, contact lenses should be removed from the eye; be sure to transport them to the hospital with the patient. If the lenses cannot be removed, notify Medical Control as soon as possible.
- B. If the patient is conscious and alert, it is much safer and easier to have the patient remove their lenses.

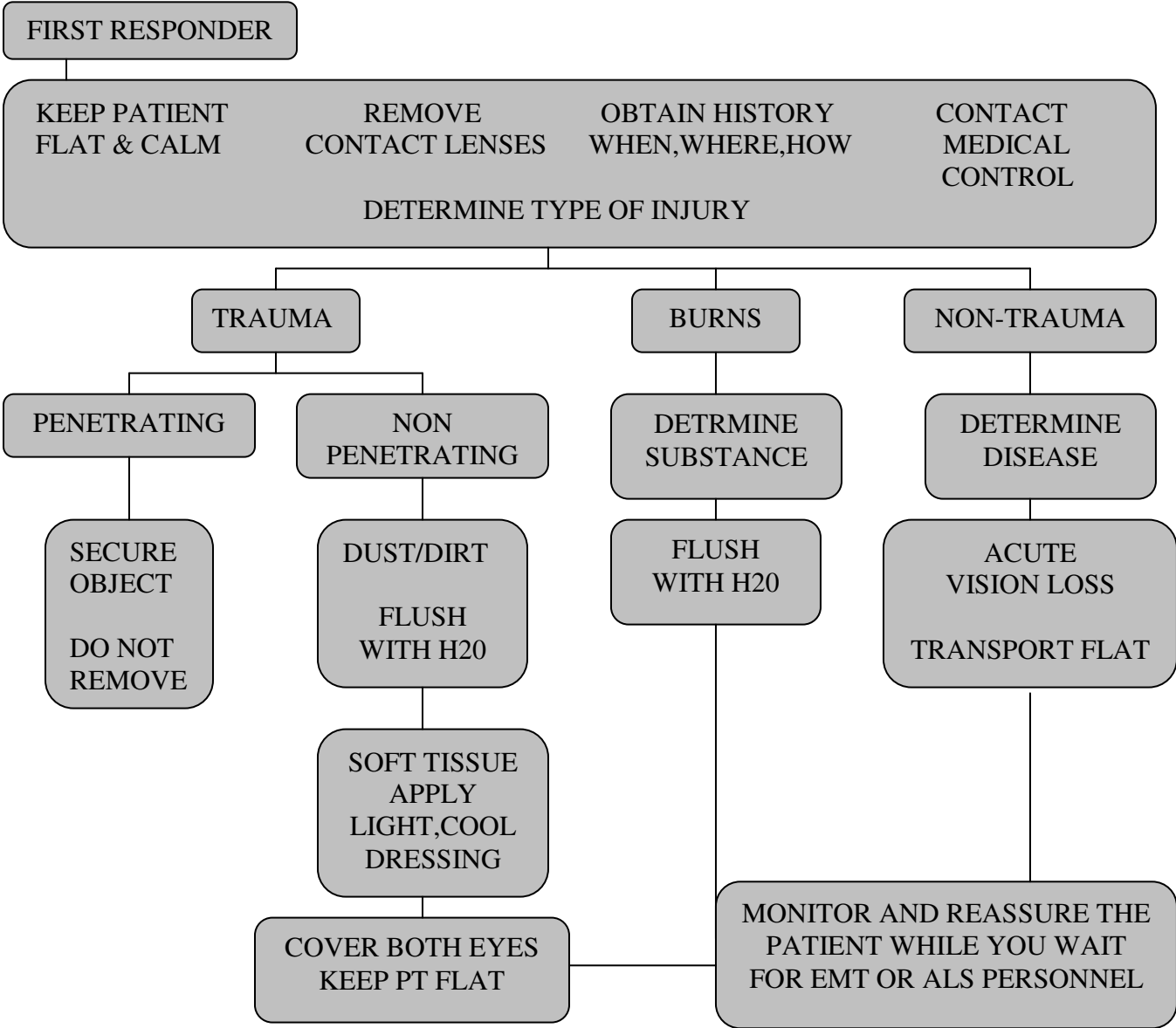
ACUTE, UNILATERAL VISION LOSS

- A. When a patient suddenly loses vision in one eye with no pain, there may be a central retinal artery occlusion. Urgent transport and treatment is necessary.
- B. Patient should be lying flat.

First Responder

- A. Keep patient calm and lying flat, unless otherwise indicated
- B. Obtain history of injury: Type, Where, When, How.
- C. Establish communications with Medical Control and advise of patient condition. Transport immediately, unless an advanced life support unit is enroute and has an ETA of less than 5 minutes.

EYE INJURIES



HYPOTHERMIA / FROSTBITE

GENERAL CONSIDERATIONS

- A. This guidelines was written to assist those instances of hypothermic injury involving long evacuation and transport time. When possible, all treatment should be left for a hospital setting.
- B. Generalized Hypothermia:
1. The most common mechanism of death in hypothermia is ventricular fibrillation. If the hypothermia victim is in ventricular fibrillation, CPR should be initiated. If V-fib is not present, then all treatment and transport decisions should be tempered by the fact that V-fib can be caused by rough handling, noxious stimuli or even minor mechanical disturbances, this means that respiratory support with 100% oxygen should be done gently.
 2. In the absence of monitor-confirmed V-fib, the decision to initiate CPR must consider the following:
 - a. Hypothermia may produce profound Bradycardia and the pulse should be taken for at least 60 seconds before concluding that the patient is pulseless.
 - b. Hypothermia can exert a protective effect on body tissues. The hypothermia victim's own cardiac activity, even when profoundly bradycardic may be preferred to CPR perfusion, especially in light of the fact that CPR may well precipitate V-fib
 3. The heart is most likely to fibrillate between 85-88 degrees F. (29-31 degree C.)
Defibrillate VF / VT up to a total of three shocks (200 J, 300 J, 360 J).
 4. Since fibrillation is so difficult to convert without rewarming, measures to rewarm should be instituted in any hypothermia victim with V-fib. The decision to rewarm should be made in consultation with Medical Control and should consider the following factors:
 - a. Method of rewarming available
 - b. Time / distance from hospital
 - c. Capability of treating V-fib
 5. Shivering stops below 90-degree F. (32 degrees C).
 6. Consider hypoglycemia in the hypothermic patient.
 7. Wet clothing robs heat from the body more than it insulates and should be removed, protecting victim from wind.
 8. Never give hot liquids by mouth.
 9. Generalized hypothermia can occur whenever the ambient temperature is less than body temperature and the body is not capable of maintaining that temperature. For example, an elderly debilitated patient sitting over night in a room which is at 66 degrees F. may become hypothermic for that exposure alone. Suspect hypothermia in the injured, elderly, or debilitated patient.
- C. Local Hypothermia (frostbite):
1. Thawing should be done under controlled conditions. It is extremely painful.
 2. Complete rewarming requires active heating for prolonged period. Partial rewarming is worse than none. Therefore, rewarming should rarely be done in the field.

Hypothermia / Frostbite (cont.)

First Responder

- A. Administer warm 100% oxygen, if available, by NRB mask and or BVM.
- B. Move patient to warm environment, remove any wet clothing and cover with blankets.
- C. Evaluate patient's general appearance, relevant history of condition and determine:
- | | |
|-----------------------|--|
| <u>O</u> nset | <u>A</u> llergies |
| <u>P</u> rovokes | <u>M</u> edications |
| <u>Q</u> uality | <u>P</u> ast Medical History – especially cardiac, length of exposure, unconsciousness, was the patient wet, drugs/alcohol ingestion, did injured areas thaw and freeze. |
| <u>R</u> adiates | |
| <u>S</u> everity | |
| <u>T</u> ime | |
| <u>I</u> nterventions | <u>L</u> ast Meal |
| | <u>E</u> vents leading to present illness |
- D. Assess vital signs, mental status, temperature of patient and environment and evidence of local injury.
- E. Generalized Hypothermia with Arrest:
1. CPR and AED.
 2. If an Automated External Defibrillator (AED) is available:
 - a. Assess patient for respiratory and cardiac arrest
 - b. Apply AED and activate device. If the unit is equipped with a voice recorder, start verbal documentation which must include:
 - EMS delivering care, unit number and ID of EMS provider
 - Initial call information (i.e. man down, frowning, etc.)
 - Initial patient assessment, findings and impression
 - Care given to this point
 - Ongoing outcomes of care delivered to patient
- i. "No Shock Advised"
 - (a) CPR as recommended by the American Heart Association.
 - (b) Establish communications with Medical Control and advise of cardiac arrest.
 - (c) Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.
 - ii. "Shock Advised"
 - (a) Deliver three stacked shocks (shocks without pulse checks)
 - (i) Defibrillate 200 joules
 - (ii) No Change – Second defibrillation 300 joules
 - (iii) No Change – Third defibrillation 360 joules

Hypothermia / Frostbite (cont.)

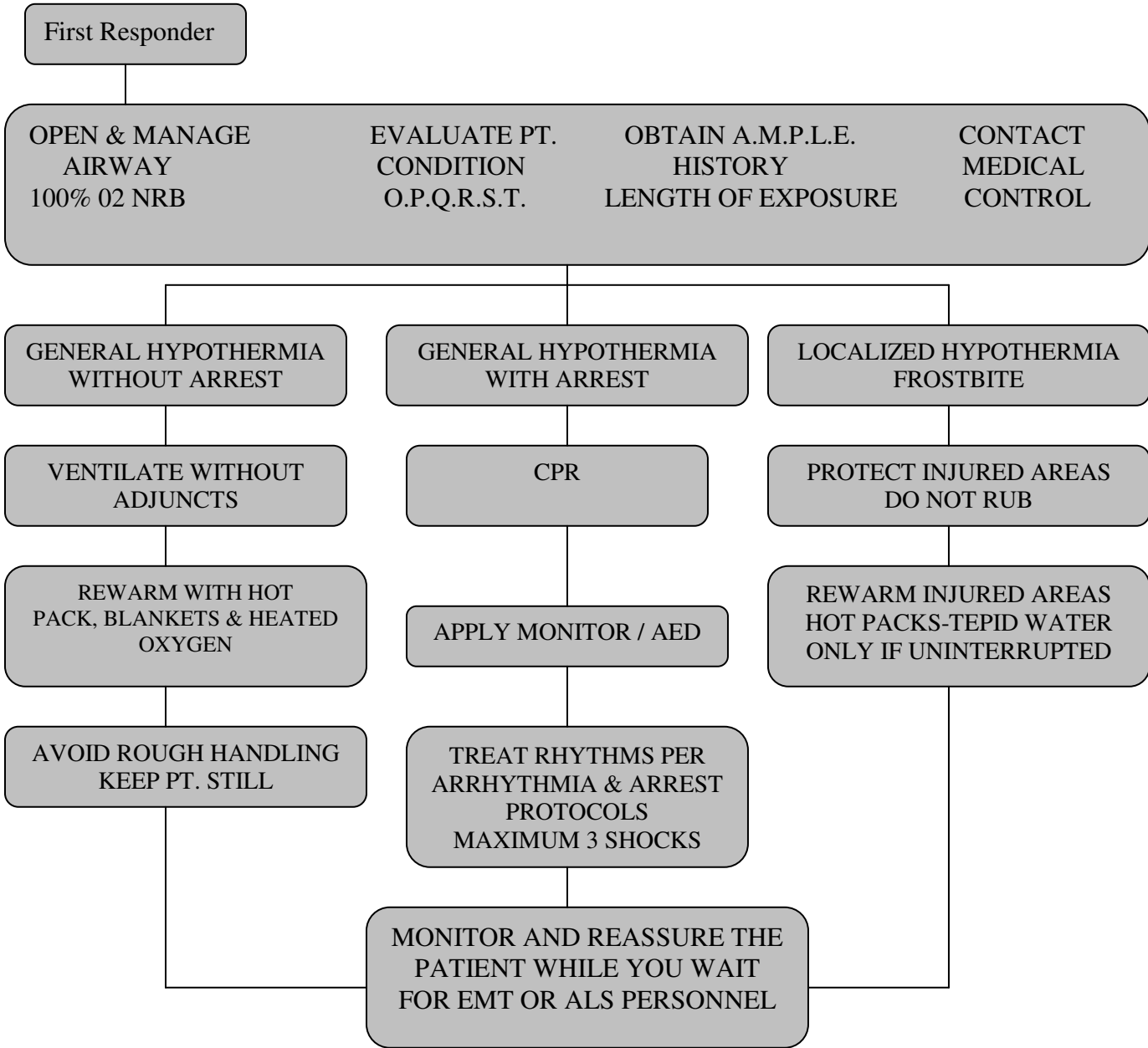
F. Generalized Hypothermia without Arrest

1. Do not initiate CPR if there is any pulse present, no matter how bradycardic.
2. Use oxygen, high flow, if available. Do not hyperventilate. Do not use adjunctive airway equipment unless absolutely necessary. If necessary, use least intrusive measures which will adequately assure airway and ventilation.
3. Avoid rough handling, unnecessary stimulation.
4. If rewarming is undertaken, rewarm rapidly by applying warm packs or hot water bottles to trunk, neck and groin only.
5. Do not allow conscious patients to ambulate, exercise or move about.

G. Local Hypothermia (frostbite)

1. Protect the injured areas from pressure, trauma, and friction. Remove all covering from injured parts. Do not rub. Do not break blisters.
2. Do not thaw injured part with local heat in excess of 100-110 degrees F. (water that is comfortably hot to the touch without burning).
3. Do not allow limb to thaw if there is a chance that the limb may refreeze before evacuation is complete.
4. Maintain core temperature by keeping patient warm with blankets, warm fluids, etc.
5. Monitor and reassure patient while you wait for EMT or ALS personnel.

HYPOTHERMIA / FROSTBITE



HEAT EXPOSURE

GENERAL CONSIDERATIONS

- A. Recognize that the very old, very young and patients with a history of spinal injury are the ones most likely to suffer related illness. Other contributory factors may include heart medications, diuretics, cold medications and/or psychiatric medications.
- B. Heat exposure can occur either due to increased environmental temperatures or prolonged exercise or a combination of both. Environments with temperature above 90 degree F and humidity over 60% present the most risk.
- C. Types of heat related illness:
1. Heat Stroke – The most serious type of exposure illness, usually due to prolonged exposure to heat, inadequate fluid replacement and deficient thermo-regulatory function. The patient will often experience inadequate perspiration with body temperatures reaching 105 degree F or greater. The skin is usually hot and dry and there may be an altered LOC and/or coma. Seizures may also occur. Cardiovascular collapse is the usual cause of death.
 2. Heat Exhaustion – A more moderate form of heat exposure associated with dehydration combined with overexertion.

The skin is cooler and the core temperature is below 105 degree F. The patient may experience syncope with orthostatic hypotension.
 3. Heat Cramps – The mildest form of heat exposure caused by dehydration, overexertion and electrolyte abnormalities. The skin is moist with muscle cramps, usually affecting large muscle groups.
- D. When altered mental status is present consider other causes such as hypoglycemia, stroke and/or shock.

First Responder

- A. Secure airway, and consider cervical spine injury
1. Administer oxygen, maintaining a 95% SpO₂ or BVM.
- B. Move patient to cool environment and remove any light clothing.
- C. Evaluate patient's general appearance, relevant history of condition and determine:

Onset
Provokes
Quality
Radiates
Severity
Time
Interventions

Allergies
Medications
Past Medical History – especially length of exposure, unconsciousness, drugs/alcohol ingestion
Last Meal
Events leading to present illness

Heat Exposure (cont.)

- D. Assess vital signs every 15 minutes, mental status, and temperature of patient and environment.
- E. Determine type of exposure:
 - 1. Heat Stroke (hot and insufficient sweating)
 - a. Patient alert and oriented, may be given fluid orally if there is no nausea and/or vomiting.
 - b. Patient with altered LOC:
 - i. Cool with mist or cool wet sheet with fan, air conditioning and/or open windows.
 - ii. Apply cold packs to axilla, groin and neck. (avoid shivering)
 - 2. Heat Exhaustion (pale, moist, may be orthostatic)
 - a. Patient alert and oriented, may be give fluid orally if there is no nausea and/or vomiting.
 - b. Patient with altered LOC:
 - i. Apply cold packs to axilla, groin and neck. (avoid shivering)
 - 3. Heat Cramps
 - a. Patient alert and oriented, may give fluid orally if there is no nausea and/or vomiting.
 - 4. Monitor and reassure patient while you wait for EMT or ALS personnel.

HEAT EXPOSURE

First Responder

OPEN & MANAGE AIRWAY 02, MAINTAIN 95% SpO2	EVALUATE PT. CONDITION O.P.Q.R.S.T.	OBTAIN A.M.P.L.E. HISTORY LENGTH OF EXPOSURE	CONTACT MEDICAL CONTROL
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ALERT & ORIENTED
MAY GIVE ORAL FLUID
REMOVE TIGHT CLOTHING
PLACE IN COOL ENVIRONMENT

DECREASED L.O.C.
CONSIDER OTHER CAUSES

HEAT STROKE

HEAT EXHAUSTION

APPLY COLD PACK
AXILLA, GROIN, NECK

APPLY COLD PACK
AXILLA, GROIN, NECK
DISCONTINUE COOLING
IF SHIVERING OCCURS

RAPID COOLING
MIST, COOL WET SHEETS,
FAN, AC, OPEN WINDOW

MONITOR AND REASSURE THE
PATIENT WHILE YOU WAIT
FOR EMT OR ALS PERSONNEL

POISONING

GENERAL CONSIDERATIONS

EMS provider will consider the possibility of accidental or self-poisoning under the following conditions:

- A. History of observed or admitted accidental or intentional ingestion
- B. Coma
- C. History of known suicide gesture
- D. Suggestive intoxicated behavior (hyperactive, hypoactive, unstable walk, lethargic)

First Responder

- A. Establish airway
- B. Obtain relevant history:
 - 1. What, when, why taken (if known)
 - 2. Quantity taken (if known)
 - 3. Victim's age and weight
- C. Take whatever container the substance came from to the hospital along with readily obtainable Samples of medication unless this results in an unreasonable delay of transport.
- D. Evaluate patient:
 - 1. Breath sounds (rales)
 - 2. Level of consciousness
 - 3. Pupil size
 - 4. Evidence of head injury
- E. Depending on route poison entered body apply the following:
 - 1. Ingested Poisons – Transport (Contact Medical Control for prolonged transports, >30 minutes or for recommendation for charcoal administration).
 - 2. Inhaled Poisons
 - a. Remove from toxic area
 - b. Secure airway; support with 100% oxygen, if available
 - c. Assist in ventilation if necessary
 - 3. Absorbed Poisons
 - a. Remove victim's clothing
 - b. Identify substance
 - c. Flush skin with water before and during transport if possible – at least 10-15 minutes
 - 4. Injected Poisons
 - a. Secure and maintain airway
 - b. Find substance and introduction system, if possible

POISONING

FIRST RESPONDER

MANAGE AIRWAY
100% O₂ NRB / BVM
PULSE OX

EVALUATE
AIRWAY / BREATHING
CIRCULATION

IDENTIFY
SUBSTANCE
TYPE-AMOUNT

IF ALTER LOC
FOLLOW
ALTERED LOC PROTOCOL

CONTACT MEDICAL
CONTROL

DETERMINE ENTRY OF SUBSTANCE

INGESTED

ABSORBED

INHALED

INJECTED

REMOVE PT
FROM
CONTAMINATED
AREA

REMOVE
CLOTHING

REMOVE PT
FROM
CONTAMINATED
AREA

MAINTAIN
OPEN AIRWAY
100% O₂
VENTILATE
BVM / PPV

TREAT SYMPTOMS

MONITOR AND REASSURE THE
PATIENT WHILE YOU WAIT
FOR EMT OR ALS PERSONNEL

PSYCHIATRIC EMERGENCIES

GENERAL CONSIDERATIONS

- A. A behavioral emergency exists in situations where the patient exhibits abnormal behavior That is unacceptable or intolerable to the patient, family, or community.
- B. Such behavior may occur because of extremes of emotion or a psychological or medical condition. Other causes of behavioral change include.
 - Situational stress (patient reacting to events at the scene).
 - Mind-altering substances
 - Psychiatric problems
 - Psychological crises, including panic or paranoia

First Responder

- A. Obtain relevant history:
 - 1. Previous psychiatric hospitalization, when and where
 - 2. Where does patient receive psychiatric care?
 - 3. What drugs does patient take (including alcohol)?
- B. Calm the patient
- C. Evaluate patient:
 - 1. Vital signs
 - 2. General appearance
- D. Contact Medical Control and advise of patient condition
- E. Contact local enforcement for assistance with violent patients

NOTE: Restraints may be used to protect the patient, technicians, and bystanders.
See restraint policy

- F. ALL patients who are not making rational decisions should be transported for medical evaluation.

Threat of suicide, overdose of medication, drugs, or alcohol, and/or threats to the health and well being of others are NOT considered rational.

- Refer to Refusal Protocol

RESPIRATORY DISTRESS

GENERAL CONSIDERATIONS

- A. Respiratory difficulty may be caused by a variety of conditions ranging from ongoing medical problems, such as asthma, to sudden illnesses, such as pulmonary embolism.
1. Adequate breathing:
 - a. Normal adult respiratory rate is 12 to 20
 - b. Normal child respiratory rate is 15 to 30
 - c. Normal infant respiratory rate is 25 to 30
 2. Inadequate breathing:
 - a. Rate is faster or slower than the normal respiratory rate
 - b. Irregular breathing rhythm or pattern
 - c. Decrease quality of respirations (diminished volume of air taken inhaled or exhaled)

First Responder

- A. Open airway and check for breathing
1. Airway obstructed:
 - a. Manual clearing
 - b. Abdominal or chest thrust
 - c. Suction
 2. Airway is open, breathing absent, pulse present:
 - a. Ventilate patient 100% oxygen by two person bag valve mask, if available
 3. Airway is open and patient is in distress:
 - a. Administer 100% O₂ by NRB mask
 - b. Be prepared to assist ventilations
 - c. Evaluate breath sounds
 - i. Clear breath sounds: Treat cause – MI, Pulmonary embolism
Metabolic disturbance
Hyperventilation
 - ii. Wheezes present:
 - a. Minor allergic reaction: Support with oxygen, observe patient carefully
 - b. Severe allergic reaction (allergy, asthma)
 - (i) Secure airway and support with oxygen
 - (ii) Ask patient or bystanders if epinephrine by auto-injector has been prescribed for these situations and do they have the medication

Respiratory Distress (cont.)

with them.

(iii) IF MEDICATION IS AVAILABLE:

- (aa) Assure medication is prescribed for patient.
- (bb) Check medication – cloudiness, expiration date, and administration method.
- (cc) Contact Medical Control
- (dd) Administer medication in mid-thigh and hold injector firmly against leg for at least ten seconds to assure all medication is injected.
- (ee) Record patient reaction to medication and relay to Medical Control - be sure to have vital signs.

c. Patient with COPD (emphysema, asthma, bronchitis)

(i) Minor distress

- (aa) Put patient in position of comfort, support with LOW flow oxygen.

(ii) Severe distress:

- (aa) Set patient up, assist ventilations with HIGH flow O₂
- (bb) Ask patient or bystanders if a bronchial dilator by inhaler has been prescribed for these situations and do they have the medication with them.
- (cc) IF MEDICATION IS NOT AVAILABLE – ALS unit is enroute of less than 5 minutes. (Consider transport time)
- (dd) IF MEDICATION IS AVAILABLE:
 - (i) Assure medication is prescribed for patient
 - (ii) Check medication – expiration date, administration method
 - (iii) Contact Medical Control, if possible
 - (iv) Administer medication by having the patient exhale, then activate spray during inhalation, and have patient hold breath for ten seconds so medication can be absorbed

USE SPACER IF AVAILABLE

- (v) Record patient reaction to medication and relay to Medical Control – be sure to have vital signs

iii. Rales present (pulmonary edema)

- (a) Set patient up, administer HIGH flow oxygen by NRB and/or BVM.

Respiratory Distress (cont.)

- iv. Breath sounds absent
 - (a) Treat cause: pneumothorax, hemothorax, and lower airway obstruction
- B. Pulse Oximeter and monitor patient condition and treat accordingly
- C. Evaluate patient's general appearance, relevant history of condition and determine
 - Onset
 - Provokes
 - Quality
 - Radiates
 - Severity
 - Time
 - Interventions
 - Allergies
 - Medications
 - Past Medical History – especially - RESPIRATORY
 - Last Meal
 - Events leading to present illness
- E. Contact Medical Control, advise of patient condition
- F. Monitor and reassure patient while you wait for EMT or ALS personnel;

RESPIRATORY DISTRESS OBSTRUCTED AIRWAY

FIRST RESPONDER

OPEN AIRWAY
CHECK FOR
BREATHING

CLEAR OBSTRUCTION
BY MAUNUAL METHODS
SUCTION

CONTACT
MEDICAL
CONTROL

AIRWAY CLEARED

OXYGEN IF AVAILABLE

100% O₂
NRB
BVM/PPV IF NEEDED

MONITOR AND REASSURE THE
PATIENT WHILE YOU WAIT
FOR EMT OR ALS PERSONNEL

SEIZURES

GENERAL CONSIDERATIONS

- A. The seizure has usually stopped by the time the FR personnel arrive (Postictal state)
- B. The basic rule with seizures is to “protect and support” the patient, if trauma, consider cervical immobilization.
- C. Aspiration precautions include:
 - 1. Coma position: a side lying position with the head lowered 15 to 30 degrees
 - 2. Suction readily available
 - 3. If possible, mouth cleared of foreign bodies (food, gum, dentures)

First Responder

- A. Place patient away from objects on which they might injured themselves; protect but do not restrain them.
- B. Clear and maintain airway, consider cervical spine injury
- C. Administer 100% oxygen with NRB mask if available
- D. Obtain history from bystanders:
 - 1. Seizure history
 - 2. Description of onset of seizure
 - 3. Medications
 - 4. Other known medical history (especially head trauma, diabetes, drugs, alcohol, stroke, heart disease)
- E. Evaluate:
 - 1. Evidence of head trauma
 - 2. Drug abuse
- F. Bring medication with patient if available
- G. Establish communications with Medical Control and advise of patient condition.

SEIZURES

FIRST RESPONDER

OPEN AIRWAY
100% O2
IF AVAILABLE
NRB/BVM
CONSIDER C-SPINE

EVALUATE PT.
CONDITION
PULSE OX
LUNG SOUNDS

OBTAIN HISTORY
SEIZURES
DIABETIC
DRUG ABUSE

CONTACT
MEDICAL
CONTROL

PROTECT PATIENT FROM INJURY

MONITOR AND REASSURE THE
PATIENT WHILE YOU WAIT
FOR EMT OR ALS PERSONNEL

SHOCK

GENERAL CONSIDERATIONS

- A. Shock is the failure of the body to circulate blood and oxygen properly and perfuse body tissue
- B. Shock can be due to:
 - 1. Hypovolemic – fluid loss
 - 2. Cardiogenic – pump failure
 - 3. Neurogenic - vasodilatation
 - 4. Anaphylactic – allergic reaction
 - 5. Septic – infection, vasodilatation
 - 6. Respiratory – lack of oxygen
- C. Priorities of care in shock situations are:
 - 1. Provide an adequate airway and oxygenation
 - 2. Recognize the type of shock present and its treatment
 - 3. Replace body fluids

First Responder

- A. Establish airway; administer oxygen, if available 100% by NRB mask. Assist ventilation as required with oral or nasal airway and BVM. Obtain Pulse Ox reading and treat accordingly.
- B. Obtain relevant medical history: CAUSE
- C. Place patient in proper shock position:
 - 1. Hypotension – laying flat with feet elevated
 - 2. Respiratory difficulty – head elevated
- D. Maintain body temperature:
 - 1. Patient cold – Warm them up
 - 2. Patient hot – Cool them down
- F. Treat the cause
- G. Evaluate the patient's:
 - 1. Respiratory status
 - 2. Circulatory status – pulse, B/P
 - 3. Level of consciousness
 - 4. Evidence of trauma to abdomen, chest, and head
- H. Establish communications with Medical Control and advise of patient condition.
- I. Monitor and reassure patient while you wait for EMT or ALS personnel.

SHOCK

FIRST RESPONDER

OPEN AIRWAY
OXYGEN
IF AVAILABLE
NRB/BVM

EVALUATE PT.
CONDITION
PULSE OX
LUNG SOUNDS

OBTAIN HISTORY
VITAL SIGNS

CONTACT
MEDICAL
CONTROL

ACTIVATE ALS RESPONSE

MONITOR AND REASSURE THE
PATIENT WHILE YOU WAIT
FOR EMT OR ALS PERSONNEL

ACUTE STROKE

GENERAL CONSIDERATIONS

- A. PATIENTS WHO EXPERIENCE TRANSIENT ISCHEMIC ATTACK (TIA) DEVELOP MOST OF THE SAME SIGNS AND SYMPTOMS AS THOSE WHO ARE EXPERIENCING A STROKE. THE SIGNS AND SYMPTOMS OF TIA'S CAN LAST FROM MINUTES UP TO ONE DAY THUS THE PATIENT MAY INITIALLY PRESENT WITH TYPICAL SIGNS AND SYMPTOMS OF A STROKE, BUT THOSE FINDINGS MAY PROGRESSIVELY RESOLVE. THE PATIENT NEEDS TO BE TRANSPORTED TO THE MOST APPROPRIATE HOSPITAL FOR FURTHER EVALUATION.
- B. Some patients who have had a stroke may be unable to communicate but can understand what is being said around them.
- C. Place the patient's affected or paralyzed extremity in a secure and safe position during patient movement and transport.
- D. Hypertension in stroke patients routinely should not be treated in the pre-hospital setting.
Any treatment of hypertension must be an ON-LINE issue.
Nitroglycerin should not be used unless signs and symptoms consistent with AMI or APE are present
- E. New therapies for stroke are now available. However successful use is only possible during a short time window after the start of symptoms. Early notification of the receiving hospital and minimizing scene time are important parts of a strategy to treat patients quickly.
- F. TIME OF ONSET OF SIGNS AND SYMPTOMS MUST ALWAYS BE OBTAINED, DOCUMENTED AND RELAYED TO THE RECEIVING FACILITY.
Time of symptom onset needs to be accurately determined for consideration of thrombolytic therapy.
In patients whose symptoms were present upon awakening, their symptom onset is estimated from the last time that the patient's neurological status was known to be normal, or the time just prior to going to sleep.
- G. A simple method of physical exam for the stroked patient is:
1. ask the patient to say "the sky is blue in Ohio"
 2. ask the patient to smile or show their teeth
 3. ask the patient to hold their arms straight up in front with palms up, have the patient close their eyes and watch arm drift. (palms turn down)
 - a. if only one palm turns down the test is positive
 - b. if both arms drift down, the result is unclear
- H. Assessment should also include Glasgow Coma Score. Patient's with scores of 8 or less have poor prognosis and need ALS as soon as possible.

ACUTE STROKE (cont.)

First Responder

A. Open and manage the airway and provide oxygen, if available, by nasal cannula 4 lpm and increase as needed with respiratory distress.

Apply pulse Oximeter and treat per procedure. Maintain 95% SpO2.

Be prepared to hyperventilate and/or assist ventilations with oral or nasal airway and BVM or PPV

B. Evaluate patient's general appearance, relevant history of condition and determine:

Onset
Provokes
Quality
Radiates
Severity
Time
Interventions

Allergies
Medications (i.e. Blood thinners; Coumadin, Warfarin, Heparin)
Past Medical History – especially, diabetic, seizures, stroke, TIA, head injury, drug abuse, hypertension, arrhythmias
Last Meal
Events leading to present illness

ACUTE STROKE

FIRST RESPONDER

OPEN & MANAGE AIRWAY OXYGEN IF AVAILABLE	EVALUATE PT. CONDITION VS, LOC, PUPILS PULSE OX MED ALERT	OBTAIN MEDICAL HISTORY SEIZURES, STROKE DIABETIC	CONTACT MEDICAL CONTROL
CONSIDER C-SPINE	EVALUATE LANGUAGE	MOTOR RESPONSE & SENSATION	

ACTIVATE ALS RESPONSE

MONITOR AND REASSURE THE PATIENT WHILE YOU WAIT FOR EMT OR ALS PERSONNEL

TRAUMA EMERGENCIES

GENERAL CONSIDERATIONS

- A. Scene size up – assure scene is safe, determine mechanism of injury, determine number of patients and request additional help if needed.
- B. Rapid assessment and recognition of major trauma/multiple system trauma is essential to the subsequent treatment.
- C. Once the patient is determined to be an actual or potential major trauma/multiple system patient, personnel on scene and /or medical control must quickly determine the appropriate course of action including:
 - Requesting aeromedical evacuation from scene (See Aeromedical Evacuation Procedure)
 - Ground transportation directly to an appropriated facility. (When requesting bypass of nearest facility, this action must be approved by Medical Control).
- D. In cases where the victim must be transported by ground units, because of transport times every effort should be made to limit on-scene time to 10 minutes or less.

THIS CANNOT BE STRESSED ENOUGH!!!

- E. If patient is entrapped or inaccessible, contact Medical Control and advise of condition and circumstances.

First Responder

- A. Trauma Assessment
 - 1. Initial assessment – establish life threats, chief complaints, assess airway and initiate appropriate therapies, assess circulation and control major bleeding, establish a general impression of patient condition and prioritize patient for transport.
 - 2. Urgent patient
 - a. Rapid trauma assessment – quick head to toe survey utilizing DECAP BTLS. Obtain baseline vitals signs and SAMPLE history.
 - b. Detailed physical exam and ongoing assessment – during transport, evaluate patient head to toe and assess effectiveness of treatments to this point.
 - 3. Non-urgent patient – single or non-life threatening injury
 - a. Focused physical exam of injured area and management of the situation
 - b. Detailed physical exam and ongoing assessment – evaluate patient head to toe and assess effectiveness of treatments to this point

TRAUMA EMERGENCIES (cont.)

- B. Urgent trauma treatment
 - 1. Establish airway, breathing and circulation; maintain C-Spine immobilization.
 - 2. Administer 100% oxygen and apply pulse oximetry, if available.
 - 3. Control hemorrhage by appropriate method – Apply PASG if indicated
 - 4. If transportation has not yet arrived
 - a. Splint individual fracture
 - b. Evaluate patient's:
 - i. Pulses distal to the fracture site
 - ii. Distal skin color, temperature, neurological status
 - c. Obtain relevant history:
 - i. Where, When, How
 - ii. Mechanism of injury
 - 5. Establish communications with Medical Control and advise of patient condition and need for Trauma Team.
- C. Non-urgent trauma treatment
 - 1. Establish airway, breathing and circulation; maintain C-spine immobilization
 - 2. Administer 100% oxygen and apply pulse oximeter
 - 3. Splint all fracture(s) (IN NON-LIFE THREATENING SITUATION ONLY)
 - a. Evaluate patient:
 - i. Pulses distal to the fracture site
 - ii. Distal skin color, temperature, neurological status
 - 5. Obtain relevant history
 - a. Where, When, How
 - b. Mechanism of injury
- D. Establish communications with Medical Control and advise of patient condition.

SPECIFIC INJURIES

- A. Chest Wounds:
 - 1. For sucking chest wounds or open pneumothorax, always cover the wound with a non-porous dressing and seal 3 sides
 - 2. Stabilize flail chest with trauma dressing
- B. Evisceration:
 - 1. Cover organs with sterile dressing moistened with saline
 - 2. Lay the patient flat and elevate the knees

TRAUMA EMERGENCIES (cont.)

C. Complete Amputations:

1. Control bleeding by the most appropriate method; remember tourniquet is a last resort.
2. Always take time to find the avulsed part, but do not delay patient transport, and transport it to the hospital as follows:
 - a. Put part in a cool, dry sterile dressing

D. Pneumothorax / Hemothorax / Tension Pneumothorax:

3. Transport patient in position of comfort and watch for signs of a tension pneumothorax
4. Symptoms of tension pneumothorax:
 - a. Chest pain or evidence of trauma
 - b. Tachypnea
 - c. Tachycardia
 - d. JVD
 - e. May initially exhibit hypertension progressing to hypotension
 - f. Diminished or absent breath sounds of affected side
 - g. Audible wheeze
 - h. Tracheal deviation away from affected side (latent sign)

NOTE: Significant tension pneumothorax may present exhibiting any or all of the above

E. Head injury:

1. Evaluate patient condition:
 - a. Level of Consciousness
 - b. Pupillary size and reaction
2. Transport with head elevated 8 to 10 inches by tilting backboard, and C-spine immobilized
3. Maintain airway, support with 100% oxygen, if available by NRB mask and/or BVM
 - a. Hyperoxygenate when there are signs of cerebral herniation:
 - i. Blown pupils, bradycardia, posturing

G. Spinal Injuries:

1. Immobilize spine
2. Cervical Immobilization Assessment
 - a. Cervical immobilization should be used if the following criteria are met.
 - i. The patient complains of neck pain
 - ii. The patient has pain on palpation of the neck
 - iii. The patient complains of neurologic deficits or is found upon physical exam to have neurologic deficits. (subjective: numbness, tingling, weakness) (objective: loss or diminished sensation or motor weakness)

TRAUMA EMERGENCIES (cont.)

- iv. The patient with altered LOC and impaired competence whether from drugs, alcohol or head injury and suggestive mechanism of injury for neck injury (refer to Refusal of Service for impaired competence criteria).
 - v. The patient with suggestive mechanism of injury for neck injury and the patient has other major distracting injuries.
 - vi. The patient has neck pain with any head motion.
- b. All patients that DO meet the above criteria shall have full cervical immobilization.
3. Always contact Medical Control and relay information regarding patient to the hospital. Spinal cord injury patients may need to be delivered to another facility of the hospital initially contacted cannot handle this injury.

TRAUMA EMERGENCIES

FIRST RESPONDER

SCENCE SIZE UP
MECHANISM OF INJURY
NUMBER OF PATIENT
ADDITIONAL RESOURCES

INITIAL ASSESSMENT
C-SPINE,
AIRWAY
BREATHING
CIRCULATION
BLEEDING

ACTIVATE ALS RESPONSE

OPEN & MANAGE AIRWAY OXYGEN IF AVAILABLE NRB / BVM	RAPID TRAUMA ASSESSMENT “DCAP-BTLS” MANAGE INJURED AREA(S)	FOCUSED ASSESSMENT “DCAP-BTLS”	CONTACT MEDICAL CONTROL
SAMPLE HISTORY			

MONITOR AND REASSURE THE
PATIENT WHILE YOU WAIT
FOR EMT OR ALS PERSONNEL

TRAUMA ARREST

GENERAL INFORMATION

- A. Resuscitation should not be attempted in cardiac arrest patients with decapitation, or total body burns, nor in patients with obvious, severe blunt trauma who are without vital signs, pupillary response, or an organized or shockable cardiac rhythm at the scene. Patients in cardiac arrest with deep penetrating cranial injuries and patients with penetrating cranial or truncal wounds associated with asystole and a transport time of more than 15 minutes to a definitive care facility are unlikely to benefit from resuscitative efforts.

Trauma victims who are initially found by responders in cardiac arrest or found at the scene without vital signs may be considered dead and follow the DOA policy.

- B. Extensive, time-consuming care of trauma victims in the field is usually not warranted. Unless the patient is trapped, they should be enroute to a Medical Facility within 10 minutes after arrival of the ambulance on the scene.

First Responder

- A. Ventilate with 100% oxygen, if available, by two-person bag valve mask and oral or nasal airway.

Ventilation should be delivered over tow seconds and cricoid pressure should be considered to help reduce gastric distention.

Always consider C-Spine

- B. Basic CPR with consideration of C-spine
- C. Immobilize C-spine, and TRANSPORT IMMEDIATELY

TRAUMA ARREST

FIRST RESPONDER

VENTILATE PT
WITH C-SPINE
CONTROL

IF AVAILABLE
SUCTION 100% O₂
ORAL OR NASAL AIRWAY

INITIATE CPR

ACTIVATE ALS RESPONSE

CONTROL
BLEEDING

CONTACT
MEDICAL
CONTROL

MONITOR AND REASSURE THE
PATIENT WHILE YOU WAIT
FOR EMT OR ALS PERSONNEL

GLASGOW COMA SCALE

		GCS
EYES	SPONTANEOUSLY	4
	TO VERBAL COMMAND	3
	TO PAIN	2
	NO RESPONSE	1
BEST MOTOR RESPONSE	OBEYS VERBAL COMMAND	6
	PURPOSEFUL MOVEMENT TO PAIN	5
	FLEXION - WITHDRAWAL	4
	FLEXION - ABNORMAL	3
	EXTENSION	2
	NO RESPONSE	1
BEST VERBAL RESPONSE	ORIENTED & CONVERSES	5
	DISORIENTED & CONVERSES	4
	INAPPROPRIATE WORDS	3
	INCOMPREHENSIBLE SOUNDS	2
	NO RESPONSE	1

REVISED TRAUMA SCORE

		RTS
GLASGOW COMA SCALE	13 - 15	4
	9 - 12	3
	6 - 8	2
	4 - 5	1
	0 - 3	0
RESPIRATORY RATE	10 - 29	4
	MORE THAN 29	3
	6 - 9	2
	1 - 5	1
	0	0
SYSTOLIC BLOOD PRESSURE	LESS THAN 89	4
	76 - 89	3
	50 - 75	2
	1 - 49	1
	0	0