EMS

Medical Treatment Protocols

2009

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Introduction 1.01

GENERAL RULES FOR FOLLOWING PROTOCOL

1. These protocols are designed to outline minimal patient treatment procedures. They have been developed to provide guidelines for initiating emergency patient care.

2. EMS personnel are defined as any personnel employed with College Station Fire Department that hold an EMT-Basic or higher certification with Texas Department of Health.

3. The purpose of the protocols is to allow approved EMS personnel to perform patient care under **Standing Orders**.

4. Once patient care is begun, EMS personnel are advised to contact a medical facility for medical direction as soon as possible during treatment to obtain additional instructions.

5. Some protocols and drug dosage ranges are stated as absolutes. However, physician judgment based on the individual patient may also be used and may supersede these protocols. This is done through direct medical control.

6. Protocols may overlap with one another.

7. If an arrhythmia is to be treated, do so in the following order:
   FIRST: Treat rate
   SECOND: Treat rhythm
   THIRD: Treat BP

8. NOTE: If low BP and arrhythmias are due to low volume in a trauma patient, Normal Saline boluses (rapid infusion) and MAST may be used first.

9. If a patient converts to another TREATABLE rhythm after defibrillation or drug therapy, refer to the appropriate protocol for the new rhythm to continue treatment.

10. Due to continual changes in general policies and patient treatment techniques, these protocols will be revised as needed.

Geographical Area / Duty Status 1.02

Geographical Area:
These protocols shall only be utilized under the medical direction of the Medical Director in the College Station Fire Department's 911 service area, mutual aid areas and when on transfers.

Duty Status:
College Station Fire Department EMS personnel shall utilize these protocols under medical direction only when acting in their official capabilities with the College Station Fire Department as defined in the College Station Fire Department Standard Operating Procedures.

Standing Orders 1.03

EMS personnel who have been approved by the Medical Director may conduct patient care and perform skills as outlined in this protocol.

A. EMT-Paramedics are to perform procedures as outlined in the Texas Department of Health skills objectives as directed by protocols. This includes sections labeled "ECA, EMT-B Procedures, EMT-I Procedures" and "EMT-P Procedures".

B. EMT-Intermediates are to perform procedures as outlined in the Texas Department of Health skills objectives as directed by protocols. This includes sections labeled "ECA, EMT-B Procedures" and "EMT-I Procedures". The ALS Procedures are limited to IV/IO therapy, PASG/MAST and Intubation.

C. EMT-Basics are to perform procedures as outlined in the Texas Department of Health skills objectives as directed by protocols. This includes the section labeled "ECA, EMT Procedures".

D. ECAs are to perform procedures as outlined in the Texas Department of Health skills objectives and as directed by protocols. This includes the section labeled "ECA, EMT Procedures".

E. ECAs, EMT-Basics and EMT-Intermediates are allowed to perform additional advanced skills as approved by the Medical Director

Procedures that are before the line “CONTACT RECEIVING MEDICAL FACILITY” may be performed under STANDING ORDERS.

Procedures that are after the line “CONTACT RECEIVING MEDICAL FACILITY” must be done by DIRECT MEDICAL CONTROL orders from that Receiving Medical Facility.

The Receiving Medical Facility should be contacted as early as possible for additional advice and/or directions.

Physician on Scene 1.04

A. **Intervening Physician:**
Intervening Physician is a physician that has no prior patient relationship before this incident.

Any time an Intervening Physician is found in attendance of a patient or comes to the scene after the treatment has been initiated:

1. Identify the Physician and their specialty.
2. Advise the physician of your medical protocols and additional directives you have received from the receiving medical facility.
3. If the Intervening Physician assumes patient care, notify the physician that they must accompany the patient in the ambulance to the hospital.
4. If the physician gives direction regarding patient care that is compatible with Protocol and standard pre-hospital care, the attendant will follow these directions.
5. If the Intervening Physician's orders fall outside of protocols, the attendant shall place the Intervening Physician in contact with the Emergency Room Physician for clarification of orders (the attendant will then follow the orders of the ER Physician).
6. If the physician refuses to accompany the patient, continue patient care according to Protocol and/or direction from the receiving medical facility.
7. Document the physician contact and outcome in the written call documentation.

B. **Private Physician**

Any time a Private Physician is found in attendance of a patient or comes to the scene after the treatment has been initiated:

1. If the patient's Private Physician is found in attendance, the attendant will follow the physician's orders within protocol guidelines.
2. If the Private Physician's orders fall outside of protocols, the attendant shall place the Private Physician in contact with the Emergency Room Physician for:
   a. Clarification of orders (the attendant will then follow the orders of the ER Physician).
   b. To determine the need for the Private Physician to accompany the patient in the ambulance.
3. Document the physician contact and outcome in the written call documentation.

Protocol Deviation or Error 1.05

Protocol Deviation

If the attending EMS personnel deviates from protocol or is unable to perform care as outlined in the specific protocol, documentation should be done in the computer report.
The documentation shall include:

1. Description of how the protocols were deviated
2. Reason for the deviation and/or inability to perform the care
3. Outcome and effect on the patient

Errors

In the event an error in patient care occurs, written documentation should be immediately filed through the appropriate chain of command to the Assistant Chief.
The documentation shall include:

1. Incident number
2. Patient's name
3. Personnel involved
4. Description of the error
5. Reason for the error
6. The outcome and effects on the patient

The documentation will then be forwarded to the Medical Director.

Inability To Carry Out Physicians Order:

In the event a physicians order cannot be carried out immediately notify the physician and advise as to the reason. Documentation of this should be completed in the report narrative.

Consent to Treatment / Transport 1.06

Informed, legal consent to treatment and/or transportation must be obtained by EMS personnel.

1. All adult patients who are in possession of their mental faculties (conscious, alert and oriented to person, place and date) must give EMS personnel permission for treatment and transportation (verbal consent is sufficient).
2. Adult patients who are in possession of their mental faculties (conscious, alert and oriented to person, place and date) have the legal right to refuse treatment or transportation even if that refusal will result in serious harm or death.
    a. EMS personnel should encourage all persons needing medical help or transportation to make use of the services offered. However, if they choose to refuse service after having been informed of the possible consequences of their refusal, they should be allowed to do so.
    b. Thorough documentation of the patient's refusal and EMS personnel's efforts to persuade them to seek help are necessary. Any time patient contact is made and the patient refuses treatment and/or transportation, a refusal form must be signed by the patient and if possible witnessed. The refusal must be explained to the patient.
3. Adult patients who are unconscious may be treated under implied consent.
4. Minors (males under 18 years of age or females under 17 years of age and who are not married or have not been married) are unable to give consent or refuse treatment and therefore present special legal problems. Every effort should be made to obtain legal consent for the treatment of minors from their parent of guardian.
    a. Under circumstances of serious medical conditions that are life threatening, or have the potential for permanent disability, the rules of implied consent are used.
    b. In situations to which EMS is called that involves minors not having life threatening injuries, every reasonable effort to contact the minor's parent or legal guardian should be made.
        1) If consent cannot be obtained because of lack of contact, The Texas Family Code, Sections 35.01 and 35.02, provides limited consent powers to certain others in particular circumstances. Certain relatives of the minor can give consent. They are:
            a) a grandparent
            b) an adult brother or sister
            c) an adult aunt or uncle

2) Additionally, the parent or guardian may leave written authorization for consent to treatment with an educational institution or day care center in which the minor is enrolled. The parent or guardian may also leave written authorization for consent to treatment with an individual.

c. The minor may consent to their own treatment under the following circumstances:

1) The minor is on active duty with the Armed Services of the USA

2) Is 16 years of age or older and resides separate and apart from their parents or guardians (regardless of the duration of such residence) and is managing their own financial affairs (regardless of source of income).

3) Is unmarried and pregnant and consents to hospital, medical or surgical treatment related to the pregnancy.

4) If the consent to examination and treatment is for drug addiction, dependency or other condition directly related to drug use.

5) Consent is to the diagnosis and treatment of an infectious, contagious or communicable disease which is required by law or regulation to be reported by the licensed physician to a local health officer.

Refusal of Treatment or Transportation 1.07

When a patient refuses treatment and/or transportation by a responding EMS unit for whatever reason, the following steps should be taken:

1. Assess the following to the best of your ability as the patient permits:
   a. Level or consciousness and neurological status
   b. Mechanism of injury / Nature of illness
   c. Obvious physical trauma
2. If deemed an emergent situation, explain to the patient the necessity of seeking further medical help (i.e. physician care) by being transported to a local hospital.
3. When possible, have a family member, law enforcement officer and/or another EMS person explain the same concerns to the patient.
4. Offer the patient the opportunity to talk to their personal physician or ER physician by phone.
5. If the patient still refuses to be treated and/or transported, have the patient sign a "Refusal" form. If possible, have a law enforcement officer, family member or other EMS person witness.
6. If the patient will not sign the refusal form, document the refusal and get substantiating witness signatures, preferably law enforcement, if possible.
7. EMS personnel may sign as a witness on the refusal form. On any unusual or questionable refusal, a law enforcement officer or credible bystander should sign as the witness. It should be made clear that the co-signer is witnessing only the refusal and not making a comment on any medical condition.
8. The evaluation of the patient, mechanism of injury / nature of illness and the signing of the refusal form should be documented in the report narrative.

Transport: Destination Determination 1.08

In an effort to give transported patients a choice of medical facilities, the following policy shall be followed.

HOSPITAL:

College Station Fire Department ambulances will only transport to:

1. College Station Medical Center; or
2. St. Joseph Regional Health Center

GENERAL GUIDELINES:

A. Patient Preference - Stable Patient

If the patient is conscious and stable, they shall be asked for a preference of medical facilities. If a preference is stated, the patient shall be transported to that facility. All patient information and order requests shall be routed to that location.

B. Parent/Guardian Preference - Stable Patient

When the patient is a minor and is conscious and stable, the parent or guardian will be asked for a preference of medical facilities. If a preference is stated, the patient shall be transported to that facility. All patient information and order requests shall be routed to that location.

C. No Preference Stated - Stable Patient

If the patient is conscious and stable, or parent/guardian in the case of a minor, and does not have a preference, the patient will be taken to the closest hospital (by time).

D. Unconscious or Unstable Patient

Patients with life threatening conditions, who are unstable or who are unconscious, will be transported to the nearest medical facility (by time) for stabilization. If necessary after stabilization, College Station Fire Department will then provide transport to the patient's facility of choice. The patient will be billed for only one ambulance transport in this instance. In this case, the report narrative should document any time a patient is transported under this policy. Any and all factors influencing the attendant's decision should also be documented.

DIVERSION

A. Diversion DOES NOT apply to trauma patients, only to medical patients.

B. As a general guideline, College Station Fire Department EMS personnel will honor the diversion request by the hospitals under the following criteria:

1. Prior notification is received.
2. Both hospitals are not on diversion at the same time.

C. If both hospitals are on diversion, ambulances will transport as indicated in the General Guidelines above.

D. If an ambulance arrives on hospital property before receiving notice of diversion, the patient will be delivered to the Emergency Department of that hospital for evaluation. At that point, a further destination determination will be made.

BYPASS

A. College Station Fire Department ambulances will not bypass a hospital except under the following criteria:

1. Patient or parent/guardian request - stable patients only
2. Diversion
3. Request of the on-duty Emergency Physician at that facility.

Prehospital Triage And Bypass Algorithm 1.09

GOAL:
To provide optimum care to the injured patient. In an effort to provide optimum care, Pre-hospital Triage and Bypass Protocols have been established to use as a guideline to transport the injured patient to the nearest appropriate facility as soon as possible.

GUIDELINES:
1. If unable to establish and/or maintain an adequate airway, or in the case of a traumatic arrest, take to the nearest acute care facility for stabilization.
   a. Multi-system blunt or penetrating trauma with unstable vital signs
2. The following patients will be transported directly to the nearest appropriate facility:
   a. Anatomical injury as identified in the triage algorithm
   b. High-energy event-risk for severe injury as identified in the triage algorithm
3. All other patients may be evaluated at the nearest Level III or Level IV facility and transferred as indicated.
4. Other patients that may be transported directly to a Level III are those patients in which the facility that is being bypassed does not provide the service that the Emergency Medical Service anticipates the patient will need.
5. If the attendant has any question regarding bypass, on-line medical control should be consulted.

Trauma Activation Criteria
The guidelines for trauma activation are:
Level One:

Physiologic:
- a) GCS <10 or a deteriorating GCS
- b) Sustained systolic blood pressure <90 in an adult with clinical signs of shock.
- c) Sustained pulse <60 or >100 in an adult with clinical signs of shock.
- d) Respiratory rate <10 or >29 in an adult.
- e) Unstable pediatric vital signs

Anatomical:
- a) Unstable airway, intubated or ventilated patient.
- b) Penetrating injury to head, neck anterior or posterior thorax or abdomen.
- c) Severe uncontrolled bleeding.
- d) Neurological injuries with deficits and or LOC> 10 minutes.
- e) Depressed skull fracture
- f) Paralysis/trauma with burns/major burns TBSA >10%
- g) Trauma transfer from another facility receiving blood to maintain vital signs.
- h) Any patient determined to be a STAT activation by the ED MD.

Level two:

Physiologic:

a) Sustained GCS <14.
b) History of unstable vital signs.
c) Two or more long bone fractures located in separate anatomical compartments.
d) Penetrating trauma to extremity with suspected long bone fracture.
e) All suspected neurovascular or neurosensory injuries.
f) All partial thickness burns >10% TBSA
g) All chemical burns and/or inhalation burn injury
h) All burns involving face, hands, feet, genitalia, perineum or major joints.

Mechanism of Injury:

a) Fall of a distance equal to or greater than one and one half the patient's height.
b) Death of occupant in same vehicle.
c) Ejection from vehicle.
d) Major intrusion damage or high-speed crash.
e) Auto vs. pedestrian injury >5MPH
f) Auto vs. bicycle injury >5 MPH.
g) Motorcycle or ATV or similar motorized off road vehicle crash >30 MPH
h) Multiple victim event with greater than 3 patients or greater than 1 critical patient
i) Any patient determined to be an ALERT activation by the ED MD.

Level three:

General Criteria:

f) The patient has been evaluated in the ED and is being admitted or requires observation.
g) The patient has been evaluated by another facility and is being accepted as transfer for treatment of a single system injury.
h) The patient has been evaluated and diagnosed with an injury and is being direct admitted for definitive surgical procedures or observation for development of complications, related to single system trauma.

Anatomical Criteria:

a) Fractures of the upper or lower extremity.
b) Closed head injured admitted for definitive care or observation.
c) The potential for development of any anatomical injury exists.

Mechanism of Injury:

a) Any mechanism of injury is acceptable if injury is present or the potential for development of complications from the injury exists.
b) Mechanism of injury documentation in physician record.

Prehospital Triage And Bypass Algorithm 1.09

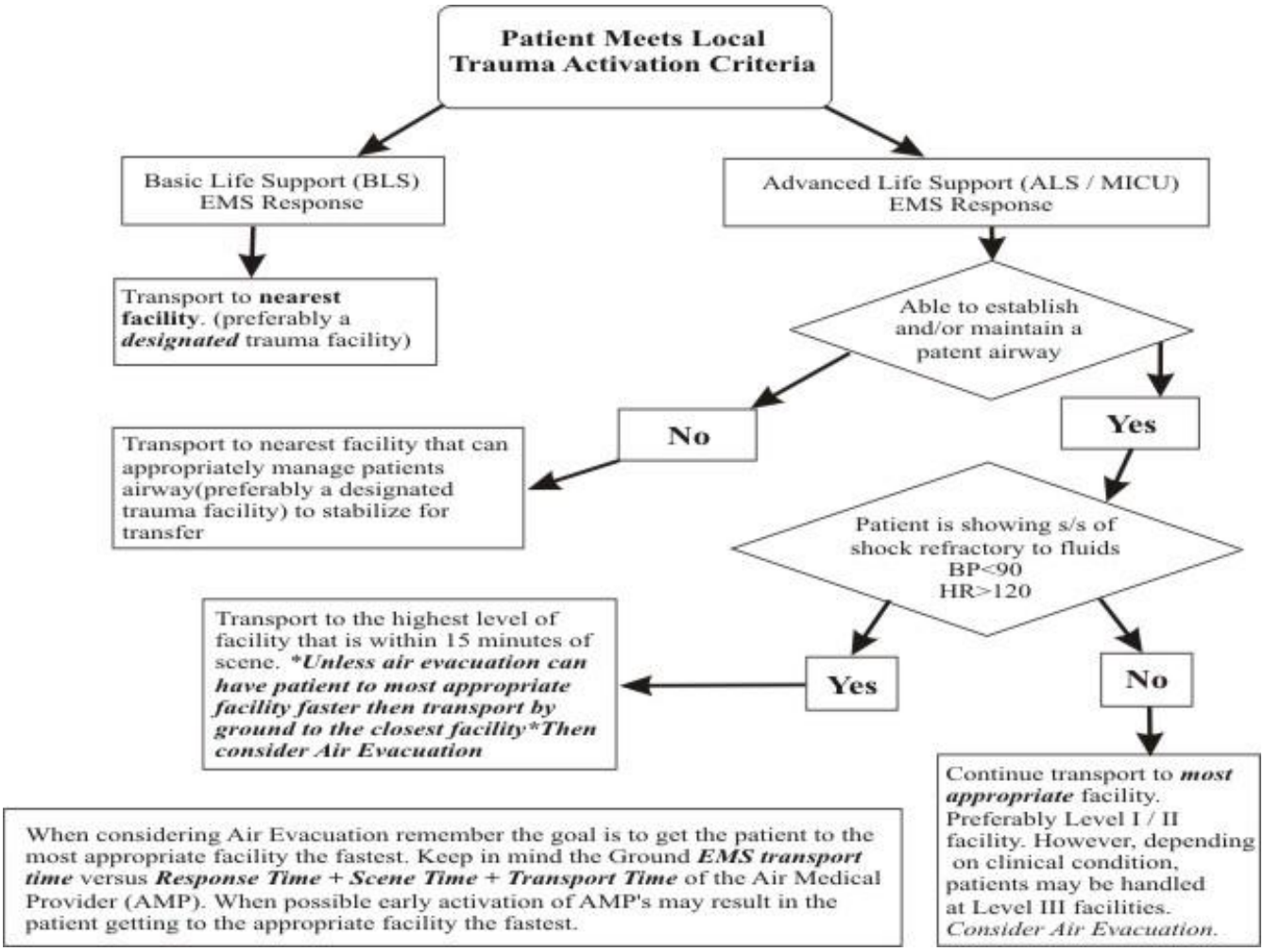
Notes:

A. In addition to hypotension: pallor, tachycardia or diaphoresis may be early signs of hypovolemia.

B. Tachypnea (hyperventilation) alone will not necessarily initiate this level of response.

C. Altered sensorium secondary to sedative-hypnotic will not necessarily initiate this level of response

D. High Energy Event signifies a large release of uncontrolled energy. Patient is assumed injured until proven otherwise and multisystem injuries might exist.



Helicopter Activation 1.10

GOALS:
To assure a mechanism for ambulance crews to request a scene response by a helicopter air ambulance when a reduction in transport time will be achieved and advanced skills will be utilized.

GUIDELINES:

1. The ambulance crew may, when one or more of the elements of the below criteria are found to exist, request a scene response by a helicopter air ambulance, and transportation of the patient to the appropriate medical facility.
2. Once an air ambulance is en route to the scene, only the pilot or medical personnel in attendance with the patient at the scene may make the determination to cancel the air ambulance response.
3. Not to be used for patients in cardiac arrest or traumatic arrest.

CRITERIA FOR HELICOPTER ACTIVATION:

1. Local EMS and/or hospital resources are exhausted or exceeded.
2. Long extrication times (>30 minutes) in which activation will decrease the transport time to the facility
3. Severely injured or ill patient located in remote or off-road area not readily accessible to ground ambulance.
5. Special environmental conditions which affect potential patient outcome or prohibit ground access to hospital (i.e. road or bridge damage due to flooding).

Treatment / No Transport Calls 1.11

Purpose:
Procedures for handling calls where treatment is rendered and the patient refuses transport.

Procedure:
1. Render care as outlined in protocols.
2. Explain the necessity of seeking further medical help.
3. Refer to Refusal of Treatment / Transportation
4. If treatment is rendered and the patient refuses transport, the following must be completed:
   A. Patient Data Sheet
   B. Refusal Form
5. Replace supplies and medications as outlined below.

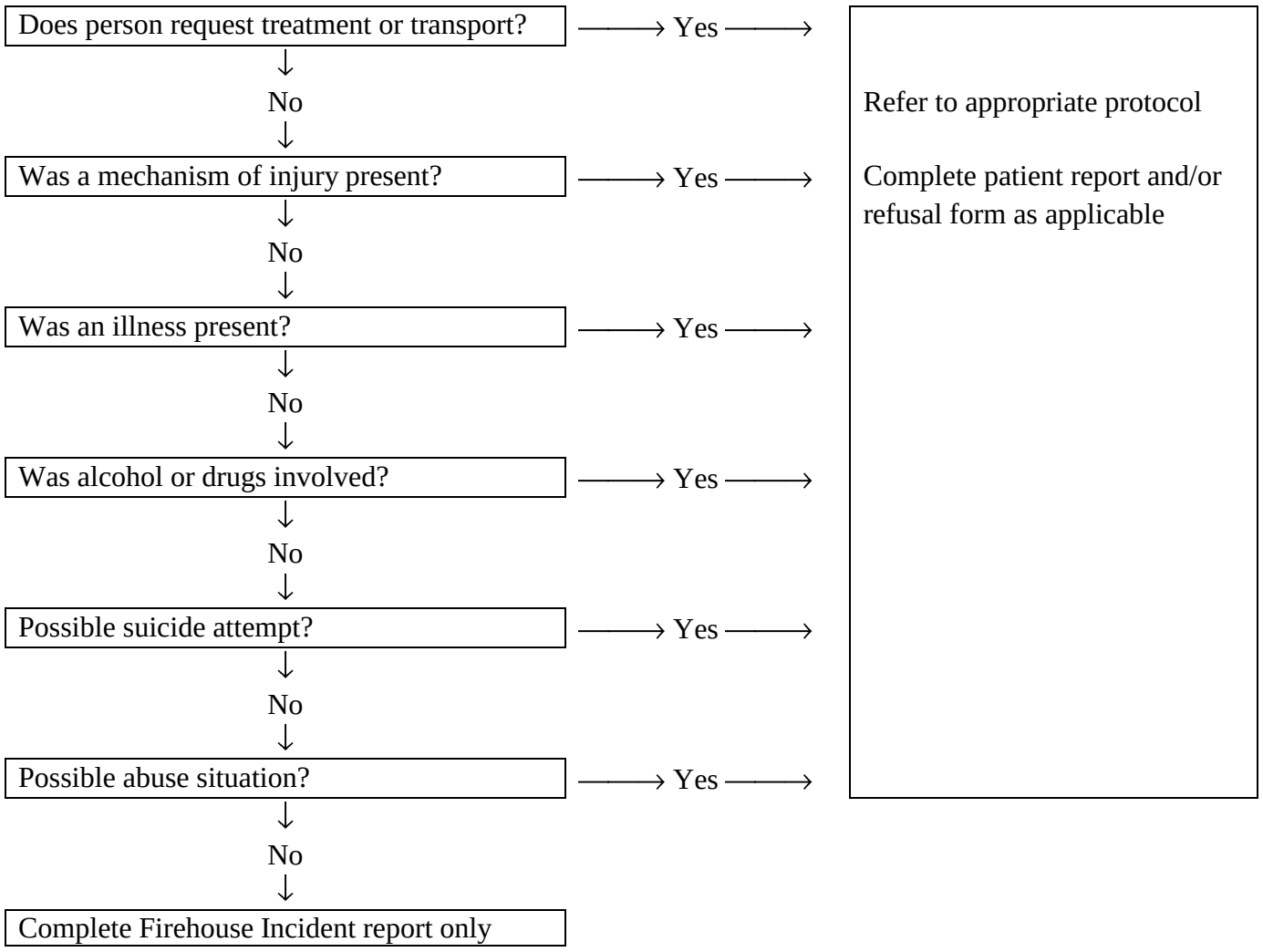
Replacement of Supplies:
Supplies will be obtained from the Station Supply

Replacement of Medications:
Medication will be replaced as outlined in EMS Protocol 3.04: Medications Exchange and Replacement

No Patient Incidents 1.12

Issued: 01/31/2009 **Expiration: 01/31/2011** **Page 1 of 1**

Purpose:
To give EMS personnel the criteria needed to decide if a patient was present and a patient report must be completed.



Examples of No Patient calls (with no person at the scene who meets the above criteria):

1. EMS Stand By
2. Fire Stand By
3. PD Stand By
4. Public Assist
5. Patient Gone on Arrival of EMS

Do-Not-Resuscitate Orders (DNR) 1.13

College Station Fire Department will honor the following Orders:
1. TDH Out of Hospital Do-Not-Resuscitate Orders
2. Out of Hospital Do-Not-Resuscitate Orders from other states

I. The following care will be initiated if a patient presents with a valid Order (includes TDH OOH-DNR bracelet and/or necklace):

A. Honor DNR Order: DO NOT ATTEMPT RESUSCITATION if
   1. Patient presents with no pulse
   2. Patient presents with a pulse without respiration (excluding airway obstruction)

B. Do not honor DNR Orders if
   1. Suspicion of suicide, homicide or non-natural cause of death
   2. Patient is pregnant

C. Provide palliative care and pain management if the patient presents with a pulse and spontaneous respirations
   1. Palliative care: Oxygen therapy, IV therapy (excludes advanced airway management)
   2. Consider pain management

II. If there is a dispute on scene or the Order is NOT present (includes TDH OOH-DNR bracelet and/or necklace) and the family and/or bystanders states that there is an Order:

A. Inform the family and/or bystanders that, without the Order, life saving measures will and must be rendered.

B. Begin resuscitation

C. EMS personnel shall make direct verbal contact with the patient's attending physician, EMS medical director, or ER physician. The physician will decide on resuscitative measures.

D. Refer to the appropriate protocol as directed by the physician.

E. Document the physician contact and directions.

III. In the event the patient expires:

A. During assessment on scene
   1. Honor DNR Order unless:
      a. Suspicion of suicide, homicide or non-natural cause of death
      b. Patient is pregnant
   2. Refer to DOS protocol

III. In the event the patient expires:

B. During transport
   1. Contact ER Physician and the receiving medical facility
   2. Follow the directions of the ER Physician
   3. Transport to that facility

IV. Documentation

A. Document presence and type of Order, if possible, attached a copy to the patient report.

B. If transporting a patient with a DNR Order, attempt to keep the Order with the patient.

DO NOT RESUSCITATE

TEXAS DEPARTMENT OF HEALTH STANDARD
OUT-OF-HOSPITAL DO-NOT-RESUSCITATE ORDER

This document becomes effective immediately on the date of execution.
It remains in effect until the death of the patient or the document is revoked.

TDH TEXAS DEPARTMENT OF HEALTH

1. _____ Date of Birth: _____ Male/Female (Circle One)
Patient's full legal name — printed or typed

2. *COMPLETE ONE OF THE FOLLOWING THREE BOXES: A, B, OR C.*

A. **Patient's Statement:** I, the undersigned, am capable of making an informed decision regarding the withholding or withdrawing of CPR, including the treatments listed below, and I direct that none of the following resuscitation measures be initiated or continued.
Cardiopulmonary resuscitation (CPR), Transcutaneous Cardiac Pacing, Defibrillation, Advanced Airway Management, Artificial Ventilation
I understand that I will be given comfort measures as needed. I understand that I may revoke this order at any time.

Signature _____ Date _____ Printed or Typed Name _____

B. **Only use this box if the order is being completed by a person acting on behalf of a patient who is incompetent or otherwise unable to make his or her wishes known**

I am the patient's: ☐ legal guardian; ☐ agent under Medical Power of Attorney; ☐ managing conservator; ☐ Qualified Relative (see back); or parent of a minor child **AND**:

☐ I attest to issuance of an Out-of-Hospital DNR by the patient by nonwritten means of communication; **OR**
☐ I am acting under the guidance of a prior Directive to Physicians; **OR**
☐ I am acting upon the known values and desires of the patient; **OR**
☐ I am acting in the patient's best interest based upon the guidance given by the patient's physician.
I direct that none of the following resuscitation measures be initiated or continued; Cardiopulmonary resuscitation (CPR), Transcutaneous Cardiac Pacing, Defibrillation, Advanced Airway Management, Artificial Ventilation on behalf of the patient.

Signature _____ Date _____ Printed or Typed Name _____

C. **Only use this box only if the order is being completed by two physicians acting on behalf of a patient who is incompetent or otherwise unable to make his or her wishes known, and who is without a legal guardian, agent, managing conservator, qualified relative, or parent.**

☐ I attest to issuance of an Out-of Hospital DNR by the patient by nonwritten communication; **OR**:
☐ The patient's specific wishes are unknown, but resuscitation measures are, in reasonable medical judgement, considered ineffective in these circumstances or are otherwise not in the best interest of the patient.
I direct that none of the following resuscitation measures be initiated or continued; Cardiopulmonary resuscitation (CPR), Transcutaneous Cardiac Pacing, Defibrillation, Advanced Airway Management, Artificial Ventilation on behalf of the patient.

Signature Treating Physician _____ Date _____ Printed or Typed Name _____

Signature Second Physician who is not involved in treating the patient _____ Date _____ Printed or Typed Name _____

3. **WITNESSES:** (see qualifications on reverse) We have witnessed all of the above signatures

Witness 1 Signature _____ Date _____ Witness Printed or Typed Name _____

Witness 2 Signature _____ Date _____ Witness Printed or Typed Name _____

4. **PHYSICIAN'S STATEMENT:** I, the undersigned, am the attending physician of the patient named above. I have noted the existence of this order in the patient's medical records, and I direct out-of-hospital health care professionals to comply with this order as presented.

Physician's signature _____ License number _____

Printed or Typed name _____ Date _____

ALL PERSONS WHO SIGNED MUST SIGN HERE: This document has been properly completed.

Signature of Patient, Agent or Relative (A or B) _____ Signature of Second Physician (C) _____

Signature of Witness _____ Signature of Witness _____

Signature of Attending Physician _____ Date _____

SHOULD TRANSPORT OCCUR, THIS DOCUMENT OR A COPY MUST ACCOMPANY THE PATIENT.

Figure 1: 25 TAC '157.25 (h)(2) Page 1 of 2

OUT-OF-HOSPITAL DNR INSTRUCTIONS

PURPOSE:
This form was designed to comply with the requirements as set forth in Chapter 166 of the Health and Safety Code (H&SC) relating to the issuance of Out-of-Hospital Do-Not-Resuscitate (DNR) orders for the purpose of instructing Emergency Medical Personnel and other health care professionals to forgo resuscitation attempts and to permit the patient to have a natural death with peace and dignity. This order does NOT affect the provision of other emergency care including comfort care.

APPLICABILITY:
This form applies to all health care professionals operating in any out-of-hospital setting to include hospital outpatient or emergency departments and physician's offices.

IMPLEMENTATION:
Any competent individual may execute or issue an Out-of-Hospital DNR Order. The patient's attending physician will document the existence of the directive in the patient's permanent medical record.

If the patient is capable of providing informed consent for the order, he/she will sign and date the out-of-hospital DNR order on the front of this sheet in Box A. In the event that the patient is unable to provide informed consent, his/her Legal Guardian, agent under Medical Power of Attorney, Managing Conservator, Qualified Relative, or Parent (if a minor) may execute the order by signing and dating the form in Box B. If the patient is unable to provide informed consent and none of the persons listed in Box B are available, the treating physician may execute the order with the consent of a second physician who is not treating the patient and/or is a member of the health care facility ethics committee or other medical committee (Box C).

The form must be signed and dated by two witnesses except when executed by two physicians only (Box C).

The original standard Texas Out-of-Hospital DNR form must be completed and properly executed. Duplicates may be made by the patient, health care provider organization or attending physician as necessary. **Copies of this completed document may be used for any purpose that the original may be used and shall be honored by responding health care professionals.**

The presence of a Texas DNR identification device on a person is sufficient evidence that the individual has a valid Out-of-Hospital DNR Order. Therefore, either the original standard form, a copy of the completed standard form, or the device is sufficient evidence of the existence of the order.

For information on ordering identification devices or additional forms, contact the Texas Department of Health at (512) 834-6700.

REVOCATION:
The Out-of-Hospital Do-Not-Resuscitate Order may be revoked at ANY time by the patient **OR** the patient's Legal Guardian/ Agent/Managing Conservator/ Qualified Relative, Parent (if a minor), or physician who executed the order. The revocation may involve the communication of wishes to responding health care professionals, destruction of the form, or removal of all or any Do-Not-Resuscitate identification devices the patient may possess.

AUTOMATIC REVOCATION: This Out-of-Hospital DNR order is automatically revoked if the patient is known to be pregnant or in the case of unnatural or suspicious circumstances.

DEFINITIONS:

Attending Physician: The physician who is selected by or assigned to a patient who has primary responsibility for a person's treatment and care and is licensed by the Texas State Board of Medical Examiners or who is properly credentialed and holds a commission in the uniformed services of the United States and who is serving on active duty in this state. **(H&SC 166.002 (3) & (12))**

Qualified Relatives: Those persons authorized to execute or issue an out-of-hospital DNR order on behalf of a person who is comatose, incompetent, or otherwise mentally or physically incapable of communication under Section 166.088 H&SC Section 166.088 refers to 166.039: "One person, if available, from one of the following categories, in the following priority...: (1) The patient's spouse; (2) the patient's reasonably available adult children; (3) the patient's parents; or (4) the patient's nearest living relative."

Health Care Professional: Means physicians, nurses, physician assistants and emergency medical services personnel; and, unless the context requires otherwise, includes hospital emergency department personnel. (H&SC 166.081 (5))

Witnesses: Two competent adult witnesses must sign the form acknowledging the signature of the patient or the person(s) acting on the patient's behalf (except when signed by two physicians in Section C). Witness One must meet the qualifications listed below. Witness Two may be any competent adult. Witness One (the "qualified" witness) may not be: (1) person designated to make a treatment decision for the patient; (2) related to the patient by blood or marriage; (3) entitled to any part of the estate; (4) be a person who has a claim against the estate of the patient; (5) the attending physician or an employee of the attending physician; (6) an employee of a health care facility in which the patient is being cared for, if he or she is involved in providing direct patient care to the patient; or (7) an officer, director, partner, or business office employee of a health care facility in which the patient is being cared for or any parent organization of the health care facility.

Please report any problems with this form to the Texas Department of Health at (512) 834-6700.

Revised May 17, 2000
Texas Department of Health

Figure 1: 25 TAC '157.25 (h)(2) Page 2 of 2

2/01 Publications No. EF01-11421

Death on Scene (DOS) 1.14

In the case of a clinically dead patient, it is the responsibility of the on scene EMS crew to determine whether or not resuscitative efforts should be started. That determination should be based on the extent of the injury and the length of down time.

1. Definition of clinical death (DOS)
   a. Visible head or chest trauma clearly incompatible with life
   b. Decapitation
   c. Rigor mortis
   d. Dependent lividity
   e. Decomposition
   f. Documented prolonged down time
   g. Absence of breathing and pulse in a multiple casualty incident
2. Body should not be disturbed or moved without authorization by appropriate agency.
3. Contact dispatch and request PD/SO and JP as soon as possible
5. The EMS personnel are required to document the absence of vital signs and any evidence of death. If possible, document patient history. Paramedics, at their discretion, may obtain an EKG in all 3 leads.
5. Limit the number of personnel in area until the scene is released to law enforcement.
6. EMS units will remain on the scene to relay pertinent information to PD, SO and JP. Verify through dispatch that the JP and law enforcement were notified.
7. EMS vehicles are not to be used to transport the known dead from the scene.

Suspected Abuse of Any Patient 1.15

When treating any patient suffering from injuries and/or illnesses suspected as abuse, EMS personnel shall:

1. As with all patients, conduct the patient assessment and continue with patient care.
2. Be sure to USE EXTREME TACT AND PROFESSIONALISM when dealing with this situation. DO NOT let your emotions enter the situation when dealing with the relatives or acquaintances of the individual.
3. Notify law enforcement as soon as possible.
4. Be alert to any evidence that might be found. Be cautious and do not destroy any evidence.
5. On arrival at the hospital, inform emergency room personnel of your concerns and findings of the situation. Use a confidential environment to relay this information.
6. At the completion of the call, fully document all aspects of the incident, including the relay of your concerns to the medical facility staff and the notification of law enforcement.

Abandoned Children 1.16

Under Texas law, fire stations are the designated drop off site for abandoned children. By law, this is a totally anonymous process. No questions can be asked of the person who is dropping the child off.

Procedures:

1. Assess and treat the child in accordance with protocols.
2. Notify law enforcement to meet the ambulance at the hospital.
3. Transport the child to the hospital for evaluation.
4. Notify Child Protective Services. The hospital can notify CPS for the ambulance crew as long as the ambulance crew has requested the hospital to do so.

Transportation of Prisoners 1.17

1. Prisoners requiring treatment and/or transportation by EMS shall be accompanied by a law enforcement officer to the receiving medical facility.
2. If the patient is unconscious and needs transport with implied consent there still needs to be an officer present.
3. Patients will not be given a choice of ambulance transport or transport in a police car.
4. **The College Station Fire Department will not transport a person in Custody without a CSPD officer in the unit unless a life threatening condition exists.**

Transportation of Belligerent / Violent Patients 1.18

EMS personnel will, on occasion, have to deal with belligerent / violent patients. The belligerent person, in all probability, will refuse treatment and refuse to sign a release. If possible, law enforcement should be called to witness the refusal and control the belligerent / violent patient.

1. If the patient does not need ambulance transportation, let law enforcement assume responsibility for the patient.
2. When necessary, transportation to a hospital will be made following law enforcement arrest or restraint of patient.
    a. Refer to Transportation of Prisoners 1.17
    b. Refer to Restraint of Patients 1.19

Restraint of Patients 1.19

Under normal circumstances, EMS personnel should not attempt to restrain a violent patient. Law enforcement should be utilized for this purpose. However, any patient who presents a significant danger to him / herself or others may be physically restrained by EMS personnel.

When patient restraint becomes necessary, the following procedures will be used:

1. Soft wrist and ankle restraints along with folded sheets are the only materials authorized for use by EMS personnel.
2. Use techniques which will cause no injury to the patient (i.e. the minimum amount of force possible will be used to secure the restraints).
3. Caution should be used to not restrict the respiratory efforts of the patient. Avoid transporting the patient in the prone position.
4. Pulse and other measures to assure distal circulation will be checked frequently following the application of restraints.
5. Contact the receiving medical facility as soon as possible and advise them of the specifics of the situation and the reason for the restraints.
6. Get assistance from law enforcement as soon as possible. If available, get the law enforcement officer to accompany the patient in the back of the ambulance. Refer to Transportation of Prisoners 1.13.
7. At the termination of the call, fully document all pertinent details including signatures of witnesses if possible.
8. Remember, a restrained patient is totally dependent on the EMS crew for their safety.

Self Protection 1.20

Guidelines for EMS personnel to protect themselves from physical danger by a violent person with or without a weapon.

1. In all cases, where the threat of physical harm is probable (i.e. domestic violence, hostage situations, psychiatric patients and any situation where there may be weapons on the scene), EMS personnel should contact law enforcement before entering the area. The EMS crew should not enter the area until law enforcement reports that the scene is secure. At no time should EMS personnel attempt to manage the situation without aid. Primary emphasis in such situations should be the safety of the crew.
2. If EMS personnel are threatened with bodily harm, either by serious verbal threat or weapons, they should make every effort to avoid confrontation and if necessary leave the premise and/or scene. Notify law enforcement as soon as possible for their assistance.
3. Under situations where personal injury seems imminent, then EMS personnel may use any measure reasonable and prudent to protect themselves from injury or death. Immediately notify law enforcement.

Concealed Weapons 1.21

Concealed Weapons on Patients

If a patient is found to be carrying a concealed weapon and the patient is to be transported, the following procedure will be followed:

1. Notify law enforcement. Let law enforcement secure the weapon.
2. If law enforcement is not available,
    a. EMS personnel should secure the weapon in an outside compartment on the ambulance..
    b. Have law enforcement meet the ambulance at the hospital and turn the weapon over to them at that point.
3. If law enforcement is not available to meet at the hospital:
    a. Have hospital security secure the weapon.

Use of Non Certified or Licensed EMS Personnel 1.22

EMS personnel may utilize non-EMS personnel only under the following circumstances:

A. Non-medical personnel may assist with lifting patients, moving patients and assisting with supplies.

B. Nurses may assist with patient care under the guidance of direct medical control such as written physician orders. Outside of direct medical control, these personnel can only function at the BLS level. This is done at the discretion of the attending paramedic.

C. Other medical personnel such as Respiratory Therapist may assist with patient care under the guidance of direct medical control such as written physician orders. Outside of direct medical control, these personnel can only function at the BLS level. This is done at the discretion of the attending paramedic.

D. Assistance by physicians is outlined in the Physician on Scene protocol.

Patient Reports 1.23

I. Confidentiality

All patient reports are considered confidential. All information pertaining to the identification of a patient will not be discussed outside of the realm of patient care, training, QI/QA and billing. Under no circumstance is patient information to be released outside of the circumstances listed above unless the patient (parent/guardian of a minor) has expressed their desire to release information in writing or upon subpoena.

II. Verbal Reports to the Hospital

The hospital will be notified by radio or phone that a patient is being brought to that facility. The verbal report will include all relevant and pertinent information including nature of illness/injury, vitals signs, patient history, and care rendered.

Upon arrival at the hospital, a verbal report will also be given to the hospital staff member in which patient care was transferred to. The verbal report will include all relevant and pertinent information including nature of illness/injury, vitals signs, patient history, and care rendered.

III. Written Reports to the Hospital

The patient data sheet will be completed as soon as possible after the patient care has been transferred to the hospital staff. Dispatch information and times can be obtained by contacting the appropriate dispatch center. The patient data sheet is to be left with the hospital staff.

First Responder Program 1.24

I. Interlocal Agreement

Details of the First Responder Program are outlined in the Interlocal Agreement between the College Station Fire Department, Bryan Fire Department, Brazos County District 2 VFD, Brazos County Precinct 3 VFD, County Precinct 4 VFD and the South Brazos County Fire Department.

II. Medications

First Responders CAN NOT carry medications to be administered to patients. First Responders can assist patients with medications in which the patient is prescribed and is in the patient's possession.

III. Advanced Skills

First Responders CAN NOT perform the following skills: ECG, pacing, PASG/MAST and/or pulse oximetry.

Skills

Table of Contents

Endotracheal Intubation 2.01

Purpose:
To provide a definitive method of airway control. Any intubation procedure may be performed, including, but not limited to nasotracheal, orotracheal, or tactile (digital) as deemed necessary by the patient's presenting condition.

Procedure:
1. Oxygenate patient with a bag valve mask.
2. Perform the intubation
3. Check placement by auscultating the lungs and epigastrium and end tidal CO2 detector
4. Secure the tube
5. Complete spinal immobilization of the patient
6. Avoid hyperventilation in patients except for evidence of acute cerebral herniation

Indications:
1. Unconsciousness
2. Depressed level of consciousness with impaired gag reflex
3. Respiratory arrest (apnea)
4. Severe respiratory compromise
5. Any other patient in which there is difficulty maintaining a patent airway.

Contraindications For Nasotracheal Intubation:
1. Apnea (relative contraindication)
2. Known defect in blood clotting mechanisms.
3. Possible basilar skull fracture as evidenced by Battle's signs and clear fluid draining from nose or ears.
4. Severe nasal polyps or other abnormalities of the nose.

Notes:
1. If any intubation attempt lasts for greater than 30 seconds, then stop the attempt and hyperventilate the patient and re-attempt intubation. This may be repeated until successful.
2. Nasotracheal intubation may be better tolerated by patients with an intact gag reflex.
3. If necessary, intubation may be facilitated by use of medications:
    a. For pediatric patients administer Atropine 0.01 mg/kg IV (min. dose 0.1 mg), if time allows
    b. Consider administering Fentanyl at 1-2 mcg/kg IV/IO if needed for analgesia
    c. Administer Etomidate for sedation:
        i. All age groups: 0.3 mg/kg over 30 to 60 seconds

d. Versed may be administered to maintain sedation if necessary according to the following schedule:
   i. Adult – 2 mg IV over two minutes may repeat dose after an additional two minutes as needed up to 10 mg total dose;
   ii. Pediatric patients less than or equal to 5 years – 0.1 mg/kg IV over two minutes, may repeat dose after an additional two minutes as needed to 6 mg total dose
   iii. Pediatric patients age 6 to 12 - 0.05 mg/kg IV over two minutes, may repeat dose after an additional two minutes as needed to 10 mg total dose
   iv. Pediatric patients over 12 years of age – same dosing as adults
e. Document person performing intubation, tube size, tube depth, auscultation of breath sounds, and method of secondary tube confirmation in patient report.

EGTA / Combitube Intubation 2.02

Purpose:
The EGTA and the Combitube are considered an interim form of airway management for those patients who prove difficult to intubate or where endotracheal intubation is not available. Both the EGTA and Combitube are used on adult patients only.

Insertion:
1. Oxygenate the patient.
2. Assemble the necessary equipment
4. Advance the tube until properly positioned.
5. Check for proper placement of the tube by auscultating the lungs and epigastrium. If breath sounds are absent, remove the tube, hyperventilate the patient and reinsert the EGTA/Combitube.
6. Inflate the cuff(s)
7. Ventilate with BVM/100% oxygen.

Removal:
1. The patient must be endotracheally intubated before removal.
2. Have suction available, turn patient's head to the side (or log roll patient) and deflate cuff.
3. Remove the tube from the esophagus in one smooth motion.
4. Continue ventilating through the ET tube and suction as needed.

Notes:
1. If any intubation attempt lasts for greater than 30 seconds, then stop the attempt and hyperventilate the patient and re-attempt intubation. This may be repeated until successful.

IV Therapy 2.03

Purpose:
To provide a mechanism for fluid replacement and a medication route.

Site Selection:
A. Select the most distal site first if possible. Sites which can be utilized include:
   1. Back of hand
   2. Forearm
   3. Antecubital fossa in immediate life threatening situations
   4. External Jugular Vein may be used in life threatening circumstances if an attempt in the antecubital fossa has failed. The left external jugular is preferred although the right external jugular is an acceptable site if the left external jugular is not visible or has overlying trauma.

B. Areas that shall be avoided when selecting a site for cannulation:
   1. Areas of articulation.
   2. Areas where pulse is palpable close to the vein.
   3. Veins near injured areas.
   4. Veins of the lower extremities.

Procedure:
1. Explain procedure to the patient and check for allergies, especially to provo-iodine if used.
2. Assemble the necessary equipment.
3. Select the cannula size that is most appropriate for patient condition.
4. Apply tourniquet and select a suitable vein. TQ not required for EJ cannulation.
5. Prepare the insertion site with alcohol or provo-iodine prep.
7. Perform venipuncture.
6. Release tourniquet and open tubing clamp to check flow and placement.
7. Check for infiltration and leakage.
9. Adjust flow as required for patient condition.
10. Secure cannula and tubing.
11. Label the site indicating date, time, name of person starting IV, and the size of the catheter.
12. Monitor patient for complication due to IV therapy.

Notes:
1. Normal Saline is the only IV solution used by CSFD.
2. When more than two attempts are necessary on any one patient, the Paramedic shall document in writing the reasons for additional attempts.
3. Any time an IV is established at an area of articulation, the extremity shall be secured to an IV arm board to prevent flexing of the extremity.
4. All IV lines established on Pediatric Patients weighing 80 pounds or less shall be established with a Buretrol type administration set.

Saline Locks 2.04

The use of saline locks is an optional skill that can be used on patients that meet the criteria.

Indications:
1. Medications route.
2. Patients that do not need or require IV fluids.

Contra-indications:
1. Patients that need or require the administration of IV fluids.
2. Patients that are in cardiac arrest.

Procedures:
1. Start IV access as per IV Therapy protocol.
2. Fill the saline lock with saline and connect to the IV catheter.
3. Secure the IV catheter and saline lock with tape or site dressing.
4. Insure the patency by flushing the saline lock with 10 to 20 cc of fluid.
5. Treat the saline lock as a standard IV site.

Notes:
1. The saline lock can be utilized as a medication route or can be used as an injection port to establish an IV fluid line.
2. The IV Therapy protocol establishes the guidelines for IV access as well as the possible complication.

Intraosseous Infusion (IO): Pediatric 2.05

IO Needle Only

Purpose:
For administration of fluids and/or medications where quick peripheral venous access is not possible. This is a STANDING ORDER PROCEDURE if the patient meets the selection criteria.

Selection Criteria:
1. Pediatric patients 12 years old and younger.
2. Patient must be in shock and have a decreased level of consciousness secondary to inadequate perfusion, or patient must be in cardiac arrest.
3. Three (3) attempts at peripheral IV cannulation within 90 seconds have failed.

Contraindications:
1. Obvious fracture of ipsilateral lower extremity.
2. Trauma to site.
3. Apparent infection over site.
4. MAST/PASG

Procedure:
1. Select Site: 2 finger breath below the tibial tuberosity either midline or slightly medial to the midline.
2. Use 16 or 18 gauge IO needle.
3. Place rolled towels under the knee.
4. Clean the site. Strict aseptic technique MUST be followed.
5. Insert the needle into the proximal tibia using a slow, boring, twisting motion, until you have penetrated the bone. (When this occurs, a sudden decrease in resistance will be felt, as the needle enters the marrow cavity.)
6. Aspiration of blood/marrow confirms proper placement of needle.
7. Attach IV tubing for infusion of fluid and adjust flow rate.
8. Secure needle and tubing to patient's leg. Splint the limb with long IV board for protection.
9. Attempts are limited to 2.

Possible Complications:
Subperiosteal infusion due to improper placement, osteomyelitis, sepsis, fat embolism, marrow damage.

Notes:
1. The initial dosage of fluid for pediatric patients in hypovolemic shock is 20 ml/kg rapid IV bolus. Reassess, and if perfusion is still diminished, then a second bolus of 20 ml/kg should be administered. Continue to reassess and bolus as needed.
2. If infiltration occurs, do not use the same bone as fluid will leak out of the original site.
3. If the patient presents in cardiac arrest, this procedure can be tried immediately upon the discretion of the paramedic without IV attempts.

EZ-IO PD

Purpose:
For administration of fluids and/or medications where quick peripheral venous access is not possible. This is a STANDING ORDER PROCEDURE if the patient meets the selection criteria.

Selection Criteria:
1. Patient weighs 3 to 39 kg
2. Patient must be in shock and have a decreased level of consciousness secondary to inadequate perfusion, or patient must be in cardiac arrest.
3. Three (3) attempts at peripheral IV cannulation within 90 seconds have failed.

Contraindications:
1. Fracture of the extremity of the injection site.
2. Trauma to site.
3. Apparent infection near injection site.
4. Inability to locate landmarks (significant edema).
5. Previous orthopedic procedures (IO within 24 hours, knee replacement)
6. Pre-Existing Medical Condition (tumor near site or peripheral vascular disease).
7. Excessive tissue at insertion site.
8. MAST/PASG

Equipment:
A. EZ-IO Driver
B. EZ-IO PD Needle Set (Pink Needle Set)
C. Alcohol and povodine swab
D. IV or Extension Set
E. 10 ml Syringe
F. Tape or Gauze
G. Pressure Bag
H. 2% Lidocaine

Injection Sites:
A. Tibial tuberosity

Procedure:
1. Wear approved Body Substance Isolation Equipment.
2. Determine EZ-IO Indications.
3. Rule out Contraindications.
4. Locate insertion site.
5. Cleanse insertion site using aseptic technique. Utilize povodine swab sticks.
6. Prepare the EZ-IO driver and needle set.

Procedure: (cont.)

7. Stabilize leg and insert EZ-IO needle set.
8. Remove EZ-IO driver from needle set while stabilizing catheter hub.
9. Remove stylet from needle set, secure stylet.
10. Confirm placement.
11. Connect primed EZ-Connect.
12. Conscious patients should now receive 0.5 mg/kg 2% Lidocaine IO only if there is no history of allergy to Lidocaine.
13. Flush or bolus the EZ-IO catheter rapidly with 5 ml of normal saline using a 10 ml syringe.
14. Place a pressure bag or infusion pump on solution being infused, where applicable.
15. Begin infusion.
16. Dress site, secure tubing and apply wristband.
17. Monitor EZ-IO site and patient condition.
18. Consider pain management.

Possible Complications:

A. Subperiosteal infusion due to improper placement
B. Osteomyelitis
C. Sepsis
D. Fat embolism
E. Marrow damage.

Notes:

1. The initial dosage of fluid for pediatric patients in hypovolemic shock is 20 ml/kg rapid IV bolus. Reassess, and if perfusion is still diminished, then a second bolus of 20 ml/kg should be administered. Continue to reassess and bolus as needed.
2. If infiltration occurs, do not use the same bone as fluid will leak out of the original site.
3. If the patient is in cardiac arrest, this procedure can be tried immediately upon the discretion of the EMT-Intermediate/Paramedic without IV attempts.

Intraosseous Infusion (IO): Adult 2.06

Purpose:
For administration of fluids and/or medications where quick peripheral venous access is not possible. This is a STANDING ORDER PROCEDURE if the patient meets the selection criteria.

Selection Criteria:
1. Patient weighs 40 kg or more
2. Patient must be in shock and have a decreased level of consciousness secondary to inadequate perfusion, or patient must be in cardiac arrest.
3. Three (3) attempts at peripheral IV cannulation within 90 seconds have failed.

Contraindications:
1. Fracture of the extremity of the injection site.
2. Trauma to site.
3. Apparent infection near injection site.
4. Inability to locate landmarks (significant edema).
5. Previous orthopedic procedures (IO within 24 hours, knee replacement)
6. Pre-Existing Medical Condition (tumor near site or peripheral vascular disease).
7. Excessive tissue at insertion site.
8. MAST/PASG

Equipment:
A. EZ-IO Driver
B. EZ-IO Needle Set (Blue Needle Set)
C. Alcohol and povodine swab
D. IV or Extension Set
E. 10 ml Syringe
F. Tape or Gauze
G. Pressure Bag
H. 2% Lidocaine

Injection Sites:
A. Tibial tuberosity
B. Humeral head

Procedure:
1. Wear approved Body Substance Isolation Equipment.
2. Determine EZ-IO Indications.
3. Rule out Contraindications.
4. Locate insertion site.
5. Cleanse insertion site using aseptic technique. Utilize povodine swab sticks.
6. Prepare the EZ-IO driver and needle set.
7. Stabilize leg and insert EZ-IO needle set.

Procedure: (cont.)

8. Remove EZ-IO driver from needle set while stabilizing catheter hub.
9. Remove stylet from needle set, secure stylet.
10. Confirm placement.
11. Connect primed EZ-Connect.
12. Conscious patients should now receive 20 – 50 mg 2% Lidocaine IO only if there is no history of allergy to Lidocaine.
13. Flush or bolus the EZ-IO catheter rapidly with 10 ml of normal saline using a 10 ml syringe.
14. Place a pressure bag or infusion pump on solution being infused, where applicable.
15. Begin infusion.
16. Dress site, secure tubing and apply wristband.
17. Monitor EZ-IO site and patient condition.
18. Consider pain management.

Possible Complications:

A. Subperiosteal infusion due to improper placement
B. Osteomyelitis
C. Sepsis
D. Fat embolism
E. Marrow damage.

Notes:

1. The initial dosage of fluid for adult patients in hypovolemic shock is 250 ml rapid IV bolus. Reassess, and if perfusion is still diminished, then a second bolus of 250 ml should be administered. Continue to reassess and bolus as needed.
2. If infiltration occurs, do not use the same bone as fluid will leak out of the original site.
3. If the patient is in cardiac arrest, this procedure can be tried immediately upon the discretion of the EMT-Intermediate/Paramedic without IV attempts.

Blood Draw 2.07

Purpose:
To provide the Receiving Medical Facility with a blood sample that was obtained prior to the administration of normal saline and/or medications.

Indication:
1. All patients in which an IV is started, unless the blood draw hinders or delays patient care
2. Trauma patients
3. Diabetic patients, before administration of glucose or D50

Blood Tubes:
1. Red Top
2. Purple Top
3. Blue Top
4. Green Top

Methods:
1. Direct venipuncture with Vacutainer set
2. Vacutainer through the IV catheter
3. Syringe through the IV catheter

Procedure:
1. Cleanse site
2. Perform the blood draw
3. Connect IV tubing, if applicable
4. Place sample in tubes as soon as possible
5. Label the tube with patient's name, date and time of draw

Notes:
1. Blood draws should not hinder or delay patient care
2. A red, purple, blue and a green top are preferable, but if there is a limited amount of sample only use the red top.
3. If a tube contains an additive, insure proper mixing of the sample in the tube.
4. If a syringe is used, fill the tubes as soon as possible after the draw.

PASG / MAST 2.08

Purpose:
To provide a mechanism to increase the blood pressure in trauma patients exhibiting signs and symptoms of shock and for use as an air splint.

Indications:
1. Blood pressure of less than 90 mm Hg systolic with presumed hypovolemia due to blunt trauma
2. Splinting of major trauma to pelvis or lower extremities.
3. Major trauma without hypotension (without inflation) in anticipation of hypovolemia and/or shock.

Contraindications:
1. Pulmonary edema
2. Isolated head trauma

Complications:
1. Pulmonary edema from volume overload
2. Ventilatory compromise

Inflation:
1. **Physician Orders Only**
2. When orders are received to inflate MAST, the garment should be inflated to obtain a target blood pressure of 100-110 mm HG Systolic, unless directed otherwise by ER physician.
3. If using MAST as a splint, pants should be inflated until rigid.

Notes:
1. In a visibly pregnant patient, do not inflate the abdominal section.
2. Using PASG/MAST as a splint does not require physician orders

Pulse Oximetry 2.09

Purpose:
Pulse oximetry is to be used as an assessment tool and not a tool to determine whether or not the patient requires oxygen. As with all patient care Oxygen is to NEVER be withheld from any patient whose signs and symptoms warrant its administration

Indications:
1. Assessment of oxygenation before and after oxygen administration
2. It is encouraged that pulse oximetry be used on any patient that exhibits respiratory or cardiac complications.

Procedure:
1. Clean polish off fingernail or toenail, if applicable.
2. Place monitoring device over finger or toe.
3. Turn unit on.
4. Pulse and oxygen saturation are shown on display.

Notes:
1. Conditions such as shock, carbon monoxide inhalation and decreased body temperatures may hinder the accuracy of pulse oximeters.

Transcutaneous Cardiac Pacing 2.10

Indications for Transcutaneous Pacing:

1. Bradycardia, (Heart rate < 60) with evidence of inadequate perfusion, (e.g., hypotension, altered mental status).
2. Pulseless bradycardia or idioventricular rhythms, (wide QRS, slow rate 15 to 40 per minute) prior to or during resuscitation.
3. Asystole encountered following defibrillation.

Contraindications for Transcutaneous Pacing:

1. Primary asystole as presenting rhythm.
2. Patients who are less than 14 years of age.
3. Patients exhibiting signs of penetrating or blunt trauma to the chest.

Procedure:

1. Continue CPR if patient is in cardiac arrest.
2. Attach pacing electrodes to anterior and posterior chest just to the left of the sternum and spinal column respectively.
3. Select pacing rate of 80.
4. Observe ECG for "sense" marker. If not present adjust ECG Size as needed to obtain marker on QRS complex.
5. Activate pacing, increase current slowly until evidence of pacing capture.
6. Evaluate patients pulse and blood pressure to access perfusion.
7. In the event of electrical capture and no pulse, continue CPR and follow PEA protocol.

Notes:

1. While pacing, the patient should go no longer than 30 seconds without CPR while trying to capture.
2. While trying to capture initially, the mA should start at 20 and doubled every 10 seconds if no capture.

Chest Decompression 2.11

Purpose:
To relieve tension pneumothorax. This is a STANDING ORDER PROCEDURE if the patient meets the selection criteria.

Selection Criteria:
1. Patient exhibits signs of tension pneumothorax which may include:
   a. Unilateral diminished or absent breath sounds on the affected side.
   b. The affected side is hyperressonant to percussion.
   c. Shock.
   d. Tracheal deviation, away from the side of injury: late sign.
   e. Jugular vein distention.
   f. Possible subcutaneous emphysema.
   g. Dyspnea / tachypnea.
2. And one or more of the following signs:
   a. Loss of radial pulse.
   b. Loss of consciousness.
   c. Respiratory distress and cyanosis.

Procedure:
1. Assist ventilations with 100% oxygen with BVM.
2. Maintain airway with endotracheal tube if necessary.
3. Select site. The site for decompression should be the 2nd intercostal space mid-clavicular or the 4th-5th intercostal space in the anterior axillary line. The needle should be inserted over the superior border of the lower rib. Care should be taken not to insert it along the bottom margin of the rib, which could damage the underlying artery, vein, or nerve.
4. Prep the site as when establishing an IV. Strict aseptic technique MUST be followed.
5. Select and prepare 14 or 16 gauge needle or angiocatheter by inserting it through the finger of a sterile latex glove. Cut the finger off as close to the palm of the glove as possible. This creates a one-way-valve and prevents air from returning back into the lung.
6. Insert the needle into the site until there is an audible or palpable return of air through the needle. If air release is not obtained, the needle should be withdrawn and the diagnosis reconsidered.
7. Remove the needle (stylet), leaving the plastic catheter in place.
8. Use of goggles and gloves is strongly recommended due to the potential for a hemothorax to be present with a tension pneumothorax.

Complications:
1. Laceration of artery, vein and/or nerve along the inferior border of each rib.
2. Create a pneumothorax if incorrectly placed.
3. Laceration of lung.

End Tidal CO2 Detector 2.12

Purpose:
An assessment tool that helps to insure that endotracheal tubes are properly place and to assess the exhaled level of carbon dioxide.

Indications:

1. Endotracheally intubated patients

Procedure:

1. Intubate the patient
2. Ascultate to determine if the tube is in the correct location
3. Connect the detector between the ET tube and the BVM
4. Assess the color change of the detector to assess proper ET tube location
5. Periodically assess the detector to make sure the ET tube remains in the proper location.

Pain Management 2.13

Purpose:
To facilitate pre-hospital treatment of pain

Indications:

1. Moderate to severe pain

Relative Contraindications:

1. Intoxicated patients
2. Altered mental status
3. Possible head injury

Medications:

1. Morphine Sulfate
2. Fentanyl

Notes:

1. Fentanyl is preferable in patients with abdominal pain, critically ill patients, and multi-systems trauma patients.
2. Morphine is preferable for patients with ischemic chest pain.
3. Obtain medical control orders for hypotensive patients.

12 Lead ECG 2.14

Clinical Indications:

- Suspected cardiac patient
- Suspected tricyclic overdose
- Electrical injuries
- Syncope
- Patients with stable arrhythmias
- Other patients at paramedic's discretion

Procedure:

1. Assess patient and monitor cardiac status.
2. Administer oxygen as patient condition warrants.
3. If patient is unstable, definitive treatment is the priority. If patient is stable or stabilized after treatment, perform a 12 Lead ECG.
4. Prepare ECG monitor and connect patient cable with electrodes.
5. Enter the required patient information (patient name, etc.) into the 12 lead ECG device.
6. Expose chest and prep as necessary. Modesty of the patient should be respected.
7. Apply chest leads and extremity leads using the following landmarks:
    - RA -Right arm
    - LA -Left arm
    - RL -Right leg
    - LL -Left leg
    - V1 -4th intercostal space at right sternal border
    - V2 -4th intercostal space at left sternal border
    - V3 -Directly between V2 and V4
    - V4 -5th intercostal space at midclavicular line
    - V5 -Level with V4 at left anterior axillary line
    - V6 -Level with V5 at left midaxillary line
8. Instruct patient to remain still.
9. Press the appropriate button to acquire the 12 Lead ECG.
10. If the monitor detects signal noise (such as patient motion or a disconnected electrode), the 12 Lead acquisition will be interrupted until the noise is removed.
11. Notify hospital that a 12 Lead ECG has been acquired.
12. Monitor the patient while continuing with the treatment protocol.
13. Document the procedure, time, and results on/with the patient report.
14. Attach a copy of the 12 lead to the PCR.

Cricothyrotomy: QuickTrach 2.15

Purpose:
The purpose of the QuickTrach is to obtain a surgical airway in patients that cannot be managed via bag-valve-mask, and either the initial attempts to intubate were unsuccessful, or the airway is deemed too difficult for attempts at orotracheal intubation. The decision to perform cricothyrotomy is the authority of the treating medic. Medical control is not required to initiate cricothyrotomy.

Clinical Indications:
Any patient with a "failed airway" is a candidate for cricothyrotomy using the QuickTrach. A failed airway is one that is known immediately to be excessively difficult for oral intubation such as oromaxillary trauma, penetrating neck trauma with arterial bleeding obscuring the airway, or one that has failed at initial attempts (>60 seconds).

Procedure:
1. If C-spine injury is not a concern, hyperextend the neck.
2. Locate the cricoid cartilage, and clean site with alcohol prep and/or povodine swab.
3. Firmly hold the syringe at a 90 degree angle to the skin and puncture through the skin.
4. After puncturing through the skin, drop the angle to 60 degrees, with needle pointing down the trachea.
5. While aspirating back in order to check for air, push the QuickTrach forward into the trachea up to the stopper.
6. Remove the stopper.
7. Hold the needle and syringe firmly and slide the plastic cannula along the needle into the trachea until the flanges rest upon the neck.
8. Remove the needle and syringe.
9. Secure the cannula with the tracheostomy neck tape.

Warning:
Should aspiration not draw back air, after removal of the stopper, the cannula and needle can be advanced with constant aspiration until the trachea is reached.

Complications:
Complications to the performance of the QuickTrach cricothyrotomy include:
1. Failure to find the trachea using the aspiration method.
2. Bleeding.
3. Damage to the thyroid (if placed incorrectly).
4. Injury to the recurrent laryngeal nerve causing vocal cord paralysis.

Continuous Positive Airway Pressure (CPAP) 2.16

Purpose:
Continuous Positive Airway Pressure has been shown to rapidly improve vital signs, gas exchange, and the work of breathing, decrease the sense of dyspnea, and decrease the need for endotracheal intubation in the patients who suffer from shortness of breath from asthma, CO poisoning, Near Drowning, COPD, pulmonary edema, CHF, and pneumonia. In patients with CHF, CPAP improves hemodynamics by reducing preload and afterload.

Indications:

1. Any patient who is complaining of shortness of breath for reasons other than pneumothorax and:
   A. Is awake and oriented
   B. Is 7 years and older and is able to fit the CPAP mask
   C. Has the ability to maintain an open airway (GCS>10)
   D. A respiratory rate greater than 25 breaths per minute
   E. Has a systolic blood pressure above 90 mmHg
   F. Uses accessory muscles during respirations
   G. Significant signs and symptoms consistent with asthma, COPD, pulmonary edema, CHF, or pneumonia

Contraindications:

1. Patient is in respiratory arrest
2. Patient is suspected of having a pneumothorax
3. Patient has decreased cardiac output, obtundation and questionable ability to protect airway (e.g. stroke, obtundation, etc.), penetrating chest trauma gastric distention severe facial injury, uncontrolled vomiting and hypotension secondary to hypovolemia.

Precautions:

1. Use care if patient:
   A. Has impaired mental status and is not able to cooperate with the procedure
   B. Had failed at past attempts at noninvasive ventilation
   C. Has active upper GI bleeding or history of recent gastric surgery
   D. Complains of nausea or vomiting
   E. Has inadequate respiratory effort
   F. Has excessive secretions
   G. Has a facial deformity that prevents the use of CPAP

Pediatric Considerations:

1. CPAP should not be used in children under 7 years of age

EMT-B PROCEDURES

1. Gather the appropriate equipment.
2. Assess vital signs, attach pulse oximeter
3. Make sure patient does not have a pneumothorax!
4. EXPLAIN THE PROCEDURE TO THE PATIENT
5. Connect the CPAP to a 50 PSI oxygen outlet.
6. Ensure adequate oxygen supply to ventilate device (100% when starting and until Sa02 is >95%)
7. Select a sealing face mask and ensure that the mask fits comfortably, seals the bridge of the nose, and fully covers the nose and mouth.
8. Attach the Breathing Circuit to the CPAP, insert and align the locking bayonet outlet adapter to the unit and turn clockwise until securely engaged.
9. Secure the mask to the patient with provided straps or the other provided devices.
10. Prior to setting the pressure always observe that the airway pressure gauge needle indicator is at the zero (0) value with the CPAP adjustment knob in the fully counterclockwise position and the breathing circuit is connected. To set continuous positive airway pressure, turn the CPAP adjustment clockwise and observe the needle indicator on the airway pressure gauge.
11. If patient is in moderate distress turn CPAP adjustment clockwise to 5cm H20 pressure or titrate to effect.

EMT-B PROCEDURES (continued)

12. If patient is in Severe Distress turn CPAP adjust clockwise to 10cm H2O pressure or titrate to effect.
13. Check for air leaks.
14. Monitor and document the patient's respiratory response to the treatment.
15. Continue to coach patient to keep mask in place and readjust as needed.
16. Evaluate vital signs every 5-10 minutes.
17. If respiratory status deteriorates, remove device and consider bag valve mask ventilation or other BLS/ALS support per appropriate protocol.

EMT-I PROCEDURES (in addition to EMT-B Procedures above)

1. If patients respiratory status still deteriorates consider intubation (see Protocol 2.01 Endotracheal Intubation)

EMT-P PROCEDURES (in addition to EMT-B, EMT-I Procedures above)

1. EKG

Removal Procedure:

1. CPAP therapy needs to be continuous and should not be removed unless the patient cannot tolerate the mask or experiences continued or worsening respiratory failure

Notes:

1. Advise receiving hospital as soon as possible so they can be prepared for patient. Advise them of baseline Respiratory status. Upon arrival, advise them of change in baseline respiratory status when CPAP was placed on pt. Ask that pt be continued on CPAP until physician assessment can occur.
2. Do not remove CPAP until hospital therapy is ready to be placed on patient
3. Watch patient for gastric distention
4. Reassessment of the patient's status is critical and should be performed every 5-10 minutes.

Medications

Table of Contents

Approved Medication List 3.01

Approved Medication List

The following medications have been approved for use by College Station Fire Department. Use of these medications is at the discretion of the physician and as outlined in specific protocols.
This list provides information on the name of each mediation, how supplied, and the amount of the medication to be kept in each location shown. Brand names and generic names may be used interchangeably. In the event the exact unit dose cannot be obtained, inventory must be maintained with the total amount of medication.

Medication	Quantity	ALS Engine	Notes
Adenosine 12 mg/4 ml	4	0	
Adenosine 6 mg/2 ml	2	1	
Albuterol 2.5 mg/3 ml	4	2	
Etomidate (Amidate) 40 mg/20 ml	2	0	Stored in Lock Box
Amiodarone 150 mg/3 ml	4	0	
Aspirin 325 mg tablet	4	2	
Atropine 1 mg/1 ml	6	6	
Atropine 1 mg/10 ml	6	0	
Benadryl 50 mg/1 ml	2	1	
Calcium Chloride 1G/10 ml	1	0	
Captopril (Capoten) 25 mg tablet	2	0	
D50 25G/50 ml	3	1	
Dopamine 1600 mcg/ml	1	0	Pre-Mix Drip
Epinephrine 1:1,000 1 mg/ml	10	2	
Epinephrine 1:10,000 1 mg/10 ml	9	2	
Glucagon 1 mg/1 mL	3	0	
Fentanyl (Sublimaze) 0.1 mg / 2 ml	3	1	Stored in Lock Box
Lasix 40 mg/4 ml	2	0	
Lidocaine 100 mg/5 ml	4	0	
Lidocaine 2G/500 ml	1	0	Pre-Mix Drip
Magnesium Sulfate 5 gm/10 ml	2	0	
Midazolam (Versed)10 mg/2ml	2	1	Stored in Lock Box
Morphine Sulfate 10 mg/ml	2	0	Stored in Lock Box
Narcan 2 mg/ 2 ml	2	1	
Nitrostat 1/150 gr (bottle w/6 pill minimum)	2	1	
Promethazine (Phenergan) 25 mg/ml	2	0	
Sodium Bicarbonate 50 mEq	2	0	
Sodium Bicarbonate Infant 5 mEq	2	0	
Tetracaine 1/2% 1 ml	2	1	
Thiamine 200mg/2ml	1	0	

Controlled Substance Accountability 3.02

Under College Station Fire Department Protocols, additional accountability for Morphine Sulfate, Midazolam (Versed), Etomidate (Amidate), and/or Fentanyl (Sublimaze) will be done.

Paramedics are required to complete a Controlled Substance Accountability form for all calls where one of these medications was used.

The completed form will be forwarded in the following manner:

1. White Form – forwarded to Training Coordinator
2. Yellow Form – Narcotic Vault
3. Pink Form - attached to the copy of the patient data form that is left at the hospital

College Station Fire Department

Emergency Medical Service

Controlled Substance Accountability Form

Call Number: _____

Date: _____ Time: _____

Name of Patient: _____

Name of Drug: Versed Morphine Etomidate Fentanyl (Circle One)

How Ordered: Protocol Physician's Order (Circle One)

Amount Administered: _____

Amount Destroyed: _____ Witness: _____

Paramedic Signature: _____

Physician Signature: _____

(Only if given by direct orders of this Physician)

• • • • • • •

White: Call Report Yellow: Narcotic Locker Pink: Hospital

Medication Storage 3.03

All medications are to be stored in accordance to manufacturer recommendations, FDA recommendations and the Texas Department of State Health Services Provider Policy 99-1.

Provider Policy 99-1

EMS Pharmaceutical Storage and Maintenance Policy

25 TAC 157.11

The EMS provider licensure or relicensure applicant shall provide evidence of an operational policy which shall list the parenteral pharmaceuticals authorized by the medical director and which shall define the storage and maintenance procedures for each in accordance with the manufacturers and/or FDA recommendations. Compliance with the policy shall be incorporated into the provider's Quality Management process and shall be documented on the daily unit readiness reports. 11 March 1999

1. Medications will be checked in accordance to College Station Fire Department SOP's/SOG's.
2. A record of these checks will be maintained on the unit. When the form is full, it will be forwarded to the Training Coordinator/QI.
3. In the event that medication temperatures exceed manufacturer and/or FDA recommendations, those medications are to be replaced.

Medications Exchange and Replacement 3.04

The exchange and replacement of medications will be done in accordance with College Station Fire Department SOP 400.3.10.

Definitions:

- **Medication:** refers to any medication in ampule, tablet, tube, pre-filled syringe form, or vial; fluid; or premixed drip. Medication does not refer to sterile water or saline, alcohol or iodine preps, vacutainers, or other non-medicinal supplies.
- **Exchange:** refers to any medications that are within expiration date and/or damage that is being traded for a new dose.
- **Replacement:** refers to any medication that has been used on a patient and is being obtained from the Stations EMS supply cabinet or from main supply located at Stations 4.
- **Inventory:** Refers to Daily and Weekly inventory of all EMS medications and supplies.
- **Controlled Medication:** Morphine Sulfate, Fentanyl (Sublimaze), Midazolam (Versed), and Etomidate (Amidate) are all controlled medication used within the College Station Fire Department.

Medication Usage

- When Nitroglycerin tablets are used, the remaining medication will be disposed of if patient is not transported or left at the receiving facility for the patient. The medication will then be restocked with a new bottle from the Station Supply Cabinet or from Station 4.
- The usage and disposal of Morphine, Versed, Fentanyl, and/or Etomidate will be documented on the approved "Controlled Drug Usage Form" found within this policy.
- The "Controlled Drug Usage Form" will be utilized the following ways:
    - Pink Copy: Receiving Hospital
    - Yellow Copy: Medical Director
    - White Copy: EMS Run Report
- Unused portions of Controlled Medications will be transported with the patient to the receiving facility. The attending Nurse and/or Physician will witness disposal of the unused portion and will sign the "Controlled Drug Usage Form".

Medication Inventory

Medication List

- A list of the drugs in the ambulance must be present and within easy access inside the ambulance, according to Texas Department of State Health Services guidelines. The list will be kept in the protocol book. This list will be approved or changed only with approval of the Medical Director.

Responsibility

- Personnel are responsible for the inventory of medications, checking of the security tag system, and/or Knox Box System on the unit that they are assigned to.
- It is the responsibility of the In-Charge Paramedic to ensure the medications are checked on a daily basis and that the tag system is replaced if the seal is broken for any reason.

Required Personnel:

- The In-Charge Paramedic must complete all checks and inventory of medications on their unit.

Daily Check:

- Each morning the drug coolers/bags will be checked to verify that the tag number matches the number in the "Unit Check Book".
- If the tag matches and the cooler/bag appear to be functioning properly then the book will be signed and dated to verify the numbers match by the In-Charge Paramedic. If desired, for any reason, the drug cooler/bag can be opened and inventoried and a new tag placed on it.

Crew Change:

- Each time a new In-Charge Paramedic is assigned to the ambulance or engine during the shift, he/she will verify that the security tag system is secure and sign the "Unit Check Book" for that unit.

Medication Check and Exchange

- The medications will be checked for proper dose and quantity per protocol, and inspected for any damage and/or tampering.
- The drug check sheet will then be signed by the In-Charge paramedic for that unit, thus verifying that all the drugs for that unit are present and accounted for.
- If the unit you are assigned to does not have a cooler/bag for the drugs, the drugs will be verified to assure they match with that unit's inventory list.
- All medications will be checked weekly for a monthly expiration date. Medications will expire on the last day of the month unless otherwise indicated.
- On the last Tuesday of the month, all medications and supplies will be checked for an expiration date and exchanged if expiring before the next weekly check.

Medication Damage:

- When medications are damaged, an email will be sent by that individual, to the Quartermaster through the Station Officer and Shift Commander explaining the incident, and what medication was damaged. In addition, if it is a controlled medication, a "Controlled Drug Usage Form" will be completed, and if possible the damaged medication container will then be taken to Station 4.

Medication Security Tags

Usage Tag Replacement:

- After each call that the drug cooler/bag has been opened, the cooler/bag will be re-stocked and inventoried and a new tag will be placed on the cooler/bag. This should be done when the unit returns to the station.

Replacement of Tags:

- New tags are located at each station in the EMS cabinet. Two signatures are required to remove a tag from the supply box. The two signatures will include the In-Charge Paramedic, and a witness.
- After securing the new tag on the unit, the In-Charge Paramedic will sign the "Unit check book" and indicate the new tag number.

Bulk Supply of Tags:

Each station is issued a designated number of tags by the EMS Supply Officer. It will be the responsibility of the on shift personnel performing the cabinet inventory to order the proper number of tags to replace the ones used.

Station 1 - 20 tags
Station 2 - 20 tags
Station 3 - 20 tags
Station 4 - bulk supply of tags
Station 5 – 20 tags

Missing Tags or Numbers Not Matching:

- If for any reason a tag is missing or a tag does not match the drug sheet, the On-Duty Shift Commander will be notified immediately.
- It will be the responsibility of the on duty Station Officer to start an investigation to determine the cause and resolution to the situation, if possible.
- A complete report of the investigation will be forwarded to the Assistant Fire Chief through the chain of command as soon as possible.

Alternate Medication Routes 3.05

ET Medication Administration
Based upon current ACLS guidelines, the following medications can be given via the Endotracheal Route in a situation in which vascular access is not available or the ET route is the easiest or quickest means to administer the medications. The appropriate dose via ET is also listed.

Epinephrine 1:10,000	2 to 2.5 times the IV dose
Epinephrine 1:1,000	2 to 2.5 times the IV dose
Atropine	2 to 2.5 times the IV dose to a maximum total loading dose of 0.04 mg/kg
Lidocaine	2 to 2.5 times the IV dose to a maximum total loading dose of 3 mg/kg
Albuterol	Same metered unit dose as used for nebulizing
Narcan/Naloxone	Same dose as IV dose

ET Medication Administration is considered a last resort if IV and IO route is not available.

Cardiac Arrest IV Medication Administration
Based upon current ACLS guidelines, during a cardiac arrest situation, after each IV medication, give a 20 to 30 ml bolus of IV fluid and immediately elevate the extremity. This will enhance delivery of drugs to the central circulation, which may take 1 to 2 minutes.

IO Medication Administration
Any medication that is given IV can be given IO.

Albuterol (Proventil)

Purpose:
To treat patients who are experiencing moderate to severe respiratory distress.

Indications:
1. Wheezing patients who present with moderate to severe dyspnea.
2. Patients who are experiencing wheezing including, but not limited to, patients with asthma, exacerbation of COPD, anaphylaxis, or CHF.

Contraindications:
1. Tachydysrythmias in any age group.

Administration:
1. Place unit dose of Albuterol in the mask or hand held nebulizer.
2. Flow at least 8 LPM of oxygen into the device and encourage to patient to deeply inhale the nebulized medication.
3. Continue until the entire medication has been breathed in.
4. Repeat dosage as needed.

Continuation After Medication:
1. Pulse oximetry readings should be documented prior to and after each administration of the medication.
2. Constant reassessment of breath sounds and vital signs.
3. Monitor ECG.
4. After administration of the medication, place the patient on the appropriate oxygen delivery device (nasal cannula, simple facemask, or non-rebreather.)

Side Effects:
1. Ventricular Ectopy
2. Tachycardia or Tachydysrythmias
3. Nausea
4. Anxiety
5. Tremulousness

Notes:
1. Oxygen from a humidified source may interfere with the nebulizing of medications.

Promethazine (Phenergan)

Indications:
1. Nausea
2. Vomiting

Contraindications:
1. Less than 2 years of age
2. Hypotension
3. Altered mental status
4. History of allergy to Promethazine

Precautions:
1. Phenergan potentiates the actions of narcotics

Administration:
1. Adults Dosage:
   a. 12.5 to 25 mg IV in a minimum of 10 to 20 cc Normal Saline.
   b. 25 mg IM
2. Pediatric Dosage:
   a. 0.5 mg/lb IV to a maximum dose of 12.5 mg in a minimum of 5 to 10 cc Normal Saline
   b. 0.5 mg/lb IM

Side Effects:
1. Sedation
2. Hypotension
3. Allergic reaction (usually due to sulfide additives)
4. Extrapyramidal reactions

Notes:
1. Extrapyramidal reactions may be treated with Benadryl
   a. Adults - Benadryl 25 to 50 mg IV or IM
   b. Pediatrics - Benadryl 1 mg/kg IV or IM to a maximum dose of 25 mg

Fentanyl (Sublimaze) 3.08

Pharmacologic Effects:
An opiate agonist that is similar in action to morphine, but much more potent. It has an extremely rapid onset (<30 seconds) and a much shorter clinical duration (20-40 minutes) than other opiates. Additionally, Fentanyl produces much less histamine release than other opiates, therefore less itching and less hypotension. The combination of rapid onset, short duration, and stabile hemodynamic profile make Fentanyl an excellent option for critically ill patients.

Metabolism:
By the liver and kidneys.

Indications:
Control of moderate to severe pain in
1. multi-system trauma patients
2. critically ill patients with potential for hypotension
3. patients with abdominal pain
4. patient with adverse reactions (but not anaphylaxis) to other opiates
5. transcutaneous pacing

Contraindications:
1. Hypersensitivity
2. Not to be used in a neonate/infant <1 month of age due to association with bradycardia

Cautions/Adverse Effects:
1. May cause respiratory depression especially with co-administration or use of benzodiazepines (e.g. Midazolam).
2. Rarely associated with nausea, vomiting, pruritis, and hypotension
3. Fentanyl has no anxiolytic or amnestic properties
4. Extremely rarely associated with a "chest wall syndrome" involving chest wall rigidity that occasionally can require supportive ventilation. This condition has only been associated with extremely large and rapid bolus (>5 mcg/kg) administration.
5. The effects of Fentanyl are reversible with naloxone.
6. Fentanyl tends to have more of a sedative effect in children
7. If patient has low blood pressure, Fentanyl can only be given by direct medical control.

Dosage and Administration:
1. *Adults*: 1 micrograms (mcg)/kg slow IV push/IO (over ~1 minute) Can be repeated every 5 minutes to desired effect.
2. *Pediatrics > one month of age*: 1 microgram (mcg)/kg slow IV push/IO (over ~1 minute). Can be repeated every 5 minutes.
3. *IM Dosing:* 2 micrograms/kg for adults and pediatrics. Dose can be repeated only with direct medical control.

Morphine Sulfate 3.09

CLASS: Narcotic

ACTION:
1. CNS depressant
2. Vasodilatation
3. Analgesic
4. Decrease myocardial oxygen demand

INDICATIONS:
1. Severe pain (i.e. Chest Pain)
2. Pulmonary edema

CONTRAINDICATIONS:
1. Head injury
2. Volume depletion
3. Undiagnosed abdominal pain
4. Allergy to med
5. Respiratory depression or any COPD
6. MAO inhibitors, antidepressants, & tricyclics

PRECAUTIONS:
1. Respiratory depression (Narcan should be available)
2. Hypotension

SIDE EFFECTS:
1. Dizziness
2. Altered level of consciousness
3. Severe Nausea & Vomiting
4. Increases vagal tone: Bradycardias
5. Respiratory depression

ROUTE: IV, IM

DOSAGE:
1. **Adult IV**: 0.1 mg/kg slow IV push followed by 2 mg every few minutes until pain relieved or respiratory depression occurs. Caution: adjust to lower dose in elderly.
2. **Adult IM**: 0.1 mg/kg slow IV push. Caution: adjust to lower dose in elderly.
3. **Pediatric IV**: 0.1 mg/kg slow IV push. May be repeated every 10 minutes to a maximum dose of 5 mg.

Etomidate (Amidate) 3.10

Pharmacologic Effects:
It is a carboxylayted imidazole derivative used as a sedative-hypnotic agent for rapid sedation of a patient undergoing intubation. It provides rapid, complete, and reproducible sedation at a standard dose without the adverse cardiovascular effects often seen with other sedative agents. The duration of the sedation is approximately 5-10 minutes.

Indications:
1. Indicated as an adjunct in facilitated intubation

Contraindications:
1. None in the setting of facilitated intubation

Cautions:
1. Causes rapid and deep sedation within 15-30 seconds of administration.
2. Etomidate should only be used in the process of facilitated intubation once personnel and equipment are ready for appropriate airway and ventilatory management.

Dosage and Administration:
1. Adults: The dose is 0.3mg/kg IV injection over 30 to 60 seconds. A dose of 20mg is adequate for most adults.
2. Pediatrics: The dose is 0.3mg/kg IV injection over 30 to 60 seconds.

Adverse Effects:
1. Causes mild local burning and venous irritation on administration
2. Myoclonus (muscular contractions)
3. Rapid and deep sedation
4. If used without concomitant paralytics nausea and vomiting can occur

Notes:
1. The duration of etomidate is about 5-10 minutes.
2. Continued sedation after the intubation procedure is often indicated and is best provided with a longer acting sedative such as midazolam. This can be administered after the procedure of intubation is complete.

ALS Inventory List 3.11

The list represents the minimum ALS equipment and supplies to be on an ambulance while that ambulance is in service.

Item	Quantity
Adult Electrodes	10
Adult MAST Trousers	1
Adult Quik Combo Pads	2
Alcohol Preps	10
Buretrol Set	1
CO2 Detector	1
Cardiac Monitor/Defibrillator*	1
Catheters - 14G	3
Catheters - 16G	3
Catheters - 18G	3
Catheters - 20G	3
Catheters - 24G	3
Combi - Tube	1
Defib Gels	2
Defib Pads	2
EKG Cable – 4 Lead	1
EKG Cable – 12 Lead	1
EKG Paper	2
ET Tube w/ Stylette 3.0	1
ET Tube w/ Stylette 4.0	1
ET Tube w/ Stylette 5.0	1
ET Tube w/ Stylette 5.5	1
ET Tube w/ Stylette 6.0	1
ET Tube w/ Stylette 6.5	1
ET Tube w/ Stylette 7.0	1
ET Tube w/ Stylette 7.5	1
ET Tube w/ Stylette 8.0	1
ET Tube w/ Stylette 8.5	1
ET Tube w/ Stylette 9.0	1
EZ IO Adapter Tube	1
EZ IO Drill	1
EZ IO Needle – Adult	1
IO Needle (16 or 18 gauge)	1
IV Admin. Set - Mini	3
IV Admin. Set - Volume	3
IV Arm Boards (Long)	2
IV Arm Boards (Short)	2
IV Extension Sets	3
IV Loop Connectors	2

Item	Quantity
IV Site Dressings	3
IV Start Kits	3
Jump Kit & Drug Bag	1
Laryngoscope Handle	1
Laryng. Blades Straight 0-4	1 ea
Laryng. Blades Curved 1-4	1 ea
Laryng. Bulbs (Spare)	2
Magill Forceps (Adult)	1
Magill Forceps (Pedi)	1
Needles 18G	1
Needles 21G	1
Needles 22G	1
Nitrous Oxide Bottles	2
Nitrous Oxide Kit	1
Normal Saline - 1000cc	2
Normal Saline - 250cc	2
Normal Saline – 30ml Bottles	3
Pedi Defib Paddles	2
Pedi Electrodes	6
Pedi Kit	1
Pedi MAST Trousers	1
Pedi Quik Combo Pads	2
Prep Razors	1
Pressure Infuser	1
Provodine Swab	1
Quik Combo – Cable	1
Saline Locks	2
Sharps Container - Large	1
Sharps Container - Small	1
Specimen Bags	3
Surgilube	5
Syringe 10cc	2
Syringe 1cc	2
Syringe 20cc	2
Syringe 3cc	2
Tourniquets	2
Tube Tamers - Adult	2
Tube Tamers - Pedi	2
Tubex/Carpuject Adapter	1

ALS Inventory List 3.11

Vacutainer Luer Adapt	3
Vacutainer Needles	3
Vacutainers- Blue Top	3
Vacutainers- Purple Top	3

Vacutainers- Red Top	3
Vacutainers- Green Top	3
Vacutainer Sleeves	2

*LP 10 or 12 when staffed as MICU Level

BLS Inventory List 3.12

The list represents the minimum BLS equipment and supplies to be on an ambulance while that ambulance is in service.

Item	Quantity
1" Clear Tape	2
1" Cloth Tape	2
2" Cloth Tape	2
3" Cloth Tape	2
3" Kling	3
4" Kling	3
4x4's	30
6" Kling	3
Activated Charcoal	2
Adaptics	3
Ammonia Inhalants	5
Backboards w/ straps	2
Band-Aids	5
Bite Sticks	2
Blankets	3
Board Splints (Long)	2
Board Splints (Medium)	2
Board Splints (Short)	2
Body Bag	1
Bolt Cutters	1
BP Cuff Adult	1
BP Cuff Infant	1
BP Cuff Pedi	1
BP Cuff Thigh	1
Burn Sheets	3
BVM - Adult	1
BVM - Child	1
BVM - Infant	1
C-Collar Adult Adjustable	3
C-Collar Pedi - Adjustable#	3
Cold Packs	3
Combi-Mask	4
Convenience Bags	3
CPR Board	1
Crisis Clean-Up	1
Defibrillator	1
Demand Valve	1
Emergency Blankets	1
Emergency Triangles	3

Item	Quantity
EMT Shears	2
Eye Protection Glasses	3
Eye Wash (4oz)	2
Frac Pack Kit	1
Fire Extinguisher	1
Gloves (S,M,L,XL)	1 box ea
Glucometer	1
Glucometer Test Strips	3
Head Blocks w/ straps	2
HEPA Mask Lg.	1
HEPA Mask Med.	1
Instant Glucose	2
KED's	1
Kerlix	3
KTD	1
Lancets	5
Lg. Bio-Haz Linen Bags	1
Lg. Bio-Haz Trash Bags	1
LP 12 Pulse Ox – Cable	1
LP 12 Pulse Ox Probe – Adult	1
Meconium Aspirators	1
Morgan Lens	3
Multi-trauma Pads	3
Nail Polish Remover	5
Nasal Cannulas	3
Nebulizers w Masks	3
Nebulizers w Mouthpiece	3
No Smoking Signs	2
Normal Saline Bottles	1
OB Kits	1
Oral Airway 0	1
Oral Airway 1	1
Oral Airway 2	1
Oral Airway 3	1
Oral Airway 4	1
Oral Airway 5	1
Oral Airway 6	1
Oval Eye Pads	3
Oxygen Bottles - Portable	2

BLS Inventory List 3.12

Item	Quantity
Oxygen Tubing	3
Oxygen Tubing - Connector	1
Oxygen Regulator - Portable	1
Oxygen Mask - Infant	2
Oxygen Masks - NRB	3
Oxygen Masks - Pedi	3
Oxygen Masks - Simple	3
Oxygen Cyl/Reg Vehicle Mnt.	1
Oxygen Wrench	1
Paper Bags	1
Paper Cups	1
Pen Lights	2
Pill Book	1
Pillow Cases	3
Pillows	1
Protective Gowns	3
Protocol Book	1
Pulse Oximeter	1
Pulse Ox Probe - Adult	1
Pulse Ox Probe - Infant	1
Pulse Ox Probe - Pedi	1
Rescue/Foil Blankets	2
Ring Cutter	1
Scoop Stretcher	1
Sheets	3
Short Spine Board	1

Item	Quantity
Sm. Bio-Haz Trash Bags	1
Spider Strap	1
Spray Cleaner Bottle	1
Stair Chair	1
Sterile Water Bottles	1
Stethoscopes	2
Stretcher	1
Stryker Transfer Sheet	1
Suction Canister	1
Suction Catheters 8FR	2
Suction Catheters 14FR	2
Suction Tube w Yaunker	2
Suction Unit - Portable	1
Suction Unit - Vehicle Mount	1
Surgipads	3
Syrup of Ipecac	2
Thermometer	1
Thermometer Probe Covers	1
Towelette-Pers. Cleaning (tub)	1
Towels	3
Traction Splint (Adult)	1
Traction Splint (Child)	1
Triage Kit	1
Triangular Bandages	3
Waterless Cleaner	1

C-Collar Pedi - Adjustable must have child and infant adjustment setting

Patient Assessment

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General Patient Assessment 4.01

General guidelines for the assessment of all patients

I. Scene Size-Up / Assessment
   A. Body substance isolation
   B. Scene Safety
   C. Mechanism of Injury / Nature of Illness
   D. Number of Patients (Call for help as needed)
   E. The safety of EMS personnel

II. Initial Patient Assessment
   A. Evaluate the patient's chief complaint and general impression to determine the presence of any life threatening injuries.
   B. Central nervous system evaluation to include:
      1. Level of consciousness and mental status.
      2. Sensory response.
      3. Motor response.
   C. Airway / breathing evaluation to include:
      1. Presence or absence of breathing efforts.
      2. Rate of respirations.
      3. Depth of respirations.
      4. Regularity of respirations.
      5. Auscultation of breath sounds
      6. Airway patency
   D. Circulatory evaluation to include:
      1. Presence or absence of pulse.
      2. Rate of pulse.
      3. Strength of pulse.
      4. Regularity of pulse.
   E. Rapid initial assessment to identify life threatening medical or traumatic emergencies.

III. Patient Assessment
   A. Reassess the chief complaint
   B. Perform a detailed physical exam or a focused physical exam as indicated by the patient's condition. A detailed physical exam is a complete head to toe survey.
   C. Assess vital signs
      1. Respirations (rate, quality, rhythm)
      2. Pulse (rate, quality, rhythm)
      3. Blood pressure and/or capillary refill

4. All patients transported by CSFD EMS shall have a minimum of one set of vital signs recorded. Any seriously injured or ill patient shall have vital signs recorded at 5-10 minute intervals.

D. Assess SAMPLE History

IV. Additional Assessment

A. Additional assessment may be indicated by the patient's condition and/or outlined in specific protocols.

1. Pulse oximeter
2. Glucometer
3. EKG
4. Temperature
5. Skin color and condition
6. End Tidal CO_2

Results of all assessments to be documented in the patient report.

Glasgow Coma Scale: Adult 4.02

Glasgow Coma Score: Adult

Condition	*Variable*	*Score*
Eye Opening	Spontaneous	4
	To Voice	3
	To Pain	2
	No Response	1
Best Verbal Response	Oriented	5
	Confused	4
	Inappropriate Words	3
	Incomprehensible Words	2
	No Response	1
Best Motor Response	Obeys Commands	6
	Localizes Pain	5
	Withdrawal	4
	Flexion (Decorticate Rigidity)	3
	Extension (Decerebrate Rigidity)	2
	No Response	1

Revised Trauma Score: Adult 4.03

Revised Trauma Score: Adult

Condition	*Variable*	*Score*
Respiratory Rate (Breaths/min)	10 - 24	4
	25 - 35	3
	=> 36	2
	1-9	1
	0	0
Systolic BP	> 89	4
	70 - 89	3
	50 - 69	2
	1 - 49	1
	0	0
Glasgow Coma Scale Score Conversion	13 - 15	4
	9 - 12	3
	6 - 8	2
	4 - 5	1
	< 4	0

Glasgow Coma Scale: Pediatric 4.04

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Glasgow Coma Score: Pediatric

Condition	*Variable Age >1*	*Variable Age <1*	*Score*
Eye Opening	Spontaneous	Spontaneous	4
	To Voice	To Voice	3
	To Pain	To Pain	2
	No Response	No Response	1
Motor Response	Obeys Commands	Obeys Commands	6
	Localizes Pain	Localizes Pain	5
	Withdrawal	Withdrawal	4
	Flexion (Decorticate Rigidity)	Flexion (Decorticate Rigidity)	3
	Extension (Decerebrate Rigidity)	Extension (Decerebrate Rigidity)	2
	No Response	No Response	1

Condition	*Age >5 years*	*Age 2 - 5 years*	*Age 0 - 23 months*	*Score*
Verbal Response	Oriented	Appropriate Words and Phrases	Smiles, Coos, Cries Appropriately	5
	Confused	Inappropriate Words	Cries	4
	Inappropriate Words	Cries and/or Screams	Inappropriate Crying and/or Screaming	3
	Incomprehensible Words	Grunts	Grunts	2
	No Response	No Response	No Response	1

Trauma Score: Pediatric & APGAR Score 4.05

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Pediatric Trauma Score

Assessment	*Score* + 2	+ 1	- 1
Weight	> 44 lb (> 20 kg)	22 - 44 lb (10-20 kg)	< 22 lb (< 10 kg)
Airway	Normal	Oral Airway Nasal Airway	Intubated Tracheostomy Invasive
Blood Pressure	Pulse at Wrist > 90 mmHg	Carotid or Femoral Pulse 50 - 90 mmHg	No Palpable Pulse < 50 mmHg
Level of Consciousness	Completely Awake	Obtunded or any Decreased level of consciousness	Comatose
Open Wound	None	Minor	Major or Penetrating
Fractures	None	Closed Fracture	Open or Multiple Fractures

APGAR Score

Sign	**0**	**1**	**2**
Appearance	Blue, Pale	Body Pink, Extremities Blue	Completely Pink
Pulse Rate	Absent	Below 100	Above 100
Grimace	No Response	Grimaces	Cries
Activity	Limp	Some Flexion	Active Motion
Respiratory	Absent	Slow and Irregular	Strong Cry

Trauma: Adult

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Orthopedic Injury: Adult 5.01

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and Calm the patient.
5. Determine presence of life threatening injuries involving the head, chest and abdomen.
6. Control hemorrhage with direct pressure.
7. Immobilize fractures in accordance with standard practice.
8. Splint joint injuries in position found.
9. Splint fractures in position found.
10. Cover all open fractures with sterile dressings.
11. Femoral traction ONLY on closed fractures without injury to hip, knee, lower leg, or foot.
12. Assess distal pulse, motor, and sensory functions before and after splinting.
13. If injury to Head, Neck, or Spine, immobilize the patient with rigid cervical collar, KED (if applicable), long backboard (or scoop stretcher).
14. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. If fractures are open or suspicion of hip, femur or pelvic fracture start IV of NS flow at rate sufficient to maintain systolic pressure of 90 mm Hg.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**
4. PASG / MAST, if indicated (by Physician Orders only)

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG, if indicated.
2. Consider pain management.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Head/Spinal Injury: Adult 5.02

I. ECA, EMT Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen.
4. Consider using BVM if respirations are less than 8 or greater than 32.
5. Complete Patient Assessment.
6. Reassure and calm the patient.
7. Be prepared to suction.
8. Spinal Immobilization for all head injury patients.
9. Determine presence of life threatening injuries involving the head, chest, and abdomen.
10. Control hemorrhage.
11. Elevate head of stretcher/backboard to 30 degrees.
12. If patient confused, disoriented, or combative after initial oxygen therapy, restraints may be required to protect from further injury.
13. ECA, EMT - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Start IV of NS flow at rate sufficient to maintain systolic pressure of 90 mm Hg.
2. If IV started, obtain blood sample.
3. Consider intubation to secure the airway.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Continuous observation of the patient is essential when treating the neurological trauma patient. Early recognition of subtle changes in the neurologic status or vital signs may indicate the need for additional intervention.

Multi System Trauma: Adult 5.03

Trauma management involves minimal scene time and maximal treatment while enroute to a medical facility. **Rapid Evacuation** is the **KEY** in trauma management.

I. ECA, EMT Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen.
4. Consider using BVM if respirations are less than 8 or greater than 32.
5. Complete Patient Assessment.
6. Reassure and calm the patient.
7. Be prepared to suction.
8. Spinal Immobilization for all head injury patients.
9. Determine presence of life threatening injuries involving the head, chest and abdomen.
10. Control hemorrhage.
11. Immobilize fractures only if grossly angulated, involve pelvis or femur, or are open (compound fractures).
12. ECA, EMT - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. IV of NS (See notes below for flow rates based on systolic blood pressure).
2. If possible, 2 bilateral large bore IVs of NS should be started.
3. If IV started, obtain blood sample.
4. Intubation, if indicated.
5. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**
6. PASG / MAST, if indicated (by Physician Orders only).

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. If necessary, refer to the appropriate cardiac protocol.
3. Consider pain management unless contraindicated:
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Guidelines for fluid administration:
   a. Blunt trauma – flow rate to maintain systolic blood pressure greater than 90 mm Hg.
   b. Penetrating trauma to chest or abdomen - flow rate to maintain systolic blood pressure greater than 70 mm Hg.
   c. Penetrating trauma to a compressible site - flow rate to maintain systolic blood pressure greater than 90 mm Hg.

Burns: Adult 5.04

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I. ECA, EMT Procedures

1. Stop the burning process and remove the patient from the source of injury.
2. Complete Initial Patient Assessment.
3. Establish and maintain airway.
4. Administer high concentration oxygen as needed.
5. Consider using BVM if respirations are less than 8 or greater than 32.
6. Be prepared to manage vomiting (suction and log roll).
7. Complete Patient Assessment.
8. Reassure and calm the patient.
9. Determine presence of life threatening injuries involving the head, chest, and abdomen.
10. Look for and attend to associated injuries.
11. Remove jewelry, clothing, etc., not seared to skin.
12. Use "Rule of Nine's" or "Rule of Palms" to determine percent and depth of area burned.
13. If less than 10% BSA, cover burn areas with cool sterile saline dressing. Remove if patient begins to chill.
14. If greater than 10% BSA, use sterile dry dressing.
15. Cover patient with sterile burn sheet.
16. ECA, EMT - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS preferably in non-burned areas if one or more of the following conditions exist:
   a. Partial thickness burn over 15%.
   b. Any full thickness burn.
   c. Inhalation Injury.
   d. Associated Injuries: internal or external hemorrhage, burn to feet, hands, face, or groin, fractures associated with burned area.
2. If IV started, use Parkland Burn Formula - (% Burn Area x Pt. Wt. in kg)/4 =cc/hr. This is the rate for first 8 hours (this 8 hours starts at the time of burn), unless evidence of shock then flow at rate sufficient to maintain systolic pressure of 90 mm Hg.
3. If IV started, obtain blood sample.
4. Intubation, if indicated.
5. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG, if indicated.
2. Consider pain management.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Tension & Spontaneous Pneumothorax: Adult 5.05

I. ECA, EMT Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen as needed.
4. If the patient is unconscious, placement of an oral airway and ventilate the patient using a BVM device with supplemental oxygen at 15 LPM.
5. Complete Patient Assessment.
6. Look for the signs of a tension pneumothorax:
   a. Unilateral diminished or absent breath sounds on the affected side.
   b. The affected side is hyperressonant to percussion.
   c. Shock.
   d. Tracheal deviation, away from the side of injury: late sign.
   e. Jugular Vein Distention.
   f. Possible subcutaneous emphysema.
   g. Dyspnea / tachypnea.
7. Place the patient in sitting position, if no indication of spinal injury
8. Spinal immobilization of the patient, if indicated.
9. Treat for shock.
10. Reassure and calm the patient.
11. ECA, EMT - **CONTACT RECEIVING MEDICAL FACILITY**
12. Treat other injuries as indicated.

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS at 30 drops/min.
2. Intubation, if the patient is unconscious.
3. Chest decompression, if indicated, refer to Chest Decompression protocol.
4. Treat other injuries as indicated.
5. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. EKG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport

Amputation: Adult 5.06

I. ECA, EMT Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and Calm the patient.
5. Preserve amputated parts:
   a. Irrigate part with Normal Saline to remove dirt and debris and wrap part in sterile dressing, preserving all amputated material.
   b. Moisten with sterile saline.
   c. Place in watertight container.
   d. Place container in ice.
6. Treat for shock.
7. ECA, EMT - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS flow at rate to maintain systolic blood pressure of 90 mm Hg.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG, as indicated.
2. Consider pain management.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Partial amputations shall be dressed and splinted in alignment with the extremity.
2. Rapid transport

Ocular Trauma: Adult 5.07

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I. ECA, EMT, EMT-I, EMT-P Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and Calm the patient.
5. Treat other severe injuries as indicated.
6. Treat ocular injuries as indicated below.

PENETRATING TRAUMA: Penetrating foreign body, lacerated globe, or disrupted globe

a. Patch both eyes and transport. Treat ocular injuries as indicated below.
b. Stabilize penetrating foreign bodies.

SUPERFICIAL EMBEDDED FOREIGN BODY:

a. Tetracaine 2 drops to affected eye(s).
b. Patch both eyes and transport.

SMALL NON-EMBEDDED FOREIGN BODY: Sand, sawdust, metal particles, dirt, etc.

a. Tetracaine 2 drops to affected eye(s).
b. Lavage with 1L NS via Morgan Lens then reassess.
c. Repeat as needed.

LARGER, NON-EMBEDDED FOREIGN BODY: Eyelash, contact lens, wood or metal chips.

a. Tetracaine 2 drops to affected eye(s).
b. May attempt removal of object with cotton tipped applicator.
c. Patch both eyes after removal, or if unable to remove, and transport.

ULTRAVIOLET RADIATION BURNS: "Welder's" burn or from tanning booth

a. Tetracaine 2 drops to affected eye(s).
b. Patch affected eye(s).

CORNEAL ABRASIONS OR FOREIGN BODY SENSATION WITHOUT FOREIGN BODY

a. Tetracaine 2 drops to affected eye(s).
b. Patch affected eye(s).

CHEMICAL BURNS: Acid, alkali, solvents, gasoline, detergents, etc.

a. Flush with NS, sterile water or tap water for at least 5 minutes.
b. Tetracaine - 2 drops to affected eye(s).
c. Lavage with 1L NS via Morgan lens then reassess. If pain diminished greatly after one liter the decrease rate to 100 cc/hr. If pain is not reduced much after initial liter of NS, the repeat lavage with a second Liter of NS and reassess.

7. ECA, EMT, EMT-I, EMT-P CONTACT RECEIVING MEDICAL FACILITY

Notes:

1. Tetracaine may "sting" for a brief period after application
2. Ocular lavage may provoke a vagal reaction with nausea, vomiting, hypotension and bradycardia.

Drowning: Adult 5.08

I. ECA, EMT Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Suction as needed.
4. Complete Patient Assessment.
5. Reassure and calm the patient.
6. Treat injuries as indicated.
7. Spinal Immobilization.
8. Refer to appropriate cardiac protocol, if indicated.
9. ECA, EMT - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS and flow at 30 drops/min.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If a cardiac dysrhythmia appears, refer to the appropriate cardiac protocol.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport
2. Stabilize neck and spine prior to removal from water.
3. All near drowning or submersions shall be transported due to the threat of delayed pulmonary edema.
4. All cold water drowning shall be actively resuscitated unless obvious signs of death. (i.e. rigor mortis, severe lividity, etc.)

Clearance of Cervical Spine in the Field 5.09

Purpose: To outline guidelines for EMS personnel to follow to clear cervical spines in the field when a mechanism of injury is present.

Criteria:

1. No extremity of age.
   a. Less than or equal to 12 years of age
   b. Greater than or equal to 65 years of age
2. No altered mental status.
   a. Alcohol or drug use.
   b. Head injury.
   c. Communication barrier (language or deafness).
   d. Underlying medical problem such as postictal confusion or hypoglycemia.
3. No neurological deficits or complaints
   a. Paralysis (loss of or decrease in motor function)
   b. Loss of sensation (numbness)
   c. Fleeting or bizarre symptoms (tingling, shooting pain etc.)
4. No distracting injuries or severe pain that would interfere with spinal evaluation
5. No midline or paraspinal pain or tenderness
   a. Stiffness
   b. Soreness
   c. Aches
   d. "Frank" pain
6. No mechanism of injury that is likely to result in spinal injury (ejection from vehicle, death in the same vehicle, falls greater than 2 times the patient's height, drowning/near drowning etc.)

ECA, EMT-B, EMT-I and EMT-P Procedures:

1. Treat patient in accordance to the applicable protocols.
2. If the above criteria are met, then EMS personnel may choose not to perform spinal immobilization.

Notes:

1. When in doubt, immobilize.

Crush Injury: Adult 5.10

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I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Determine presence of life threatening injuries involving the head, chest. and abdomen.
6. Control hemorrhage with direct pressure.
7. Immobilize fractures in accordance with standard practice.
8. Assess distal pulse, motor, and sensory functions before and after splinting.
9. If injury to Head, Neck, or Spine, immobilize the patient with rigid cervical collar, KED (if applicable), long backboard (or scoop stretcher).
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Start IV of NS with Buretrol.
2. If the time of entrapment is greater than 2 hours, administer fluid bolus with 20 ml/kg of normal saline. Otherwise flow IV at rate to maintain systolic blood pressure of 90 mm Hg
3. If IV started, obtain blood sample.
4. After being freed, fluid therapy is 5 ml/kg/hr of normal saline.
5. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. For constant crush injuries with duration greater than 2 hours, administer Sodium Bicarbonate 1 mEq/kg.
3. Consider pain management.
4. Consider sedation: Versed 2 mg IV over two minutes may repeat dose after an additional two minutes as needed up to 10 mg total dose.
5. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Sodium bicarbonate should not be used in crush injuries of durations less than two hours.
2. Indications of distal ischemia include: pain, pallor, pulselessness, paralysis, parathesia and poikilothermia (cool to touch).
3. Preservation of body heat is paramount.
4. Continuous ECG, pulse oximetry and blood pressure monitoring (every 5 minutes) are mandatory during and after the administration of Morphine, Fentanyl and Versed.
5. If cardiac arrest occurs after release of entrapment, give Sodium Bicarbonate 1 mEq/kg immediately and every 10 minutes during CPR.

Snake Bites: Adult 5.11

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Complete Patient Assessment.
4. Reassure and calm the patient, minimize activity of patient.
5. Remove tight clothing and jewelry.
6. Splint limb and place in a dependent position below the level of the heart.
7. Assess distal pulse, motor, and sensory functions before and after splinting.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Start IV of NS and flow at 30 gtts/min.
2. If patient is in shock, administer fluid bolus with normal saline to achieve SBP $\geq$ 90.
3. If IV started, obtain blood sample.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If no response to two liters of normal saline, administer Dopamine 5 to 20 mcg/kg/min IV to maintain a SBP of 90 mm Hg.
3. Consider pain management: May repeat after 10 minutes.
4. For nausea and vomiting, administer promethazine (Phenergan): 12.5 to 25 mg IV or IM.
5. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Caution: In the case of coral snake envenomation, the onset of symptoms may be delayed several hours. Advise patient to be evaluated even if not symptomatic.
2. Continuous ECG, pulse oximetry, and blood pressure monitoring (every 5 minutes) are mandatory during and after the administration of Morphine
3. Constricting bands, tourniquets, and cryotherapy is contraindicated.

Medical: Adult

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Universal Algorithm: Adult Cardiac 6.01

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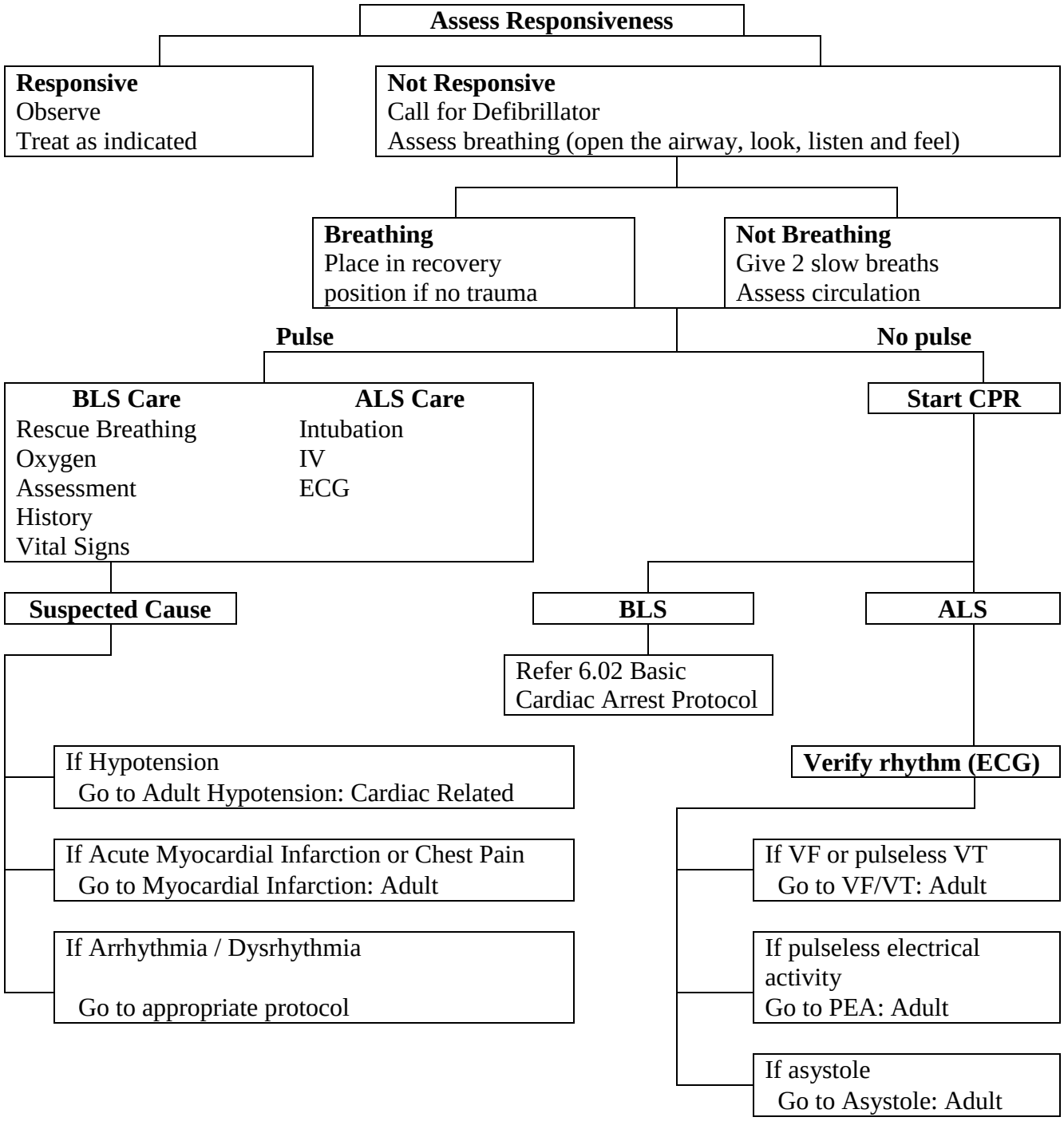

Basic Cardiac Arrest (AED): Adult 6.02

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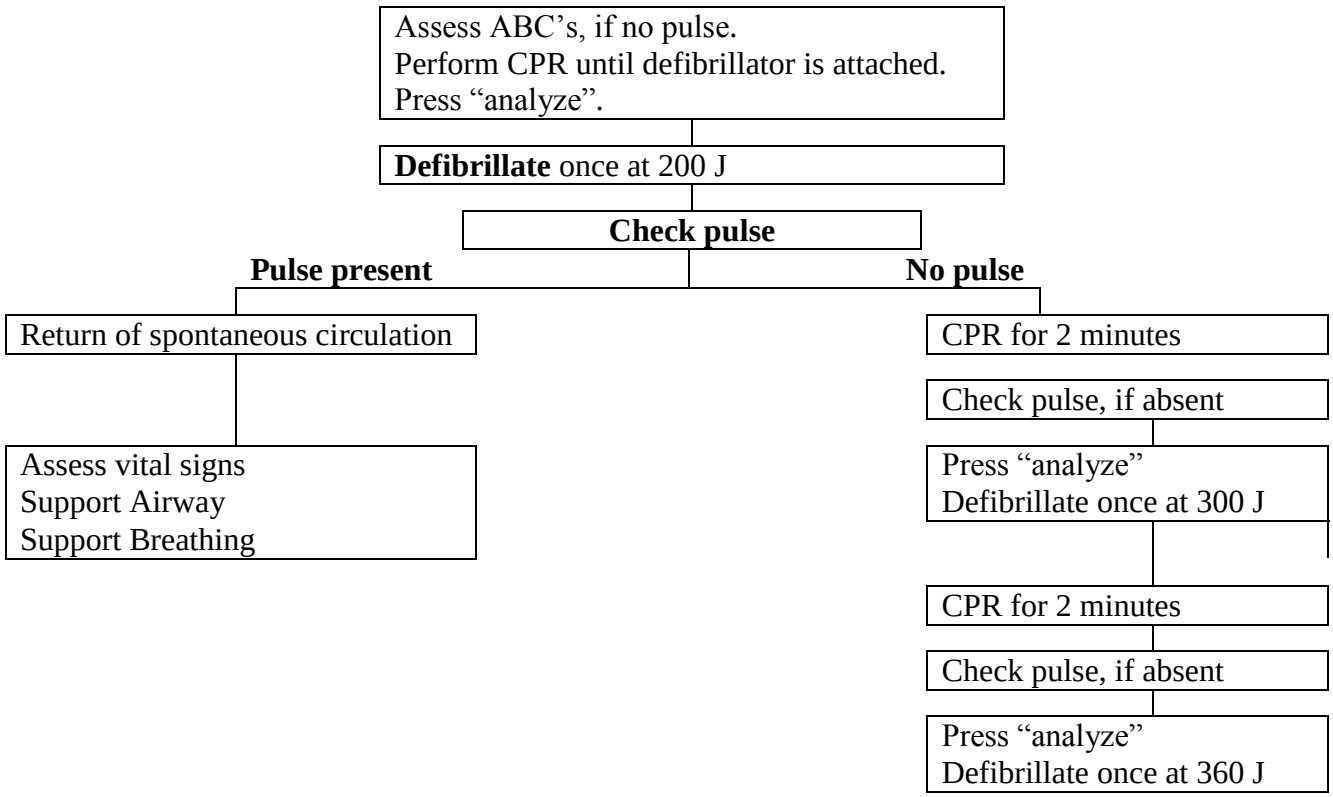
The Basic Cardiac Arrest (AED): Adult is designed for the used of the AED by ECAs, EMT-Bs, EMT-Is and EMT-Ps during the care of an adult in cardiac arrest prior to the arrival of Advanced Life Support.



NOTES

1. If "no shock indicated" appears, check pulse, repeat 1 minute of CPR, and then reanalyze. After three "no shock indicated" messages are received, repeat analyze period every 1-2 minutes.
2. Pulse check is required after each shock and if the "no shock indicated" appears.
3. If ventricular fibrillation recurs after transiently converting (rather than persists without ever converting), restart the treatment algorithm from the top.
4. Pulse & Rhythm should be rechecked immediately before and after delivering defibrillation. If the rhythm is other than VF or VT then CPR should be performed.

Acute Myocardial Infarction: Adult 6.03

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Place patient in a semi-sitting position or position of comfort.
6. If the patient is having chest pain and the blood pressure is greater than 100 systolic, administer Nitrostat 0.4 mg sublingual every 3-5 minutes up to a total of 3 doses or the pain is relieved.
7. Administer one plain 325 mg aspirin by mouth or have the patient chew and swallow the tablet.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If after one Nitrostat dose, the patient is still anxious and having chest pain, and vital signs are still within parameters, administer Morphine Sulfate slow IV push.
3. Consider Phenergan to treat nausea and vomiting related to the administration of Morphine.
4. If patient presents with an arrhythmia / dysrhythmia, refer to the appropriate protocol.
5. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport the patient to the ambulance by stretcher.
2. Contraindications to the use of Aspirin include:
   a. Bleeding disorders
   b. Active gastric or peptic ulcer disease
   c. History of allergy to Aspirin
3. The blood pressure should be checked prior to each dose of Nitrostat. Only administer Nitrostat if the systolic blood pressure remains above 100.

Chest Pain: Suspected Cardiac Ischemia: Adult 6.04

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Place patient in a semi-sitting position or position of comfort.
6. If the patient is having chest pain and the blood pressure is greater than 100 systolic, administer Nitrostat 0.4 mg sublingual every 3-5 minutes up to a total of 3 doses or the pain is relieved.
7. Administer one plain 325 mg aspirin by mouth or have the patient chew and swallow the tablet.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If after one Nitrostat dose, the patient is still anxious and having chest pain, and vital signs are still within parameters, administer Morphine Sulfate slow IV push.
3. Consider Phenergan to treat nausea and vomiting related to the administration of Morphine
4. If patient presents with an arrhythmia / dysrhythmia, refer to the appropriate protocol.
5. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport the patient to the ambulance by stretcher.
2. Contraindications to the use of Aspirin include:
   a. Bleeding disorders
   b. Active gastric or peptic ulcer disease
   c. History of allergy to Aspirin
3. The blood pressure should be checked prior to each dose of Nitrostat. Only administer Nitrostat if the systolic blood pressure remains above 100.

Bradycardia: Adult 6.05

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Place patient in a semi-sitting position or position of comfort.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. **Assess for serious signs or symptoms:**
   No: Monitor patient
   Yes: Assess Rhythm

Sinus Bradycardia or
Second Degree Type I AV Block

3. Administer 0.5-1.0 mg Atropine IVP
4. Consider Transcutaneous Pacing
5. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Second Degree Type II AV Block or
Third degree AV Block

3. Consider Transcutaneous Pacing
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

6. Consider Dopamine IV infusion at 5-20 mcg/kg/minute
7. Consider Epinephrine IV infusion at 2-10 mcg/minute.

Notes:

1. Transport.
2. Serious signs or symptoms must be related to the slow rate. Clinical manifestations include:
   Symptoms: Chest Pain, Shortness of Breath, Decreased Level of Consciousness.
   Signs: Hypotension, Shock, Pulmonary Congestion, CHF, Acute MI.
3. Atropine should be given in repeat doses in 3-5 minutes to a total of 0.04 mg/kg.
4. Atropine shall be given fairly rapidly as slow administration results in a transient bradycardia.
5. During TCP, verify patient tolerance and mechanical capture. Use analgesia and sedation as needed. Fentanyl and Versed are preferable but Morphine can be used based on patient condition.

Tachycardia Shunt Protocol: Adult 6.06

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I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Place patient in a semi-sitting position or position of comfort.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Determine rhythm.
    a. If STABLE Atrial Fibrillation or Atrial Flutter: Go to 6.08 Atrial Fibrillation / Atrial Flutter Stable: Adult
    b. If STABLE PSVT: Go to 6.07 Paroxysmal Supraventricular Tachycardia (PSVT) Stable: Adult protocol.
    c. If STABLE Wide-Complex Tachycardia of Uncertain Type: Go to 6.09 Wide Complex Tachycardia of Uncertain Type Stable: Adult protocol
    d. If STABLE Ventricular Tachycardia (VT): Go to 6.10 Ventricular Tachycardia Stable: Adult protocol.
    e. For all UNSTABLE Tachycardias (VT, PSVT, SVT, Atrial Fib/Flutter): Go to 6.11 Tachycardia Unstable: Adult protocol
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport

Paroxysmal Supraventricular Tachycardia (PSVT) Stable: Adult 6.07

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I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Place patient in a semi-sitting position or position of comfort.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Attempt vagal maneuvers.
3. Adenosine 6 mg RAPID IVP over 1-3 seconds. Repeat in 1-2 minutes.
4. NO CHANGE: Adenosine 12 mg RAPID IVP over 1-3 seconds. Repeat 12 mg dose once more in 1-2 minutes if Tachycardia persists. Total dose of Adenosine is 30 mg.
5. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**
6. Determine complex width.

Narrow Complex

7. Determine blood pressure.

Wide Complex

7. Administer Amiodarone 150 mg over 10 minutes (15 mg/min). May repeat in 10 minutes unless hypotensive.

Low or Unstable Blood Pressure

8. Refer to 6.11 Tachycardia Unstable: Adult protocol.

Notes:

1. Transport.
2. Carotid Sinus pressure is contraindicated in patients with carotid bruits.
3. If patient becomes unstable, go to 6.11 Tachycardia Unstable: Adult protocol.
4. Unstable symptoms: Hypotension, Chest Pain, Shortness of Breath, Decreased Level of Consciousness, Shock, Pulmonary Congestion, CHF, and AMI.

Atrial Fibrillation / Atrial Flutter Stable: Adult 6.08

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Place patient in a semi-sitting position or position of comfort.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. Administer Magnesium Sulfate 2 grams (over 5 minutes). May be repeated after 10 minutes.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport.
2. If patient becomes unstable, go to 6.11 Tachycardia Unstable: Adult protocol.
3. Unstable symptoms: Hypotension, Chest Pain, Shortness of Breath, Decreased Level of Consciousness, Shock, Pulmonary Congestion, CHF, and AMI.

Wide Complex Tachycardia of Uncertain Type Stable: Adult 6.09

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I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Place patient in a semi-sitting position or position of comfort.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. Administer Amiodarone 150 mg over 10 minutes (15 mg/min). May repeat in 10 minutes unless hypotensive.
3. If unstable, Synchronized Cardioversion. Go to 6.11 Tachycardia Unstable: Adult protocol.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport.
2. Patients shall be placed in the unit and transported as soon as possible during this therapy.
3. If patient becomes unstable, go to Ventricular Tachycardia Unstable protocol.
4. Unstable symptoms: Hypotension, Chest Pain, Shortness of Breath, Decreased Level of Consciousness, Shock, Pulmonary Congestion, CHF, and AMI.

Ventricular Tachycardia Stable: Adult 6.10

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Place patient in a semi-sitting position or position of comfort.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. Check for allergy to Lidocaine or Novacaine.
3. Lidocaine 1-1.5 mg/kg IVP as initial dose.
4. Repeat Lidocaine 0.5-0.75 mg/kg IVP, every 5-10 minutes to a maximum total of 3 mg/kg or until tachycardia resolves.
5. If unstable, Synchronized Cardioversion. Go to 6.11 Tachycardia Unstable: Adult protocol.
6. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Patients shall be placed in the unit and transported as soon as possible during this therapy.
2. When patient converts with Lidocaine, begin Lidocaine drip at 2 to 4 mg/min by microdrip.
3. If patient becomes unstable, go to 6.11 Tachycardia Unstable: Adult protocol.
4. Unstable symptoms: Hypotension, Chest Pain, Shortness of Breath, Decreased Level of Consciousness, Shock, Pulmonary Congestion, CHF, and AMI.

Tachycardia Unstable: Adult 6.11

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Place patient in a semi-sitting position or position of comfort.
6. Pulse oximeter.
7. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. If needed, sedate patient with Versed 2 mg IV over two minutes may repeat dose after an additional two minutes as needed up to 10 mg total dose.
3. Determine cardiac rhythm.

Ventricular Tachycardia, Atrial Fibrillation	**PSVT, Atrial Flutter**
4. Synchronized Cardioversion: 100 J	Synchronized Cardioversion: 50 J
5. Synchronized Cardioversion: 200 J	Synchronized Cardioversion: 100 J
6. Synchronized Cardioversion: 300 J	Synchronized Cardioversion: 200 J
7. Synchronized Cardioversion: 360 J	Synchronized Cardioversion: 300 J
8.	Synchronized Cardioversion: 360 J

9. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Patients shall be placed in the unit and transported as soon as possible during this therapy.
2. Unstable symptoms: Hypotension, Chest Pain, Shortness of Breath, Decreased Level of Consciousness, Shock, Pulmonary Congestion, CHF, and AMI.

Ventricular Fibrillation / Pulseless Ventricular Tachycardia: Adult 6.12

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Move patient to a flat surface.
3. If witnessed arrest, precordial thump.
4. Initiate CPR.
5. Complete Patient Assessment.
6. Refer to AED Protocol.
7. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. Intubate.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. Defibrillate: 200 J
3. Epinephrine 1:10,000 1 mg IVP. Repeat every 3-5 minutes.
4. NO CHANGE/PULSE: Defibrillate: 300 J.
5. NO CHANGE/PULSE: Administer Amiodarone 300 mg IV push. May give an additional dose of 150 mg IV push after 5 minutes.
6. NO CHANGE/PULSE: Defibrillate: 360 J.
7. NO CHANGE/PULSE: Consider Lidocaine 1.5 mg/kg IVP. Repeat dose in 3-5 min. Total dose of 3 mg/kg.
8. NO CHANGE/PULSE: Defibrillate: 360 J.
9. NO CHANGE/PULSE: Administer Sodium Bicarbonate 1 mEq/kg IV push if the down time is 10 minutes or greater. Repeat after 5 to 10 minutes at 0.5 mEq/kg if no response to initial dose.
10. NO CHANGE/PULSE: Defibrillate: 360 J
11. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Ventricular Fibrillation / Pulseless Ventricular Tachycardia: Adult 6.12

Notes:

1. Rapid transport. Patients shall be transported as soon as possible during this therapy.
2. The first shock should be performed prior to intubation and IV access.
3. CPR should be resumed after each shock. CPR should be performed for a minimum of 2 minute after any medication administration.
4. Epinephrine 1:10,000 & Lidocaine dose should be double when administering via ET.
5. Lidocaine: not to exceed total dose of 3 mg/kg even if giving ET.
6. Both Rhythm and Pulse shall be checked before and after each defibrillation and medication administration.
7. Sodium Bicarbonate second and subsequent doses are 0.5 mEq/kg.
8. Intubation is preferable, if it can be done simultaneously with other techniques, then the earlier the better. However, defibrillation and epinephrine are more important initially if the patient can be ventilated without intubation.
9. If v-fib/pulseless v-tach converts to a perfusing rhythm, start an IV infusion with the anti-arrhythmic medication that converted the rhythm.
10. If CPR has not been initiated prior to arrival of EMS, CPR is to be done for 2 minute prior to the delivery of the initial defibrillation.

Torsades de Pointes: Adult 6.13

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Move patient to a flat surface and initiate CPR, if indicated.
3. Administer high concentration oxygen.
4. Consider hyperventilation with BVM.
5. Complete Patient Assessment.
6. Reassure and Calm the patient.
7. Place patient in a semi-sitting position or position of comfort.
8. Assess oxygenation with pulse oximeter.
8. If witnessed arrest, precordial thump.
9. Initiate CPR.
10. Complete Patient Assessment.
11. Refer to AED Protocol.
12. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. Intubate.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. Magnesium Sulfate 2 gm IVP over 1-2 minutes. Follow with a 2 gm infusion over the next 1 hour. This infusion is to be mixed as 2 grams of magnesium in 250 cc bag of normal saline and flowed at a rate of 250 cc per hour.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**
4. If needed, sedate patient with Versed 2 mg IV over two minutes may repeat dose after an additional two minutes as needed up to 10 mg total dose.
5. If refractory to Magnesium Sulfate, begin Transcutaneous Pacing.

Notes:

1. Patients shall be placed in the unit and transported as soon as possible during this therapy.
2. If patient is in cardiac arrest with torsades de pointes then treat as VF/pulseless VT: Adult except give Magnesium Sulfate as the initial medication.

Asystole: Adult 6.14

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Move patient to a flat surface and initiate CPR.
3. Complete Patient Assessment.
4. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. Intubate.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. Consider possible causes and treatment:
   a. Hypoxia
   b. Drug Overdose
   c. Hypothermia
   d. Tension Pneumothorax.
   e. Hypovolemia
   f. Massive MI
3. Epinephrine 1:10,000 1 mg IVP. Repeat dose every 3-5 minutes.
4. Atropine 1.0 mg IVP. Repeat dose every 3-5 minutes to a total of 0.04 mg/kg.
5. Administer Sodium Bicarbonate 1 mEq/kg IV push if the down time is 10 minutes or greater. Repeat after 5 to 10 minutes at 0.5 mEq/kg if no response to initial dose.
6. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**
7. Consider administering Calcium Chloride 1 gm IVP if hyperkalemia is suspected.

Notes:

1. Patients shall be placed in the unit and transported as soon as possible during this therapy.
2. CPR should be performed for a minimum of 1 minute after any medication administration.
3. Both Rhythm and Pulse shall be checked before and after each medication administration.
4. Intubation is preferable, if it can be done simultaneously with other techniques, then the earlier the better. However, CPR and epinephrine are more important initially if the patient can be ventilated without intubation.
5. Consider sodium bicarbonate in patients with a history of chronic renal failure/dialysis presenting with dysrhythmia/arrest.

Pulseless Electrical Activity: Adult 6.15

PEA includes EMD, Idioventricular Rhythms, Ventricular Escape, Bradyasystolic, Post defibrillation Idioventricular

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Move patient to a flat surface and initiate CPR.
3. Complete Patient Assessment.
4. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. Intubate.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. Consider possible causes and treatment:
   a. Hypoxia
   b. Drug Overdose
   c. Hypothermia
   d. Tension Pneumothorax.
   e. Hypovolemia
   f. Massive MI
3. Epinephrine 1:10,000 1 mg IVP. Repeat dose every 3-5 minutes.
4. If bradycardic, administer Atropine 1.0 mg IVP. Repeat dose every 3-5 minutes to a total of 0.04 mg/kg.
5. Administer Sodium Bicarbonate 1 mEq/kg IV push if the down time is 10 minutes or greater. Repeat after 5 to 10 minutes at 0.5 mEq/kg if no response to initial dose.
6. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**
7. Consider administering Calcium Chloride 1 gm IVP if hyperkalemia is suspected.

Notes:

1. Patients shall be placed in the unit and transported as soon as possible during this therapy.
2. CPR should be performed for a minimum of 1 minute after any medication administration.
3. Both Rhythm and Pulse shall be checked before and after each medication administration.
4. Intubation is preferable, if it can be done simultaneously with other techniques, then the earlier the better.
5. Consider sodium bicarbonate in patients with a history of chronic renal failure/dialysis presenting with dysrhythmia/arrest.

Premature Ventricular Contractions: Adult 6.16

This protocol has been removed. Treat rhythm problems not PVCs.

Acute CHF/Pulmonary Edema: Adult 6.17

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer humidified oxygen at percentage and flow rate appropriate to illness or patient condition. If ventilations are less than 8 or greater than 32 consider assisting ventilations using BVM with supplemental oxygen.
4. Complete Patient Assessment.
5. Reassure and calm the patient.
6. Loosen any tight restrictive clothing.
7. Place patient in a semi-sitting position or position of comfort.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. Intubate and assist ventilations, if indicated.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. Administer Captopril 25 mg PO. May let dissolve in mouth. Do not administer to pregnant patients.
3. Consider administering Lasix 1 mg/kg IVP (Usual adult dose is 40 - 80 mg.)
4. If patient is wheezing with moderate to severe dyspnea, administer unit dose of Albuterol by mask or hand held nebulizer. May repeat as needed.
5. Administer Nitroglycerin 0.4 mg SL, if systolic blood pressure greater than 100 mm Hg.
6. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**
7. Utilize CPAP, if available, at maximal tolerated level for patients in respiratory distress.

Notes:

1. Rapid transport.
2. Use of Nitrostat and Lasix should be a gradual procession, stopping when systolic blood pressure is <100 mm Hg or the patient improves.
3. Continually reassess breath sounds, pulse oximetry, and vitals to ensure the patient is maintaining good oxygenation and adequate tissue perfusion.

Hypotensive - Cardiac Related: Adult 6.18

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Loosen any tight restrictive clothing.
6. Place patient in a semi-sitting position or position of comfort.
7. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. Fluid challenge of 250 cc NS IV Bolus if no symptoms of pulmonary edema are present.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. Refer to treatment of underlying cardiac arrhythmia, if any.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**
4. Consider Dopamine if patient is in pulmonary edema or no response from fluid challenge.

Notes:

1. Rapid transport.

Hypertensive Crisis: Adult 6.19

Criteria:
Systolic BP greater than 220 and/or Diastolic greater than 140, with one or more of the following symptoms:

a. Altered Mental Status
b. Severe Headache
c. Slurred Speech
d. Weakness/Numbness
e. Chest Pain
f. Pulmonary Edema

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Loosen any tight restrictive clothing.
6. Place patient in a semi-sitting position or position of comfort.
7. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. If patient has Chest Pain or Pulmonary Edema, administer 0.4 mg of Nitrostat SL.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.

Cerebrovascular Accident (CVA): Adult 6.20

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Loosen any tight restrictive clothing.
6. Place patient in a semi-sitting position or position of comfort.
7. Suction patient as needed.
8. Continually monitor blood pressure.
9. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. If Systolic BP greater than 220 and/or Diastolic greater than 140 refer to Hypertensive Crisis: Adult Protocol.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.

Dehydration: Adult 6.21

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Determine severity of dehydration.
5. Reassure and calm the patient.
6. Perform Dextrostix if diabetic complication is suspected.
7. Place patient in trendelenburg position & conserve body heat.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS flow at rate sufficient to maintain systolic pressure of 90 mm Hg.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.

Respiratory Distress: Adult 6.22

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen as needed.
4. If ventilations are less than 8 or greater than 32 consider assisting ventilations using BVM with supplemental oxygen.
5. Complete Patient Assessment.
6. Perform auscultation of lungs.
7. Pulse oximetry.
8. Place the patient in sitting position.
9. Reassure and calm the patient.
10. If patient is wheezing with moderate to severe dyspnea, administer unit dose of Albuterol by mask or hand held nebulizer at 8 LPM.
11. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS. Care should be taken not to further overload these patients with fluid.
2. If IV started, obtain blood sample.
3. If indicated, intubation and assist ventilations.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.

Asthma: Adult 6.23

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen as needed.
4. If ventilations are less than 8 or greater than 32 consider assisting ventilations using BVM with supplemental oxygen.
5. Complete Patient Assessment.
6. Perform auscultation of lungs.
7. Pulse oximetry.
8. Place the patient in sitting position.
9. Reassure and calm the patient.
10. **Severity of Attack?**

Mild Attack

11. Monitor for worsening condition.

Moderate or Severe Attack

11. Administer unit dose of Albuterol by mask or hand held nebulizer 8 LPM.

12. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS. Care should be taken not to further overload these patients with fluid.
2. If IV started, obtain blood sample.
3. If indicated, intubation and assist ventilations.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If Albuterol fails to improve respiratory status, administer 0.3 to 0.5 mg of Epinephrine 1:1000 SQ and repeat Albuterol treatment.
3. If the asthma attack is refractory to Albuterol and Epinephrine, administer Magnesium Sulfate 2 grams IV.
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Asthma: Adult 6.23

Notes:

1. Rapid transport.
2. Continually reassess breath sounds, pulse oximetry, and vitals to ensure the patient is maintaining good oxygenation and adequate tissue perfusion.
3. Use Epinephrine with caution in patients over 50 years of age, BP >150/90, and a history of cardiac disease.
4. Mild attack is defined as minimal wheezes, no or minimal use of accessory muscles, good skin color, and present breath sounds.
5. Moderate or severe attack is defined as increased respiratory rate, wheezes present and easily heard (or NO wheezes with little air movement), use of accessory muscles to breathe, gray-ashen-or pale skin color, hyperinflation of chest, and patient sitting upright with shoulders flexed forward to aid in breathing.

Allergic Reaction: Adult 6.24

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen as needed.
4. If ventilations are less than 8 or greater than 32 consider assisting ventilations using BVM with supplemental oxygen.
5. Complete Patient Assessment.
6. Perform auscultation of lungs.
7. Pulse oximetry.
8. Place the patient in sitting position.

With hives or a localized reaction:

9. Monitor patient closely for deterioration.

With localized reaction and dyspnea:

9. Administer 0.3 - 0.5 mg of Epinephrine 1:1000 SQ.
10. If patient is wheezing with moderate to severe dyspnea, administer unit dose of Albuterol by mask or hand held nebulizer at 8 LPM.

With localized reaction and shock (systolic BP below 90 mm HG):

9. Administer 0.3 - 0.5 mg of Epinephrine 1:1000 IM.
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS. Care should be taken not to further overload these patients with fluid.
2. If IV started, obtain blood sample.
3. If indicated, intubation and assist ventilations.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Administer Benadryl 50 mg IVP or IM.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport.
2. If a patient is in profound shock, 0.3 - 0.5 mg (3 - 5 cc) Epinephrine 1:10,000 may be given VERY SLOWLY IVP in place of or in addition to IM Epinephrine. If so, place ECG on patient.
3. Continually reassess breath sounds, pulse oximetry, and vitals to ensure the patient is maintaining good oxygenation and adequate tissue perfusion.
4. May repeat epinephrine every 10 minutes if needed.

Seizures: Actively Seizing: Adult 6.25

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Determine type and duration of seizure.
4. Protect patient from injury to self and others.
5. Complete Patient Assessment.
6. Reassure and calm the patient.
7. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS. Care should be taken not to further overload these patients with fluid.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If Dextrostix or Glucometer is below 60, administer 50 ml of 50% Dextrose (D50W) IVP Administer Thiamine 100 mg IVP. Refer to Diabetic Emergency: Adult protocol

If Patient Is Actively Seizing:

3. Administer Versed 2 mg IV over two minutes may repeat dose after an additional two minutes as needed up to 10 mg total dose.
4. If patient is pregnant or is within 2 weeks post partum and eclampsic, administer Magnesium 2 grams IV.
5. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.
2. If no IV is established, administer Versed 5 mg IM. Repeat in 10 minutes if needed.

Seizures: Not Seizing Upon Arrival: Adult 6.26

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Determine type and duration of seizure.
4. Protect patient from injury to self and others.
5. Complete Patient Assessment.
6. Reassure and calm the patient.
7. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. If Dextrostix or Glucometer is below 60, administer 50 ml of 50% Dextrose (D50W) IVP Administer Thiamine 100 mg IVP. Refer to Diabetic Emergency: Adult protocol.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport

Diabetic Emergency: Adult 6.27

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If Dextrostix or Glucometer is below 60, administer 50 ml of 50% Dextrose (D50W) IVP Administer Thiamine 100 mg IVP.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport
2. Consider additional problems and appropriate protocols as needed.

Unconscious: Adult 6.28

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Control and maintain airway.
3. Administer high concentration oxygen.
4. Complete Patient Assessment.
5. Reassure and calm the patient.
6. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose.
7. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. Intubation, if indicated.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. If Dextrostix or Glucometer is below 60, administer 50 ml of 50% Dextrose (D50W) IVP Administer Thiamine 100 mg IVP. Refer to Diabetic Emergency: Adult protocol.
3. Administer Narcan 1 mg slow IV push, if no response to previous treatment.
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport
2. Consider additional problems and appropriate protocols as needed.

Alcohol Emergency: Adult 6.29

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Control and maintain airway.
3. Administer high concentration oxygen.
4. Complete Patient Assessment.
5. Reassure and calm the patient.
6. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose.
7. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. If Dextrostix or Glucometer is below 60, administer 50 ml of 50% Dextrose (D50W) IVP Administer Thiamine 100 mg IVP. Refer to Diabetic Emergency: Adult protocol.
3. Administer Narcan 1 mg slow IV push, if no response to previous treatment.
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport
2. Conditions such as diabetes, pneumonia, closed head injuries and/or drug ingestion may be masked by alcohol.

Substance Abuse or Overdose: Adult 6.30

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Control and maintain airway.
3. Administer high concentration oxygen.
4. Complete Patient Assessment.
5. Reassure and calm the patient.
6. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose.
7. Consider contacting Poison Control 1-800-222-1222.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**
9. If patient is conscious, consider syrup of Ipecac 30 cc P.O. followed with 3-4 glasses of warm tap water. Dose may be repeated in 30 minutes. Inspect emesis for pills and record.

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. If Dextrostix or Glucometer is below 60, administer 50 ml of 50% Dextrose (D50W) IVP Administer Thiamine 100 mg IVP. Refer to Diabetic Emergency: Adult protocol.
3. If altered Level of Consciousness, administer 1.0 mg Narcan slow IV push. Repeat as needed.
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport.
2. All attempted suicides shall be transported. Contact medical control on all overdoses as to disposition of patient.
3. For stimulant overdose (amphetamine, methamphetamine, ecstasy, cocaine and PCP), administer Versed for agitation, hypertension and/or dysrhythmia.
4. Versed is administered as 2 mg IV over two minutes may repeat dose after an additional two minutes as needed up to 10 mg total dose.
5. If the stimulant related dysrhythmia fails to respond to Versed, refer to the specific dysrhythmia protocol.

Poisoning: Adult 6.31

I. ECA, EMT-B Procedures

1. Protect rescuer from contamination. Wear appropriate protective clothing and/or SCBA.
2. Remove patient from continued exposure.
3. Complete Initial Patient Assessment.
4. Control and maintain airway.
5. Administer high concentration oxygen.
6. Complete Patient Assessment.
7. Reassure and calm the patient.
8. Determine agent involved in poisoning.
9. Consider contacting Poison Control 1-800-222-1222.
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport
2. If the poison agent is unknown, attempt to transport the agent with the patient to the hospital for analysis, if it can be done safely.

Special Considerations:

1. Calcium Chloride for calcium channel blocker. Pace if needed.
2. Sodium Bicarbonate 1 mEq/kg for aspirin and tricyclic medications
3. If organophosphate poisoning or nerve agent, refer Organophosphate Poisoning: Adult protocol.
4. Versed for stimulant induced symptoms including dysrhythmias. Versed is administered as 2 mg IV over two minutes may repeat dose after an additional two minutes as needed up to 10 mg total dose.

Organophosphate Poisoning/Nerve Agent: Adult 6.32

I. ECA, EMT-B Procedures

1. Protect rescuer from contamination. Wear appropriate protective clothing and/or SCBA.
2. Remove patient from continued exposure.
3. Complete Initial Patient Assessment.
4. Control and maintain airway.
5. Administer high concentration oxygen.
6. Complete Patient Assessment.
7. Reassure and calm the patient.
8. Determine agent involved in poisoning.
9. Remove contaminated clothing.
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. Intubate, if the patient is unconscious.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**
3. Administer Atropine based on age as outlined below every 3-6 minutes until bronchial secretions clear

	Mild/Moderate	Severe Symptoms
Infant (0-2 years)	Atropine 0.05 mg/kg IM/IV	Atropine 0.1 mg/kg IM/IV
Child (2-10 years)	Atropine 1 mg IM/IV	Atropine 2 mg IM/IV
Adolescent (11-17)	Atropine 2 mg IM/IV	Atropine 4 mg IM/IV
Adult	Atropine 2 mg IM/IV	Atropine 6 mg IM/IV
Elderly, frail	Atropine 1 mg IM/IV	Atropine 2-4 mg IM/IV

Notes:

1. Transport
2. **Mnemonic for Nerve Agent or Organophosphate Exposure:**

Salivation (excessive production of saliva), **s**weating, **s**eizures
Lacrimation (excessive tearing)
Urination (uncontrolled urine production)
Defecation (uncontrolled bowel movements)
Gastrointestinal distress (cramps)
Emesis (excessive vomiting)
Breathing Difficulty (bronchospasm and excessive secretions)
Arrhythmias
Miosis (pinpoint pupils), muscle twitching

3. When administering Atropine to a patient experiencing an organophosphate or nerve agent exposure, there is no maximum dosage.
4. Versed (Midazolam) may be required to treat seizures. If patient is seizing, refer to Seizures: Actively Seizing: Adult protocol.

Toxic Inhalation: Adult 6.33

I. ECA, EMT-B Procedures

1. Protect rescuer from contamination. Wear appropriate protective clothing and/or SCBA.
2. Remove patient from continued exposure.
3. Complete Initial Patient Assessment.
4. Control and maintain airway.
5. Administer high concentration oxygen.
6. Complete Patient Assessment.
7. Reassure and calm the patient.
8. Determine agent involved in poisoning.
9. Remove contaminated clothing.
10. If wheezing, administer Albuterol by nebulizer.
11. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. Intubate, if the patient is unconscious.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport

Hyperthermic Emergency: Adult 6.34

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Control and maintain airway.
3. Administer high concentration oxygen.
4. Obtain temperature.
5. Complete Patient Assessment.
6. Reassure and calm the patient.
7. If patient is exhibiting signs of altered level of consciousness, cool patient. Apply ice or cold packs to groin, axilla, wrists and neck.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. Intubate, if the patient is unconscious.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport.
2. Do not let cooling in the field delay transport.
3. If patient shivers, then stop cooling.

Hypothermic Emergency: Adult 6.35

CRITERIA:

1. Oral or rectal Temperature 90 degrees (32 degrees C.) or less.
2. Altered mental status.
3. Uncoordinated physical activity and no shivering.

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Control and maintain airway.
3. If ventilations are less than 8 or over 32 consider assisting ventilations using BVM with supplemental oxygen.
4. Administer high concentration oxygen.
5. Obtain temperature.
6. Complete Patient Assessment.
7. Reassure and calm the patient.
8. External warming.
9. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose.
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. If Dextrostix or Glucometer is below 60, administer 50 ml of 50% Dextrose (D50W) IVP. Administer Thiamine 100 mg IVP. Refer to Diabetic Emergency: Adult protocol.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport.
2. Limit secondary survey to what is necessary in assessing injuries or complaint. Avoid vigorous handling of the patient as this could promote cardiac arrythmias in the hypothermic patient.
3. If core temperature is less than 30^{o}C (86^{o}F) and patient is in arrest, do not give IV medications and limit defibrillation attempts to 1 shock.
4. If core temperature is greater than 30^{o}C (86^{o}F) and patient is in arrest, then double the medication interval.

General Illness: Adult 6.36

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Check temperature, if appropriate.
5. Reassure and calm the patient.
6. Perform Dextrostix if diabetic complications are suspected.
7. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG, if indicated by patient condition.
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport.
2. Phenergan may be used for nausea and vomiting. The use of Phenergan is by standing orders, it does not require contact of the medical facility prior to administration.

Acute Abdomen: Adult 6.37

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Perform Dextrostix if diabetic complications are suspected.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. Consider pain management if patient is in severe pain.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport.
2. Phenergan may be used for nausea and vomiting. The use of Phenergan is by standing orders, it does not require contact of the medical facility prior to administration.

Acute GI Hemorrhage: Adult 6.38

I. ECA, EMT Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and Calm the patient.
5. ECA, EMT - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS flow at rate sufficient to maintain systolic BP of 90 mm Hg.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport

OB / GYN

Table of Contents

Obstetrical Emergencies 7.01

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment
2. Administer high concentration oxygen as needed
3. Complete Patient Assessment
4. Reassure and calm the patient
5. Obtain obstetrical history including:
   - a. Patients age
   - b. Due date.
   - c. Prenatal care.
   - d. Number of prior pregnancies.
   - e. Problems with past pregnancies.
   - f. Presence, length and timing of contractions.
   - g. Has "Water broken" - Note color of fluid.
   - h. Does she feel the need to push?
6. Determine presence of complications:
   - a. Abnormal bleeding
   - b. Premature labor
   - c. If any of these conditions exist, proceed to the appropriate protocol.
   - d. Abnormal presentation
   - e. Prolapsed cord
7. Respecting the patient's privacy as much as possible, examine perineum for:
   - a. Vaginal bleeding or fluid.
   - b. Abnormal presentation
   - c. Crowning
   - d. Prolapsed cord
8. If delivery is not imminent or no complications are present, position mother on left side.
9. If delivery is imminent, prepare mother for birthing.
10. During the delivery process, suction the infant's mouth and nose, & clamp and cut the cord.
11. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS, at a rate sufficient to maintain systolic pressure of 90 mm Hg.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport
2. Immediate transport required on:
   - a. Previous cesarean section.
   - b. Abnormal presenting part.
   - c. Excessive bleeding.
   - e. Multiple births.

Prolapsed Cord 7.02

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Obtain obstetrical history including:
   a. Patients age
   b. Due date.
   c. Prenatal care.
   d. Number of prior pregnancies.
   e. Problems with past pregnancies.
   f. Presence, length and timing of contractions.
   g. Has "Water broken" - Note color of fluid.
   h. Does she feel the need to push?
6. Check for pulsation in cord and determine rate.
7. Place mother in one of the following positions:
   a. Left sided trendelenburg position
   b. Knee-chest position: Mother on knees with upper body resting on cot. Keep hips elevated.
8. The attendant shall hold the cord between two fingers and elevate the head of the fetus off of the cord by pushing against the presenting part.
9. Re-evaluate cord for pulsation. If none, with a gloved hand, gently push infant back up the birth canal. DO NOT REMOVE YOUR HAND FROM THIS POSITION UNTIL AT RECEIVING FACILITY AND RELIEVED BY PHYSICIAN.
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS, at a rate sufficient to maintain systolic pressure of 90 mm Hg.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport

Eclampsia/Pre-Eclampsia 7.03

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Obtain obstetrical history including:
   a. Patient's age.
   b. Due date.
   c. Prenatal care.
   d. Number of prior pregnancies.
   e. Problems with past pregnancies.
   f. Presence, length and timing of contractions.
   g. Has "Water broken" - Note color of fluid.
   h. Does she feel the need to push?
6. Note presence of peripheral edema, hypertension or neurologic abnormalities.
7. Place patient on left side if possible or place a wedge under right hip.
8. Avoid stimulus (e.g. Bright light, loud noises).
9. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS, at a rate sufficient to maintain systolic pressure of 90 mm Hg.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If patient has seized or is actively seizing, administer 4 gm Magnesium Sulfate fast IVP.
3. If unable to establish IV, administer 4 gm Magnesium Sulfate IM in gluteus maximus.
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport
2. If pregnant or post-partum patient has a known seizure or significant head injury, refer to Protocol 6.25 Seizure: Actively Seizing: Adult.

Vaginal Hemorrhage 7.04

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Complete Patient Assessment.
4. Determine the severity of hemorrhage, pain associated with the bleeding, passage of clots or tissue and vital signs.
5. Reassure and calm the patient.
6. Apply bulky dressing over perineum.
7. If patient is visibly pregnant, place on left side.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS, at a rate sufficient to maintain systolic pressure of 90 mm Hg.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport

Multi System Trauma: Pregnant Patient 7.05

Trauma management involves minimal scene time and maximal treatment while enroute to a medical facility. **Rapid Evacuation** is the **KEY** in trauma management.

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen. Consider using BVM if respirations are less than 8 or greater than 32.
4. Complete Patient Assessment.
5. Reassure and calm the patient.
6. Be prepared to suction the airway.
9. Determine the severity of hemorrhage, pain associated with the bleeding, passage of clots or tissue and vital signs.
10. Spinal Immobilization for all head injury patients.
11. Determine presence of life threatening injuries involving the head, chest and abdomen.
12. Control hemorrhage.
13. Immobilize fractures only if:
    a. Grossly angulated
    b. Involve pelvis or femur
    c. Open (compound fractures)
14. If patient is visibly pregnant, place on left side or elevate the right side of the backboard.
15. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS, at a rate sufficient to maintain systolic pressure of 90 mm Hg. If possible, 2 bilateral large bore IVs of NS should be started.
2. If IV started, obtain blood sample.
3. Intubation, if indicated.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Refer to the appropriate cardiac protocol as necessary.
3. Consider pain management.
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.
2. The blood pressure in the second half of pregnancy may be lower than usual.
3. Consider possible fetal salvage.

Post Delivery Care of Newborn 7.06

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen.
4. Complete Patient Assessment.
5. Reassure and calm the patient.
6. Suction and dry the patient.
7. APGAR at 1 and 5 minutes post birth.
8. Wrap in Silver Swaddler.
9. If patient is lethargic, perform Dextrostix.
10. If Dextrostix < 40 mg/dl then refer to Diabetic Emergency: Pediatric protocol.
11. If Heart rate <80, refer to Pediatric Bradycardia protocol and begin CPR.
12. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV /IO of NS with Buretrol, as indicated.
2. If IV started, obtain blood sample.
3. Intubation, if indicated.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If Dextrostix < 40 mg/dl then administer D25% 2 ml/kg IV/IO.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**
4. If persistent obtundation AND suspicion or evidence of narcotic use, administer Narcan 0.1 mg/kg IV/IO.

Notes:

1. Transport. Rapid transport for unstable patients.
2. IO therapy is for use on unstable patients only (i.e. respiratory failure).
3. Emphasis is on the importance of maintaining temperature and respirations (oxygenation) of newborns.

Trauma: Pediatric

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Orthopedic Injury: Pediatric 8.01

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Determine presence of life threatening injuries involving the head, chest and abdomen.
6. Control hemorrhage with direct pressure.
7. Immobilize fractures in accordance with standard practice.
   a. Splint joint injuries in position found.
   b. Splint fractures in position found.
   c. Cover all open fractures with sterile dressings.
   d. Femoral traction ONLY on closed fractures without injury to hip, knee, lower leg, foot
8. Assess distal pulse, motor, and sensory functions before and after splinting
9. If injury to Head, Neck, or Spine, immobilize the patient with rigid cervical collar, KED (if applicable), long backboard (or scoop stretcher).
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. If fractures are open or suspicion of hip, femur, or pelvic fracture start IV of NS with Buretrol.
2. If shock is present, then bolus with 20 ml/kg of normal saline and repeat as needed if no response.
3. If IV started, obtain blood sample.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**
5. PASG / MAST, if indicated.

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Consider pain management.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport

Head/Spinal Injury: Pediatric 8.02

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen as needed. Consider using BVM if respirations are less than 12 or greater than 40 with a decreased level of consciousness.
4. Complete Patient Assessment.
5. Reassure and calm the patient.
6. Be prepared to suction the airway.
7. Spinal Immobilization for all head injury patients.
8. Determine presence of life threatening injuries involving the head, chest and abdomen.
9. Control hemorrhage.
10. If patient confused, disoriented or combative after initial oxygen therapy, restraints may be required to protect form further injury.
11. Elevate head of stretcher/backboard to 30 degrees.
12. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol.
2. If IV started, obtain blood sample.
3. Intubation, as indicated.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.
2. If patient is hypotensive or shows signs of shock, bolus with 20 ml/kg of normal saline.
3. Continuous observation of the patient is essential when treating the neurological trauma patient. Early recognition of subtle changes in the neurologic status or vital signs may indicate the need for additional intervention.

Multi System Trauma: Pediatric 8.03

Trauma management involves minimal scene time and maximal treatment while enroute to a medical facility. **Rapid Evacuation** is the **KEY** in trauma management.

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen. Consider using BVM if respirations are less than 12 or greater than 40 with a decreased level of consciousness.
4. Complete Patient Assessment.
5. Reassure and calm the patient.
6. Be prepared to suction the airway.
7. Spinal immobilization.
8. Determine presence of life threatening injuries involving the head, chest, and abdomen.
9. Control hemorrhage.
10. Immobilize fractures only if:
    a. Grossly angulated
    b. Involve pelvis or femur
    c. Open (compound fractures)
11. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol. If possible, 2 bilateral large bore IVs of NS should be started. Consider IO instead of IV if IO criteria are met.
2. If shock is present, then bolus with 20 ml/kg of normal saline and repeat as needed if no response.
3. If IV started, obtain blood sample.
4. Intubation, as indicated.
5. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**
6. PASG / MAST, if indicated.

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Consider pain management.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.

Burns: Pediatric 8.04

I. ECA, EMT-B Procedures

1. Stop the burning process and remove the patient from the source of injury.
2. Complete Initial Patient Assessment.
3. Establish and maintain airway.
4. Administer high concentration oxygen. Consider using BVM if respirations are less than 12 or greater than 40.
5. Be prepared to suction the airway (suction and log roll).
6. Complete Patient Assessment.
7. Reassure and calm the patient.
8. Spinal immobilization, if indicated.
9. Determine presence of life threatening injuries involving the head, chest and abdomen.
10. Look for and attend to associated injuries.
11. Remove jewelry, clothing, etc., not seared to skin.
12. Use "Rule of Nine's" or "Rule of Palms" to determine percent and depth of area burned.
13. If less than 10% BSA, cover burn areas with cool sterile saline dressing. Remove if patient begins to chill.
14. If greater than 10% BSA, use sterile dry dressing.
15. Cover patient with sterile burn sheet.
16. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV if one or more of the following conditions exist:
   a. Partial thickness burn over 15%
   b. Any full thickness burn
   c. Inhalation Injury
   d. Associated Injuries: internal or external hemorrhage; burn to feet, hands, face, or groin; fractures associated with burned area.
   e. If IV started, use Parkland Burn Formula - (% Burn Area x Pt. Wt. in kg)/4 =cc/hr. This is the rate for first 8 hours (this 8 hours starts at the time of burn), unless evidence of shock then flow at rate sufficient to maintain systolic pressure of 90 mm Hg.
2. Consider IO if the patient is severely compromised.
3. If IV established, obtain blood sample.
4. Intubate, if indicated.
5. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Consider pain management.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Tension & Spontaneous Pneumothorax: Pediatric 8.05

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen. Consider using an oral airway and BVM if respirations are less than 12 or greater than 40 or the patient is unconscious.
4. Complete Patient Assessment.
5. Look for the signs of a tension pneumothorax.
   a. Unilateral diminished or absent breath sounds on the affected side.
   b. The affected side is hyperresonant to percuss.
   c. Shock
   d. Tracheal deviation, away from the side of injury: late sign.
   e. Jugular Vein Distention
   f. Possible subcutaneous emphysema
   g. Dyspnea / tachypnea
6. Place the patient in sitting position.
7. Spinal immobilization, if indicated.
8. Treat for shock.
9. Reassure and calm the patient.
10. Treat other injuries as indicated.
11. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol
2. Consider IO if the patient is severely compromised.
3. If IV established, obtain blood sample.
4. Intubate, if the patient is unconscious
5. Chest decompression, if indicated, refer to Chest Decompression protocol.
6. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.

Amputation: Pediatric 8.06

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen, as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Irrigate part with Normal Saline to remove dirt and debris and wrap part in sterile dressing, preserving all amputated material.
6. Moisten with sterile saline.
7. Place in watertight container.
8. Place container in ice.
9. Treat for shock.
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol and flow at rate sufficient for patient's condition
2. If IV established, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Consider pain management.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.
2. Partial amputations shall be dressed and splinted in alignment with the extremity.

Ocular Trauma: Pediatric 8.07

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I. ECA, EMT-B, EMT-I and EMT-P Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen, as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Treat other severe injuries as indicated.
6. Treat ocular injuries as indicated below

PENETRATING TRAUMA: Penetrating foreign body, lacerated globe, or disrupted globe

a. Patch both eyes and transport

SUPERFICIAL EMBEDDED FOREIGN BODY:

a. Tetracaine 2 gtts to affected eye(s).
b. Patch both eyes and transport.

SMALL NON-EMBEDDED FOREIGN BODY: Sand, sawdust, metal particles, dirt, etc.

a. Tetracaine 2 gtts to affected eye(s).
b. Lavage with 1L NS via Morgan Lens then reassess.
c. Repeat as needed.

LARGER, NON-EMBEDDED FOREIGN BODY: Eyelash, contact lens, wood or metal

a. Tetracaine 2 gtts to affected eye(s).
b. May attempt removal of object with a cotton tipped applicator.
c. Patch both eyes after removal, or if unable to remove, and transport.

ULTRAVIOLET RADIATION BURNS: "Welder's" burn or from tanning booth

a. Tetracaine 2 gtts to affected eye(s).
b. Patch affected eye(s).

CORNEAL ABRASIONS OR FOREIGN BODY SENSATION WITHOUT FOREIGN BODY

a. Tetracaine 2 gtts to affected eye(s).
b. Patch affected eye(s).

CHEMICAL BURNS: Acid, alkali, solvents, gasoline, detergents, etc.

a. Flush with NS or tap water for at least 5 minutes.
b. Tetracaine 2 gtts to affected eye(s).
c. Lavage with 1L NS via Morgan lens then reassess. If pain diminished greatly after one liter the decrease rate to 100 cc/hr. If pain is not reduced much after initial liter of NS, the repeat lavage with a second Liter of NS and reassess.

7. ECA, EMT-B, EMT-I and EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Tetracaine may "sting" for a brief period after application.
2. Ocular lavage may provoke a vagal reaction with nausea, vomiting, hypotension and bradycardia.

Drowning: Pediatric 8.08

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen, as needed.
3. Suction as needed.
4. Complete Patient Assessment.
5. Reassure and calm the patient.
6. Treat injuries as indicated.
7. Spinal immobilization.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol.
2. If IV established, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Refer to treatment of underlying cardiac arrhythmia, if appropriate.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.
2. Stabilize neck and spine prior to removal from water.
3. All near drowning or submersions shall be transported due to the threat of delayed pulmonary edema.
4. All cold water drowning shall be actively resuscitated unless obvious signs of death. (i.e. rigor mortis, severe lividity, etc.)

Crush Injury: Pediatric 8.09

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Determine presence of life threatening injuries involving the head, chest and abdomen.
6. Control hemorrhage with direct pressure.
7. Immobilize fractures in accordance with standard practice.
8. Assess distal pulse, motor, and sensory functions before and after splinting.
9. If injury to Head, Neck, or Spine, immobilize the patient with rigid cervical collar, KED (if applicable), long backboard (or scoop stretcher).
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Start IV of NS with Buretrol.
2. If shock is present and/or the time of entrapment is greater than 2 hours, administer fluid bolus with 20 ml/kg of normal saline.
3. After being freed, fluid therapy is 5 ml/kg/hr of normal saline.
4. If IV started, obtain blood sample.
5. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. For constant crush injuries with duration greater than 2 hours, administer Sodium Bicarbonate 1 mEq/kg just prior to release from entrapment.
3. Consider pain management.
4. Consider sedation with Versed (see dosing in notes below).
5. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Sodium bicarbonate should not be used in crush injuries of durations less than two hours.
2. Indications of distal ischemia include: pain, pallor, pulselessness, paralysis, parathesia and poikilothermia (cool to touch).
3. Preservation of body heat is paramount.
4. Continuous ECG, pulse oximetry and blood pressure monitoring (every 5 minutes) are mandatory during and after the administration of Morphine and Versed.
5. If cardiac arrest occurs after release of entrapment, give sodium bicarbonate 1 mEq/kg immediately.

6. Versed dosing:
   a. Pediatric patients less than or equal to 5 years – 0.1 mg/kg IV over two minutes, may repeat dose after an additional two minutes as needed to 6 mg total dose.
   b. Pediatric patients age 6 to 12 - 0.05 mg/kg IV over two minutes, may repeat dose after an additional two minutes as needed to 10 mg total dose.
   c. Pediatric patients over 12 years of age – same dosing as adults.
   d. May be given IM at 10 minute intervals if needed.

Snake Bites: Pediatric 8.10

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Complete Patient Assessment.
4. Reassure and calm the patient, minimize activity of patient.
5. Remove tight clothing and jewelry.
6. Splint limb and place in a dependent position below the level of the heart.
7. Assess distal pulse, motor, and sensory functions before and after splinting.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Start IV of NS with Buretrol.
2. If patient is in shock, administer fluid bolus with 20 ml/kg of normal saline. Repeat a second bolus if needed.
3. Fluid therapy is 5 ml/kg/hr of normal saline.
4. If IV started, obtain blood sample.
5. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If no response to two fluid boluses, administer Dopamine 5 to 20 mcg/kg/min IV to maintain a SBP appropriate for the age.
3. Consider pain management.
4. For nausea and vomiting, administer promethazine (Phenergan): 0.5 mg/lb IV or IM to a maximum dose of 12.5 mg.
5. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Caution: In case of coral snake envenomation, the onset of symptoms may be delayed several hours. Advise patient to be evaluated even if not symptomatic.
2. Continuous ECG, pulse oximetry and blood pressure monitoring (every 5 minutes) are mandatory during and after the administration of Morphine.
3. Constricting bands, tourniquets and cryotherapy are contraindicated.

Medical: Pediatric

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Cardiac Arrest: Pediatric 9.01

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Move patient to a flat surface.
3. Initiate CPR.
4. Complete Patient Assessment.
5. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Intubate.
2. Establish IV of NS with Buretrol.
3. If IV started, obtain blood sample.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. **Refer to appropriate cardiac protocol**
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.
2. Cardiac arrest in pediatrics is usually from a respiratory cause.
3. AEDs are not used on pediatric patients less than 8 years of age.
4. In the arrest situation, consider IO instead of IV.

Bradycardia: Pediatric 9.02

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Observe patient for severe cardiopulmonary compromise - look for poor perfusion, hypotension, respiratory difficulty.
4. Perform chest compression, if heart rate <80 in infant or <50 in child and severe cardiopulmonary compromise exists.
5. Complete Patient Assessment.
6. Reassure and calm the patient.
7. Place patient in a semi-sitting position or position of comfort.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol.
2. If IV started, obtain blood sample.
3. If severe cardiopulmonary compromise exists: Intubate and Ventilate with BVM at 100% Oxygen.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. If bradycardia persists administer 0.1 cc/kg (0.01 mg/kg) Epinephrine 1:10,000 IV/IO or 0.1 cc/kg (0.1 mg/kg) Epinephrine 1:1000 ET. Repeat every 3-5 minutes at same dose.
3. Administer Atropine 0.02 mg/kg to maximum 0.5 mg for child, 1.0 mg for adolescent. Dose may be repeated once.
4. Consider transcutaneous pacing
5. If asystole develops, go to asystole protocol.
6. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Bradycardia	
Age	**Pulse**
0-2	<80/min
>2	<50/min

2. *Hypotension:	
Age	**Systolic BP**
0-2	<60 mm Hg
>2	<70 mm Hg

3. Rapid transport.
4. Administer no more than 1.0 mg Atropine in a 15 minute period.
5. Atropine shall be given fairly rapidly as slow administration results in a transient bradycardia.

Ventricular Fibrillation / Pulseless Ventricular Tachycardia: Pediatric 9.03

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment
2. Move patient to a flat surface
3. Initiate CPR
4. Use AED with pediatric pads if patient is greater that 1 year of age.
5. Complete Patient Assessment
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Intubate
2. Establish IV of NS with Buretrol.
3. If IV started, obtain blood sample.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Defibrillate: 2 J/kg
3. NO CHANGE/PULSE: 0.1 cc/kg (0.01 mg/kg) Epinephrine 1:10,000, IVP/IO or 0.1 cc/kg (0.1 mg/kg) Epinephrine 1:1000 ET.
4. NO CHANGE/PULSE: Defibrillate: 4 J/kg
5. NO CHANGE/PULSE: Administer Amiodarone 5 mg/kg IV. May give an additional dose of 5 mg/kg IV after 5 minutes.
6. NO CHANGE/PULSE: Defibrillate: 4 J/kg
7. NO CHANGE/PULSE: Administer Lidocaine 1 mg/kg. Repeat same dose in 3-5 min. Total dose of 3 mg/kg.
8. NO CHANGE/PULSE: Defibrillate: 4 J/kg
9. NO CHANGE/PULSE: Consider Sodium Bicarbonate 1 mEq/kg IVP
10. NO CHANGE/PULSE: Defibrillate: 4 J/kg
11. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Ventricular Fibrillation / Pulseless Ventricular Tachycardia: Pediatric 9.03

Notes:

1. Patients shall be transported as soon as possible during this therapy.
2. Intubation is preferable, if it can be done simultaneously with other techniques, then the earlier the better. However, defibrillation and epinephrine are more important initially if the patient can be ventilated without intubation.
3. CPR should be resumed after each subsequent shock. CPR should be performed for a minimum of 2 minute after any medication administration.
4. Lidocaine dose should be doubled when administering via ET. Lidocaine not to exceed total dose of 3 mg/kg even if given ET.
5. If administering epinephrine via ET tube, always use the 1:1000 concentration at a dose of 0.1 cc/kg (0.1 mg/kg).
6. Both Rhythm and Pulse shall be checked before and after each defibrillation and medication administration.
7. Concentration of Sodium Bicarbonate for pediatric dosing:

   Less that one year of age – 4.2%

   Older than one year of age – 8.4 %
8. Sodium Bicarbonate - second and subsequent doses are 0.5 mEq/kg.

Asystole: Pediatric 9.04

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Move patient to a flat surface.
3. Initiate CPR.
4. Complete Patient Assessment.
5. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Intubate.
2. Establish IV of NS with Buretrol.
3. If IV started, obtain blood sample.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG. Confirm rhythm in more than one lead.
2. Consider possible causes and treatment
   - a. Hypoxia
   - b. Preexisting Acidosis
   - c. Hyperkalemia
   - d. Drug Overdose
   - e. Hypokalemia
   - f. Hypothermia
3. Administer 0.1 cc/kg (0.01 mg/kg) Epinephrine 1:10,000, IVP/IO or 0.1 cc/kg (0.1 mg/kg) Epinephrine 1:1000 ET. Repeat every 3-5 minutes at same dose.
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Patients shall be transported as soon as possible during this therapy.
2. Both Rhythm and Pulse shall be checked before and after each medication administration.
3. Intubation is preferable, if it can be done simultaneously with other techniques, then the earlier the better. However, defibrillation and epinephrine are more important initially if the patient can be ventilated without intubation.

Pulseless Electrical Activity (PEA): Pediatric 9.05

PEA includes EMD, Idioventricular Rhythms, Ventricular Escape, Bradyasystolic, and Post Defibrillation Idioventricular

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Move patient to a flat surface.
3. Initiate CPR.
4. Complete Patient Assessment.
5. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Intubate.
2. Establish IV of NS with Buretrol.
3. If IV started, obtain blood sample.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG. Confirm rhythm in more than one lead.
2. Consider possible causes and treatment.
   - a. Hypoxia
   - b. Acidosis
   - c. Hypovolemia
   - d. Hyperkalemia
   - e. Drug Overdose
   - f. Massive MI
   - g. Hypokalemia
   - h. Hypothermia
   - i. Tension Pneumothorax
3. Administer 0.1 cc/kg (0.01 mg/kg) Epinephrine 1:10,000 IVP/IO or 0.1 cc/kg (0.1 mg/kg) Epinephrine 1:1000 ET. Epinephrine should be repeated every 3 to 5 minutes.
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**
5. Consider Sodium Bicarbonate 1.0 mEq/kg to treat Hyperkalemia or Metabolic / Respiratory Acidosis. Repeat 5-10 minutes, with second and subsequent doses at 0.5 mEq/kg.

Notes:

1. Rapid transport.
2. Intubation is preferable, if it can be done simultaneously with other techniques, then the earlier the better.
3. CPR should be performed for a minimum of 1 minute after any medication administration.
4. Sodium bicarbonate: < 1 year old – 4.2%; >= 1 year old – 8.2 %
5. Both Rhythm and Pulse shall be checked before and after each medication administration.

Shock: Pediatric 9.06

Criteria:

a. Lethargy and
b. Diminished peripheral pulses or
c. Prolonged capillary refill or
d. Cool, pale, or mottled skin

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Determine presence of life threatening injuries involving the head, chest. and abdomen.
6. Control hemorrhage.
7. Immobilize fractures in accordance with standard practice.
8. If injury to Head, Neck, or Spine, immobilize the patient with rigid cervical collar, KED (if applicable), long backboard (or scoop stretcher).
9. Place patient in trendelenburg position & conserve body heat.
10. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose. Refer to Diabetic Emergency: Pediatric protocol.
11. Anaphylactic: Refer to Allergic Reaction: Pediatric protocol.
12. Neurogenic: Stabilize and protect spinal cord.
13. Other type of shock: refer to the appropriate pediatric protocol.
14. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol and flow at a rate sufficient to maintain systolic pressure appropriate for age. Bolus with 20 ml/kg NS and repeat if needed.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Hypoglycemia: If Dextrostix or Glucometer is below 60, administer 2 ml/kg of 25% Dextrose (D50W) IVP.
3. Cardiogenic: Assure that the rate and rhythm are treated first. Refer to the appropriate Pediatric Cardiac protocol.
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.

Dehydration: Pediatric 9.07

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Complete Patient Assessment.
4. Determine severity of dehydration.
5. Reassure and calm the patient.
6. Perform Dextrostix if diabetic complication is suspected.
7. Place patient in trendelenburg position & conserve body heat.
8. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol and flow at a rate sufficient to maintain systolic pressure appropriate for age. Bolus with 20 ml/kg NS and repeat if needed.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.

Respiratory Distress: Pediatric 9.08

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen. If ventilations are less than 12 or greater than 40 consider assisting ventilations using BVM with supplemental oxygen.
4. Complete Patient Assessment.
5. Perform auscultation of lungs.
6. Pulse oximetry.
7. Place the patient in sitting position.
8. Reassure and calm the patient.
9. If patient is wheezing with moderate to severe dyspnea, administer unit dose of Albuterol by mask or hand held nebulizer at 8 LPM.
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol. Flow at a rate appropriate for age. Care should be taken not to further overload these patients with fluid.
2. If IV started, obtain blood sample.
3. If indicated, intubation and assist ventilations.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.

Asthma: Pediatric 9.09

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen. If ventilations are less than 12 or greater than 40 consider assisting ventilations using BVM with supplemental oxygen.
4. Complete Patient Assessment.
5. Perform auscultation of lungs.
6. Pulse oximetry.
7. Place the patient in sitting position.
8. Reassure and calm the patient.
9. Determine the severity of the asthma attack.

Mild Attack	Moderate or Severe Attack
10. Monitor for worsening condition.	10. If patient is wheezing with moderate to severe dyspnea, administer unit dose of Albuterol by mask or hand held nebulizer 8 LPM. Repeat as needed.

11. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol flow at a rate appropriate for age. Care should be taken not to further overload these patients with fluid.
2. If IV started, obtain blood sample.
3. If indicated, intubation and assist ventilations.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If Albuterol fails to improve respiratory status, administer 0.01 cc/kg (0.01 mg/kg) Epinephrine 1:1000 SQ (max. dosage 0.3 cc/dose or 0.3 mg/dose). May repeat dosage of Epinephrine every 10 minutes to a maximum of 3 doses.
3. If the severe asthma attack is refractory to Albuterol and Epinephrine, administer 25-50 mg/kg Magnesium Sulfate IVP/IM (max. dosage 2 grams).
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Asthma: Pediatric 9.09

Notes:

1. Rapid transport.
2. Continually reassess breath sounds, pulse oximetry, and vitals to ensure the patient is maintaining good oxygenation and adequate tissue perfusion.
3. Mild attack is defined as minimal wheezes, no or minimal use of accessory muscles, good skin color, and present breath sounds.
4. Moderate or severe attack is defined as increased respiratory rate, wheezes present and easily heard (or NO wheezes with little air movement), use of accessory muscles to breathe, gray-ashen-or pale skin color, hyperinflation of chest, and patient sitting upright with shoulders flexed forward to aid in breathing.

Allergic Reaction: Pediatric 9.10

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Establish and maintain airway.
3. Administer high concentration oxygen. If ventilations are less than 12 or greater than 40 consider assisting ventilations using BVM with supplemental oxygen.
4. Complete Patient Assessment.
5. Perform auscultation of lungs.
6. Pulse oximetry.
7. Place the patient in sitting position.
8. Reassure and calm the patient.
9. Determine level of reaction and treat:

With hives or a localized reaction:

a. Monitor patient closely for deterioration.

With localized reaction and dyspnea:

a. Administer 0.01 cc/kg (0.01 mg/kg) of Epinephrine 1:1000 SQ (max. dosage 0.3 cc/dose or 0.3 mg/dose). May repeat dosage of Epinephrine every 10 minutes to a maximum of 3 doses.
b. If patient is wheezing with moderate to severe dyspnea, administer unit dose of Albuterol by mask or hand held nebulizer at 8 LPM. Repeat as needed.

With localized reaction and shock:

a. Administer 0.01 cc/kg (0.01 mg/kg) of Epinephrine 1:1000 IM (max. dosage 0.3 cc/dose or 0.3 mg/dose). May repeat dosage of Epinephrine every 10 minutes to a maximum of 3 doses.

10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol flow at a rate appropriate for age.
2. If IV started, obtain blood sample.
3. Intubate, as indicated.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Administer Benadryl 1 mg/kg IVP or IM (max 50 mg)
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport
2. If a patient is in profound shock, infuse Epinephrine 0.1 mcg/kg/min titrating response. Prepare by adding 0.5 mg (0.5 ml) of Epinephrine 1:1000 solution to 100 ml of normal saline to make a concentration of 5 mcg/ml.

3. Continually reassess breath sounds, pulse oximetry, and vitals to ensure the patient is maintaining good oxygenation and adequate tissue perfusion.
4. May repeat epinephrine every 10 minutes if needed.

Seizures: Actively Seizing: Pediatric 9.11

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Determine type and duration of seizure.
4. Protect patient from injury to self and others.
5. Complete Patient Assessment.
6. Reassure and calm the patient.
7. Obtain temperature.
8. If temperature is greater than 103, begin passive cooling of patient. Remove clothing and sponge bath with room temperature water.
9. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose. Refer to Diabetic Emergency: Pediatric protocol.
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol flow at a rate appropriate for age.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG.
2. If Dextrostix or Glucometer is below 60, administer 2 ml/kg of 25% Dextrose (D50W) IVP Refer to Diabetic Emergency: Pediatric protocol.
3. **If Patient Is Actively Seizing:** Administer Versed (see dosing notes below). Discontinue infusion when seizure stops. Observe for respiratory depression.
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport.
2. Versed dosing:
   a. Pediatric patients less than or equal to 5 years – 0.1 mg/kg IV over two minutes, may repeat dose after an additional two minutes as needed to 6 mg total dose.
   b. Pediatric patients age 6 to 12 - 0.05 mg/kg IV over two minutes, may repeat dose after an additional two minutes as needed to 10 mg total dose.
   c. Pediatric patients over 12 years of age – same dosing as adults.
   d. May be given IM at 10 minute intervals if needed.

Seizures: Not Seizing Upon Arrival: Pediatric 9.12

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I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen as needed.
3. Determine type and duration of seizure.
4. Protect patient from injury to self and others.
5. Complete Patient Assessment.
6. Reassure and calm the patient.
7. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose. Refer to Diabetic Emergency: Pediatric protocol.
8. Obtain temperature.
9. If temperature is greater than 103, begin passive cooling of patient. Remove clothing and sponge bath with room temperature water.
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol flow at a rate appropriate for age.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If Dextrostix or Glucometer is below 60, administer 2 ml/kg of 25% Dextrose (D50W) IVP Refer to Diabetic Emergency: Pediatric protocol.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport

Diabetic Emergency: Pediatric 9.13

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If Dextrostix or Glucometer is below 60, administer 2 ml/kg of 25% Dextrose (D50W) IVP.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport
2. Consider additional problems and appropriate protocols as needed.

Unconscious: Pediatric 9.14

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Control and maintain airway.
3. Administer high concentration oxygen.
4. Complete Patient Assessment.
5. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose. Refer to Diabetic Emergency: Pediatric protocol.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol.
2. If IV started, obtain blood sample.
3. Intubate, if indicated.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If Dextrostix or Glucometer is below 60, administer 2 ml/kg of 25% Dextrose (D50W) IVP. Refer to Diabetic Emergency: Pediatric protocol.
3. Administer Narcan 0.1 mg/kg slow IV push. May repeat in 10 minutes as needed. If mental status improves, but not to normal, repeat initial dose. Maximum dose is 2 mg.
4. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport

Poisoning: Pediatric 9.15

I. ECA, EMT-B Procedures

1. Protect rescuer from contamination. Wear appropriate protective clothing and/or SCBA.
2. Remove patient from continued exposure.
3. Complete Initial Patient Assessment.
4. Control and maintain airway.
5. Administer high concentration oxygen.
6. Complete Patient Assessment.
7. Reassure and calm the patient.
8. Determine agent involved in poisoning.
9. Consider contacting Poison Control 1-800-222-1222.
10. Consider the administration of activated charcoal.
11. Consider the dilution of poison with water or milk.
12. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**
13. If ingested and patient is conscious, consider Ipecac PO:
    a. Less than 1 year of age: 5 to 10 ml
    b. Greater that 1 year of age: 15 ml

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport.
2. If organophosphate poisoning or nerve agent, refer to EMS Protocol 9.16: Organophosphate Poisoning/Nerve Agent: Pediatric
3. It the poison agent is unknown, attempt to transport the agent with the patient to the hospital for analysis, if it can be done safely.

Special Considerations:

1. Calcium Chloride for calcium channel blocker. Pace if needed.
2. Sodium Bicarbonate 1 mEq/kg for aspirin and tricyclic medications
3. If organophosphate poisoning or nerve agent, refer Organophosphate Poisoning: Pediatric protocol.

4. Versed for stimulant induced symptoms including dysrhythmias.
5. Versed dosing:
   a. Pediatric patients less than or equal to 5 years – 0.1 mg/kg IV over two minutes, may repeat dose after an additional two minutes as needed to 6 mg total dose.
   b. Pediatric patients age 6 to 12 - 0.05 mg/kg IV over two minutes, may repeat dose after an additional two minutes as needed to 10 mg total dose.
   c. Pediatric patients over 12 years of age – same dosing as adults.
   d. May be given IM at 10 minute intervals if needed.

Organophosphate Poisoning/Nerve Agent: Pediatric 9.16

I. ECA, EMT-B Procedures

1. Protect rescuer from contamination. Wear appropriate protective clothing and/or SCBA.
2. Remove patient from continued exposure.
3. Complete Initial Patient Assessment.
4. Control and maintain airway.
5. Administer high concentration oxygen.
6. Complete Patient Assessment.
7. Reassure and calm the patient.
8. Determine agent involved in poisoning.
9. Remove contaminated clothing.
10. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol.
2. If IV started, obtain blood sample.
3. Intubate, if the patient is unconscious.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**
3. Administer Atropine based on age as outlined below every 3-6 minutes until bronchial secretions clear

	Mild/Moderate	Severe Symptoms
Infant (0-2 years)	Atropine 0.05 mg/kg IM/IV	Atropine 0.1 mg/kg IM/IV
Child (2-10 years)	Atropine 1 mg IM/IV	Atropine 2 mg IM/IV
Adolescent (11-17)	Atropine 2 mg IM/IV	Atropine 4 mg IM/IV
Adult	Atropine 2 mg IM/IV	Atropine 6 mg IM/IV
Elderly, frail	Atropine 1 mg IM/IV	Atropine 2-4 mg IM/IV

Notes:

1. Transport
2. **Mnemonic for Nerve Agent or Organophosphate Exposure:**

Salivation (excessive production of saliva), **s**weating, **s**eizures
Lacrimation (excessive tearing)
Urination (uncontrolled urine production)
Defecation (uncontrolled bowel movements)
Gastrointestinal distress (cramps)
Emesis (excessive vomiting)
Breathing Difficulty (bronchospasm and excessive secretions)
Arrhythmias
Miosis (pinpoint pupils), muscle twitching

Organophosphate Poisoning/Nerve Agent: Adult **9.16**

3. When administering Atropine to a patient experiencing an organophosphate or nerve agent exposure, there is no maximum dosage.
4. Versed (Midazolam) may be required to treat seizures. If patient is seizing, refer to Seizures: Actively Seizing: Pediatric protocol.

Toxic Inhalation: Pediatric 9.17

I. ECA, EMT-B Procedures

1. Protect rescuer from contamination. Wear appropriate protective clothing and/or SCBA.
2. Remove patient from continued exposure.
3. Complete Initial Patient Assessment.
4. Control and maintain airway.
5. Administer high concentration oxygen.
6. Complete Patient Assessment.
7. Remove contaminated clothing.
8. If wheezing, administer Albuterol by nebulizer.
9. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol.
2. If IV started, obtain blood sample.
3. Intubate, if patient is unconscious.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport

Hyperthermic Emergency: Pediatric 9.18

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Control and maintain airway.
3. Administer high concentration oxygen.
4. Obtain temperature.
5. Cool patient if there is a decreased mental status.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport
2. Do not let cooling in the field delay transport.
3. If patient shivers, then stop cooling.

Hypothermic Emergency: Pediatric 9.19

CRITERIA:

a. Oral or rectal Temperature 90 degrees (32 degrees C.) or less.
b. Altered mental status.
c. Uncoordinated physical activity and no shivering.

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Control and maintain airway.
3. Administer high concentration oxygen, if ventilations are less than 12 or over 40 consider assisting ventilations using BVM with supplemental oxygen.
4. Complete Patient Assessment.
5. Reassure and calm the patient.
6. Obtain temperature.
7. Use external warming as indicated.
8. Check blood sugar with Dextrostix or Glucometer. If below 60 and patient is conscious, consider use of Insta-Glucose. Refer to Diabetic Emergency: Pediatric protocol.
9. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. If Dextrostix or Glucometer is below 60, administer 2 ml/kg of 25% Dextrose (D50W) IVP
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport
2. Limit secondary survey to what is necessary in assessing injuries or complaint. Avoid vigorous handling of the patient as this could promote cardiac dysrhythmias in the hypothermic patient.
3. If core temperature is less than 30^{o}C (86^{o}F) and patient is in arrest, do not give IV medications and limit defibrillation attempts to 1 shocks.
4. If core temperature is greater than 30^{o}C (86^{o}F) and patient is in arrest, then double the medication interval

Acute Abdomen: Pediatric 9.20

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen, as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. Check blood sugar with Dextrostix or Glucometer if diabetic complications are suspected.
6. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol.
2. If IV started, obtain blood sample.
3. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. Consider pain management.
3. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Transport
2. Phenergan may be used for nausea and vomiting. The use of Phenergan is by standing orders.

Acute GI Hemorrhage: Pediatric 9.21

I. ECA, EMT-B Procedures

1. Complete Initial Patient Assessment.
2. Administer high concentration oxygen, as needed.
3. Complete Patient Assessment.
4. Reassure and calm the patient.
5. ECA, EMT-B - **CONTACT RECEIVING MEDICAL FACILITY**

II. EMT-I Procedures (in addition to I. above)

1. Establish IV of NS with Buretrol and flow at rate sufficient to maintain systolic BP appropriate for age.
2. Consider IO if the patient is severely compromised.
3. If IV established, obtain blood sample.
4. EMT-I - **CONTACT RECEIVING MEDICAL FACILITY**

III. EMT-P Procedures (in addition to I. and II. above)

1. ECG
2. EMT-P - **CONTACT RECEIVING MEDICAL FACILITY**

Notes:

1. Rapid transport.

Hydrofluoric Acid Exposure 10.01

A. Skin Exposure

1. Rinse with water for 5 minutes if Calcium Gluconate gel is available, or indefinitely if Calcium Gluconate gel is not available.
2. Massage 2.5% Calcium Gluconate gel into affected areas. Reapply until pain is relieved.
3. ECG for burns greater than or equal to 2% total BSA (EMT-P only)

B. Ocular Exposure

1. Tetracaine 2 drops to affected eye(s)
2. Irrigate with water or normal saline for 5 minutes if Calcium Gluconate solution is available, otherwise 15 minutes
3. Irrigate affected eye(s) with 1% Calcium Gluconate solution until pain is relieved
4. May use Morgan lens

C. Inhalation

1. Administer high concentration Oxygen
2. Administer 2.5% Calcium Gluconate solution as 3cc via nebulizer
3. Administer unit dose of albuterol via nebulizer if wheezing is present
4. ECG (EMT-P only)

D. Ingestion

1. DO NOT INDUCE VOMITING
2. May give 8 oz water or milk
3. ECG (EMT-P only)

Notes:

1. Calcium Gluconate gel and solution is available (outside hospital) at Honeywell.
2. Consider pain management.
3. Hydrogen Fluoride toxicity is due to fluoride ion, which may penetrate deeply and cause continued tissue destruction for days if not treated.
4. Calcium Gluconate is used in treatment due to its ability to bind fluoride ions.
5. Severe systemic effects may be seen with burns greater than or equal to 2% total BSA and with ingestion or inhalation. Hypocalcemia, hypomagnesemia and hyperkalemia may occur and lead to cardiac dysrhythmias.
6. Respiratory effects include bronchospasm, pulmonary edema and upper airway obstruction.
7. Lower concentrations of Hydrogen Fluoride (less than 50% concentration) may not cause symptoms for up to 24 hours after exposure.

Appendices

Table of Contents

Exposure Prophylaxis — Appendix A

Protocol for treatment of needlestick and other blood or body fluid exposures.

A. Wound care / first aid
1. Irrigate wound with NS, sterile water or tap water
2. Flush mucus membranes with NS or tap water
3. Wash wound with soap and water

B. Lab evaluation
1. Source patient - HBsAg, anti-HIV, and anti-HCV
2. Exposed personnel - anti-HBs, anti-HIV, and anti-HCV

C. Tetanus Prophylaxis
1. Tetanus and diphtheria toxoids (Td) 1/2 cc IM if > 10 years since last booster
2. Tetanus immune globulin not needed

D. Hepatitis Prophylaxis (percutaneous exposure, human bite or contaminated blood to broken skin or mucus membrane)

Source Patient	**Unvaccinated Personnel**	**Vaccinated Personnel**
HBsAg +	1. Recommend HBIG 0.06 ml/kg IM and begin HB vaccine series 2. If initial anti-HBs > 10 then defer 2nd and 3rd vaccines 3. If anti-HBs < 10 recommend complete vaccination series	1. If anti-HBs > 10 then no treatment needed 2. If anti -HBs < 10 then recommend HBIG 0.06 ml/kg IM and Hep B vaccine 1.0 ml as single booster
HBsAg -	1. If anti-HBs <10 then offer Hep B vaccination series 2. If anti-HBs >10 then no treatment needed	1. If anti-HBs <10 then Hep B vaccine 1.0 ml IM as a single booster 2. If anti-HBs >10 then no treatment needed
Unknown	1. If anti-HBs <10 then offer Hep B vaccination series 2. If anti-HBs >10 then no treatment needed	1. If anti-HBs <10 then Hep B vaccine 1.0 ml IM as a single booster 2. If anti-HBs >10 then no treatment needed
Anti-HCV + or chronic hepatitis	Offer: 1. Gamma globulin 0.06 ml/kg IM for percutaneous but HBsAg - exposure only 2. Check anti-HCV and liver function panel in 6 months if known exposure to hepatitis C	

E. HIV Post-exposure prophylaxis

Evaluate Risk of Percutaneous Exposure		
Highest Risk	**Increased Risk**	**No Increased Risk**
BOTH larger volume of blood (e.g., deep injury, large diameter needle previously in source patient's vein or artery) **AND** solid high titer of HIV (e.g., source from a patient with acute retroviral with illness or end stage AIDS)	**EITHER** larger volume of blood OR high titer of HIV	No larger volume of blood No high titer of HIV (e.g., injury with a suture needle; source patient asymptomatic

Summary of PHS Recommendations for PEP		
Exposure Type: Percutaneous		
Source	**Prophylaxis**	**Regimen***
Blood-highest risk	Recommend	ZDV + 3TC + IDV
Blood-increased risk	Recommend	ZDV + 3TC + IDV
Blood-no increased risk	Offer	ZDV + 3TC
Fluid containing visible blood, other potentially infectious fluid, or tissue	Offer	ZDV + 3TC
Other body fluid (e.g. urine)	Don't Offer	
Exposure Type: Mucous Membrane		
Source	**Prophylaxis**	**Regimen***
Blood	Offer	ZDV + 3TC + IDV
Fluid containing visible blood, other potentially infectious fluid or tissue	Offer	ZDV + 3TC
Other body fluid (e.g., urine)	Don't Offer	
Exposure Type: Skin-Increased Risk (e.g., exposure to high titer of HIV, prolonged contact, extensive area involved, or skin is visibly compromised)		
Source	**Prophylaxis**	**Regimen***
Blood	Offer	ZDV + 3TC + IDV
Fluid containing visible blood, other potentially infectious fluid or tissue	Offer	ZDV + 3TC
Other body fluid (e.g., urine)	Don't Offer	

If PEP is offered, the recommended course of treatment is 4 weeks

* Recommendations from MMWR, Vol. 45/No. 22, June 7, 1996; ZDV-zidovudine (200 mg t.i.d.), 3TC-lamivudine (150 mg b.i.d.), IDV-indinavir (800 mg t.i.d.-i.e., q8h). Please refer to manufacturers' full prescribing information for dosing and other information.

Follow-up
Any adverse events associated with PEP, as well as signs and symptoms of possible retroviral illness (e.g., fever, enlargement or tenderness of lymph nodes, rash), should be reported. Recommended laboratory testing for an occupational exposure to HIV: HIV antibody: baseline, 6 weeks, 12 weeks, 6 months and 12 months postexposure. Drug toxicity: baseline and 2 weeks postexposure (CBC, BUN, and AST {SGOT}).

Health Care Worker Information

The primary infection of concern, that a HCW may acquire, following occupational exposure to blood and body fluids are hepatitis B, hepatitis C, and infection with HIV.

The risk of infection from a needlestick injury involving HBsAg (hepatitis B) positive blood is approximately 2 - 40 %. The risk of infection from a needlestick injury involving HIV-infected blood is approximately 0.1 - 0.4 % (one in 333). The risk of Hepatitis C is unknown. The risk from exposures involving mucous membranes or nonintact skin is lower that the risk from a needlestick, but is not zero. Both these infections can be transmitted to one's sexual partners and to children before or during childbirth. Therefore, knowledge of infection is not only important to you, but to your significant others as well.

If you are already immune to hepatitis B, there is no risk of infection. Immunity results from immunization with a hepatitis B vaccine or from prior infection and can be determined with a blood test. If infection is to occur, it usually takes place within six months, but can almost always be prevented in those not immune by treatment with a combination of passive (HBIG) and active (hepatitis B vaccine) immunizations.

There is no proven way to prevent HIV infection. If infection is to occur, it usually takes place within six months. Infection is sometimes heralded by an illness called the HIV seroconversion syndrome with symptoms of fever, fatigue, joint pains, and rash. Therefore, it is important to seek medical attention if you develop any of these symptoms within the first few months after parenteral exposure to blood or body fluid.

If you are infected as a result of your exposure, you may transmit this infection to your sexual partner before you are again tested. Therefore HCWs with definite parenteral exposure to HIV should practice "safe sex" and use effective contraception (condom and HIV virucidal contraceptive material) or abstinence, at least until the result of the six-month HIV antibody test is known. This will minimize the risk of infecting one's sexual partners and unborn children.

Public Health Service Guidelines for the Management of Health Care Worker Exposures to HIV and recommendations for Postexposure Prophylaxis

Introduction:
In December 1995, CDC published a brief report of a retrospective case-control study of health care workers (HCWs) exposed percutaneously to HIV. The study documented that the use of ZDV was associated with a decrease in the risk for HIV seroconversion. This information, along with data on ZDV efficacy in preventing perinatal transmission and evidence that PEP prevented or ameliorated retroviral infection in some studies in animals, prompted a Public Health Service interagency working group.

Definitions of Health Care Workers and Exposure
Exposure: a percutaneous injury, contact of mucous membrane or nonintact skin, or contact with intact skin when the duration of contact is prolonged or involves an extensive area, with blood, tissue, or other body fluids. Body fluids include a) semen, vaginal secretions, or other body fluids contaminated with visible blood that have been implicated in the transmission of HIV infection and b) cerebrospinal, synovial, pleural, peritoneal, pericardial, and amniotic fluids which have an undetermined risk for transmitting HIV.

In the absence of visible blood in the saliva, exposure to saliva from a person infected with HIV is not considered a risk for HIV transmission; also, exposure to tears, sweat, or nonbloody urine or feces does not require postexposure follow-up.

Occupational exposure to human breast milk has not been implicated in HIV transmission to HCWs and does not require postexposure follow-up.

Risk for Occupational Transmission of HIV to HCWs
Average risk for HIV transmission after a percutaneous exposure to HIV-infected blood is approximately 0.3% and after a mucous membrane exposure is 0.09%.

The risk for HIV transmission was increased with exposure to a larger quantity of blood from the source patient as indicated by (a) a device visibly contaminated with the patient's blood, (b) a procedure that involved a needle placed directly in a vein or artery, or (c) a deep injury.

The risk also was increased for exposure to blood from source patients with terminal illness.

The host immune response sometimes may be able to prevent establishment of HIV infection after a percutaneous exposure.

HIV Seroconversion in HCWs

The estimated median interval from exposure to serconversion was 46 days. 95% seroconverted within 6 months.

Three instances of delayed HIV seroconversion occurring in HCWs have been reported; in these instances, the HCWs tested negative for HIV antibodies > 6 months postexposure but were seropositive within 12 months after the exposure.

Efficacy of Antiretrovirals for PEP

Animal studies have demonstrated that early initiation of PEP and small innoculum size are correlates of successful PEP.

Seroconversion is infrequent after an occupational exposure to HIV infected blood.

The risk for HIV infection among HCWs who used ZDV as PEP was reduced by approximately 81%. Administration of ZDV during pregnancy, labor and delivery, and to the infant, reduced transmission by 67%.

Failure of ZDV PEP to prevent HIV infection in HCWs has been reported in at least 14 instances.

Antiretroviral Agents for PEP

Include the nucleoside analogue reverse transcriptase inhibitors (NRTIs), nonnucleoside reverse transcriptase inhibitors (NNRTIs), and protease inhibitors (PIs). Among these drugs, ZDV (an NRTI) is the only agent shown to prevent HIV transmission in humans.

There are no data to directly support the addition of other antiretroviral drugs to ZDV to enhance the effectiveness of the PEP regimen. However, in HIV infected patients, combination regimens have proved to be superior to monotherapy in reducing HIV viral load. Thus, theoretically a combination of drugs with activity at different stages in the viral replication cycle could offer an additive preventive effect in PEP.

In previous CDC recommendations, 3TC was recommended as a second agent for PEP based on greater antiretroviral activity of the ZDV/3TC combination and its activity against many ZDV resistant HIV strains without substantially increased toxicity. Because ZDV and 3TC are available in a combination formulation (Combivir), the use of 3TC may be more convenient for HCWs.

The addition of a PI as a third drug for PEP following high risk exposures is based on the site of activity in the replication cycle and demonstrated effectiveness in reducing viral burden. Indinavir (IDV) or Nelfinavir (NEL) is recommended as first choice for inclusion in an expanded PEP regimen.

The NNRTIs (i.e., nevirapine and delavirdine) have not been included in these recommended regimens for PEP. Concerns about side effects and the availability of alternative agents argue against routinely using this class of drugs for initial PEP.

Side Effects and Toxicity of Antiretroviral Agents

Studies of adverse events have been reported primarily for persons with advanced HIV disease (and longer treatment courses). Side effects associated with many of the NRTIs (e.g. ZDV or ddl) are chiefly gastrointestinal (e.g., nausea or diarrhea)

All of the approved PIs may have potentially serious drug interactions. Nephrolithasis has been associated with IDV use.

Preliminary information about HCWs receiving combination drugs for PEP (usually ZDV plus 3TC with or without a PI) suggests that approximately 50% - 90% of HCWs report subjective side effects that caused 24% - 36% to discontinue PEP.

Resistance to Antiretroviral Agents

Resistance of HIV has been reported with all available antiretroviral agents.

Antiretroviral Drugs in Pregnancy

ZDV appears safe and well tolerated in both women and their infants who have had a follow-up period of several years. There is limited data on use of 3TC alone or in combination with ZDV in late gestation in pregnant HIV infected women. The drug appears safe during pregnancy for women and infants, although long term safety is not known.

No data are available regarding pharmacokinetics, safety, or tolerability of any of the PIs in pregnant women.

Recommendations for the Management of Potentially Exposed HCWs

HCWs should be educated to report occupational exposures immediately after they occur, Particularly because PEP is most likely to be effective if implemented as soon after the exposure as possible.

Exposure Management
Treatment of an Exposure Site

Wounds and skin sites that have been in contact with blood or body fluids should be washed with soap and water; mucous membranes should be flushed with water.

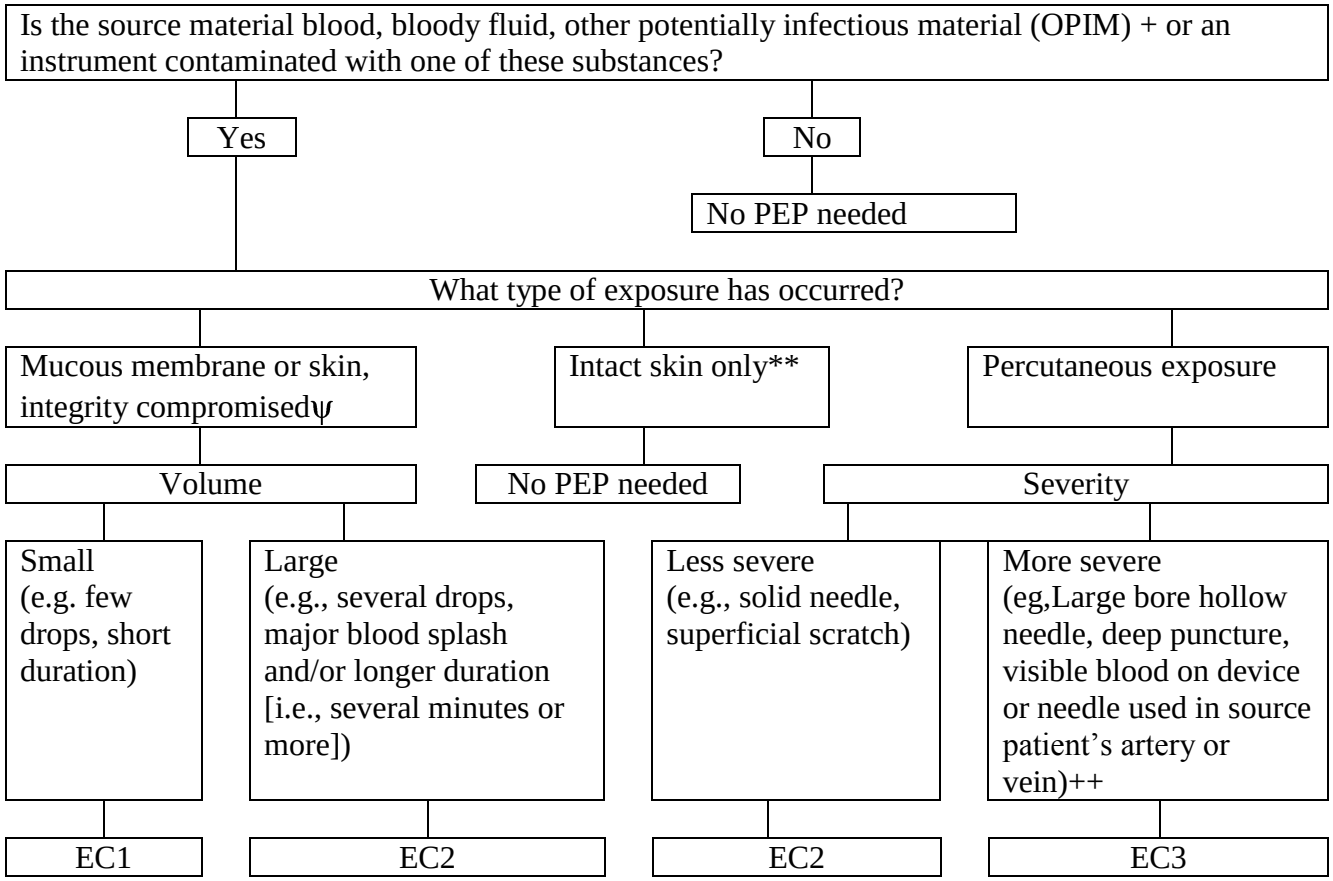
Evaluation of Exposure

Exposures to body fluid containing visible blood, or other potentially infectious fluid (including semen; vaginal secretions; and cerebrospinal, synovial, pleural, peritoneal, pericardial, and amniotic fluids) or tissue through a percutaneous injury (i.e., needlestick or other penetrating sharps related event) or through contact with a mucous membrane are situations that pose a risk for bloodborne transmission and require further evaluation.

For skin exposures, follow-up is indicated if it involves direct contact with a body fluid listed above and there is evidence of compromised skin integrity. However, if the contact is prolonged or involves a large area of intact skin, postexposure follow-up may be considered on a case-by-case basis or if requested by the HCW.

For human bites, the clinical evaluation must consider possible exposure of both the bite recipient and the person who inflicted the bite. HIV transmission only rarely has been reported by this route.

Step 1: Determine the Exposure Code (EC)



* This algorithm is intended to guide initial decisions about PEP and should be used in conjunction with other provided in this report.

+ Semen, vaginal secretions, cerebrospinal, synovial, pleural, peritoneal, pericardial, or amniotic fluids; or tissue

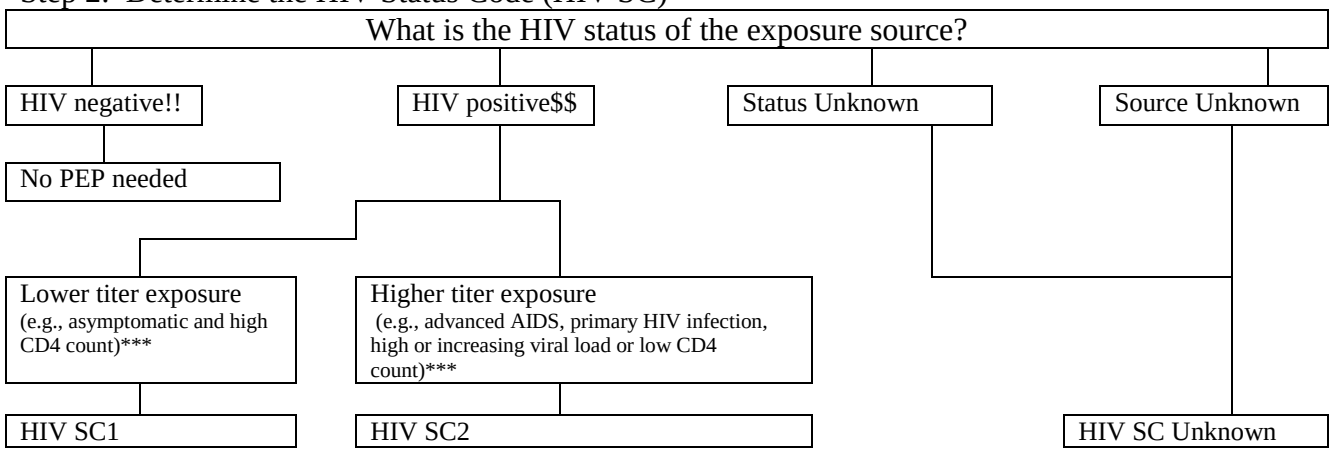
! Exposures to OPIM must be evaluated on a case-by-case basis. In general, these body substances are considered an occupational exposure that requires clinical evaluation to determine the need for PEP.

ψ Skin integrity is considered compromised if there is evidence of chapped skin, dermatitis, abrasion, or open wound.

** Contact with intact skin is not normally considered a risk for HIV transmission. However, if the exposure was to blood, and the circumstance suggests a higher volume exposure (e.g., an extensive area of skin was exposed or there was prolonged contact with blood), the risk for HIV transmission should be considered.

++ The combination of these severity factors (e.g., large-bore hollow needle and deep puncture) contribute to an elevated risk for transmission if the source person is HIV positive.

Step 2: Determine the HIV Status Code (HIV SC)



!! A source is considered negative for HIV infection if there is laboratory documentation of a negative HIV antibody, HIV polymerase chain reaction (PCR), or HIV p24 antigen test result from a specimen collected at or near the time of exposure and there is no clinical evidence of recent retroviral-like illness.

$$ A source is considered infected with HIV (HIV positive) if there has been a positive laboratory result for HIV antibody, HIV PCR, or HIV p24 antigen or physician diagnosed AIDS.

*** Examples are used as surrogates to estimate the HIV titer in an exposure source for purposes of considering PEP regimens and do not reflect all clinical situations that may be observed. Although a high HIV titer (HIV SC2) in an exposure source has been associated with an increased risk for transmission, the possibility of transmission form a source with a low HIV titer also must be considered.

Step 3: Determine the PEP Recommendation

EC	HIV SC	PEP recommendation
1	1	PEP may not be warranted. Exposure type does not pose a known risk for HIV transmission. Whether the risk for drug toxicity outweighs the benefit of PEP should be decided by the exposed HCW and treating clinician.
1	2	Consider basic regimen.+++ Exposure type poses a negligible risk for HIV transmission. A high HIV titer in the source may justify consideration of PEP. Whether the risk for drug toxicity outweighs the benefit of PEP should be decided by the exposed HCW and treating clinician.
2	1	Recommend basic regimen. Most HIV exposures are in this category; no increase risk for HIV transmission has been observed but use of PEP is appropriate.
2	2	Recommend expanded regimen.!!! Exposure type represents an increased HIV transmission risk.
3	1or2	Recommend expanded regimen. Exposure type represents an increased HIV transmission risk.
Unknown		If the source or, in the case of an unknown source, the setting where the exposure occurred suggests a possible risk for HIV exposure and the EC is 2 or 3, consider PEP basic regimen.

+++ Basic regimen is four weeks of zidovudine (ZDV), 600 mg per day in two or three divided doses, and lamivudine (3TC), 150 mg twice daily.

!!! Expanded regimen is the basic regimen plus either indinavir (IDV), 800 mg every 8 hours, or nelfinavir, 750 mg three time a day.

Clinical Evaluation and Baseline Testing of Exposed HCWs

If the source person is seronegative for HIV, baseline testing or further follow-up of the HCW normally is not necessary. Serologic testing should be made available to all HCWs who are concerned that they may have been exposed to HIV.

HIV PEP

Because most occupational HIV exposures do not result in the transmission of HIV, potential toxicity must be carefully considered when prescribing PEP.

Explaining PEP to HCWs

For exposures for which PEP is considered appropriate, HCWs should be informed that a)knowledge about the efficacy and toxicity of drugs used for PEP are limited; b) only ZDV has been shown to prevent HIV transmission in humans; c) there are no data to address whether adding other antiretroviral drugs provides any additional benefit for PEP, but experts recommend combination drug regimens because of increased potency and concerns and drug-resistant virus; d) data regarding toxicity of antiretroviral drugs in person without HIV infection or in pregnant women are limited for ZDV and not known regarding other antiretroviral drugs; and e) any or all drugs for PEP may be declined by the HCW. HCWs who have HIV occupational exposures for which PEP is not recommended should be informed that the potential side effects and toxicity of taking PEP outweigh the negligible risk of transmission posed by the type of exposure.

Timing of PEP Initiation

PEP should be initiated as soon as possible. If there is a question about which antiretroviral drugs to use, or whether to use two or three drugs, it is probably better to start ZDV and 3TC immediately that to delay PEP administration. If appropriate for the exposure, PEP should be started even when the interval since exposure exceeds 36 hours. Initiating therapy after a longer interval (e.g., 1-2 weeks) may be considered for exposures that represent an increased risk for transmission; even if infection is not prevented, early treatment of acute HIV infection may be beneficial. PEP probably should be administered for 4 weeks, if tolerated.

Follow up of HCWs Exposed to HIV

Postexposure testing

HIV antibody testing should be performed for at least 6 months postexposure (e.g., at 6 weeks, 12 weeks, and 6 months). A final post-exposure HIV test should probably be done 12 months after exposure. HIV testing should be performed on any HCW who has an illness that is compatible with an acute retroviral syndrome, regardless of the interval since exposure.

Monitoring an management of PEP Toxicity

If PEP is used, drug-toxicity monitoring should be performed at baseline and again 2 weeks after starting PEP. This should include a complete blood count and renal and hepatic chemical function tests. Monitoring for evidence of hyperglycemia should be included for HCWs whose regimen includes any PI; if the HCW is receiving IDV, monitoring for crystalluria, hematuria, hemolytic anemia, and hepatitis also should be included.

Counseling and Education

Although HIV infection following an occupational exposure occurs infrequently, the emotional impact of the exposure often is substantial.

HIV exposed HCWs should be advised to use the following measures to prevent secondary transmission during the follow-up period, especially during the first 6-12 weeks after the exposure when most HIV infected persons are expected to seroconvert: use sexual abstinence or condoms to prevent sexual transmission and to avoid pregnancy; and refrain from donating blood, plasma, organs, tissue, or semen. If the exposed HCW is breastfeeding, she should be counseled about the risk for HIV transmission through breast milk, and discontinuation of breastfeeding should be considered, especially following high risk exposures. If the HCW chooses to receive PEP, temporary discontinuation of breastfeeding while she is taking PEP should be considered to avoid exposing the infant to these agents.

Exposed HCWs should be advised to seek medical evaluation for any acute illness that occurs during the follow-up period.

Exposed HCWs who choose to take PEP should be advised of the importance of completing the prescribed regimen.

Recommendations for the Selection of Drugs for PEP

Two regimens for PEP are provided: a “basic” two drug regimen that should be appropriate for most HIV exposures and an “expanded” three drug regimen that should be used for exposures that pose an increased risk for transmission or where resistance to one or more antiretroviral agents is known or suspected.

Basic and expanded post exposure prophylaxis regimens

Regimen Category	Application	Drug regimen
Basic	Occupational HIV exposures for which there is a recognized transmission risk (Figure 1).	4 weeks (28 days) of both zidovudine 600 mg every day in divided doses (i.e., 300 mg twice a day, 200 mg three times a day, or 100 mg every4 hours) **and** lamivudine 150 mg twice a day.
Expanded	Occupational HIV exposures that pose an increased risk for transmission (e.g., larger volume of blood and/or higher virus titer in blood) (figure 1).	Basic regimen plus either indinavir 800 mg every 8 hours or nelfinavir 750 mg three times a day.*

***** Indinavir should be taken on an empty stomach and with increased fluid consumption (i.e., drinking six 8 oz glasses of water throughout the day); nelfinavir should be taken with meals.

Situations That Require Special Consideration

Resistance of the Source Virus to Antiretroviral Drugs

If the source person's virus is known or suspected to be resistant to one or more of the drugs included in the PEP regimen, the selection of drugs to which the source person's virus is unlikely to be resistant is recommended.

Known or suspected Pregnancy in the HCW

Pregnancy should not preclude the use of optimal PEP regimens, and PEP should not be denied to an HCW solely on the basis of pregnancy.

HIV Post Exposure Prophylaxis Resources and Registries

Resource or Registry	Contact Information
National Clinicians' Postexposure Hotline	Telephone: (888) 448-4911
HIV Postexposure Prophylaxis Registry	Telephone: (888) 737-4448 or (888) PEP-4HIV Write: 1410 Commonwealth Dr. Suite 215 Wilmington, NC 28405
Antiretroviral Pregnancy Registry	Telephone: (800) 258-4263 Fax: (800) 800-1052 Write: 1410 Commonwealth Dr Suite 215 Wilmington, NC 28405
Food and Drug Administration (for reporting unusual or severe toxicity to antiretroviral agents	Telephone: (800)332-1088
CDC (for reporting HIV seroconversion in health care workers who received PEP)	Telephone: (404) 639-6425

F. Tuberculosis
   1. Document exposure
   2. Obtain TB skin test as soon as possible. If there has been a previous positive reaction to the TB skin test, obtain chest x-ray as soon as possible.
   3. Consult Medical Director, personal physician or emergency room physician if the test results are positive.
   4. If the initial TB testing is negative (non-reactive), repeat TB skin test (or chest x-ray) at 3 months.

College Station Fire Department

Blood Borne Pathogen Infection Control Plan

SECTION I

PURPOSE OF THE PLAN

One of the goals of the College Station Fire Department is to promote safe work practices in an effort to minimize the incidence of illness and injury experienced by employees. Relative to this goal, OSHA has enacted the Bloodborne Pathogens Standard, regulation number 29 CFR 1910.1030, and a standard for Occupational Exposure to Tuberculosis, 29 CFR 1910.134. The purpose of the Bloodborne Pathogen Standard is to "reduce occupational exposure to Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV) and other bloodborne pathogens" that employees may encounter in their workplace. The Tuberculosis Standard enforces the Guidelines for Preventing the Transmission of Tuberculosis in Health-Care Facilities. The Center for Disease Control and Infection (CDC) sets the minimum level of respiratory protection to be used under this guideline.

The College Station Fire Department believes that there are a number of "good general principles" that should be followed when working with transmissible pathogens, whether they are airborne or bloodborne. These include:

* It is prudent to minimize all exposure to contagious pathogens.

* Risk of exposure to contagious pathogens should never be underestimated.

* Our department should institute as many work practice and engineering controls as possible to eliminate or minimize employee exposure to contagious pathogens.

We have implemented this Exposure Control Plan to meet the letter and intent of OSHA's Bloodborne Pathogens Standard and Occupational Exposure to Tuberculosis, and also the NFPA Standard. The objective of this plan is twofold:

* To protect our employees from the health hazards associated with contagious pathogens.

* To provide appropriate treatment and counseling should an employee be exposed to contagious pathogens.

SECTION II

GENERAL PROGRAM MANAGEMENT

A. Responsible Persons

There are four major "Categories of Responsibility" that are central to the effective implementation of our Exposure Control Plan. These are:

* The "Exposure Control Officer".

* Department Managers and Supervisors.

* Education/Training Instructors.

* Our Employees.

Exposure Control Officer

The "Exposure Control Officer" will be responsible for overall management and support of our department's Exposure Control Program. Activities which are delegated to the Exposure Control Officer typically include, but are not limited to:

* Overall responsibility for implementing the Exposure Control Plan for the entire operation.

* Working with management and other employees to develop and administer any additional transmissible pathogen related policies and practices needed to support the effective implementation of this plan.

* Looking for ways to improve the Exposure Control Plan, as well as to revise and update the plan when necessary.

* Collecting and maintaining a suitable reference library on the Bloodborne Pathogens Standard, Guidelines for Preventing the Transmission of Tuberculosis in Health-Care Facilities, and any other transmissible pathogen safety and health information.

* Knowing current legal requirements concerning transmissible pathogens.

* Conducting periodic audits to maintain an up-to-date Exposure Control Plan.

A BATTALION CHIEF has been appointed as the department's Exposure Control Officer.

Supervisors

Supervisors are responsible for exposure control in their areas. They work directly with the Exposure Control Officer and our employees to ensure that proper exposure control procedures are followed.

Education/Training Chief

Our Education/Training Chief will be responsible for providing information and training to all employees who have the potential for exposure to transmissible pathogens. Activities falling under the direction of the Chief include:

* Maintaining an up-to-date list of group personnel requiring training (in conjunction with management).

* Developing suitable education/training programs.

* Scheduling periodic training seminars for employees.

* Maintaining appropriate training documentation such as "Attendance Sheets," quizzes, etc.

* Periodically reviewing the training programs with the Exposure Control Officer and Supervisors to include appropriate new information.

A BATTALION CHIEF has been selected to be the departments Education/Training Chief.

Employees

As with all of our department's activities, our employees have the most important role in our transmissible disease compliance program, for the ultimate execution of much of our Exposure Control Plan rests in their hands. In this role they must do things such as:

* Know what tasks they perform that have occupational exposure.

* Attend the contagious disease training sessions.

* Plan and conduct all operations in accordance with our work practice controls.

* Develop good personal hygiene habits.

B. AVAILABILITY OF THE EXPOSURE CONTROL PLAN TO EMPLOYEES

To assist our employees with their efforts, our department's Exposure Control Plan is available to our employees at any time. Employees are advised of this availability during their education/training sessions. Copies of the Exposure Control Plan are kept in the following locations:

* Risk Managers Office

* Employee Policy Hand Book

C. REVIEW AND UPDATE OF THE PLAN

We recognize that it is important to keep our Exposure Control Plan up-to-date. To ensure this, the plan will be reviewed and updated under the following circumstances:

* Annually, on or before October 1st of each year.

* Whenever new or modified tasks and procedures are implemented which affect occupational exposure of our employees.

* Whenever the jobs of our employees are revised such that new instances of occupational exposure may occur.

* Whenever we establish new functional positions within our operations that may involve exposure to transmissible pathogens.

SECTION III

EXPOSURE DETERMINATION

One of the keys to implementing a successful Exposure Control Plan is to identify exposure situations employees may encounter. To facilitate this in our operations, we have prepared the following lists:

* Job classifications in which all employees have occupational exposure to transmissible pathogens.

* Job classifications in which some employees have occupational exposure to transmissible pathogens.

* Tasks and procedures in which occupational exposure to transmissible pathogens occur (these tasks and procedures are performed by employees in the job classifications shown on the two previous lists).

The initial list was compiled on or before January 1, 1993.

A BATTALION CHIEF will work with supervisors to revise and update these lists as our tasks, procedures, and classifications change.

SECTION IV

METHODS OF COMPLIANCE

We understand that there are a number of areas that must be addressed in order to effectively eliminate or minimize exposure to transmissible pathogens in our operations. The first five areas we deal with in our plan are:

* The use of Universal Precautions.

* Wearing HEPA respirators.

* Pre-employment, post-exposure, and annual PPD skin testing.

* Establishing appropriate Engineering Controls.

* Implementing appropriate Work Practice Controls.

* Using necessary Personal Protective Equipment.

* Implementing appropriate Housekeeping Procedures.

* Eliminating exposure to employees with transmissible diseases.

Each of these areas is reviewed with our employees during their transmissible disease pathogens related training (see the "Information and Training" section of this plan for additional information). By rigorously following the requirements of OSHA's Bloodborne Pathogens Standard, Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Facilities, and NFPA #1581 in these five areas, we feel that we will eliminate or minimize our employees occupational exposure to contagious pathogens as much as is possible.

A. UNIVERSAL PRECAUTIONS

In our department we have begun the practice of "Universal Precautions" on June 1, 1992. As a result, we treat all human blood and body fluids such as semen and vaginal secretions as if they are known to be infectious for HBV, HIV, and other bloodborne pathogens.

In circumstances where it is difficult or impossible to differentiate between body fluid types, we assume all body fluids to be potentially infectious.

A BATTALION CHIEF is responsible for overseeing our Universal Precautions Program.

B. HEPA RESPIRATORS

The use of HEPA respirators is mandatory when a patient is suspected or known to have Tuberculosis (TB). HEPA respirators exceed the Center for Disease Control's guidelines for respiratory protection and are the recommended form of protection while exposed to TB. These respirators are fit-tested annually using a smoke test.

A BATTALION CHIEF is responsible for overseeing HEPA respirator usage and fit-test.

C. SKIN TESTING

The standard method to identify TB infection is through a TB skin test. This test is administered under three conditions:

1. Pre-Employment. The pre-employment TB skin test will be the Two-Step Testing procedure. This is an initial TB skin test, followed by a second test seven to fourteen days later (to evaluate the "booster effect"). Persons who have received the BCG vaccine are not exempt from TB skin testing (unless a history of a positive Mantoux skin test reaction has been documented and submitted). Reactions of 5mm or more are classified positive for the following groups:

    a. Recent close contacts to known tuberculosis cases.
    b. Individuals who are HIV (+) or at high risk for HIV infection
    c. Persons who have chest x-rays with fibrotic lesions likely to present old healed tuberculosis

    Reactions of 10mm or more shall be considered a positive for all other individuals. The results will be used as the valid baseline for the individual.

    Any individual with a positive skin test must contact his/her personal physician and submit a medical evaluation, including extrapulmonary tuberculosis findings, in order to be considered for employment. Any person with active TB disease will not be considered for employment.

2. Following exposure. Employees are tested immediately following an exposure, and three months after the exposure to determine the possible on-duty exposure (TB can be acquired in any setting).

3. Annual testing. Annual testing is performed to identify employees who may have unknowingly been infected with TB either through work duties or in an off-duty setting.

The TB skin testing program was initiated on May 1, 1995.

A BATTALION CHIEF is responsible for overseeing TB skin testing.

D. ENGINEERING CONTROLS

One of the key aspects to our Exposure Control Plan is the use of Engineering Controls to eliminate or minimize employee exposure to transmissible pathogens. As a result, employees use cleaning maintenance and other equipment that is designed to prevent contact with blood or other potentially infectious materials.

A BATTALION CHIEF periodically works with supervisors to review tasks and procedures performed in our operations where engineering controls can be implemented or updated. As part of this effort, a survey was completed on August 1, 1993 identifying three things:

* Operations where engineering controls are currently employed.

* Operations where engineering controls can be updated.

* Operations currently not employing engineering controls, but where engineering controls could be beneficial.

The results of this survey can be found on the following pages.

Each of these lists is reexamined during our annual Exposure Control Plan review and opportunities for new or improved engineering controls are identified. Any existing engineering control equipment is also reviewed for proper function and needed repair or replacement daily, in conjunction with the supervisor where the equipment is located.

In addition to the engineering controls identified on these lists, the following engineering controls are used throughout our operations:

* Hand washing facilities (or antiseptic hand cleansers and towels or antiseptic towelettes), which are readily accessible to all employees who have the potential for exposure.

* Self-Sheathing needles.

* Containers for contaminated reusable sharps having the following characteristics:
  - Puncture-resistant.
  - Color-coded or labeled with a biohazard warning label.
  - Leak-proof on the sides and bottom.

* Specimen containers which are:

  - Leak-proof.
  - color-coded or labeled with a biohazard warning label.
  - Puncture-resistant, when necessary.

E. WORK PRACTICE CONTROLS

In addition to engineering controls, our department uses a number of Work Practice Controls to help eliminate or minimize employee exposure to transmissible pathogens. Many of these Work Practice Controls have been in effect for some time. Any controls that we are using for the first time will be fully implemented before January 1, 1993.

A BATTALION CHIEF is responsible for overseeing the implementation of these Work Practice Controls. He will work in conjunction with supervisors and our department's training coordinator to effect this implementation.

Our department has adopted the following Work Practice Controls as part of our Transmissible Pathogens Compliance Program:

* Employees wash their hands immediately, or as soon as feasible, after removal of potentially contaminated gloves or other personal equipment.

* Following any contact of body areas with blood or any other infectious materials, employees wash their hands and any other exposed skin with soap and water as soon as possible. They also flush exposed mucous membranes with water.

* Contaminated needles and other contaminated sharps are not bent, recapped or removed unless:

  - It can be demonstrated that there is no feasible alternative.
  - The action is required by specific medical procedure.
  - In the two situations above the recapping or needle removal is accomplished through the use of a medical device or a one- handed technique.

* Contaminated reusable sharps are placed in appropriate containers immediately, or as soon as possible, after use.

* Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses is prohibited in work areas or on apparatuses where there is potential for exposure to transmissible pathogens.

* Food and drink is not kept in refrigerators, freezers, on countertops or in other storage areas where blood or other potentially infectious materials are present.

* All procedures involving blood or other infectious materials must minimize splashing, spraying or other actions generating droplets of these materials.

* Specimens of blood or other materials are placed in designated leak-proof containers, appropriately labeled, for handling and storage.

* If outside contamination of a primary specimen container occurs, that container is placed within a second leak proof container, appropriately labeled, for handling and storage. (If the specimen can puncture the primary container, the secondary container must be puncture-resistant as well.

* Equipment which becomes contaminated is examined prior to servicing or shipping, and decontaminated as necessary (unless it can be demonstrated that decontamination is not feasible).

  - An appropriate biohazard warning label is attached to any contaminated equipment, identifying the contaminated portions.
  - Information regarding the remaining contamination is conveyed to all affected employees, the equipment manufacturer and the equipment service representative prior to handling, servicing or shipping.

When a new employee comes to our department, or an employee changes jobs within our department, the following process takes place to ensure that they are trained in the appropriate work practice controls:

* The employee's job classification and the tasks and procedures that they will perform are checked against the Job Classifications and Task Lists which we have identified in our Exposure Control Plan as those in which occupational exposure occurs.

* If the employee is transferring from one job to another within our department, the job classifications and task/procedures pertaining to their previous position are also checked against these lists.

* Based on this "cross-checking" the new job classifications and/or tasks and procedures which will bring the employee into occupational exposure situations are identified.

* The employee is then trained by the department's Training Coordinator or another instructor regarding any work practice controls that the employee is not experienced with.

F. PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment is our employees "last line of defense" against transmissible pathogens. Because of this, our department provides (at no cost to our employees) the Personal Protective Equipment that they need to protect themselves against such exposure. This equipment includes, but not limited to:

* Gloves.

* Safety glasses.

* Goggles.

* Face shields/masks.

* Masks and HEPA respirators.

* Coats/jackets.

Hypoallergenic gloves, glove liners and similar alternatives are readily available to employees who are allergic to the gloves our department normally uses.

A BATTALION CHIEF, working with department supervisors, is responsible for ensuring that all vehicles and work areas have appropriate personal protective equipment available to employees.

Our employees are trained regarding the use of the appropriate personal protective equipment for the job classifications and tasks/procedures they perform. Initial training about personal protective equipment was completed in our department on our before Nov. 1, 1993. Additional training is provided, when necessary, if an employee takes a new position or new job functions are added to their current position.

To determine whether additional training is needed the employee's previous job classification and tasks are compared to those for any new job or function that they undertake. Any needed training is provided by their immediate supervisor or personnel working with our department's Training Coordinator.

To ensure that personal protective equipment is not contaminated and is in the appropriate condition to protect employees from potential exposure, we adhere to the following practices:

* All personal protective equipment is inspected periodically and repaired or replaced as needed to maintain its effectiveness.

* Reusable personal protective equipment is cleaned, laundered and decontaminated as needed.

* Single-use personal protective equipment (or equipment that cannot, for whatever reason, be decontaminated) is disposed of in our Bio- Hazard waste containers.

To make sure that this equipment is used as effectively as possible, our employees adhere to the following practices when using their personal protective equipment:

* Any garments penetrated by blood or other infectious materials are removed immediately, or as soon as is feasible.

* All potentially contaminated personal protective equipment is removed prior to leaving an accident/incident site, if possible (or as soon as is feasible).

* Gloves are worn in the following circumstances:
  - Whenever employees anticipate hand contact with potentially infectious materials.
  - When handling or touching contaminated items or surfaces.

* Disposable gloves are replaced as soon as practical after contamination or if they are torn, punctured or otherwise lose their ability to function as an "exposure barrier".

* Utility gloves are decontaminated for reuse unless they are cracked, peeling, torn or exhibit other signs of deterioration, at which time they are disposed of.

* Masks and eye protection (such as goggles, face shields, etc.) are used whenever splashes or sprays may generate droplets of infectious materials.

* Protective clothing (such as gowns) is worn whenever potential exposure to the body is anticipated.

G. HOUSEKEEPING

Maintaining our equipment and facility in a clean and sanitary condition is an important part of our Transmissible Pathogens Compliance Program. To facilitate this, we have set up a written schedule for cleaning and decontamination of equipment and the appropriate areas of the facility. The schedule provides the following information:

* The equipment or area to be cleaned/decontaminated.

* Day/time of scheduled work.

* Cleansers and disinfectants to be used.

* Any special instructions that are appropriate.

Using this schedule, our department employs the following practices:

* All equipment and surfaces are cleaned and decontaminated after contact with blood or other potentially infectious materials:
  - After the completion of medical procedures.
  - Immediately (or as soon as feasible) when surfaces are overtly contaminated.
  - After any spill of blood or infectious materials.
  - At the end of the work shift if the surface may have been contaminated during that shift.

* Protective coverings (such as linens, plastic trash bags or wrap, aluminum foil or absorbent paper) are removed and replaced:
  - As soon as it is feasible when overtly contaminated.
  - At the beginning of the work shift if they may have been contaminated during the shift.

* All trash containers, pails, bins, and other receptacles intended for use routinely are inspected, cleaned and decontaminated as soon as possible if visibly contaminated.

* Potentially contaminated broken glassware is picked up using mechanical means (such as dustpan and brush, tongs, forceps, etc.).

* Contaminated reusable sharps are stored in containers that do not require "hand processing".

A BATTALION CHIEF is responsible for setting up our cleaning and decontamination schedule and making sure it is carried out within our operations.

We are also very careful in handling regulated waste (including used bandages, disposed of personal protective equipment and other potentially infectious materials). Starting on or before October 1, 1993, the following procedures are used with all of these types of wastes:

* They are discarded or "bagged" in containers that are:
  - Closable.
  - Puncture-resistant if the discarded materials have the potential to penetrate the container.
  - Leak-proof if the potential for fluid spill or leakage exists.
  - Red in color or labeled with appropriate biohazard warning label.

* Containers for this regulated waste are placed in appropriate locations in our vehicles and facilities within easy access of our employees and as close as possible to the sources of the waste.

* Waste containers are maintained upright, routinely replaced and not allowed to overfill.

* Contaminated laundry is handled as little as possible and is not sorted or rinsed where it is used.

* Whenever our employees move containers of regulated waste from one area to another the containers are immediately closed and placed inside an appropriate secondary container if leakage is possible from the first container.

H. EMPLOYEES WITH TRANSMISSIBLE DISEASE

Any employee who is diagnosed with a communicable disease that can be spread through general contact (breathing, coughing, speaking, touching) cannot report to work. To do so would place many employees and members of the public (especially the patients cared for on EMS units) at risk.

SECTION V

VACCINATION,

POST-EXPOSURE EVALUATION AND FOLLOW-UP

Everyone in our department recognizes that even with good adherence to all of our exposure prevention practices, exposure incidents can occur. As a result, we have implemented an Immunization/Vaccination Program, as well as set up procedures for post-exposure evaluation and follow-up should exposure to bloodborne pathogens occur.

A. VACCINATION PROGRAM

To protect our employees as much as possible from the possibility of Hepatitis B infection, tetanus, diphtheria, rubella, measles, polio, mumps and influenza, our department has implemented a vaccination program. This program is available, at no cost, to all employees who have occupational exposure to transmissible pathogens. As part of their bloodborne and airborne pathogens training, our employees have received information regarding Hepatitis B, tetanus, diphtheria, rubella, measles, polio, mumps, influenza vaccinations, including its safety and effectiveness. Our department will require tuberculosis screening annually, and after any exposure.

A BATTALION CHIEF is responsible for setting up and operating our vaccination program, which has been in effect since October 1, 1993.

Vaccinations are performed under the supervision of a licensed physician or other healthier professional. Employees taking part in the vaccination program are listed on the "Employees Eligible for Vaccination Form". Employees who have declined to take part in the program are listed as well, and have signed the "Vaccination Declination Form".

To ensure that all employees are aware of our vaccination program, it is thoroughly discussed in our bloodborne pathogens training. We also have posted "Vaccination Program Notices" in prominent places throughout our facility.

B. POST-EXPOSURE EVALUATION AND FOLLOW-UP

If one of our employees is involved in an incident where exposure to bloodborne Pathogens may have occurred there are two things that we immediately focus our efforts on:

* Investigating the circumstances surrounding the exposure incident.

* Making sure that our employees receive medical consultation and treatment (if required) as expeditiously as possible.

A BATTALION CHIEF investigates every exposure incident that occurs in our operations. This investigation is initiated within 72 hours after the incident occurs and involves gathering the following information:

* When the incident occurred.
  - Date and time.

* Where the incident occurred.

* What potentially infectious materials were involved in the incident.
  - Type of material (blood, etc.).

* Duration of exposure.

* Source of material.

* Under what circumstances the incident occurred.
  - Type of work being performed.

* How the incident was caused.

* Personal protective equipment being used at the time of the incident.

* Actions taken as a result of the incident.
  - Employee decontamination.
  - Cleanup.
  - Notifications made.

After this information is gathered it is evaluated, a written summary of the incident and its causes is prepared and recommendations are made to Staff for avoiding similar incidents in the future.

In order to make sure that our employees receive the best and most timely treatment if an exposure to transmissible pathogens should occur; our department has set up a comprehensive post-exposure evaluation and follow-up process. We use this "checklist" to verify that all the steps in the process have been taken correctly. This process was implemented on or before November 1, 1993 and is overseen by the following people:

* Battalion Chief

* Asst. Chief Operations

* Fire Chief

We recognize that much of the information involved in this process must remain confidential, and will do everything possible to protect the privacy of the people involved.

As the first step in this process we provide an exposed employee with the following confidential information:

* Documentation regarding the routes of exposure and circumstances under which the exposure incident occurred.

* Identification of the source individual (unless infeasible or prohibited by law).

Next, if possible, we test the source individual's blood or other fluids, to determine level of transmissibility. This information will also be made available to the exposed employee, if it is obtained. At that time, the employee will be made aware of any applicable laws and regulations concerning disclosure of the identity and infectious status of a source individual.

Finally, we collect and test the blood or perform clinical tests of the exposed employee to determine infectious status.

Once these procedures have been completed, an appointment is arranged for the exposed employee with a qualified healthcare professional to discuss the employee's medical status. This includes an evaluation of any reported illnesses, as well as any recommended treatment.

C. INFORMATION PROVIDED TO THE HEALTHCARE PROFESSIONAL

To assist the healthcare professional we forward a number of documents to them, including the following:

* A description of the exposure incident.

* The exposed employee's relevant medical records.

* Other pertinent information.

D. HEALTHCARE PROFESSIONAL'S WRITTEN OPINION

After the consultation, the healthcare professional provides our department with a written opinion evaluating the exposed employee's situation. We, in turn, furnish a copy of this opinion to the exposed employee.

In keeping with this process, emphasis on confidentiality, the written opinion will contain only the following information:

* The risk status of other employees being around exposed employee

* Whether Vaccination is indicated for the employee

* Whether the employee has received the Vaccination

* Whether prophylactic chemotherapy is recommended

* Whether prophylactic chemotherapy is being implemented

* Confirmation that the employee has been informed of the results of the medical evaluation.

* Confirmation that the employee has been told about any medical conditions resulting from the exposure incident which require further evaluation or treatment.

All other findings or diagnoses will remain confidential and will not be included in the written report.

E. MEDICAL RECORD KEEPING

To make sure that we have as much medical information available to the participating healthcare professional as possible, our department maintains comprehensive medical records on our employees.

A BATTALION CHIEF is responsible for setting up and maintaining these records, which include the following information:

* Name of the employee.

* Social security number of the employee.

* A copy of the employee's Vaccination status.
  - Dates of any vaccinations.
  - Medical Records relative to the employee's ability to receive vaccination.

* Dates and results (including measurements) of TB skin test.

* Copies of the results of the examinations, medical testing and follow-up procedures which took place as a result of an employee's exposure to transmissible pathogens.

* A copy of the information provided to the consulting healthcare professional as a result of any exposure to transmissible pathogens.

As with all information in these areas, we recognize that it is important to keep the information in these medical records confidential. We will not disclose or report this information to anyone without our employee's written consent (except as required by law).

SECTION VI

LABELS AND SIGNS

For our employees, one of the warnings of possible exposure to bloodborne pathogens is biohazard labels. Because of this, we have implemented a comprehensive biohazard warning labeling program in our operations, or when appropriate, using red "color coded" containers.

A BATTALION CHIEF is responsible for setting up and maintaining this program.

On or before December 1, 1993 the following items in our operations were labeled:

* Contaminated equipment.

* Containers of regulated waste.

* Sharps disposal containers

* Other containers used to store, transport or ship blood and other infectious materials.

* Laundry bags and containers.

On labels affixed to contaminated equipment we have also indicated which portions of the equipment are contaminated.

SECTION VII

INFORMATION AND TRAINING

Having well informed and educated employees is extremely important when attempting to eliminate or minimize our employees' exposure to bloodborne pathogens. Because of this, all employees who have the potential for exposure to bloodborne pathogens are put through a comprehensive training program and furnished with as much information as possible on this issue.

This program was set up so that employees would receive the required training on or before October 1, 1993. Employees will be retrained at least annually to keep their knowledge current. Additionally, all new employees, as well as employees changing jobs or job functions, will be given any additional training their new position requires at the time of their new job assignment.

A BATTALION CHIEF is responsible for seeing that all employees who have potential exposure to bloodborne pathogens receive this training. He will be assisted by the following instructors:

* Battalion Chief/Training

A. TRAINING TOPICS

The topics covered in our training program include, but are not limited to, the following:

* The Bloodborne Pathogens Standard itself.

* The epidemiology and symptoms of bloodborne diseases.

* The modes of transmission of bloodborne diseases.

* Our departments Exposure Control Plan

* Appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.

* A review of the use and limitations of methods that will prevent or reduce exposure, including:
  - Engineering controls.
  - Work practice controls
  - Personal protective equipment.

* Selection and use of personal protective equipment including:
  - Types available
  - Proper use
  - Location within the apparatuses
  - Removal
  - Handling
  - Decontamination
  - Disposal

* Visual warnings of biohazards within our facilities and apparatus including labels, signs and "color-coded" containers.

* Information on Vaccinations, including its:

  - Efficacy
  - Safety
  - Method of Administration
  - Benefits of Vaccination
  - Our department's free vaccination program

* Actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.

* The procedures to follow if an exposure incident occurs, including incident reporting.

* Information on the post-exposure evaluation and follow-up, including medical consultation that our department will provide.

B. TRAINING METHODS

Our department's training presentations make use of several training techniques including, but not limited to, those below:

* Classroom type atmosphere with personal instruction.

* Videotape programs.

* Training manuals/employee handouts.

* Employee Review Sessions.

C. RECORD KEEPING

To facilitate the training of our employees, as well as to document the training process, we maintain training records containing the following information:

* Dates of all training sessions.

* Contents/summary of the training sessions.

* Names and qualifications of the instructors.

* Names of employees attending the training sessions.

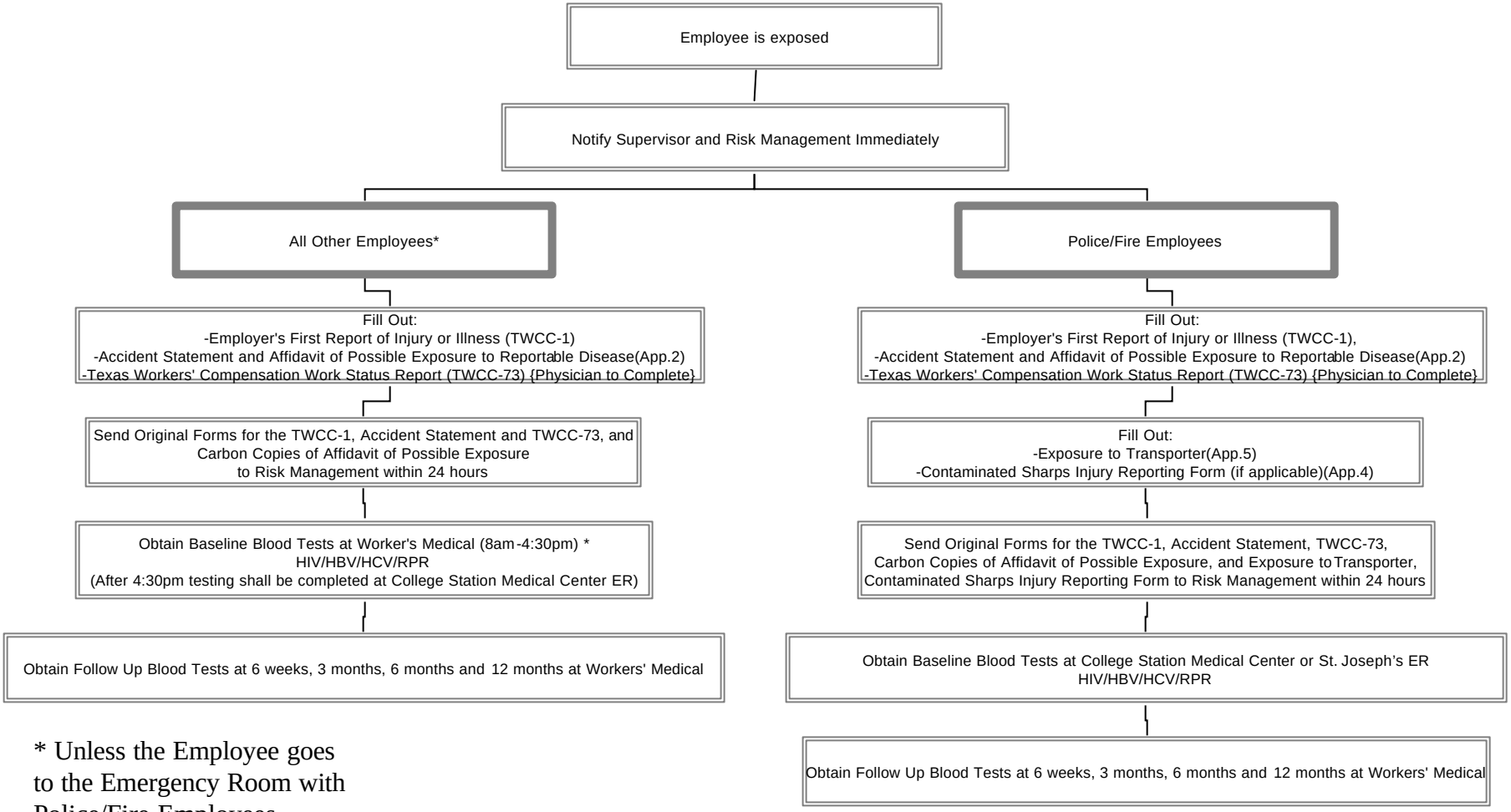
These training records are available for examination and copying to our employees and their representatives.

Infection Control Forms — Appendix C

The College Station Fire Department has adopted the Blood Borne Pathogen Control Plan that is contained in Appendix B. The intent of this section is to provide an overview of the forms to be used if the employee is exposed to infection material.

Appendix 8

BLOODBORNE PATHOGEN EXPOSURE REPORTING PROCESS



* Unless the Employee goes to the Emergency Room with Police/Fire Employees

Appendix 1

Hepatitis B Vaccination
Declination Statement

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring Hepatitis B Virus (HBV) infection.

I have been given the opportunity to be vaccinated with Hepatitis B vaccine, at no charge to myself. However, I decline Hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring Hepatitis B, a serious disease.

If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with Hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee Signature:_____ Date:_____

Employee Name:_____ Job Title:_____

Appendix 2

Affidavit of Possible Exposure to Reportable Disease/Follow-Up

Employee name_____ SS#_____
Home phone: _____ Work phone: _____

Date & time of exposure ____/____/____ ____: ____ am pm Location:_____

Type of Exposure: Needle Stick Laceration Bite Splash Other _____

Circumstances of Exposure:
_____
_____
_____

Identifiable Source

Name: _____ Location: _____

Blood Contamination screen drawn on source? Yes No

Attending MD Name: _____

Known Communicable Disease: _____

Employee's Medical History and Treatment:

Employee completed Hepatitis B Vaccine series?	Yes	No
HIV consent and Pre-HIV counseling MD signature?	Yes	No
Blood contamination screen drawn on employee?	Yes	No
Post exposure protocol (PEP) initiated?	Yes	No
Baseline (PEP) labs drawn?	Yes	No
PEP counseling by MD completed?	Yes	No
PEP consent or declinations signed?	Yes	No
Employee instructed to call and make follow-up appt. in 3 days?	Yes	No
Copy of all medical records prepared for Employee Health Services?	Yes	No

Nurse signature (initial BBP visit): _____Date: _____

Source Blood Contamination Results: HIV____ HbsAG____ RPR____ HCV____

Employee Blood Contamination Results:

AHBsAG____ HIV____ Other labs_____

Post Exposure Follow-up: (employee please initial)

____ I have been informed of the results of the post exposure evaluation.
____ I have been informed of any medical conditions resulting from exposure to blood or other potentially infectious materials which require evaluation or treatment.
____ I have been counseled about adherence to Universal Precautions and maintaining confidentiality of the sources' medical information.

Employee Signature: _____Date: _____

Nurse's Signature: _____Date: _____

I hereby declare that the facts stated in this notice are true.

Signature_____

Subscribed and sworn to before me this ____ day of _____, _____

_____
Notary Public Brazos County, Texas

Appendix 3

Hepatitis B Vaccination
Election and Consent

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring Hepatitis B Virus (HBV) infection.

I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. I agree and elect to participate in the Hepatitis B immunization program.

Signature_____ Date_____

Employee Name_____ Division_____

TEXAS DEPARTMENT OF HEALTH
Infectious Disease Epidemiology & Surveillance Division

Form E59-10666 (7/00)

Contaminated Sharps Injury Reporting Form

The facility where the injury occurred should complete the form and submit it to the local health authority where the facility is located. If no local health authority is appointed for this jurisdiction, submit to the regional director of the Texas Department of Health regional office in which the facility is located. Address information for regional directors can be obtained on the Internet at http://www.tdh.state.tx.us/brlho/regions.htm. The local health authority, acting as an agent for the Texas Department of Health will receive and review the report for completeness, and submit the report to:

IDEAS, Texas Department of Health, 1100 West 49th Street, Austin, Texas 78756-3199

Copies of the Contaminated Sharps Injury Reporting Form can be obtained on the Internet at http://www.tdh.state.tx.us/ideas/report/sharps.htm or from the Texas Department of Health Public Health Regional Offices.

Please complete a form for each exposure incident involving a sharp.

Facility *(agency/institution)* where injury occurred *(Use block letters to fill in boxes.)*

Street address *(no P.O. Boxes)*

City **County** **Zip code**

Street address of reporter if different from facility *(agency/institution)* where injury occurred *(no P.O. Boxes)*

Date filled out *(mm/dd/yy)* __ – __ – __ **By *(reporter)*** **Phone number**

---

1. Date of injury *(mm/dd/yy)* __ – __ – __ **Time of injury** __ : __ F AM F PM **Age** __ **Sex of injured person** F **Male** F **Female**

2. Type and brand of sharp involved *(Fill in one circle and/or boxes as appropriate.)*

Needle *(nonsuture)*
- F Insulin syringe with needle
- F Tuberculin syringe with needle
- F __ - gauge needle factory-attached to syringe
- F Other syringe with needle
- F Prefilled cartridge syringe (ie, Tubex-type syringe)
- F Blood gas syringe
- F Syringe, other
- F Needle connected to IV line
- F Winged steel needle
- F IV catheter, loose
- F Vacuum tube collection
- F Other nonsuture needle _____

Surgical instrument or other sharp *(no glass)*
- F Lancet
- F Suture needle
- F Scalpel
- F Trocar
- F Staples
- F Wire
- F Other surgical instrument/nonglass sharp_____

Glass
- F Blood tube
- F Other tube
- F Slide
- F Ampule
- F Other glass: _____

Brand *(Fill in brand name or "unknown.")*

3. Original intended use of sharp *(Fill in one circle.)*
- F Injection, IM
- F Injection, SC/ID
- F Suturing, skin
- F Suturing, deep
- F Draw venous sample
- F Draw arterial sample
- F Cutting (surgery)
- F Start IV or set up heparin lock
- F Other injection/aspiration IV
- F Heparin or saline flush
- F Obtain body fluid/tissue sample
- F Finger stick/heel stick
- F Drilling
- F Electrocautery
- F Wiring
- F Contain specimen/pharmaceutical
- F Other _____
- F Unknown/NA

Contaminated Sharps Injury Reporting Form (continued)

4. Did the injury occur. . . . . the sharp was used for its original intended purpose? ***(Fill in one circle.)***

F Before ***(do not report to TDH)*** F During ***(go to 4a)*** F After ***(go to 4a)***

a. If the exposure occurred "During" or "After" the sharp was used, was it? ***(Fill in one circle.)***

F Because the patient moved during the procedure
F While disassembling
F While recapping
F While putting sharp into container
F Found in an inappropriate place (eg, table, bed, trash)
F Other_____

5. Did the device being used have engineered sharps injury protection?

F Yes ***(go to 5a)*** F No ***(go to 6)*** F Don't know ***(go to 6)***

a. Was the protective mechanism activated?

F Yes, fully ***(go to 5b)*** F Yes, partially ***(go to 5b)*** F No ***(go to 6)*** F Don't know ***(go to 6)***

b. Did the exposure incident occur. . . . . activation of the protective mechanism? ***(Fill in one circle.)***

F Before F During F After

6. Was the injured person wearing gloves? F Yes F No

7. Had the injured person completed a hepatitis B vaccination series? F Yes F No

8. Was there a sharps container readily available for disposal of the sharp? F Yes F No

9. Had the injured person received training on the exposure control plan in the 12 months prior to the incident? F Yes F No

10. Involved body part ***(Fill in one circle.)***

F Hand F Arm (but not hand) F Leg/foot F Face/head/neck F Torso (front or back)

11. Job classification of injured person ***(Fill in one circle.)***

F MD/DO
F PA
F CRNA/NP
F RN
F LVN
F Surgery assistant/OR tech
F Respiratory therapist
F Phlebotomist/lab tech
F Aide (eg, CNA, HHA)
F EMT/Paramedic
F Firefighter
F Police
F Dentist
F Dental hygienist
F School personnel (not nurse)
F Housekeeper/laundry
F Chiropractor
F Other_____

Employment status of injured person ***(Fill in one circle.)***

F Employee F Contractor/Contract employee F Student F Volunteer F Other_____

12. If not directly employed by reporter, name of employer/service/agency/school ***(Optional.)***

_____

13. Location/facility/agency in which sharps injury occurred ***(Fill in one circle.)***

F Hospital
F Clinic
F Outpatient treatment (eg dialysis, infusion therapy)
F Laboratory (freestanding)
F Bloodbank/center/mobile
F EMS/fire/police
F Correctional facility
F Residential facility (eg, MHMR, shelter)
F School
F Home health
F Other_____

14. Work area where sharps injury occurred ***(Fill in one circle for best choice.)***

F Patient/resident room
F Floor, not patient room
F Critical care unit
F Emergency dept
F Rescue setting (non ER)
F Pre-op or PACU
F L&D
F Procedure room
F Dialysis room/center
F Seclusion room
F Medical/outpatient clinic
F Laboratory
F Autopsy/pathology
F Blood bank/center/mobile
F Infirmary
F Field (non EMS)
F Service/utility area (eg, laundry)
F Home
F Other_____

Appendix 5

REPORT OF POSSIBLE EXPOSURE TO TRANSPORTER

Any transporter who has one of the exposures listed in #2 below must complete this form immediately. The completed form should be placed in the designated receptacle provided by the hospital where the patient is delivered. Items 1-5 are to be completed by the transporter. Questions in the box are to be completed by the hospital.

Please Print Legibly

Items 1-5 to be completed by the Transporter.

1. The exposure described in #2 below occurred in the care of the following patient/person:

____ on ____/____/____ at
(Patients Name)

________am/pm taken to: ____
(Facility)

- -

Hospitals: Cut on dotted line and send this lower portion only to the health authority.
You may wish to keep a copy for your records.

2. Describe the details of contact with blood or body fluids.

TYPE OF EXPOSURE (Check those that apply)	ADDITIONAL DESCRIPTION
____ Mouth to mouth resuscitation	___________________________
____ Intubation	___________________________
____ Throat Exam	___________________________
____ Suctioning	___________________________
____ Blood and/or	
____ body fluid contact with:	
____ Eyes	___________________________
____ Nose	___________________________
____ Mouth	___________________________
____ Puncture/cut w/needle or sharp object	___________________________
____ Open wound lesion	___________________________
____ Non-intact skin	___________________________

Self-first aid must be done as soon as possible following one of the above exposures. Rinse/Flush thoroughly the body part exposed to blood or body fluids.
Follow with anti-microbial scrubbing of the exposed area, if not contraindicated, (i.e. eyes, etc.)

3. Transporter Name: ____
   Telephone: (home)____________________________(work)___________________________
4. Name of Employer/Agency (EMS/Fire/Police): ______________________________________
   Address: _______________________ City: ___________________Phone: ______________

5. Transporter Signature: __________________________Date form completed: ___________

Transporter; Now place form in designated receptacle

TO BE COMPLETED BY THE HOSPITAL:

____ DISEASE IDENTIFIED ______________________________ ____/____/_____
(Name of disease) (Date specimen collected)

____ NO DISEASE IDENTIFIED DURING THIS HOSPITALIZATION

REPORTED TO HEALTH AUTHORITY BY TELEPHONE (for true exposures only)
Name of Agency __________________________Person Contacted ____________________
Date Contacted ____/____/____ By: ____________________________
Name/Title of Person completing this Section: ____________________________________
Signature: ____ Date ____/____/____

Appendix 7

Infection Control Telephone Contacts

The primary contact for Infection Control information is Risk Management:

Bill Cody, Risk Manager	764-3572
Sandra Gallaway, Claims Coordinator	764-3597
Dennis Ecklund, Safety Coordinator	764-6218

In the event that one of the above are not available, please contact the departmental infection control representative as follows:

Police Department-Chief Feldman	764-3605
Fire Department-Chief Thomas Goehl	764-3710
Public Works-Jim Smith	764-3808
Public Utilities-Karl Goldapp	764-3659
Len Jenicek, Alternate	764-3439
Parks-Vera Solis	764-3540

CITY OF COLLEGE STATION
Supervisor's Injury/Exposure Report
(To be completed immediately after accident)

Injury/Exposure Report: The City of College Station Safety Procedures provides that notice of an on-the-job injury must be reported to ***Sandra Gallaway, Risk Management*** by telephone (764-3597) the same day the employee reports the injury/illness. The Supervisors Injury/Exposure Report should be faxed (764-3899) or delivered to Risk Management as soon as investigation is complete.

Date Prepared	Date Reported	Supervisor

Name(Last, First, MI)	Dept.	Date of Injury	Time of Injury
			AM PM

Place an "X" in the appropriate box

	Severity Code		*For Fire Personnel Only*
	Fatality		Fire Station #1
	Disabling (lost time)		Fire Station #2
	Medical Treatment Only		Fire Station #3
	First Aid Only		Fire Station #4
			Fire Station #5

	Object of Injury		Body Part		Cause		Nature
			Right				
			Left				
	Chemical		Ankle		Climbing		Abrasion
	Floor/Walking Surface		Arm		Caught/under/between		Bite(Insect)
	Stairway/Steps		Back		Contact/Electricity		Bite(Animal)
	Ladder/Scaffolding		Eye		Contact Inhalation		Bruise/Contusion
	Hand Tool		Finger(s)		Fall from elevation		Burn
	Animal		Hand		Fall from same level		Carpal Tunnel
	Insect		Knee		Running		Cut/Laceration
	Poisonous Plant		Leg		Lifting/Carrying		Dislocation
	Box/Barrel/Container		Neck		Slip/Trip		Exposure
	Body Fluids		Shoulder		Training		Fracture
	Human		Trunk/Body		Twisted		Heat Exhaustion
	Vehicle		Wrist		Walking		Puncture
	Office Furniture/Equip		Respiratory(lungs)		Struck by/Against		Sprain/Strain
	Material Handled		Multiple body parts		Riding In/On		Trauma
	Other:		Other:		Other:		Other:

Description of Injury: _____

_____

What Condition of Tools, Equipment, or Work Area Contributed to Incident? (check box)					
	Close/Clearance/Congestion		Floors /Work Surfaces		Inadequate Housekeeping
	Defective Tools/Equip/Vehicle		Hazardous Placement		Inadequate Ventilation
	Equipment Failure		Inadequate Warning System		Equipment/Workstation Design
	Illumination		Inadequate Guards/Barriers		Other:

What Caused Or Influenced Substandard Conditions? (check box)					
	Abuse or Misuse		Inadequate Supervision		Inadequate Purchasing
	Wear and Tear		Improper Work Surface		Inadequate Maintenance
	Inadequate Tools/Equip/Material		Lack of Skill		Lack of Knowledge/Training
	Inadequate Capacity		Inadequate Engineering		Other:

What Action or Inaction Contributed To The Incident? (check box)					
	Failure to Make Secure		Failure to Warn/Signal		Under Influence Drugs/Alcohol
	Inadequate/Improper P.P.E Use		Used Defective Equipment		Horseplay/Distraction
	Operating at Improper Speed		Improper Lifting		Improper Loading
	Improper Technique				Other:

Preventive Measures: (What Corrective actions have been taken or are planned to prevent a recurrence?)					
	Repair/Replace Equipment		Corrective Counseling		Improve Clean-up Procedures
	Improve/Change Work Method		Improve Design/Const.		Install/Revise Guards/Device
	Use Other Materials/Supplies		Complete Task Analysis		Eliminate Congestion
	Improve Storage/Arrangement		Other:		

Employees Statement of What Happened: (Attach sheet for additional comments)	
Signature of Employee:	**Date:**

Supervisor's Description of Incident: (Attach sheet for additional comments)	
Signature of Supervisor:	**Date:**

Manager's Comments: (Attach sheet for additional comments)	
Signature of Manager:	**Date:**

WITNESSES:	
	Statements Attached

FOR RISK MANAGEMENT USE ONLY

Were the following City of College Station Safety Procedures Complied with?

- ☐ Injury reported to Risk Management same day employee reported injury/illness. If not, number of days late: _____
- ☐ Employee sought treatment with a Medical Provider that accepts Workers' Compensation
- ☐ Injured employee returned to Risk Management with the completed Medical Report following treatment.