

TRUMBULL COUNTY EMS PROTOCOL  
& PROCEDURES MANUAL 2012  
APPROVED November 30, 2011

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# Signature page verifying the current protocol for

---

(name of department)

For year \_\_\_\_\_

Ted Spirtos, M.D.,  
Chairperson, Joint Committee of EMS in Trumbull County  
Forum Health Trumbull Memorial Hospital  
EMS Director

This Protocol signed by me on

on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

---

(Ted Spirtos, M.D.)

James M. Sudimack, M.D.  
Medical Director, Emergency Department  
Forum Health Trumbull Memorial Hospital

This Protocol signed by me on

on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

---

(James Sudimack, M.D.)

State of Ohio, County of Trumbull  
Sworn to and subscribed to before me  
on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

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Notary Public

Affirmed by \_\_\_\_\_

(JCEMS board secretary)

This protocol is only valid with the proper signatures and department listed above.

**PRE-HOSPITAL  
MEDICAL PROTOCOL  
FOR ALL UNITS  
OPERATING UNDER THE MEDICAL AUTHORITY OF  
  
THE JOINT COMMITTEE  
OF  
EMERGENCY MEDICAL SERVICES  
IN  
TRUMBULL COUNTY**

**TCEMS PROTOCOL COMMITTEE:**

**TED SPIRTOS, M.D.**

**JAMES M. SUDIMACK, M.D.**

**GEORGE SNYDER, EMT-P, EMS COORDINATOR - FORUM HEALTH TMH**

**FRED STOSIK, EMT-P**

**TOM LAMBERT, EMT-P**

**DALE BRIGGS, EMT-B, secretary**

The Administrative Section of the Protocol will be re-evaluated on a annual basis. The Medical protocol sections are evaluated on a continuous basis.

This pre-hospital medical protocol is for use ONLY by Emergency Medical Service squads operating under medical authority of the Joint Committee of Emergency Medical Services in Trumbull County. This committee is sanctioned by the Trumbull County Medical Society, the 12th District Academy of Osteopathic Medicine and Forum Health Trumbull Memorial Hospital. Use of or reproduction of this protocol in its entirety or any part thereof is starkly prohibited without the express permission of the Joint Committee of Emergency Medical Services in Trumbull County.

Emergency Medical Technicians operating under the medical authority of the Joint Committee of Emergency Medical Services in Trumbull County are required to follow this protocol unless and intervening physician licensed to practice medicine in the State of Ohio (M.D. or D.O.) accepts full responsibility for deviation from the provisions of this document and accompanies the patient to the receiving hospital. This committee reserves the right to change this protocol at any time with proper notification.

For patients with suspected myocardial infarction, hypoglycemia, and other potentially life-threatening situations, all EMT-Basic and EW-Intermediate units will request assistance from a neighboring Paramedic unit while enroute to the scene, at the scene, or enroute to the hospital UNLESS the transport time is less than rendezvous time, with a Paramedic unit.

The Joint Committee of Emergency Medical Services in Trumbull County recommends that since intravenous therapy by itself does not benefit that cardiac patient, EMT-Basic units should not call for back up from EMT-Intermediate units. Any patient Paramedic unit should transport any patient suspected of having cardiopulmonary problems.

The physicians signing this document agree this protocol is acceptable and in agreement with current medical standards including ACLS and ATLC. These physicians further agree this protocol is, at the present time, the desirable method of pre-hospital medical care for patients by qualified Emergency Medical Technicians at the Basic, Intermediate, and Paramedic. These qualified Emergency Medical Technicians shall be certified to practice pre-hospital emergency medicine in the State of Ohio under medical authority of the Joint Committee of Emergency Medical as issued by the signing physicians.

**All Emergency Medical Service units operating under the medical authority of the Joint Committee of Emergency Medical Services are reminded that this protocol is for use in the pre-hospital setting only. This includes patient transports from:**

**Home to hospital  
Accident scene to hospital  
Extended Care facility to hospital**

**Any other type of transport, i.e. inter-facility transport of critical care patients or inter-facility transport of any other type of patient is the responsibility of the sending facility, the respective physician, and the transporting agency. The Joint Committee of Emergency Medical Services nor any of its signing physicians WILL NOT accept liability or responsibility for these types of transports.**

This protocol is reviewed on a monthly basis with changes effective on January 1 and July 1 of each year. The members of the board must be advised, in writing of any changes proposed to this protocol 7 days prior to any meeting at which a vote shall be taken to make these changes. The board upon 2/3 approval of those in attendance may waive the above mentioned rules and implementation shall be immediate.

# SECTION I

# ADMINISTRATION POLICIES

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# GUIDELINES FOR OBTAINING & RETAINING PERSONAL PROTOCOL TRUMBULL COUNTY

1. Company / Department will give personnel a copy of the current protocol for study purposes only.
2. All necessary paperwork will be presented to a committee representative and the protocol test given. Necessary paperwork includes:
  - a. Letter of recommendation from employer
  - b. Copy of American Heart A.C.L.S. card (EMT-P Only )
  - c. Copy of B.L.S. Healthcare provider card or other equivalent CPR certification for the professional rescuer or healthcare provider.
  - d. Copy of ATT, ITLS and /or PHTLS certificates (EMT-P Only )
    1. The first opportunity to take the Trumbull County Protocol test will be offered at the end of class. Test to be given by a JCEMS protocol board member. Otherwise one must contact the Protocol Testing sub-committee Chairman or member of the protocol committee to arrange a testing time and date.
    2. Test score must be 84% or higher to pass
    3. If unsuccessful, the candidate may elect to take the test two more times at his/her discretion during the following twelve months. A candidate may not retest sooner than 7 days upon failure of the protocol test and at least 7 days between the second and third testing. Upon failing the test a second time, the candidate must review the protocol with a member protocol chairman or designated protocol member. If the test is failed a third time, the candidate shall be required to take a board approved refresher course for their level of certification and meet with the board or protocol committee for discussion prior to taking their fourth test.
3. The EMT will be granted probationary protocol for 90 days after successfully passing the protocol test. The primary chief or administrator of the EMT's primary department will assign a board approved preceptor to the EMT. The primary preceptor will evaluate all of the EMT's runs.
4. Following completion of the probationary status, the primary preceptor will recommend the EMT be granted protocol to the secretary of the EMS board. The secretary will insure that the board has received all required copies of licenses for the level the EMT is functioning.
5. If for any reason the primary preceptor feels the EMT needs more probationary time ie EMT has not been active enough, the primary preceptor can request an 90 day extension to the secretary of the EMS board.

# **GUIDELINES FOR OBTAINING & RETAINING PERSONAL PROTOCOL (Continued)**

I-1-b

6. Reinstatement of protocol
  - a. EMS personnel who leave in “Good Standing” and return within a 6-month period will be automatically reinstated.
  - b. EMS personnel who leave in “Good Standing” and return after 6-month but prior to 18 months, can reactivate their protocol by passing the current protocol test.
  - c. Reinstatement after 18 months will fall under protocol requirements as stated above.
  
7. Receiving Final Protocol
  - a. The candidate will complete their respective class, testing for such class, ride time, initial runs and subsequent runs.
  - b. They will pass National Registry and the Trumbull County Protocol test.
  - c. Following completion of the probationary status, the primary preceptor will recommend the EMT be granted protocol. The protocol testing sub-committee chairman will review both levels and after receiving a copy of the individual’s Ohio EMS license for their respective level, will then make a recommendation to the board for final status:
    1. Grant full orders
    2. Extend probation
    3. Counsel applicant
    4. Deny protocol
  
8. All EMS providers with protocol under the JCEMS in TC must maintain & be current in the following:
  - a. First Responders, Basics & Intermediates – current, valid BLS healthcare certificate, and current, valid state certification card.
  - b. Paramedics – requirements of “8.a” and must maintain valid and current ACLS certifications cards (ie. PHTLS, ITLS, ATT, PALS, PEEP, etc).

Joint Committee EMS / Trumbull County

**Primary Preceptor Name**

Student Name \_\_\_\_\_

Date \_\_\_\_\_

Time Out \_\_\_\_\_

Time In \_\_\_\_\_

\_\_\_\_\_  
(level of certification)

Key to Rating Criteria:

1. Procedure not completed, detrimental to patient
2. Procedure not completed
3. Procedure not completed, not detrimental to patient
4. Procedure completed, no errors
5. Procedure completed, above / average proficiency

Procedures \_\_\_\_\_ rating

Procedures \_\_\_\_\_ rating

Triage		Drug Preparation / Administration	
Assessment		Observation of Drug Effects	
History		Defibrillation	
Primary / Secondary Exam		Rhythm Interpretation	
Neuro Evaluation		Psychiatric Management	
Airway Management		OB / Gyn Management	
O2 Administration		Resuscitation Management	
Intubation		Patient Observation	
IV Attempts (Successful)		Interaction with Patient / Family	
Angiocath Size		Interaction with Hospital Staff	
Blood Draw		Complete Factual Report	
Flow Rate Determination		Ability to Adapt to Patient Condition	
Trauma Management		Professional Demeanor	
Cardiac Monitoring		Knowledge of Protocol	
Acceptance of Criticism			

**PRECEPTORS:** Place comments on rear of this form

Student Signature \_\_\_\_\_

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Evaluator's Signature \_\_\_\_\_



# GUIDELINES FOR OBTAINING INTERMEDIATE INTUBATION CLASSIFICATION

Those intermediates that desire intubation classification can make a copy of the necessary form from the following page or download the form at the protocol link at [www.tcemergency.com](http://www.tcemergency.com)

1. The intermediate desiring intubation must contact the hospital (hospital representatives from the EMS board) to set up a time be allowed into a hospital setting to perform at least two successful intubations.
2. He / she will then need to demonstrate in the field the ability to successfully perform endotracheal intubation for a board approved proctor.
3. When both the Dr. / anesthesiologist AND the board approved proctor feels the provider has demonstrated appropriate skills they will sign the form.
4. The form will be forwarded on to an EMS board Physician for his / her signature and the document will be filed in the TCEMS office for proof of validation.



# SQUAD CERTIFICATION CRITERIA

All Emergency Medical Service units operating under the medical authority of the Joint Committee of Emergency Medical Services in Trumbull County Ohio shall comply with the requests of the Executive Board

In order to receive departmental protocol in Trumbull County each squad represented by said company needs:

- 1. Current Drug License (if applicable)
- 2. EMT registration fee paid
- 3. Current roster
- 4. Drug box maintenance fees paid up-to-date (if applicable)
- 5. Name of QA officer
- 6. A note stating that the department will post the monthly minutes and have their personnel review the protocol at least once a year.
- 7. Along with said note, a statement that the squad is equipped with the necessary equipment to run at requested level of service.

EMS Unit Name: \_\_\_\_\_

Department / Service Administrator: \_\_\_\_\_

Location: \_\_\_\_\_

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_

Date: \_\_\_\_\_

Secretary: \_\_\_\_\_

A completed copy of this form needs to be sent to the EMS office along with the required items and above requested statements on company letterhead. At the following board meeting the request will be approved or not approved..

# GUIDELINES FOR RETAINING ANNUAL DEPARTMENTAL PROTOCOL

All Emergency Medical Service units operating under the medical authority of the Joint Committee of Emergency Medical Services in Trumbull County Ohio shall comply with the requests of the Executive Board of said committee and shall do so prior to the first day of January of each calendar year. It shall be incumbent upon the Executive Committee of the Joint Committee of Emergency Medical Services in Trumbull County Ohio to see that all notification and/or invoices are mailed to the member EMS units no later than the fifteenth day of November with necessary second notices sent by the fifteenth of December of each calendar year. Upon each EMS units compliance with each of the criteria listed below, said EMS unit will be granted the ability to Practice under the medical authority of the Joint Committee of Emergency Medical Services in Trumbull County Ohio. The time period covered will be from January 1 until December 31 of the following calendar year. EMS units not in compliance will not be permitted to practice medicine under the authority of the Joint Committee of Emergency Medical Services in Trumbull County Ohio and will either secure their own medical direction from a private Ohio licensed physician (M.D. or D.O.) or will cease operations until such time as they are in compliance and are issued a Certificate of Practice.

These are the seven items required to retain your Departmental Trumbull county protocol every year and need to be sent to the EMS office by January 1.

1. Current Signed Drug License
2. DEA License
3. EMT registration fee paid
4. Current roster
5. Drug box maintenance fees paid up-to-date
6. QA officer stated in writing
7. Return of signed form (pg. I-2-c) stating that
  - a. The department has in it's files a form signed by each primary member of the squad stating the individual reviewed the protocol during the past year;
  - b. The department has posted the board minutes during the past year
  - c. The department has conducted 3 hours of protocol training sometime during the past calendar year on 2 topics from this protocol
  - d. The department has in it's files a copy of each provider's current, valid EMS state certificate & current BLS healthcare provider certificate or other equivalent CPR certification for the professional rescuer or healthcare provider.
  - e. Participation in the QA program requiring all who do not use EMS Charts to submit the required number and type of run reports to the protocol chair person by the last Wed. of the month.

# GUIDELINES FOR RETAINING ANNUAL DEPARTMENTAL PROTOCOL

I-2-b-ii

- a. For paramedics this also must include current ACLS certificates (ATT, ITLS and PHTLS certificates).

Following the receipt of the above mentioned items, each department will receive a copy of the Doctor's signature page, dated with their department name on it. Any department without their signed "signature page" and signed drug license for the current year will NOT be able to run under Trumbull County protocol until such forms are obtained. This protocol is ONLY VALID if that signature page with the current year is in the front of this book. If all items are not into the EMS office by April 1, departmental protocol will be revoked.



\_\_\_\_\_ (Fire Department or Ambulance name) \_\_\_\_\_ (Year)

\_\_\_\_\_ (dept email address)

Annual Departmental Protocol Required Items:  
Please have the Chief / Administrator initial items 1 – 6 (or place n/a where applicable), and sign the proper places for item 7. Send this sheet in with the items listed. You will not have Trumbull County protocol for the upcoming year without this completed form or the requested items.

initial

- \_\_\_\_\_ 1. Current Signed Drug License (send a copy)
- \_\_\_\_\_ 2. DEA License
- \_\_\_\_\_ 3. EMT registration fee paid (check for \$10 / primary EMT)
- \_\_\_\_\_ 4. Current roster (if no change to the billing roster, the billing roster suffices)
- \_\_\_\_\_ 5. Drug box maintenance fees paid up-to-date (\$15 / box)
- \_\_\_\_\_ 6. Name of QA officer \_\_\_\_\_

7. a. I have in our files a signed form stating that each primary EMS member of this department / squad has reviewed the protocol during the past year;

(signature) \_\_\_\_\_

b. The board minutes have been posted during the past year.

(signature) \_\_\_\_\_

c. This department has conducted 3 hours of protocol training sometime during the past calendar year on two topics from this protocol.

(signature) \_\_\_\_\_

d. This department has in it's files a copy of each provider's current, valid EMS state certificate & current BLS health care certificate. (For paramedics this also must include current ACLS certificates)

(signature) \_\_\_\_\_

e. This dept has participated in the QA program either by submission of run reports or using EMS Charts.

(signature) \_\_\_\_\_

(left blank)

# GUIDELINES FOR PRECEPTORS IN TRUMBULL COUNTY

1. Anyone who wishes to become a preceptor must have held Trumbull County Protocol for 3 or more years at the level one is applying for, i.e. Intermediate, Medic.
2. A letter must be submitted in writing on company letterhead, from their administrator and presented to the EMS board for approval to become a preceptor.
3. If accepted, they will attend a training session with the protocol chairman or designated board member on what your role and responsibilities will be as a preceptor and paper work that will be involved.
4. If granted preceptorship, one may only precept at their level of service or lower.

# GUIDELINES FOR OBTAINING DEPARTMENTAL PRECEPTORSHIP IN TRUMBULL COUNTY

1. Any department wishing to become a precepting site must have Trumbull County Protocol at that level for 1 year.
2. They must submit a request on company letterhead to the Joint Committee of EMS requesting preceptorship.
3. The board at the following board meeting will accept or deny such request.

## LINEN REPLACEMENT POLICY

Whereas, based **ONLY ON THE** premise that **LINENS soiled and used** in the pre-hospital setting may present a significant public health issue, the (insert council name here) hereby approves a "LINEN REPLACEMENT EXCHANGE" for **SUCH SOILED AND USED** linen. **THE EXCHANGE WILL BE** provided by **member** hospitals for all participating Emergency Medical Services squads, both public and private, provided however that, **ALL PARTICIPATING SQUADS AND RECEIVING HOSPITALS COOPERATE AND** do the following:

1. **PARTICIPATING SQUADS WILL remove soiled and used linens from their RESPECTIVE transport vehicles AFTER EACH PATIENT TRANSPORT IS COMPLETED.** EACH RECEIVING HOSPITAL WILL DESIGNATE AN APPROPRIATE CONTAINER AS A RECEPTACLE FOR THE DEPOSIT OF SOILED LINEN USED BY PARTICIPATING EMS SQUADS IN THE PRE-HOSPITAL SETTING DURING TRANSPORT TO THE RECEIVING HOSPITAL.
  
2. EACH PARTICIPATING EMS SQUAD WILL PLACE THE SOILED AND USED LINEN REMOVED FROM THE VEHICLE AFTER TRANSPORT OF EACH patient into the appropriate, **designated** container at the receiving hospital AND WILL OBTAIN from the receiving **hospital** SUCH linen replacement consistent with that used DURING the patient TRANSPORT but **not more than:**
  - A. Two (2) bed sheets
  - B. One (1) pillowcase
  - C. One (1) bath blanket
  - D. One (1) towel
  - E. One (1) washcloth

**IF any of these linen items are not used for the patient during the ambulance run, the EMS squad will not seek AND WILL NOT RECEIVE a replacement item for the UNUSED ITEM.**

The Joint Committee of Emergency Medical Services in Trumbull County, Ohio, notes that **it is critical for all** participating Emergency Medical Service squads **to only receive from the participating hospitals replacements for those linens actually used during the patient transport to the hospital.** Hospitals in the Region 10 area of Ashtabula, Columbiana, Mahoning, and Trumbull counties have collectively pledged to continue the practice of replacing linen supplies used by pre-hospital units BECAUSE there are no facilities in the entire **FOUR COUNTY** area equipped to deal with biohazard linen EXCEPT THE RECEIVING HOSPITALS. Abandonment of this practice would leave EMS squads without a proper means to handle their linen needs.

**THIS PROCESS WILL BE IDENTICAL AT ALL RECEIVING HOSPITALS FOR ALL PARTICIPATING EMS SQUADS. NO MEMBER SQUAD OR RECEIVING HOSPITAL WILL BE GRANTED ANY EXCEPTIONS, VARIANCES, OR OTHER WAIVERS OR ADDITIONS BY ANY RECEIVING HOSPITAL.**

## Drug Box Exchange

To insure the effective and efficient management of the DRUG BOX EXCHANGE PROGRAM the following statement is true. There is common agreement between St. Joseph Health Center and Trumbull Memorial Hospital that they will follow these guidelines as closely as possible without compromising patient care standards. The DRUG BOX PROGRAM will hereafter be called "the box exchange program' or "exchange boxes'.

### 1. RESERVE SUPPLY

Each hospital will keep on hand in the Emergency Department a sufficient number of loaded Exchange Boxes for Paramedic Squads to reduce turnaround time for EMS units. Each hospital will maintain an accurate log that provides the following information:

Date  
 Squad Name  
 M Box number coming in  
 M Box number going out  
 Lock number going out  
 Signature of both pre-hospital and E.D. personnel

NOTE:Drug boxes (M) should only be signed out by paramedics and intermediate EMTs.

Basic EMT's ARE NOT PERMITTED TO SIGN OUT BOXES SINCE ALL BOXES CONTAIN MEDICATIONS AND NARCOTICS.

Each hospital should follow its own internal policies to insure the security of the exchange boxes and the general integrity of the program.

### I. EXCHANGING WITH PARTICIPATING SQUADS

The program is designed to encourage all EMS squads who function under Trumbull County protocols to participate in this program.

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## II. EXCHANGING WITH NON-PARTICIPATING SQUADS

Squads choosing not to participate in the box exchange program will still be allowed to exchange with individual hospitals item for item of medication only but must go to the hospitals pharmacy to do so.

**No exchange boxes should be opened in the Emergency Department to re-supply squads.**

Squads wishing to participate in the program should contact the EMS Coordinator or such designee at each institution.

## III. BASE HOSPITAL

Each squad participating in the box exchange program will be assigned a "BASE HOSPITAL" which will serve as their support unit in this and possibly future programs. The squads shall be divided into groups based on their geographic location; (departments and/or private companies with multiple locations will use their main station as the criteria for base hospital selection). Squads will make the final choice in cases where a question may arise concerning a base hospital (i.e. a department and/or private provider is located on a geographic boundary that allows either hospital to service the squad). Purpose of the base hospital is to be the resource unit for a particular squad where they will return if any questions arise. The base hospital will not serve as the sole medical command for a particular unit, but as a resource unit

## IV. SQUAD RESPONSIBILITY

Each EMS squad participating in the box exchange program will be required to do the following-

1. Deposit non-refundable \$25.00 with the Joint Committee of Emergency Medical Services in Trumbull County for each exchange box received.
2. Use the boxes with care and respect so as not to subject them to abuse.

3. Should abuse of the equipment take place, the squad will be required to pay for replacement equipment.
4. Report any defects in material or workmanship of the exchange boxes to their base hospital so proper documentation and adjustment can be made.
5. If any department requests the withdrawal of Trumbull County Protocol, the drug box with in their possession shall be required to be turned in at the same time of their letter of forfeiture. The box(es) will be inventoried.

While the Joint Committee of Emergency Medical Services in Trumbull County does not seek to formulate and execute policy for any hospital in Trumbull County, it is hoped that all participating hospitals will observe this policy so the program may operate with the highest degree of efficiency and effectiveness.

The signatories of this document agree to execute the DRUG BOX EXCHANGE PROGRAM according to the terms written herein and/or to the fullest extent supported by the institutions they represent.

# TRUMBULL COUNTY CORONER'S OFFICE

1863 East Market Street  
Warren, Ohio 44483  
(330) 675-2516



## INFORMATION REGARDING DEATH NOTIFICATION

**Dr. Ted Soboslay**  
Trumbull County Coroner

Dr. Humphrey D. Germaniuk  
Forensic Pathologist

Shelley R. Mazanetz, R.N.  
Chief Investigator

Kathleen M. Meszaros, R.N.  
Rebecca L. Bluedorn, R.N.  
Toni D. Clement, R.N.  
Forensic Investigators

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## I. THE LAW

Section 313.12 of the Ohio Revised Code mandates the Coroner to make inquiry regarding all unnatural deaths within the county. As required by law, all unexplained or unnatural deaths must be reported to the Coroner's office (see page 3).

## II. WHAT IS AN UNNATURAL DEATH

An unnatural death is any death that is not the direct result of a natural, medically recognized disease process. Any death where an outside intervening influence either directly or indirectly is contributory to the individuals demise or accelerates and exacerbates an underlying disease process to such a degree as to cause death would fall into the category of unnatural death (see page 3).

## III. WHAT IS A CAUSE OF DEATH

A cause of death is **etiologically specific**. Any injury or disease process, however brief or prolonged, which initiates a dependent and related sequence of events ultimately responsible for the individuals demise is the cause of death. **"But** for, this or that particular underlying event, the individual would not have died (see page 4).

## IV. WHAT IS A MANNER OF DEATH

There are five manners of death: **Natural, Homicide, Suicide, Accident and Undetermined**. The manner of death, simply put, are the circumstances in which the cause of death took place. Autopsy alone cannot determine the manner of death. The manner of death is based upon all available knowledge of a particular case, including the terminal events, scene investigation, police report and social and medical background information (see page 5).

## V. WHAT IS A MECHANISM OF DEATH

A mechanism of death is not etiologically specific. A mechanism of death is any pathophysiological derangement that is incompatible with life and should not be confused with a cause of death. Ventricular fibrillation or hypoxia are mechanisms of death; however, they can occur in advanced arteriosclerotic coronary artery disease, low voltage electrocution or homicidal strangulation.

## VI. WHEN IN DOUBT

When even the slightest doubt exists regarding any death as being natural or unnatural, or whether the death should be reported to the Coroner's office, please consult with this office at (330) - 675 2516

A natural death is any death, which is the direct result of the progression of a natural, medically recognized disease process. Widespread cancer, acute myocardial infarction due to arteriosclerotic coronary artery disease (heart attack) or chronic obstructive pulmonary diseases are all examples of progressive, medically recognized natural disease processes, which may ultimately result in the death of the individual. The foreseeable and expected complications of these disease processes would also be classified as natural.

A death falls into the **unnatural** category when there is an **outside intervening influence** or circumstance not recognized as a medical disease process which either **initiates** the lethal chain of events **or** contributes to the individuals demise. Acute renal failure due to hemolytic uremic syndrome would be classified as natural. Acute renal failure due to antifreeze ingestion would be classified as unnatural with the actual manner (homicide, suicide or accident) pending additional investigation by the Coroner. Acute peritonitis due to a ruptured appendix would be classified as natural. Acute peritonitis due to stab wound of the abdomen would be classified as unnatural with the actual manner (homicide, suicide or accident) pending additional investigation by the Coroner.

Factors, which may be contributory to a person's death, can make that death unnatural as well. An individual with terminal cancer who is on pain medication may either intentionally, accidentally or in certain cases be given excessive medication, which would hasten their demise. An individual with moderate coronary artery disease who dies while using cocaine for recreational purposes, even though the drug levels are not in the lethal range, would still have cocaine ingestion listed as a contributory cause, thus making the cause of death arteriosclerotic coronary artery disease **contributed to** by cocaine ingestion. The manner of death would be **accidental** as a result of the contributory cause. In the same fashion, **hip fractures in the elderly** which exacerbate underlying natural disease processes would have as the cause of death the underlying natural disease process **contributed to** by the hip fracture. The **manner** of death would be **accidental** as a result of the contributory cause, in this case, the hip fracture.

## CAUSE OF DEATH

The cause of death is the **etiologically specific disease or injury** which **initiates** a dependent and related sequence of events ultimately responsible for the death of that individual. The cause of death is the **"but for"** without which the individual would not be dead.

The time interval between the initial insult and death can be instantaneous, as in a massive intracranial hemorrhage due to hypertensive cardiovascular disease, or it can be days, weeks or months between the initial event and death. Bronchogenic carcinoma may be present for months before the tumor eventually erodes a major vessel resulting in exsanguination or causes sufficient obstruction as to create a favorable environment for a lethal pneumonia.

Sometimes there may be confusion regarding the actual cause of death, especially if a considerable time interval between the initial insult and death has passed and multiple disease processes have come into play. For example, an individual with massive **abdominal injuries secondary to a motor vehicle accident** may require prolonged hospitalization. During his stay, the patient develops acute peritonitis, becomes septic with seizures and subsequently expires as a result of aspiration pneumonia; the blunt traumatic injuries to the abdomen are still the **underlying cause** of death. **"But for 9-)** the abdominal injuries, none of the other disease processes would be likely to occur in and of themselves.

Another consideration is that **the sequence must be dependent and related**. An independent supervening factor which would not be a reasonable and foreseeable consequence of the initial disease or injury would alter the cause and manner of death. For example, if our motor vehicle accident patient inadvertently receives a wrong or lethal dose of medication which eventually kills him, that would be an independent supervening factor which is certainly not a reasonable and foreseeable consequence of his initial injury and thus falls under the jurisdiction of the Coroner.

## MANNER OF DEATH

There are five manners of death-. HOMICIDE, SUICIDE, ACCIDENT, NATURAL and UNDETERMINED.

The manner of death is the circumstances in which the cause of death came about. The cause of death (bronchopneumonia) can still be the same despite different manners. Bronchopneumonia is still bronchopneumonia and would not change as the cause of death if it resulted from a homicidal gunshot wound of the chest, suicidal barbiturate overdose with subsequent coma and aspiration or secondary to blunt traumatic chest injuries in a motor vehicle accident. What would change would be the manner.

Any death where there is even the remote possibility that the underlying cause of death is anything but natural must be reported to the Coroner's office, despite the length of time between the initial insult and death. For example, in May of 1991, an individual who in 1954 developed a well-documented seizure disorder as a result of a homicidal gunshot wound to the head is witnessed to have a seizure while in the shower, falls and is scalded. In the hospital he develops bronchopneumonia and dies. The cause of death would be bronchopneumonia, due to thermal injury, due to seizure disorder, due to gunshot wound of the head. Despite the 36-year time interval between the head wound and the pneumonia, "but for" the gunshot wound he would not have had the seizure disorder which led to the dependent and related sequence of events ultimately responsible for his demise. Legally, the manner of death in this case was correctly certified as homicide.

As the above case demonstrates, autopsy alone rarely determines the manner of death. The autopsy is only one facet of the entire investigative process involved in determining a manner of death. A complete medical history, police report, scene investigation and the terminal events must be taken into account if one is to correctly certify the manner of death.

PLEASE NOTE: When you are certifying a death, anytime the possibility arises that the manner of death (box #32, State of Ohio, Certificate of Death) might be listed as anything other than natural, could not be determined or pending investigation, you are probably dealing with a death that falls under the jurisdiction of the Coroner and should consult with this office, (330) - 675 2516.

## THE NEED FOR MEDICAL RECORDS

An autopsy is nothing more than a laboratory test which is never conducted **in** a vacuum. **In** all cases of unnatural death where the patient has been hospitalized, however briefly, a copy of the medical records together with a copy of the ambulance run sheet must be included with the body in order to provide essential information. **It should be standard practice that the initial admission note, doctors progress notes, consultation reports, ore and post-operative notes, radiology reports and laboratory studies be included with the body, especially admitting toxicology results if drugs are suspected to play a role, however minuscule, in the individuals demise.** If additional information is needed, the Coroner will ask for such. If the chart is voluminous, call and ask what the Coroner needs.

## DEATHS REPORTABLE TO THE CORONER

1. Any death where any form of violence, either criminal, suicidal or accidental, was either responsible or was contributory.
2. Any death where there is insufficient medical information to explain the individual's demise.
3. Any death caused by an unlawful act or criminal negligence.
4. Any death occurring in a suspicious, unusual or unexplained fashion.
5. Any death where there is no attending physician.
6. Any death of a person confined to a public institution.
7. The death of any prisoner, even though the cause and manner both appear to be natural.
8. Any death caused or contributed to by drug and/or chemical poisoning or overdose.
9. Any sudden death of a person in apparent good health.
10. Any death occurring during diagnostic procedures, resulting from such procedures or having such procedures play a contributory role.
11. Any fetal stillbirth in the absence of a physician.

## COMMONLY ENCOUNTERED REPORTABLE UNNATURAL DEATHS

1. Hip fractures in the elderly.
2. Delayed deaths where a motor vehicle has been involved.
3. Infectious deaths following injury.
4. Head injuries with a prolonged hospital course.
5. Cases where there is uncertainty or inadequate clinical information at the time of admission or death.

## ERRORS AND ITEMS OF IMPORTANCE

### Errors:

One of the more common errors that we see in certifying death is the use of the term cardio-respiratory arrest as a cause of death. **CARDIO-RESPIRATORY ARREST IS NOT A CAUSE OF DEATH.** It is a description of being dead and provides no information whatsoever as to what underlying injury or disease process was responsible for the individual's death. Regardless of the cause or the manner of death, the heart eventually stops beating and the lungs cease to breathe. Rather than list cardio-respiratory arrest as a cause of death, reflect on what was the underlying condition or disease process responsible for the "arrest".

Often we see **SUBDURAL HEMATOMA** listed as a cause of death, with the manner of death either unlisted or listed as natural. **A SUBDURAL HEMATOMA IS TRAUMATIC UNTIL PROVEN OTHERWISE.** The actual traumatic event may be accidental (slip and fall), homicidal (altercation) or suicidal jump). The Coroners office must be notified of any patient who expires with a subdural hematoma.

In cases of **SUSPECTED ASPIRATION** rarely is the obstructing bolus retained, its size measured, or the quantity documented. "Large amounts of material removed" is subjective. The courts usually want to know "how big or how much", especially when litigation is involved. -

Where **STAB** and **GUNSHOT WOUNDS** are involved it is imperative not to use the peroration as the starting point for exploratory procedures. Doing so obfuscates future accurate documentation of the injury, which may cloud the many legal issues, which usually follow. If, **projectiles** have been **removed during surgery**, please make the Coroner's office aware, especially in delayed deaths. Searching for something that isn't there benefits no one.

### Items of Importance:

1. All indwelling catheters, tubes, bandages, casts and other medical appliances should be left in place and not removed or disturbed once the person has died.

2. In cases where the individual is still alive upon admission to the hospital and where even the slightest possibility exists that the final outcome may have medicolegal implications or fall under the jurisdiction of the Coroner, it is imperative that all admitting specimens such as blood, urine, gastric lavage, **subdural hematoma clot** etc. be retained and this office notified so that the specimens can be collected.

3. All clothing where medicolegal potential exists must not be discarded. Clot etc. should be saved and the Coroner's office advised of its whereabouts on initial notification so that it can be retrieved.

## PROCEDURE FOR REPORTING A DEATH

The Trumbull County Coroner's Office is staffed 24 hours a day, 365 days a year, with a Forensic Investigator on call at all times.

The first responding EMS agency shall initiate a field death report on every field death. EMS personnel of all levels may complete the form.

To report a death, call (330) - 675 - 2516 as promptly as possible after the death. Your call will be handled by a Forensic Investigator who will request the following information:

1. Name, age, race and sex of the decedent.
2. The address and location of the decedent.
3. The telephone number and location of the next of kin.
4. The time of death and who made the pronouncement.
5. If the individual was transported, who made the transport.
6. A brief narrative of the circumstances surrounding the death.
7. Where the decedent was found and by whom, if known.
8. When the decedent was last seen alive and by whom, if known.
9. Any past medical history.
10. Current medications, if known.
11. The name and telephone number of the attending physician, if known.

Even though you may not have all of the information, that should not inhibit you from making notification. On the basis of this information, the decision will be made whether or not the death falls under the jurisdiction of the Coroner and you will be advised accordingly.

# TERMINATION OF RESUSCITATION

## IN

# NON-TRAUMATIC CARDIAC ARREST

Resuscitation may be discontinued in the prehospital setting when the patient is nonresuscitatable after an adequate trial of ACLS.

In accordance with the Journal of American Medical Association's guidelines for cardiopulmonary resuscitation and emergency cardiac care, the above statement encourages local medical directors to develop guidelines for prehospital care providers to terminate resuscitation efforts when the patient's survivability is questionable.

### **1. An Adequate Trial of ACLS**

An adequate trial of ACLS according to the guidelines, occurs when:

- A. Adequate BCLS has been provided for a reasonable amount of time.
- B. Endotracheal Intubation has been successfully accomplished; and
- C. Persistent Asystole or Agonal electrocardiographic patterns are present and no reversible causes are identified.

### **2. Immediate Transportation to the Emergency Department**

The patient **will be** transported to the emergency department when:

- A. The patient is an adult that exhibits signs or symptoms of hypothermia or drug overdose.
- B. The patient is a child.
- C. ACLS cannot be provided in a timely manner.
- D. Endotracheal Intubation
- E. Cardiac Defibrillation
- F. Cardiac Medication Administration, or
- G. Intravenous Catherization, when there is copious pulmonary edema or aspirated material emanating from the endotracheal tube.
- H. The BLS service can enter the emergency department faster the prehospital ACLS can be initiated.

### **3. Transportation to the Emergency Department After On Scene ACLS**

- A. There is a Stable Pulse.
- B. Persistent V-Tach or Course V-Fib (> 1cm amplitude)

### **4. Termination of Resuscitation Efforts**

A Paramedic **WILL CONTACT** Medical Control to terminate resuscitation efforts in the field when either of the following criteria is met.

- A. There is no return of spontaneous circulation after 25 minutes of ACLS according to American Heart Association Guidelines.
- B. Presenting rhythm is Asystole and persists unaffected by 2-3 doses of Epinephrine and Atropine accompanied by ACLS.

Upon termination of life support efforts the body is transported to the Medical Control facility, with all IVs and ETT in place, for pronouncement

# TERMINATION OF RESUSCITATION IN TRAUMA PATIENT CARDIAC ARREST

Resuscitation may be discontinued in the prehospital setting when the patient is nonreuscitatable after an adequate trial of ACLS.

In accordance with the Journal of American Medical Association's guidelines for cardiopulmonary resuscitation and emergency cardiac care, the above statement encourages local medical directors to develop guidelines for prehospital care providers to terminate resuscitation efforts when the patient's survivability is questionable.

## **1. No Sign of Life**

A. A trauma patient has No Vital Signs and No Signs of Life when there is no cardiac, respiratory, or neurologic function.

- 1.No palpable pulse
- 2.No blood pressure
- 3.No respiratory effort
- 4.No swallowing, eye, or extremity movement
- 5.No pupillary activity

B. Trauma patients with no signs of life at the scene or in transport have virtually no chance of survival, even when no signs of life are restricted to no pulse, respirations, or pupil reactivity.

C. Trauma patient survival is negligible when there is cardiac arrest and Asystole or Idioventricular rhythm.

D. Trauma patients with prehospital cardiac arrest for more than 5-10 minutes rarely survive.

## **2. Protocol Guidelines**

A. The 10-minute time period begins as soon as a BLS/ALS provider recognizes that the patient has no signs of life.

B. Patients with no signs of life upon BLS/ALS arrival.

- 1.When possible, immediately check the cardiac rhythm
- 2.If asystole is present, terminate all support; Handled by Coroner at this point
- 3.If asystole is absent or the rhythm is unknown:

I. Initiate BLS/ALS as soon as possible; promptly establish the most appropriate airway and transport to the nearest Emergency Department.

II. If there is no return of any signs of life within 10 minutes of BLS/ALS obtain medical control and recommend the termination of resuscitation efforts; transport body to Emergency Department.

III. When the patient access prevents the administration of BLS/ALS all support is terminated if there is no sign of life witnessed for 10 minutes; Handled by Coroner

IV. If there is return of any signs of life, immediately transport the patient to the nearest Emergency Department.

C. Patients deteriorating to conditions as set forth in 1A, above, after BLS/ALS arrival

1. If the patient can be delivered to the Emergency Department within 10 minutes, initiate BLS/ALS and immediately transport the patient.
2. If the patient cannot be delivered to the Emergency department within 10 minutes, follow items under 2B3, above.

## **CONTACT MEDICAL CONTROL FOR PERMISSION TO TERMINATE RESUSCITATION EFFORTS**

# DO NOT RESUSCITATE

The statewide Do Not Resuscitate (DNR) Comfort Care (CC) Protocol, is an acceptable physician order for health care personnel operating under the auspices of the Northeastern Ohio Emergency Medical Services Council Inc. The DNRCC provides protocols for comfort support as well as resuscitative measures. The DNRCC must be properly completed and legible with all appropriate signatures included.

## **PROTOCOL:**

1. **DNR Comfort Care** - The protocol is activated immediately when a “DNR Comfort Care” order is issued and/or upon identification of the person as a “DNR Comfort Care” patient.
2. **DNR Comfort Care Arrest** – The protocol is implemented in the event of cardiac or respiratory arrest. Prior to cardiac or respiratory arrest, a DNR Comfort Care Arrest patient may receive all necessary care and treatment appropriate to the patient’s needs.
3. **DNR Identification** – The following items are approved as DNRCC Identification
  - A DNR order documented on the “DNRCC Identification Form”.
  - A Living Will that authorizes the withholding or withdrawal of CPR.
  - A transparent hospital bracelet with an insert bearing the statewide Comfort Care logo.
  - A wallet card bearing the statewide Comfort Care logo.
4. **Interaction with the Patient, Family, and Bystanders** – The patient always may request resuscitation, even if he or she is a DNRCC patient and the protocol has been activated. The request for resuscitation amounts to a revocation of DNRCC status.  
  
If family or bystander request or demand resuscitation for a person for whom the DNRCC Protocol has been activated, do not proceed with resuscitation. Provide comfort measures as outlined on the form.
5. **A DNRCC order for a patient shall be considered current unless discontinued by the patient’s attending physician/CNP/CNS, or revoked by the patient. EMS personnel are not required to research whether a DNRCC order that appears to be current has been discontinued.**
6. **EMS personnel who receive a verbal DNR order from a physician, CNP or CNS must verify the identity of the person issuing the order.**
  - Personal knowledge of the physician, CNP or CNS.
  - List of practitioners with other identifying information.
  - A return telephone call to verify information provided.
7. **Relationship of DNRCC with Living Wills and Durable Powers of Attorney for Healthcare.**
  - A Living Will supersedes a Durable Power of Attorney (DPOA) for healthcare.
  - A Living Will with a DNRCC identification that is added supersedes the DPOA for healthcare.
  - A Living Will supersedes a DNRCC order that is inconsistent with the Living Will.

A Durable Power of Attorney for healthcare supersedes a DNRCC order if the DNRCC order is



# STATE DNRCC FORM

# DNR COMFORT CARE

## DNR IDENTIFICATION FORM

**DNRCC**

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

**DNRCC—Arrest**

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

Patient Name: \_\_\_\_\_

Address: \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Birthdate \_\_\_\_\_ Gender  M  F

Signature \_\_\_\_\_ (optional)

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

(Check only one box)

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

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

Printed name of physician\*: \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Address: \_\_\_\_\_ Phone \_\_\_\_\_

City/State \_\_\_\_\_ Zip \_\_\_\_\_

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



## **DO NOT RESUSCITATE COMFORT CARE PROTOCOL**

After the State of Ohio DNR Protocol has been activated for a specific DNR Comfort Care patient, the Protocol specifies that emergency medical services and other health care workers are to do the following:

### **WILL:**

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

### **WILL NOT:**


- Administer chest compressions
- Insert artificial air way
- Administer resuscitative drugs
- Defibrillate or cardiovert
- Provide respiratory assistance (other than that listed above)
- Initiate resuscitative IV
- Initiate cardiac monitoring

If you have responded to an emergency situation by initiating any of the **WILL NOT** actions prior to confirming that the DNR Comfort Care Protocol should be activated, discontinue them when you activate the Protocol. You may continue respiratory assistance, IV medications, etc., that have been part of the patient's ongoing course of treatment for an underlying disease.

# STATE DNRCC WALLET CARD

## EXAMPLE

### DNR Comfort Care Wallet Identification Card



**DNR**  
COMFORT CARE

DNR Comfort Care       DNR Comfort Care Arrest

Name \_\_\_\_\_

Birthdate \_\_\_\_\_      Gender  M     F

Physician name \_\_\_\_\_

Physician phone \_\_\_\_\_

Other emergency phone \_\_\_\_\_

The person named on the front of this card may revoke DNR Comfort Care status by destroying this card.

# TRUMBULL COUNTY JOINT COMMITTEE OF EMERGENCY MEDICAL SERVICES DISCIPLINARY POLICY

## I. Scope and Purpose

- A. The purpose of this disciplinary policy is to permit the Trumbull County Joint Committee of Emergency Medical Services (TCJCEMS) a manner in which to take disciplinary action in matters warranting such.
- B. Disciplinary actions shall be commensurate with the violation(s) committed.
- C. This policy shall apply to all persons holding protocol with the TCJCEMS.
  1. Certain rules shall also apply to those persons applying to receive protocol, and may be cause for denial of protocol to those persons.
- D. The TCJCEMS shall, within ninety days of passage of this rule, appoint a subcommittee to be known as the Disciplinary Subcommittee, part of the Protocol Committee, which shall be responsible for the investigation of complaints made toward EMS providers.
  1. The subcommittee shall consist of no less than three but no more than five current members of the TCJCEMS
  2. The subcommittee shall receive and investigate all complaints, and shall make recommendations to the TCJCEMS and the Medical Director as to the course of action for each complaint and investigation.

## II. Violations and Penalties

- A. Violations will be grouped into four (4) different classifications:
  1. Minor Administrative
    - a. These violations are of a minor nature, not dealing with a patient care issue.
  2. Major Administrative
    - a. These violations are of a serious nature, not dealing with a patient care issue.
  3. Minor Care-Related
    - a. These violations are of a minor nature, but deal with patient care.
  4. Major Care-Related
    - a. These violations are of a serious nature, and deal with patient care.

# DISCIPLINARY POLICY (cont.)

B. The TCJCEMS Board and/or the Medical Director may choose to administer any of the following penalties for violation of the protocol. Discipline ideally should be progressive, however, in the case of major violations, steps may be skipped. Also, actions such as provider re-education may occur at any step.

1. No action.
2. Documented oral counseling.
3. Documented oral counseling with re-education.
4. Written reprimand.
5. Written reprimand with probation.
  - a. Probation will be for a set amount of time, and further violations of protocol could result in suspension or revocation of protocol.
6. Suspension
  - a. Suspension of protocol will be for a set amount of time.
  - b. Provider suspended SHALL NOT function as an EMS provider under this protocol during the term of the suspension.
7. Revocation of Protocol with Ability to Reapply
  - a. Persons who have been disciplined in this manner will have protocol revoked, but will be able to reapply after a set amount of time.
  - b. These persons will be required to gain protocol by starting and completing the protocol process in the same manner as a new applicant.
8. Permanent Revocation of Protocol
  - a. Case would be reviewed by TCJCEMS Medical Director for action of permanent revocation of protocol.

## III. Classification of Violations

- A. Actions not specifically listed in this policy may be considered violations, and, if a complaint is filed on such, it shall be up to the subcommittee to determine if the alleged action constitutes a violation.
- B. Violations not specifically listed in these classifications may be classified by the subcommittee as necessary, and violations in this classification may be reclassified depending on the severity of the alleged violation as determined by the subcommittee.

# DISCIPLINARY POLICY (cont.)

## C. Classifications

### 1. Minor Administrative

- a. Items identified by the Medical Director or the Disciplinary Subcommittee as infractions being of this nature.

### 2. Major Administrative

- a. Falsification of certifications or other documents for obtaining protocol.
- b. Attempting to gain protocol or possessing protocol while having another medical certificate or license under suspension, revocation, or other disciplinary action.
- c. An example would be a paramedic with a nursing license whose nursing license is suspended or revoked for narcotics violations.
- d. Failure to report to the TCJCEMS any discipline against his or her certification by the State of Ohio.
- e. Violation of any provision of Ohio Administrative Code 4765-8-01 regarding Qualifications for a Certificate to Practice, or of Ohio Revised Code Chapter 4765.
- f. Knowingly or purposefully making a false complaint against another provider.
- g. Violation of HIPAA rules and/or regulations.
- h. Falsification of patient care records.
- i. Falsification of drug box records.
- j.. Items identified by the Medical Director or the Disciplinary Subcommittee as infractions being of this nature.

### 3.. Minor Care-Related

- a. Minor commissions or omissions that do not cause any untoward, undesired, or injurious results to a patient treated by the provider.
- b. Minor commissions or omissions that do not cause or create any serious physical harm or risk of serious physical harm to a patient treated by the provider.
- c. Items identified by the Medical Director or the Disciplinary Subcommittee as infractions being of this nature.

# DISCIPLINARY POLICY (cont.)

4. Major Care-Related
  - a. Commissions or omissions that cause or create any serious physical harm, risk of serious physical harm, or death, to a patient treated by the provider.
  - b. Medication errors.
  - c. Theft of narcotics or other medications.
  - d. Items identified by the Medical Director or the Disciplinary Subcommittee as infractions being of this nature.

## IV. Disciplinary Action Process

- A. Any person, public or private, may make a complaint against a provider for a violation of this protocol.
- B. Complainants shall not be anonymous. The accused has the right to know who is accusing him or her of a violation.
- C. Complaints shall be made in writing and forwarded to any member of the TCJCEMS, who shall forward the complaint to the Disciplinary Subcommittee.
- D. The Disciplinary Subcommittee shall cause the investigation of the complaint to commence, and shall make every attempt to complete the investigation within ninety days of its receipt by the Subcommittee.
  1. The Subcommittee shall make the Medical Director and the Chief or Chief Administrator of the subject's employer immediately aware of any investigations, and shall make the TCJCEMS Board aware in its entirety at its next regularly scheduled meeting.
- E. The Medical Director of the TCJCEMS shall have the power to compel witnesses to comply with an investigation who are under the authority of TCJCEMS.
- F. Once an investigation is completed, the Disciplinary Subcommittee shall report to the Medical Director and TCJCEMS Board the results of said investigation in Executive Session of the Board.
  1. No guest shall be present during this investigative discussion, as this is a personnel issue.
  2. A decision regarding disciplinary procedure shall be made during this investigative discussion.
    - a. The Disciplinary Subcommittee shall make its recommendation to the TCJCEMS Board.
    - b. The TCJCEMS Board shall make its decision regarding action on the complaint.
    - c. The Medical Director shall have final authority to approve or

# DISCIPLINARY POLICY (cont.)

3. The official minutes of the TCJCEMS Board shall reflect the following items only:
  - a. If the complaint is dismissed, then no record of the complaint shall appear in the official minutes.
  - b. If the complaint is sustained, then the record shall reflect the name of the subject of the complaint, the charge, and the disciplinary action taken by the Board. This is synonymous to the information released by the State of Ohio with its disciplinary policy.

G. Records of the complaint and investigation shall be retained in the following manners:

1. For a complaint that was dismissed, no record shall be in the subject's TCJCEMS personnel file, however, the case shall be retained by the TCJCEMS Secretary in a separate and secure file for a period of two years from the case's conclusion.
2. For a complaint that resulted in no action, documented oral counseling, documented oral counseling with re-education, re-education alone, or a written reprimand with no probation, a copy of the action shall be retained in the subject's TCJCEMS personnel file and the original by the TCJCEMS Secretary in a separate and secure file for a period of five years from the case's conclusion.
3. For a complaint that resulted in any other action than in subsection 2 above, a copy of the action shall be retained in the subject's TCJCEMS personnel file and the original by the TCJCEMS Secretary permanently.
  - a. In the case where a time limit exists on retention of actions, at the expiry of those time limits, the TCJCEMS shall cause the records to be securely destroyed.

H. The TCJCEMS Secretary shall report, in writing, to the Chief or Chief Administrator of each and every agency that the subject of the investigation is employed by, the results of the investigation and action taken, if any, within fifteen days of the meeting at which the charges were sustained.

I. The TCJCEMS Secretary, when receiving written requests for the addition of persons to departmental protocols, shall report, in writing, to the Chief or Chief Administrator of the department or agency requesting the addition of the person to the protocol, any violations that are currently in the subject's TCJCEMS file.

V. Efficacy and Review

- A. This policy is a living document and shall be subject to review.
- B. This policy and any subsequent changes shall become effective pursuant to the Administrative Policy of this protocol.

# Disposition of Patient Care Reports at Receiving Facilities

“EMS agencies operating under the protocol of The Joint Committee of EMS in Trumbull County are expected to leave a patient care report at the emergency department of a receiving hospital when delivering a patient that has been under the agency’s care.

Agencies will leave the run report with staff designated by the receiving facility. In most cases, this will be either the RN taking charge of the patient upon receipt at the facility, or, it may be the unit clerk or secretary who can make the patient care report part of the patient’s permanent medical record. Disposition of this run report with the hospital staff shall occur before the responsible crew is clear of the run.

In the event that an agency is dispatched to another emergency incident prior to being able to complete and leave a patient care record, the agency shall, within twenty-four (24) hours of the incident in which a patient care report was not left at the receiving facility, personally drop off or electronically transmit the run report to the emergency department. This policy is in no way intended to cause undue hardship to any agency, however, emergency department personnel require the patient care report at the time of patient admission, and the TCJCEMS supports the proper transfer of information regarding patients under EMS agencies’ care to receiving emergency departments.”

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**STATEMENT REGARDING SENATE BILL 58**  
**EMS PROVIDERS DRAWING OF BLOOD FOR LAW ENFORCEMENT PURPOSES**

On September 17, 2010, Senate Bill 58 will take effect that will allow Emergency Medical Technicians - Intermediate and Paramedic to withdraw blood for the purposes of collecting evidence for law enforcement officers in cases where probable cause exists to believe that a case of operating a motor vehicle under the influence of alcohol and/or drugs of abuse exists. This will be enveloped in Section 4765-6-06 (et al) of the Ohio Administrative Code. Emergency Medical Technicians - Basic and First Responders are not affected by this law as they are not permitted to draw blood by either law or rule.

There are two separate components of this rule. One is that the local medical director or EMS Board has the ability to control and regulate providers' ability to perform this service. In essence, medical directors or boards can allow EMS providers to collect blood samples for evidence or they can prohibit it.

The second is that in order for EMS providers to collect the blood samples, it must be during the course of the provider's regular duties for a patient that is being transported to the hospital and who gives consent for the blood draw. This means that EMS cannot be called to any particular location simply for the purpose of collecting blood for law enforcement.

This rule brings into light several different facets involving EMS and its interaction with law enforcement. These include:

The training of EMS providers to properly collect blood samples for law enforcement utilizing provided evidence kits - this is particularly important because the procedure is different for specimen collection versus other "routine" blood draws.

The real possibility of EMS providers being subpoenaed to court to testify about their role in the collection of this evidence to include, but not to be limited to: methods of collection and the chain of custody of the collected sample.

The subject of consent. Patients must still consent to the collection of the blood sample, no differently than consent to a breath test. There are certain instances where patients may not refuse, however, and while law enforcement will obviously be involved with this, these actions will place EMS in the middle of a debate over whether a collection is lawful. Dead or unresponsive patients under the rule fall under implied consent.

While all public safety workers strive to cooperate with each other, it is the opinion of the Joint Committee of Emergency Medical Services in Trumbull County that EMS providers operating under this protocol shall be prohibited from the collection of blood for law enforcement pursuant to Ohio Senate Bill 58 and the subsequent Ohio Administrative Code rules applying to same.

## **Policy Statement Regarding Transport Destinations**

The Joint Committee of Emergency Medical Services in Trumbull County recognizes that different patients have different needs. Specifically, it recognizes under Ohio law the need for trauma patients to be transported to facilities that can meet the patients' needs, i.e.: a trauma center. While Ohio law does not currently mandate the transport of other types of special circumstances patients, such as chest pain, STEMI, and stroke, the medical community has set forth processes and guidelines for these patients. Therefore, the Joint Committee makes the following policy statement regarding destination protocols:

Trauma patients shall continue to be managed and transported in a manner and to locations as designated by protocol and trauma destination protocols.

STEMI patients should be transported to facilities that have cardiac catheterization labs in the facility, remembering that "time is muscle." These patients preferably should be transported to verified Chest Pain Centers.

Potential stroke patients should be transported to verified Stroke Centers. These centers are verified by The Joint Commission (JCAHO) as having best practices with stroke patients.

The Joint Committee understands that all patients have preferences as to which hospitals they choose, and that EMS providers cannot override a patient or family that has specific transport destination wishes. However, it shall be incumbent upon EMS providers to be advocates for the best possible patient care, and in situations where the patient's hospital of choice may not represent the most appropriate level of care for the patient, the EMS provider shall seek to inform the patient of better alternatives, wherever those may be. If a patient or family chooses to go to a hospital that would not necessarily meet the patient needs based on the type of patient, then those providers should document that the patient and the family were advised of alternative locations for treatment and still chose the particular hospital of choice. The best practice in that situation would be to document this part as a refusal to be transported to a more appropriate facility, and to have either the patient or responsible family member sign the run report (as a matter of refusing), acknowledging that they do not want to go to a facility that may better serve their needs. This does *not* mean that EMS will not transport the patient, merely that the patient is being transported to

a facility against the advice of EMS to be transported to a more appropriate medical center.

Local hospitals and their capabilities include:

**Northside Medical Center  
Center**

Provisional Level III Trauma Center  
Chest Pain Center  
Stroke Center  
Cardiac Catheterization Lab

**Trumbull Memorial Hospital**

Level III Trauma Center  
Chest Pain Center  
Cardiac Catheterization Lab

**St. Elizabeth Health**

Level I Trauma Center  
Chest Pain Center  
Cardiac Catheterization Lab  
Stroke Center

**St. Joseph Health Center**

Level III Trauma Center

\*\*\*\*\*

## **Policy Statement Regarding Drug Shortages**

From time to time there will come occasions where local or national shortages of drugs that are in the protocol for the Joint Committee of Emergency Medical Services in Trumbull County will affect the manner in which EMS providers can render treatment.

In the event that a shortage causes drugs to be removed from the boxes, pharmacists will mark the drug boxes in a manner to notify EMS that a particular drug has been removed. Remembering that everyone is human, there may be times that boxes get missed, and in these events, EMS Coordinators need to be notified to ensure that drugs have not been unlawfully diverted. EMS Coordinators will follow their usual policies and procedures regarding the shortages of drugs in boxes.

In the event that an EMS provider needs a drug that is not in the drug box, the EMS provider should call Medical Control seeking an order for another applicable drug that may be in the box. A common example would be if there is no diazepam in a box and a patient is seizing, the EMS provider may wish to substitute midazolam. The EMS provider then calls Medical Control for the substitution, and if the physician agrees, the provider can use the drug in place of the missing drug.

While shortages are never convenient nor are they anticipated, they do occur from time to time. This document should provide the adequate guidance necessary to still properly care for affected patients.

\*\*\*\*\*

SECTION II

MEDICAL  
PROCEDURES

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# TABLE OF CONTENTS FOR MEDICAL PROCEDURES

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## **I. INDICATIONS/CONTRAINDICATIONS OF USE OF AN AUTOMATIC EXTERNAL DEFIBRILLATOR**

1. Use of A.E.D.
  - a. Patient criteria, patient must be:
    - 1) Pulseless
    - 2) Breathless
    - 3) Unconscious
  - b. Begin Basic Life Support procedures
    - 1) Open and maintain clear airway
    - 2) Support ventilation with appropriate equipment
    - 3) Begin CPR
    - 4) Set up A.E.D.
      - a) Set up defibrillator
      - b) Properly place defibrillator pads on patient
      - c) Connect pads to A.E.D. unit if not already done
      - d) Turn A.E.D. unit on
      - e) Follow audio/visual prompts (directions) given by A.E.D. Unit. All providers should follow the most recent approved version of BLS as written by AHA or ARC. (Present version: 2006 ECC guidelines)
      - f) If second rescuer is available, have him/her secure airway, support ventilation with appropriate equipment and begin CPR (Chest compressions)
2. Transportation
  - a. If ACLS unit is more than 10 minutes away or is delayed, consider transportation of patient if:
    - 1) The full specified number /shocks have been delivered to the patient.
    - 2) Three (3) consecutive messages that “no shock is indicated” have been delivered
    - 3) Rendezvous with ACLS unit rather than waiting an extended amount of time for the ACLS unit to arrive at the scene
      - a) Continue Basic Life/Advanced Life Support measures
      - b) Continue monitoring patient condition
      - c) If patient requires defibrillation during transport, it will be necessary to stop the transporting unit for the A.E.D. to properly analyze and deliver an electrical shock to patient

CURRENT INFORMATION AVAILABLE OF MEDICAL POLICIES AND PRACTICES DOES NOT DIFFERENTIATE BETWEEN VENTRICULAR FIBRILLATION AS A RESULT OF A MEDICAL CONDITION OR VENTRICULAR FIBRILLATION RESULTING FROM A TRAUMATIC INJURY. THE AUTOMATIC EXTERNAL DEFIBRILLATOR SHOULD BE USED ON ANY PATIENT MEETING THE ABOVE LISTED CRITERIA OF UNCONSCIOUS, PULSELESS, AND BREATHLESS REGARDLESS OF THE CAUSE OF THAT CONDITION. THE INSTRUMENT IS PROGRAMED TO DETERMINE A SHOCKABLE RHYTHM. IF QUESTIONS ARISE THAT ARE NOT ADDRESSED IN THE WRITTEN PROTOCOL, CONTACT MEDICAL COMMAND AS SOON AS POSSIBLE.

The Ohio Division of EMS Scope of Practice dated May 2005 lists some items of interest which affect Trumbull County EMS protocol. It can be found at:

<http://www.ems.ohio.gov/PDF/EMS%20Provider%20Scope%20of%20Practice>

\* Included on page 3 of that Scope of practice is listed when Basic and Intermediate EMT's may assist with Pre-hospital ALS.

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<b><u>Pre-hospital ALS Assistance</u></b>	<b><u>Basic</u></b>	<b><u>Intermediate</u></b>
1. Set up of IV administration kit *	X	
2. Cardiac monitor *	X	
3. 12 lead EKG application **	X	X

\* Set-up of equipment only – if EMT– Paramedic or EMT – Intermediate is not present, procedure(s) shall not be completed.

\*\* Set-up of equipment only – if EMT– Paramedic is not present, procedure(s) shall not be completed

---

**TRANSPORTING WITH A PRE-HOSPITAL PHYSICIAN-ORDERED MEDICAL DEVICE:**

The EMS provider confronted with a pre-hospital patient with a pre-existing physician-ordered medical device or drug administration not covered in the EMS provider's respective scope of practice should provide usual care and transportation while maintaining the pre-existing MDDA, if applicable. Concerns or questions regarding real-time events associated with a pre-existing MDDA should be directed to the relevant Medical Control Physician. Concerns or questions regarding previous, recurrent, or future pre-hospital transportations with a pre-existing MDDA should be directed to the appropriate EMS Medical Director and legal counsel.

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- For any cardiac related call where there is ST elevation or depression, contact Medical Control

This protocol reads from the top to the bottom. All levels of health care providers are expected to offer patient care encompassing all levels down to their particular level, but not exceeding their level of certification.

A first responder may only offer patient care under the level stipulated under “First Responder”. A basic EMT is expected to offer patient care listed from “First Responder” through “Basic” level. An Intermediate is expected to follow the protocol from the level of First Responder down through the Intermediate level. A Paramedic is expected to offer patient care from the top of the page down through their level of certification.

All procedures / medications within this protocol may only be performed by individuals properly trained with the procedure / medication. If one is not properly trained, they are not authorized to perform the procedure / administer the medication.

Call Medical Control if any question.

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# **GUIDELINES for AIRWAY & BREATHING EMERGENCIES**

SECURE AIRWAY

HIGH FLOW O2 BY NRB, BVM or ETT

CONTINUOUS PULSE OXIMETRY

RAPIDLY ASSESS FOR CAUSE

TREAT IDENTIFIED CAUSE  
\*NEEDLE DECOMPRESSION  
\*CRICOTHYROTOMY

# GUIDELINES for ALTERNATIVE DRUG ADMINISTRATION

1. Endotracheal route of administration is not considered to be the preferred route for drugs but can be considered when IV access cannot be established. Medications CANNOT be administered by the King airway. Once established, all drugs should be given via the normal IV route.
2. The following drugs are permitted to be administered via the endotracheal route.
  - Lidocaine
  - Epinephrine
  - Atrropine
  - Narcan
3. Whenever the endotracheal route is used, the dose should be double that of the normal IV route and should be diluted out to a total of 10 ml of solution.
4. No drug, other than those list on this page, can be administered via the endotracheal tube route. If in question, contact medical control.
5. A previously established surgical tracheal opening may also be used in place of the endotracheal tube. However, keep in mind this is also not considered to be the preferred route for drug administration.
6. The following drugs are permitted to be administered via the mucosal atomizer device under Trumbull County Protocol: Versed, and Narcan.

**GUIDELINES for CERVICAL SPINE IMMOBILIZATION**

- 1) ANY COMPLAINT OF NECK PAIN, BACK PAIN OR PAIN ON PALPATION OF SAME AREAS based upon MOI or hx of recent trauma. (Watch patients face for grimace response)
- 2) KNOWLEDGE OR SUSPICION OF ETOH / DRUGS ON BOARD
- 3) HISTORY OF LOSS OF CONSCIOUSNESS OR ALTERED LEVEL OF CONSCIOUSNESS RELATED TO INJURY
- 4) CO-EXISTING SERIOUS INJURY OR PAIN:  
(i.e. HEAD; CHEST ABDOMEN; LONG BONE FRACTURE)
- 5) MOI (Mechanism of injury), for example
  - FALLS
  - SUSPECTED OR CONFIRMED HEAD TRAUMA
  - EJECTION FROM MOTOR VEHICLE
  - ROLLOVER OF MOTOR VEHICLE
  - SEVERE DEFORMITY OF MOTOR VEHICLE OR EXTRICATION REQUIRED
  - STRUCK BY MOTOR VEHICLE WITH SPEED > 20 mph
  - DEATH OF ANOTHER PERSON IN SAME VEHICLE

**IMPORTANT NOTE !!!**

**A complete assessment of the patient's C-Spine MUST be done. Lack of verbal complaint of neck and/or back pain is not sufficient reason for eliminating cervical spine and spinal immobilization.**

**REMEMBER – Full C-Spine immobilization MUST include:**

- ✓ C-Collar (appropriate size for patient)
- ✓ Backboard with straps at shoulders, hips, lower legs
- ✓ Head immobilization blocks or other CIM device.

# GUIDELINES for CHEST DECOMPRESSION

1. Chest decompression should be performed via needle thoracentesis when a tension pneumothorax is evident. The procedure should be performed as follows:
  - A. Insert a large gage angiocath (16g or 14g) attached to a syringe with the plunger pushed fully in.
  - B. Locate the second intercostal space in the mid-clavicular line on the affected side.
  - C. Insert the needle and catheter **OVER** the rib and into the thorax.
  - D. Pull back on the syringe plunger to confirm the presence of air in the pleural space
  - E. Remove the syringe and advance the catheter.
  - F. Continuously re-assess the patient's respiratory status.
2. Needle thoroцентesis should be performed immediately following the identification of a tension pneumothorax.
3. Medical control **MUST** be contacted **PRIOR** to the chest decompression procedure in the absence of ITLS, PHTLS or ATT. Only those providers [who are currently certified in ITLS, PHTLS or ATT are permitted to perform Chest Decompression without online Medical Control.]

# CONSCIOUS PATIENT SEDATION

## **CONSCIOUS SEDATION FOR PATIENTS TO BE CARDIOVERTED.**

1. SECURE AND PROTECT PATIENT'S AIRWAY
2. ADMINISTER OXYGEN AS IS APPROPRIATE FOR THE PATIENT'S CONDITION
3. ESTABLISH IV 0.9% NaCl (NORMAL SALINE) AND RUN AT TKO
4. ADMINISTER 2 mg OF VERSED IV PUSH AS AN INITIAL DOSE TO INDUCE AMNESIA. VERSED MAY ALSO BE ADMINISTERED BY MUCOSAL ATOMIZER IF APPROPRIATE – (1 mg in each nostril.)
5. CONTACT MEDICAL CONTROL FOR ANY ADDITIONAL DOSAGES

## **ADJUNCT TO INTUBATION FOR CONSCIOUS PATIENTS**

1. SECURE AND PROTECT PATIENT'S AIRWAY
2. ADMINISTER OXYGEN AS IS APPROPRIATE FOR THE PATIENT'S CONDITION
3. ESTABLISH IV 0.9% NaCl (NORMAL SALINE) AND RUN AT TKO
4. ADMINISTER 2 mg OF VERSED IV PUSH AS AN INITIAL DOSE
5. CONTACT MEDICAL CONTROL FOR ANY ADDITIONAL DOSAGES

## **MONITORING OF PATIENTS WHO HAVE RECEIVED VERSED**

1. PLACE THE PATIENT ON A CARDIAC MONITOR
2. CLOSELY MONITOR PATIENT'S RESPIRATORY EFFORT AND EFFECTIVENESS
3. MONITOR PATIENT'S O<sub>2</sub> SATURATION VIA PULSE OXYMETRY

## **MONITORING OF PATIENTS WHO HAVE RECEIVED VERSED**

1. IF THE PATIENT BECOMES HYPOTENSIVE, ADMINISTER A FLUID BOLUS PER PROTOCOL
2. IF THE PATIENT'S RESPIRATORY EFFORT OR EFFECTIVENESS DECREASES SIGNIFICANTLY OR IF THE PATIENT BECOMES APNEIC, IMMEDIATELY BEGIN VENTILATORY ASSISTANCE.
3. CONSIDER INTUBATING THE PATIENT

# GUIDELINES for ENDOTRACHEAL INTUBATION

1. Orotracheal intubation is the preferred technique for placement of an endotracheal tube in all patients.
2. Orotracheal intubation is warranted in patients without jaw rigidity or an intact gag reflex, and the presence of the following:
  - a. hypoventilation
  - b. airway compromise despite basic maneuvers
  - c. unprotected airway
  - d. respiratory distress
3. Consider nasotracheal intubation for breathing patients with the above clinical findings and an intact gag reflex, or the presence of jaw rigidity. **Medical Control must be contacted prior to the nasotracheal intubation procedure, in absence of ITLS, ATT or PHTLS. Only those providers who are currently certified in ITLS, ATT or PHTLS are permitted to perform nasotracheal intubation without online Medical Control.**

\* Each crew member with proper training will only take 2 attempts at intubation, then consider the addendum procedure for the King LT-D airway or other approved airway pg. A-3.

The procedure is as follows:

- a. hyperventilate the patient with oxygen
- b. lubricate the endotracheal tube with water soluble jelly
- c. place the head in a neutral or sniffing position (according to the presence/absence of suspected c-spine injuries)
- d. insert endotracheal tube into right naris, bevel to septum
- e. advance with gentle pressure
- f. listen for air exchange at proximal end of tube when nearing glottic opening
- g. insert into trachea during the inspiratory phase confirm placement and secure endotracheal tube appropriately
- h. If ET intubation is unsuccessful, consider the addendum procedure for other approved airway (if properly trained)
- i. If the airway has not successfully been secured, place an oral airway, a nasal airway & bag with 2 providers (one making seal, one bagging)
- j. If air exchange not good, perform surgical airway.

## **GUIDELINES for INTRAVENOUS THERAPY**

1. Intravenous cannulation is restricted to the following sites:
  - dorsum of the hands, wrists, forearm, and antecubital fossa
  - external jugular vein
  - long saphenous vein at the medial malleolus
2. Cannulation of the antecubital vein is the site of first choice during cardiac arrests and trauma cases. Long saphenous vein cannulation is not appropriate in the cardiac arrest or trauma patient.
3. During fluid resuscitation of a trauma patient, a fluid bolus of 20 ml / kg of normal saline must be infused using a macrodrip administration set via a large bore angiocatheter (14-18 ga.). Following a rapid infusion and reassessment of the patient, a second bolus can be administered if necessary.
4. Intravenous therapy in trauma cases should be initiated while enroute to the medical facility during rapid transport excluding cases of entrapment or difficult extrication.
5. A TKO or KVO infusion rate for non-resuscitation situations is set at 10 ml / hr (1 drop every 6 seconds when using a macrodrip administration set).
6. Utilize the saline-lock for intravenous cannulation when appropriate (refer to protocols).
7. If IV access is inaccessible, consider the addendum procedure for the EZ/IO or the sternal IO (F.A.S.T) on pgs. A-2-a-e.

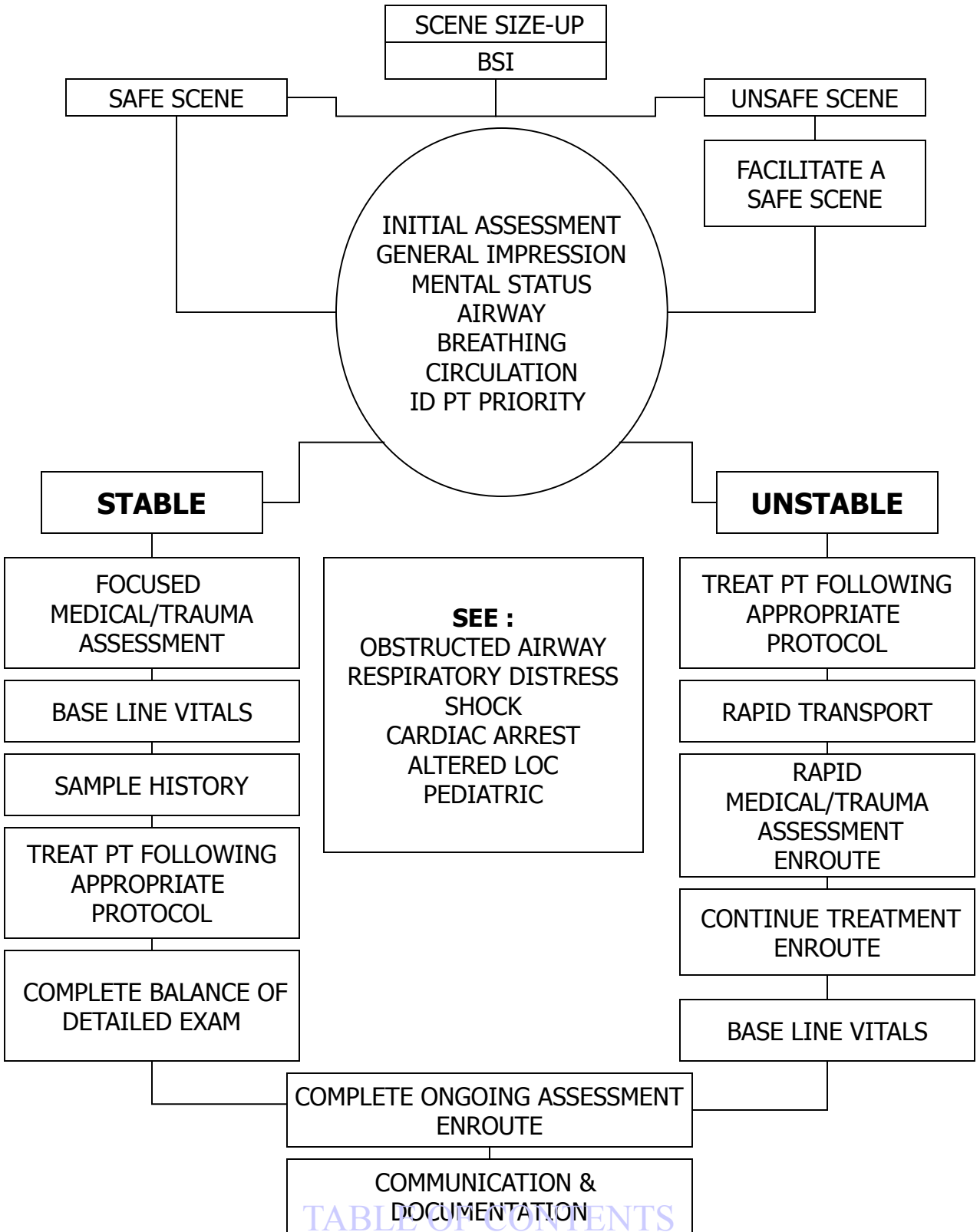
# GUIDELINES for NEEDLE CRICOTHYROTOMY (TRANSTRACHEAL JET INSUFFLATION)

1. Identify the cricothyroid membrane (small depression immediately inferior to the thyroid cartilage and superior to the cricoid cartilage).
2. Insert a 14-gauge angiocath connected to a syringe or percutaneous cricothyrotomy kit at a 45-degree angle caudally through the cricothyroid membrane while pulling back on the syringe plunger. Entrance of air into the syringe indicates that the needle is in the trachea.
3. Advance the catheter over the needle into the trachea.
4. Begin ventilation using a positive pressure device. Watch for chest expansion as a guide during ventilation. Once chest rises, discontinue pressure and observe for passive exhalation. If exhalation does not occur, insert a second catheter next to the first catheter.
5. Medical Control must be contacted prior to the Needle Cricothyrotomy procedure, in absence of ITLS, ATT or PHTLS. **Only those providers who are currently certified in ITLS, ATT or PHTLS are permitted to perform Needle Cricothyrotomy without online Medical Control**

# **GUIDELINES for OXYGEN THERAPY**

1. High flow oxygen refers to a non-rebreather mask (NRB) at 12-15 lpm.
2. Low flow oxygen refers to a nasal cannula at 1-6 lpm.
3. All patients should be evaluated for the administration of high flow oxygen. If the patient does not tolerate the NRB, administer low flow oxygen via cannula.
4. Special consideration should be given to the COPD patient when administering oxygen:
  - The COPD patient exhibiting mild respiratory distress, should receive low flow oxygen via cannula
  - If the COPD patient is exhibiting severe respiratory distress and is hypoxic, administer high flow oxygen via NRB
5. Any patient unresponsive to low flow oxygen administration should receive high flow oxygen.

# PATIENT ASSESSMENT



# **GUIDELINES for PULSE OXIMETRY**

1. Place the monitor near the patient where it can be readily seen.
2. If evidence of nail polish is present, remove it, or reposition the sensor until the display changes and confirms that proper sensing has been established.
3. Make sure that that sensor has been connected to both the monitor and patient and turn the switch to the “on” position.
4. Treat hypoxia appropriately with the proper delivering device and liter flow.
5. Considerations in overall patient condition:
  - a. Temperature of extremities
  - b. Anemic conditions
  - c. Carbon Monoxide exposure

# THROMBOLYTIC SCREEN CHECKLIST

EMS Service: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_ Age: \_\_\_\_\_

Time of onset of symptoms: \_\_\_\_\_ am / pm

**Inclusion Criteria:** (Must answer **YES** to all criteria)

**YES****NO**

1. Male or female, age 18-80 years		
2. Suspected ischemic stroke, with onset of symptoms less than 3 hours Suspected MI with onset of symptoms less than 6 hours		
3. Measurable deficit on F.A.S.T Screening Exam (if CVA suspected)		

**Exclusion Criteria:** (Must answer **NO** to all criteria)

**YES****NO**

1. Stroke or head trauma in previous 3 months		
2. History of intracranial hemorrhage that may increase risk of recurrent hemorrhage		
3. Major surgery or other serious trauma in previous fourteen days		
4. Gastrointestinal or genitourinary bleeding in previous twenty one days		
5. Arterial puncture at a noncompressible site in previous seven days 3.		
6. Lumbar puncture in previous seven days		
7. Pregnant or lactating		
8. Rapidly improving symptoms		
9. Seizure at stroke onset		
10. Symptoms suggestive of subarachnoid hemorrhage (sudden severe headache, stiff neck or recurrent nausea and vomiting)		
11. Blood glucose less than 60 or greater than 400 mg/dl		
12. Low platelet count by history		
13. On Warfarin Sodium (Coumadin), Heparin or Lovenox		
14. History of intracranial neoplasm, AV malformation, Cerebral or Abdominal Aneurysms		

1. Insert 18 gauge IV catheter with 0.9% NaCl @ TKO rate (mark missed IV sites)
2. Administer no IM injections
3. Notify ED if possible Thrombolytic candidate and suspected diagnosis (MI/CVA)
4. Continue treatment per protocol, obtain 12 lead ECG (if possible) if MI suspected

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Signature \_\_\_\_\_ Date/Time \_\_\_\_\_

# ASSISTING WITH MEDICATION ADMINISTRATION

## FIRST RESPONDERS

MAY ONLY ASSIST A PATIENT IN TAKING MEDICATION THAT HAS BEEN PRESCRIBED FOR THE PATIENT BEING TREATED

## EMT-B

MAY ASSIST A PATIENT IN TAKING MEDICATION THAT HAS BEEN PRESCRIBED FOR THE PATIENT BEING TREATED

MAY ADMINISTERED FOUR CHEWABLE BABY ASPIRIN\* (324MG) OR ONE ADULT ASPIRIN (325 MG) TO PATIENT SUSPECTED OF HAVING CARDIAC RELATED CHEST PAIN OR DISCOMFORT

**\* DUE TO COMMON ALLERGIES, USE ONLY ORANGE FLAVORED CHEWABLE BABY ASPIRIN**

## CRITERIA

FIRST RESPONDERS AND BASIC EMT'S MAY ASSIST PATIENTS IN TAKING THEIR MEDICATIONS UNDER CERTAIN CONDITIONS. THESE CONDITIONS ARE AS FOLLOWS:

1. THE MEDICATION MUST BE PRESCRIBED FOR THE PATIENT CURRENTLY BEING TREATED. THE MEDICATION CONTAINER MUST BEAR THE NAME OF THE PATIENT BEING TREATED.
2. THE MEDICATION MUST BE NOT BE EXPIRED
3. MEDICATIONS IN UNMARKED CONTAINERS (PILL BOXES, ETC.OR IN CONTAINERS THAT DO NOT BEAR THE PATIENT'S NAME OR CONTAINERS WHERE THE PATIENT'S NAME IS ALTERED SHOULD NOT BE ADMINISTERED.

## **GUIDELINES for 12-lead Monitor application**

Pursuant to the Ohio Division of EMS Scope of Practice for EMS providers, those certified at the EMT-Basic level are permitted to apply and transmit a 12-lead EKG to a facility to which a patient is being transported and that has receiving capabilities. Those certified at the EMT-Basic level, however, are NOT permitted to interpret 12-lead EKGs, rather ONLY to apply and transmit 12-lead EKGs if necessary<sup>67</sup>

Squads that are equipped with a 12-lead monitor should apply the 12-lead whenever applicable.

In any patient suspected to be having a cardiac event or any other applicable event – i.e. Respiratory, Diabetic, Shortness of breath etc., as the medic deems necessary, a 12 Lead should be performed and transmitted to the receiving facility if available.

SECTION III

MEDICAL  
EMERGENCIES

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# ABDOMINAL PAIN

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & TRANSPORT, Consider ALS INTERCEPT**  
APPLY CARDIAC MONITOR IF APPLICABLE (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

IV NaCl, TKO  
20 ml / kg BOLUS IF PATIENT IS HYPOTENSIVE  
MONITOR ECG

## PARAMEDIC

REASSESS PATIENT  
TREAT PER ACLS

# ACUTE CVA

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
 HIGH FLOW O<sub>2</sub>  
 COMPLETE ASSESSMENT  
 GATHER HISTORY  
 COMPLETE THROMBOLYTIC SCREEN  
 PLACE PT IN POSITION of COMFORT  
 CONTINUOUS REASSESSMENT

## EMT-B

COMPLETE THROMBOLYTIC SCREEN  
 CHECK BGL < 60 mg / dl OR >400mg / dl  
 REFER TO DIABETIC EMERGENCIES PROTOCOL  
**REASSESS & TRANSPORT with ALS INTERCEPT**  
 APPLY CARDIAC MONITOR (\* - See page II-2)  
 CONTACT MEDICAL CONTROL

## EMT-I

IV NaCl, TKO  
 CHECK BGL: IF BGL IS (less than) < 60 mg / dl OR (greater than) >400mg / dl,  
 REFER TO DIABETIC EMERGENCIES PROTOCOL  
 MONITOR ECG

## PARAMEDIC

REASSESS PATIENT  
 IF HYPERTENSIVE, SEE HYPERTENSION PROTOCOL, PAGE III-9  
 TREAT PER ACLS

# ALLERGIC REACTION

GENERALIZED RASH      SWELLING      ITCHING

IF RESPIRATORY DISTRESS OR HYPOTENSION REFER TO  
ANAPHYLACTIC SHOCK PROTOCOL

FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

EMT-B

**REASSESS & TRANSPORT with ALS INTERCEPT**  
CONTACT MEDICAL CONTROL

EMT-I

IV NaCl, TKO  
CONSIDER ALS INTERCEPT  
MONITOR ECG  
**BENADRYL : 25mg IV OR 50mg IM    SLOW IV PUSH (over 3 minute period)**

PARAMEDIC

MONITOR PATIENT'S AIRWAY AND RESPIRATORY STATUS  
MONITOR ECG  
TREAT PER ACLS

# ALTERED LEVEL OF CONSCIOUSNESS

FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O2  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

EMT-B

COMPLETE THROMBOLYTIC SCREEN  
CHECK BGL < 60 mg / dl OR >400mg / dl  
REFER TO DIABETIC EMERGENCIES PROTOCOL  
**REASSESS & TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

EMT-I

IV NaCl, TKO  
BGL < 60 mg / dl OR >400mg / dl REFER TO DIABETIC EMERGENCIES PROTOCOL  
IF BGL IS IN NORMAL RANGE ADMINISTER **2 mg NARCAN IV or Mucosal Atomizer (1 mg in each nostril)**  
(refer to Pharmacology pages for indications and contraindications.)

PARAMEDIC

MONITOR ECG, TREAT PER ACLS  
CHECK BGL < 60 mg / dl OR >400mg / dl  
**REFER TO DIABETIC EMERGENCIES PROTOCOL**

# CHILDBIRTH COMPLICATED DELIVERY

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY & SPECIFICS OF PREGNANCY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

VISUALLY INSPECT FOR CROWNING & DISCHARGE COLOR &  
CONSISTENCY  
NOTE CONTRACTION INTERVALS ACCURATELY  
PLACE PT IN POSITION of COMFORT  
REASSESS & TRANSPORT with ALS INTERCEPT  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

IV NaCl, TKO  
MONITOR ECG

## PARAMEDIC

REASSESS PATIENT  
TREAT PER ACLS

**ALL PROVIDERS SEE FOLLOWING PAGES FOR TREATMENT OF  
SPECIFIC EMERGENCIES**

**TABLE OF CONTENTS**

# CHILDBIRTH COMPLICATED DELIVERY continued

**EXCESSIVE BLEEDING with signs of hypovolemia / shock**

FIRST RESPONDERS

EMT-B

**PRE DELIVERY** TRANSPORT on LEFTSIDE  
**POST DELIVERY** TRANSPORT EMERGENT CONDITION IN SHOCK POSITION

## CORD AROUND NECK

LOOSEN or REMOVE CORD from AROUND NECK  
If UNABLE to LOOSEN CLAMP in 2 PLACES CUT CORD BETWEEN COMPLETE DELIVERY SEQUENCE  
TRANSPORT

## PROLAPSED CORD

TRANSPORT EMERGENT CONDITION WITH HIPS ELEVATED IN FETAL POSITION (KNEES TO CHEST)  
INSERT FINGERS INTO BIRTH CANAL TO RELIEVE PRESSURE ON THE CORD

## BREECH PRESENTATION

BODY DELIVERED FIRST USE FINGERS IN BIRTH CANAL TO CREATE PASSAGE FOR AIRWAY SUPPORT  
COMPLETE DELIVERY SEQUENCE  
BODY WON'T DELIVER TRANSPORT EMERGENT CONDITION WITH HIPS ELEVATED

EMT-I

PARAMEDIC

IV NaCl x2 REFER TO **HYPOVOLEMIC SHOCK PROTOCOL**

# CHILDBIRTH COMPLICATED DELIVERY continued

## MISCARRIAGE

FIRST RESPONDERS

EMT-B

Assess for shock and treat per shock guidelines – O2 as appropriate  
 Give psychological support to patient and / or family  
 If basic squad, apply monitor as appropriate  
 Take all expelled tissue with you to hospital

## ECTOPIC PREGNANCY

Patient may experience severe abdominal pain  
 May have intra-abdominal and / or vaginal bleeding and discharge  
 Patient may not know she is pregnant  
 Treat for hypovolemic shock  
 Transport supine with knees flexed  
 Take any expelled tissue with you to hospital

## THIRD TRIMESTER BLEEDING

Abruptio placenta – premature separation of placenta from uterine wall.  
 Characterized by abdominal pain and vaginal bleeding. Bleeding may be dark and uterus tender.  
 Placenta previa – placenta partially or completely covers the cervical canal.  
 Characterized by painless vaginal bleeding.

## EMT-I

FOR ALL ABOVE EMERGENCIES – IV NaCl, TKO

## PARAMEDIC ONLY – ECLAMPSIA / TOXEMIA

In the seizing patient, protect the patient and patient airway (see seizure protocol)  
**Administer 1 – 2 g Magnesium Sulfate** over 3 - 5 minutes for seizure  
 Contact Medical Control and advise of obstetric emergency to allow OB to prepare

# CHILDBIRTH NORMAL DELIVERY

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY & SPECIFICS OF PREGNANCY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

NOTE CONTRACTION INTERVALS ACCURATELY  
VISUALLY INSPECT FOR CROWNING & DISCHARGE COLOR &  
CONSISTENCY  
**WITHOUT CROWNING** TRANSPORT LEFT LATERAL POSITION  
REASSESS & TRANSPORT  
**CROWNING PRESENT** PREPARE TO ASSIST & FACILITATE DELIVERY  
IF NORMAL DELIVERY, TRANSPORT & REASSESS BOTH  
PATIENTS  
IF COMPLICATIONS DEVELOP REFER TO CHILDBIRTH COMPLICATED  
DELIVERY PROTOCOL  
APPLY CARDIAC MONITOR IF APPLICABLE (\* - See page II-2)

## EMT-I

REASSESS PATIENT  
IV NaCl, TKO

## PARAMEDIC

REASSESS PATIENT  
TREAT PER ACLS

# DIABETIC EMERGENCIES

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
 HIGH FLOW O<sub>2</sub>  
 COMPLETE ASSESSMENT  
 GATHER HISTORY  
 PLACE PT IN POSITION of COMFORT  
 CONTINUOUS REASSESSMENT

## EMT-B

HIGH FLOW O<sub>2</sub> → COMPLETE ASSESSMENT → GATHER HISTORY  
 PLACE PATIENT IN POSITION OF COMFORT → CHECK BGL: →  
 < 60 mg / dl & PT ALERT ADMINISTER 1 TUBE ORAL GLUCOSE  
**NORMAL RANGE** TRANSPORT with ALS INTERCEPT  
 APPLY CARDIAC MONITOR (\* - See page II-2)

## EMT-I

CHECK BGL → IV NaCl, TKO → IF PATIENT BLOOD GLUCOSE READING IS <60 mg/dl OR IS IN AN ALTERED LEVEL OF CONSCIOUSNESS,  
**ADMINISTER 1 AMP (25 GRAMS) OF 50% DEXTROSE IV PUSH OR 1 mg OF GLUCAGON IM IF IV IS NOT AVAILABLE**  
 IF BGL READING IS >400mg / dl: ADMINISTER NaCl 0.9% SODIUM CHLORIDE (Normal Saline) BOLUS OF 250cc - 500cc **WITH CAUTION for pre-existing renal problems or CHF history or signs.**  
**AUSCULTATE and MONITOR LUNG SOUNDS FREQUENTLY**  
 Consider ALS intercept

## PARAMEDIC

## TABLE OF CONTENTS

REASSESS PATIENT  
 MONITOR ECG, TREAT PER ACLS  
**NORMAL RANGE** REFER TO ALTERED CONSCIOUSNESS PROTOCOL

# HEAT EXPOSURE

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
 REMOVE FROM ENVIRONMENT & PLACE IN A COOL ENVIRONMENT  
 HIGH FLOW O<sub>2</sub>  
 COMPLETE ASSESSMENT  
 GATHER HISTORY  
 PLACE PT IN POSITION of COMFORT  
 ADMINISTER ORAL FLUIDS  
 CONTINUOUS REASSESSMENT

## EMT-B

REASSESS PATIENT  
 IF DECREASED LOC REFER ALTERED LOC PROTOCOL  
     APPLY COLD PACKS IN AXILLA / GROIN / NECK  
 IF SHIVERING OCCURS, CEASE PASSIVE COOLING  
**REASSESS & TRANSPORT with ALS INTERCEPT**  
 APPLY CARDIAC MONITOR IF APPLICABLE (\* - See page II-2)

## EMT-I

IV NaCl, TKO  
 If HYPOTENSIVE 20cc / kg BOLUS to MAINTAIN SBP 90 mm/Hg  
 CONSIDER ALS INTERCEPT  
 INTUBATE IF APPROPRIATE

## PARAMEDIC

MONITOR ECG, TREAT PER ACLS  
 IF PATIENT DISPLAYS DECREASED LEVEL OF CONSCIOUSNESS,  
     REFER TO ALTERED LEVEL OF CONSCIOUSNESS PROTOCOL  
 IF THE PATIENT EXPERIENCES SEIZURES REFER TO SEIZURE PROTOCOL

# HYPERTENSION

## FIRST RESPONDERS

COMPLETE ASSESSMENT  
CONFIRM ALS ENROUTE  
GATHER HISTORY  
APPLY O2 AT LOW FLOW  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

If on initial Systolic BP > 180  
diastolic > 105  
Wait 3 – 5 minutes reassess Blood Pressure  
Document 2<sup>nd</sup> Blood Pressure reading  
**REASSESS & TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)

## EMT-I

IV NaCl, TKO  
INTUBATE IF APPROPRIATE

## PARAMEDIC

If second SBP reading > 180  
DBP reading > 105  
**Administer Labetalol 10 mg slow IV push over 2 minutes**  
Treat any dysrhythmias  
Check for contraindications (bradycardia, asthma, etc)

# NAUSEA / VOMITING

## FIRST RESPONDERS

COMPLETE ASSESSMENT  
 GATHER HISTORY  
 PROTECT PT AIRWAY AND PLACE IN POSITION OF COMFORT  
 CONTINUOUS REASSESSMENT  
 CONFIRM TRANSPORTING SQUAD ENROUTE

## EMT-B

CHECK BGL < 60 mg / dl OR >400mg / dl  
 REFER TO DIABETIC EMERGENCIES PROTOCOL  
**REASSESS & TRANSPORT; CONSIDER ALS INTERCEPT IF APPROPRIATE**  
 PULSE OXIMETER, O2 AS NEEDED  
 APPLY CARDIAC MONITOR IF APPLICABLE (\* - See page II-2)  
 CONSIDER ETIOLOGY (i.e. Cardiac)

## EMT-I

IV NaCl, TKO IF APPROPRIATE

## PARAMEDIC

REASSESS PATIENT  
**ADMINISTER Ondansetron (Zofran)** or one of its components,  
     4mg IV push if age 13 years or older, one time;  
     2mg IV push if age 5 – 12, one time  
 Do not administer **Ondansetron (Zofran)** to children 4 yrs or less  
 If a patient is allergic to **Ondansetron (Zofran)** or one of its components,  
 or if for some other reason the drug cannot be administered, consider  
**PHENERGAN, 12.5 – 25 mg, IV times 1 (OR IM, pref. IV)**  
 (See indications / contraindications. Consider age & body weight or  
 call medical control) [TABLE OF CONTENTS](#)  
 TREAT PER ACLS

# OB/GYN VAGINAL BLEEDING

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O2  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & TRANSPORT with ALS INTERCEPT (underlying causes)**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

IV NaCl, TKO

## PARAMEDIC

REASSESS PATIENT  
MONITOR ECG, TREAT PER ACLS

# OBSTRUCTED AIRWAY

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
 PERFORM HEAD TILT-CHIN LIFT / JAW THRUST - CONSIDER C-SPINE  
 ATTEMPT TO VENTILATE / REPOSITION / REATTEMPT VENTILATION  
 REMOVE VISIBLE OBSTRUCTION / SUCTION

EMT-B

EMT-I

PARAMEDIC

CONFIRM ALS ENROUTE  
 PERFORM HEAD TILT-CHIN LIFT / JAW THRUST - CONSIDER C-SPINE  
 ATTEMPT TO VENTILATE / REPOSITION / REATTEMPT VENTILATION  
 REMOVE VISIBLE OBSTRUCTION / SUCTION

## OBSTRUCTION CLEARED

PULSE OXIMETRY  
 HIGH FLOW O<sub>2</sub>  
 COMPLETE ASSESSMENT FOCUS ON BREATH SOUNDS  
 GATHER HISTORY  
 PLACE PT IN POSITION of COMFORT  
 REASSESS & TRANSPORT with ALS INTERCEPT

## OBSTRUCTION UNABLE TO BE CLEARED

EMT-B

EMT-I

EMERGENT CONDITION TRANSPORT with ALS INTERCEPT  
 CONTINUE EFFORTS TO CLEAR OBSTRUCTION

PARAMEDIC

LARYNGOSCOPY ATTEMPT TO REMOVE WITH MAGILL FORCEPS  
 CRICOTHYROTOMY  
 MONITOR ECG TREAT PER ACLS

# OVERDOSE

## FIRST RESPONDERS

CONFIRM ALS ENROUTE → HIGH FLOW O2 → COMPLETE ASSESSMENT → GATHER HISTORY & SUBSTANCE TAKEN (TYPE / TIME / AMOUNT) → PLACE PT IN POSITION OF COMFORT → CONTINUOUS REASSESSMENT

## EMT-B

CONTACT POISON CONTROL CENTER AT 1-800-872-5111 → **CHECK BGL, REASSESS & TRANSPORT with ALS INTERCEPT** → APPLY CARDIAC MONITOR (\* - See page II-2) CONTACT MEDICAL CONTROL

## EMT-I

IV NaCl, TKO

## NARCOTICS

**NARCAN 2mg IV / Mucosal Atomizer (1 mg in ea. Nostril)**  
**REPEAT IF NECESSARY AFTER 5 MINUTES**  
**(refer to Pharmacology pages for indications and contraindications.)**

## PARAMEDIC

MONITOR ECG, TREAT PER ACLS

## TRICYCLICS

**CONSIDER SODIUM BICARB 1mEq / kg IV**

## ALCOHOL

**THIAMINE 100mg IV**  
**PUSH SLOWLY**

# POISONINGS

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY & SUBSTANCE INVOLVED (TYPE / AMOUNT / ROUTE)  
CONTACT POISON CONTROL CENTER AT 1-800-872-5111  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL **EARLY IN THE CALL**

## EMT-I

REASSESS PATIENT  
IV NaCl, TKO

## PARAMEDIC

REASSESS PATIENT  
MONITOR ECG TREAT PER ACLS

# RESPIRATORY DISTRESS / ASYMMETRICAL BREATH SOUNDS

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

REASSESS & PULSE OXIMETRY  
TRANSPORT with ALS INTERCEPT  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

REASSESS PATIENT  
IV NaCl, TKO  
INTUBATE AS APPROPRIATE

## PARAMEDIC

MONITOR ECG TREAT PER ACLS  
**SUSPECTED TENSION PNEUMOTHORAX :**  
IMMEDIATE DECOMPRESSION  
**SUSPECTED HEMOTHORAX:**  
PPV with O<sub>2</sub>

# RESPIRATORY DISTRESS / PULMONARY EDEMA

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

REASSESS PATIENT & PULSE OXIMETRY  
**TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

IV NaCl, TKO,  
**Nitroglycerin 0.4mg SL q 5 min TO MAX of 3**  
**MORPHINE 3mg SLOW IV (BP systolic should be >100 prior to admin.)**  
**If PARAMEDIC consider LASIX prior to MORPHINE**  
INTUBATE AS APPROPRIATE

## PARAMEDIC

MONITOR ECG TREAT PER ACLS  
**LASIX 40mg IV**  
**REPEAT LASIX 40mg IV after 5 min**  
**CONTACT MEDICAL CONTROL FOR POSSIBLE CONSCIOUS  
PATIENT SEDATION WITH VERSED**  
**(See Conscious Sedation Protocol, pg. II-9)**

# RESPIRATORY DISTRESS / WHEEZES

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & PULSE OXIMETRY**  
**TRANSPORT with ALS INTERCEPT**  
CONTACT MEDICAL CONTROL  
ASSIST PT with own MDI or EPI-PEN AS INDICATED  
[If anaphylaxis is suspected]  
APPLY CARDIAC MONITOR (\* - See page II-2)

## EMT-I

IV NaCl, TKO  
IF SUSPECTED ALLERGIC REACTION SEE ANAPHALACTIC PROTOCOL  
**ALBUTEROL 2.5mg AEROSOL**(MAX OF 3 TREATMENTS)  
IF NO IMPROVEMENT CONSIDER INTUBATION

## PARAMEDIC

MONITOR ECG TREAT PER ACLS  
**SOLUMEDROL, 125 mg SLOW IV PUSH OVER 2 MINUTES**  
\*\* CONSIDER CONSCIOUS SEDATION WITH VERSED  
(See Conscious Sedation Protocol, pg. II-9)

# OCULAR INJURY

**INDICATION:** To outline the care and management of the patient with an ocular injury.

ALL LEVELS

Irrigate the injured eye with normal saline

If appropriate, cover and tape the eye with gauze patch or protective cover

# SEIZURES

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
 HIGH FLOW O2 INSERT NPA ONLY  
 COMPLETE ASSESSMENT  
 GATHER HISTORY  
 PROTECT PT AND PLACE IN POSITION OF COMFORT  
 CONTINUOUS REASSESSMENT

## EMT-B

CHECK BGL < 60 mg / dl OR >400mg / dl  
 REFER TO DIABETIC EMERGENCIES PROTOCOL  
**REASSESS & TRANSPORT with ALS INTERCEPT**  
 APPLY CARDIAC MONITOR (\* - See page II-2)

## EMT-I

IV NaCl, TKO if STATUS EPILEPTICUS  
**VALIUM 5mg IV** for STATUS EPILEPTICUS (If pregnancy is a possibility, contact medical control prior to administration of Valium for poss. ½ dose or consider [**PARAMEDIC ONLY TX**] page III-5-c / TOXEMIA.)  
 REPEAT **VALIUM 5mg IV** after 5 minutes if SEIZURE DOES NOT SUBSIDE

## PARAMEDIC

REASSESS PATIENT  
 MONITOR ECG TREAT PER ACLS  
 IF PREGNANCY IS A POSSIBILITY, CONSIDER PG. III-5-C / TOXEMIA  
PRIOR TO ADMINISTRATION OF VALIUM  
**VALIUM 5mg – rectal**, if IV unable to be established. (Repeat if necessary)  
 IF VALIUM FAILS TO STOP SEIZURE OR STATUS EPILEPTICUS,  
**VERSED 2MG IV SLOW PUSH** or **0.07 to 0.08 mg/kg IM** (no more than 5 mg)  
 REFER TO DIABETIC EMERGENCIES PROTOCOL

# SHOCK / ANAPHYLACTIC

FIRST RESPONDERS

EMT-B

CONFIRM ALS ENROUTE  
 HIGH FLOW O<sub>2</sub>  
 COMPLETE ASSESSMENT  
 GATHER HISTORY  
 PLACE PT IN POSITION of COMFORT  
 ASSIST PT with own EPI-PEN AS INDICATED  
**REASSESS & TRANSPORT** (if basic) **with ALS INTERCEPT**  
 IF BASIC SQUAD, APPLY CARDIAC MONITOR (\* - See page II-2)

EMT-I

REASSESS PATIENT & PULSE OXIMETRY  
**EPI 1:1,000 0.3mg – 0.5mg SQ**  
 (Use with caution in patients who are 45 years of age or older  
 or have a cardiac history - CONTACT MEDICAL CONTROL)  
 IV NaCl, MAINTAIN SBP 90  
**BENADRYL 25mg IV or 50mg IM**  
**ALBUTEROL 2.5mg AEROSOL (MAX OF 3 TREATMENTS)**

PARAMEDIC

MONITOR ECG TREAT PER ACLS  
**SOLUMEDROL, 125 mg slow IV push over 2 minutes**  
**If SBP <90 or ALTERED LOC: DOPAMINE** (see pharmacology pages  
 for indications and contraindications.) **RAPIDLY**  
**TITRATE FROM 10mcg/kg/min to 20mcg/kg/min (MAINTAIN SBP 90)**

# SHOCK / CARADIOGENIC / NEUROGENIC/ SEPTIC

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & PULSE OXIMETRY**  
**TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

NaCl 20cc / kg BOLUS TO MAINTAIN SBP >90 UNLESS  
PULMONARY EDEMA PRESENT. IF PULMONARY EDEMA IS PRESENT  
REFER TO PULMONARY EDEMA PROTOCOL

## PARAMEDIC

MONITOR ECG TREAT PER ACLS  
**DOPAMINE RAPIDLY TITRATE FROM 10mcg/ kg - 20mcg/kg/min**  
(MAINTAIN SBP 90)

# SHOCK / HYPOVOLEMIC

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & PULSE OXIMETRY**  
**TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

NaCl 20cc / kg BOLUS TO MAINTAIN SBP >90

## PARAMEDIC

REASSESS PATIENT  
MONITOR ECG TREAT PER ACLS

# ACUTE PSYCHOSIS

**INDICATION:** To outline the care and management of the patient with an acute behavioral and / or psychiatric emergency.

## ALL LEVELS

Accept the patient's feelings, do not tell the patient how to feel.

Display a calm, professional, compassionate reassuring attitude to help calm the patient.

Have family persons provide support and reassurance if necessary.

If the patient is anxious or confused, explain all procedures carefully.

If the patient is violent, combative or an immediate danger to him / her self, bystanders, or emergency personnel, consider the following:

1. Law Enforcement assistance
2. Use of soft restraints

SECTION IV

CARDIAC  
EMERGENCIES

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# TABLE OF CONTENTS FOR CARDIAC EMERGENCIES

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# ANGINA / CHEST PAIN

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
 HIGH FLOW O<sub>2</sub>  
 ASSIST PATIENT WITH MEDS  
 COMPLETE ASSESSMENT  
 GATHER HISTORY  
 PLACE PT IN POSITION of COMFORT  
 CONTINUOUS REASSESSMENT

## EMT-B

**4 BABY ASPIRIN – 81 mg (CHEWED)**  
 PULSE OXIMETRY  
 COMPLETE THROMBOLYTIC SCREEN  
**REASSESS & TRANSPORT with ALS INTERCEPT**  
 APPLY CARDIAC MONITOR (\* - See page II-2)

## EMT-I

IV NaCl, TKO  
**1 NTG EVERY 5 MINUTES TO MAX DOSE OF 3 NTG (NTG=0.4 mg SL)**  
**5 mg MORPHINE SULFATE (IVP)**  
 (SIGNIFICANT CHEST PAIN & NOT HYPOTENSIVE )  
 Blood draw as per the Troponin blood draw addendum REQUIRED for  
 patients being transported to Trumbull Memorial Hospital ONLY. Refer to  
 \*\*\*\* addendum

## PARAMEDIC

REASSESS PATIENT  
 TREAT PER ACLS  
 MONITOR ECG as appropriate (If ST elevation or depression, contact Med control)  
 OBTAIN 12 – LEAD IF AVAILABLE and transmit to hospital (if available)

# CARDIAC ARREST

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
APPLY AED FOLLOW PROMPTS  
USE OPA OR NPA TO PROTECT AIRWAY  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

IV NaCl, TKO  
CONSIDER ENDOTRACHEAL INTUBATION  
CONSIDER KING LT-D PER PAGE II-10  
DO NOT DELAY TRANSPORT TRANSPORT TO START IV

## PARAMEDIC

QUICK LOOK,  
MONITOR ECG - if available and applicable, perform 12 lead ECG and transmit to  
hospital (if available)  
TREAT PER ACLS

# **OPTIONAL HYPOTHERMIC TREATMENT FOR POST CARDIAC EMERGENCIES: ARREST**

## **EMT-Basic:**

Follow Cardiac Arrest protocol

## **EMT-Intermed:**

After ROSC (return of spontaneous circulation) and pt unresponsive consider conversion to iced normal saline if available.

## **EMT-Paramedic:**

After ROSC and pt unresponsive, induce therapeutic hypothermia via bolus of 2 liters iced normal saline and applying ice packs to the groin and axilla bilaterally

# ASYSTOLE / PEA

**THE FOLLOWING GUIDELINES ARE TO BE FOLLOWED ONLY BY PARAMEDICS. ALL OTHER PROVIDERS REFER TO CARDIAC ARREST PROTOCOL**

PARAMEDIC

## ASYSTOLE

QUICK LOOK  
 CONFIRM IN A SECOND LEAD  
 CPR  
 INTUBATION  
 IV NaCl, TKO  
 CONSIDER IMMEDIATE TRANSCUTANEOUS PACING  
 (100/min @ 200ma)  
**1mg EPI 1:10,000 IVP or ETT**  
**1mg ATROPINE IVP or ETT TO MAX 0.04mg/kg TOTAL DOSE**  
 REPEAT EVERY 5 MINUTES  
 CONSIDER **SODIUM BICARB 1mEq / kg IV ONLY**  
 (CONSIDER EARLY IN DIALYSIS PATIENTS)  
 RE-EVALUATE  
 REFER TO TERMINATION OF RECUSITATION EFFORTS

## PEA or EMD

QUICK LOOK  
 CPR  
 INTUBATION  
 IV NaCl, TKO  
**1mg EPI 1:10,000 IVP or ETT**  
**1mg ATROPINE IVP or ETT ONLY IN BRADYCARDIC RATE**  
**(TO MAX DOSE 0.04mg/kg )**  
 REPEAT EVERY 5 MINUTES  
 CONSIDER **SODIUM BICARB 1mEq / kg IV ONLY**  
 (CONSIDER EARLY IN DIALYSIS PATIENTS)  
 RE-EVALUATE & ATTEMPT TO IDENTIFY CAUSE  
 20cc / kg NaCl BOLUS  
 TREAT OTHER UNDERLYING CAUSES  
 REFER TO TERMINATION OF RECUSITATION EFFORTS

# BRADYCARDIA

**THE FOLLOWING GUIDELINES ARE TO BE FOLLOWED ONLY BY PARAMEDICS. ALL OTHER PROVIDERS REFER TO CARDIAC ARREST PROTOCOL**

PARAMEDIC

## **SYMPTOMATIC BRADYCARDIA**

(HR <60/min with: CHEST PAIN / DYSPNEA / ↓ LOC / SBP <80 / PULMONARY CONGESTION)

MONITOR ECG

OBTAIN 12 – LEAD IF AVAILABLE and transmit to hospital  
(if available)

IV NaCl, TKO

**0.5 mg -1mg ATROPINE IVP**

**\*USE ATROPINE WITH CAUTION IN 2<sup>nd</sup> DEGREE AV BLOCK**

**TYPE II & 3<sup>rd</sup> DEGREE BLOCK WITH WIDE QRS**

CONSIDER SEDATION AND IMMEDIATE TRANSCUTANEOUS PACING

(100/min @ 200ma)

WITH CONTINUED S/S

REPEAT ATROPINE **0.5mg –1mg EVERY 3 -5 MINUTES**

**(TO MAX 0.04mg/kg DOSE )**

**DOPAMINE 5mcg / kg / min RAPIDLY TITRATED to**

**20 mcg/ kg /min or HR >60/min (and/or) SBP 90**

RE-EVALUATE

# STABLE TACHYCARDIA

**THE FOLLOWING GUIDELINES ARE TO BE FOLLOWED ONLY BY PARAMEDICS. ALL OTHER PROVIDERS REFER TO CARDIAC ARREST PROTOCOL**

PARAMEDIC

## **STABLE TACHYCARDIA**

(WHO IS ALERT & ORIENTED & HAS GOOD PERFUSION WITHOUT: CHEST PAIN/ DYSPNEA & PULMONARY EDEMA)

**\*FOR UNSTABLE PT SEE UNSTABLE TACHYCARDIA**  
MONITOR ECG

OBTAIN 12 – LEAD IF AVAILABLE and transmit to hospital  
(if available)

IV NaCl, TKO

## **PSVT (NARROW COMPLEX HR >150)**

**VAGAL MANEUVERS**

IF NO CHANGE

**ADENOSINE 6 mg RAPID IVP with 10cc NaCl RAPID FLUSH**

IF NO CHANGE

**ADENOSINE 12 mg RAPID IVP with 10cc NaCl RAPID FLUSH**

IF NO CHANGE

**REPEAT ADENOSINE 12 mg RAPID IVP with 10cc NaCl FLUSH**

IF NO CHANGE

**DILTIAZEM (CARDIZEM) 0.25 mg/kg IVP over 2 min.**

IF NO CHANGE FOR 15 MIN

**DILTIAZEM (CARDIZEM) 0.35 mg/kg IVP over 2 min.**

# STABLE TACHYCARDIA

## CONTINUED

**THE FOLLOWING GUIDELINES ARE TO BE FOLLOWED ONLY BY  
PARAMEDICS. ALL OTHER PROVIDERS REFER TO CARDIAC  
ARREST PROTOCOL**

PARAMEDIC

### **STABLE TACHYCARDIA**

(WHO IS ALERT & ORIENTED & HAS GOOD PERFUSION  
WITHOUT: CHEST PAIN/ DYSPNEA & PULMONARY EDEMA)

**\*FOR UNSTABLE PT SEE UNSTABLE TACHYCARDIA**  
MONITOR ECG

OBTAIN 12 – LEAD IF AVAILABLE and transmit to hospital  
(if available)

IV NaCl, TKO

### **V-TACH (WIDE COMPLEX HR >150)**

**LIDOCAINE 1.5mg/kg IVP**

IF NO CHANGE

**LIDOCAINE REBOLUS 0.75mg IVP/kg EVERY 5- 10 min**  
(MAX DOSE 3mg/ kg)

IF NO CHANGE

**ADENOSINE GIVEN AS IN PSVT**

IF NO CHANGE

**PROCAINAMIDE 20mg/ min ( CONSIDER ENDPOINTS)**

IF STILL NO CHANGE

**SYNC CARDIOVERT @ 100/ 200/ 300/360J )**

**CONSIDER 2mg VERSED IVP FOR SEDATION**

-Contact Medical command for an additional 3mg if needed

# UNSTABLE TACHYCARDIA

**THE FOLLOWING GUIDELINES ARE TO BE FOLLOWED ONLY BY PARAMEDICS. ALL OTHER PROVIDERS REFER TO CARDIAC ARREST PROTOCOL**

**IF UNCONSCIOUS OR UNRESPONSIVE, GO STRAIGHT TO CARDIOVERSION.**

PARAMEDIC

## **UNSTABLE TACHYCARDIA**

(WHO HAS: CHEST PAIN/ DYSPNEA/ POOR PERFUSION/  
DECREASED LOC)

MONITOR ECG

OBTAIN 12 – LEAD IF AVAILABLE and transmit to hospital  
(if available)

IV NaCl, TKO

## **PSVT (NARROW COMPLEX HR >150)**

**VAGAL MANEUVERS**

IF NO CHANGE

**ADENOSINE 6mg RAPID IVP with 10cc NaCl FLUSH**

IF NO CHANGE

**ADENOSINE 12mg RAPID IVP with 10cc NaCl FLUSH**

IF NO CHANGE

CONSIDER **2mg VERSED IVP FOR SEDATION**

-Contact Medical Command for administration instructions

**SYNC CARDIOVERT @ 100/ 200/ 300/360J )**

# UNSTABLE TACHYCARDIA

## CONTINUED

IV-8

**THE FOLLOWING GUIDELINES ARE TO BE FOLLOWED ONLY BY  
PARAMEDICS. ALL OTHER PROVIDERS REFER TO CARDIAC  
ARREST PROTOCOL**

PARAMEDIC

### **UNSTABLE TACHYCARDIA**

(WHO HAS: CHEST PAIN/ DYSPNEA/ POOR PERFUSION/  
DECREASED LOC)

MONITOR ECG

OBTAIN 12 – LEAD IF AVAILABLE and transmit to hospital  
(if available)

IV NaCl, TKO

ASYNCHRONOUS CARADIOVERT @ 100/ 200/ 300/360J

### **•IF PATIENT IS UNCONSCIOUS, GO IMMEDIATELY TO CARDIOVERSION**

#### **UNSTABLE V-TACH (WIDE COMPLEX HR >150)**

**AMIODARONE 150 mg IVP**

IF NO CHANGE

**LIDOCAINE 1.5mg/kg IVP**

CONSIDER **2mg VERSED IVP** FOR SEDATION

-Contact Medical Command for Administration Instructions

**SYNC CARADIOVERT @ 100/ 200/ 300/360J**

**LIDOCAINE REBOLUS 0.75mg IVP/kg EVERY 5- 10 min**  
(MAX DOSE 3mg/ kg)

IF NO CHANGE

**SYNC CARADIOVERT @ 360J**

IF NO CHANGE

**PROCAINAMIDE 20mg/ min ( CONSIDER ENDPOINTS)**

IF STILL NO CHANGE

**SYNC CARADIOVERT @ 360J**

WITH CONVERSION START INFUSION OF MEDICATION  
RESULTING IN THE CONVERSION

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# V-FIB / PULSELESS V-TACH

**THE FOLLOWING GUIDELINES ARE TO BE FOLLOWED ONLY BY  
PARAMEDICS. ALL OTHER PROVIDERS REFER TO CARDIAC  
ARREST PROTOCOL**

PARAMEDIC

## **V-FIB / PULSELESS V-TACH**

**QUICK LOOK / MONITOR ECG (12 lead & transmit if available /  
applicable)**

**DEFIBRILLATE ACCORDING TO THE NEWEST AHA / ARC  
GUIDELINES (presently 2006 ECC guidelines)**

**CPR / INTUBATE / IV NaCl, TKO**

**FOLLOW DRUG THEN SHOCK ROUTINE**

**EPI 1:10,000 1 mg IV or 2mg via ETT q 3minutes**

**-DEFIBRILLATE**

**AMIODARONE 300mg IVP**

**-DEFIBRILLATE**

**AMIODARONE 150mg IVP AFTER 5 MINUTES**

**-DEFIBRILLATE**

**LIDOCAINE 1.5mg/kg IVP or ETT**

**-DEFIBRILLATE**

**LIDOCAINE 1.5mg/kg IVP or ETT**

**-DEFIBRILLATE**

**PROCAINAMIDE 20mg/ min ( CONSIDER ENDPOINTS)**

**CONSIDER NaHCO<sub>3</sub> 1 mEq / kg IVP**

**REFER TO TERMINATION of RESUSCITATION PROCEDURE**

**TRANSPORT**

**\*WITH CONVERSION START INFUSION OF MEDICATION  
RESULTING IN THE CONVERSION**

# PREMATURE VENTRICULAR CONTRACTIONS

## PARAMEDIC

TREAT PREMATURE VENTRICULAR CONTRACTION, PVC'S, FOR  
THE FOLLOWING:

OBTAIN 12 – LEAD IF AVAILABLE and transmit to hospital  
(if available)

1. Treat PVC's greater than 6 per minute if symptomatic which include chest pain, dizziness and hypotension
2. Treat PVC's where there is R-T phenomenon
3. Treat PVC's if they are multifocal in nature
4. PVC's that are couplets

MEDICATION: Administer **Lidocaine bolus of 1 – 1.5 mg / kg** IV push

Followed by **Lidocaine infusion, 1 – 4 mg / minute**

If no resolution, repeat **Lidocaine bolus 0.5 – 0.75 mg / kg** IVP  
every 5 – 10 minutes to max dose of 3 mg / kg

Note: if heart rate is below 60 beats per minute with PVC's shown on the monitor, treat per bradycardia protocol.

# SECTION V

# TRAUMA EMERGENCIES

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# TABLE OF CONTENTS FOR TRAUMA EMERGENCIES

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REMOVAL OF TASER BARBS	5

# PAIN MANAGEMENT

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
 HIGH FLOW O<sub>2</sub>  
 COMPLETE ASSESSMENT  
 GATHER HISTORY  
 PLACE PATIENT IN POSITION OF COMFORT  
 CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS AND TRANSPORT WITH ALS INTERCEPT**  
 APPLY CARDIAC MONITOR (\* - See page II-2)

## EMT-I

INITIATE IV OF 0.9% NaCl (Normal Saline), RUN AT TKO  
**TORADOL 30 mg IV unless >65 yoa, then 15 mg IV**  
**60 mg IM unless >65 yoa, then 30 mg IM**  
 Indication: **Orthopedic pain (ONLY FOR ISOLATED**  
**EXTREMITY INJURY)**, known **kidney stones** **DO NOT USE**  
**ON OTHER TYPES OF PAIN UNLESS INSTRUCTED TO**  
**DO SO BY MEDICAL CONTROL**  
 (See Pharmacology list [pg. VII-3-f,m] for contraindications)  
**MORPHINE SULFATE**  
**3 – 5 mg IV SLOW PUSH AS APPROPRIATE FOR SITUATION**

## PARAMEDIC

**MONITOR ECG**  
 TREAT PER ACLS PROTOCOL

TABLE OF CONTENTS

# TRAUMA EMERGENCIES

## FIRST RESPONDERS

C-SPINE PRECAUTIONS → CONFIRM ALS ENROUTE → HIGH FLOW O2  
→ COMPLETE ASSESSMENT → GATHER HISTORY →  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

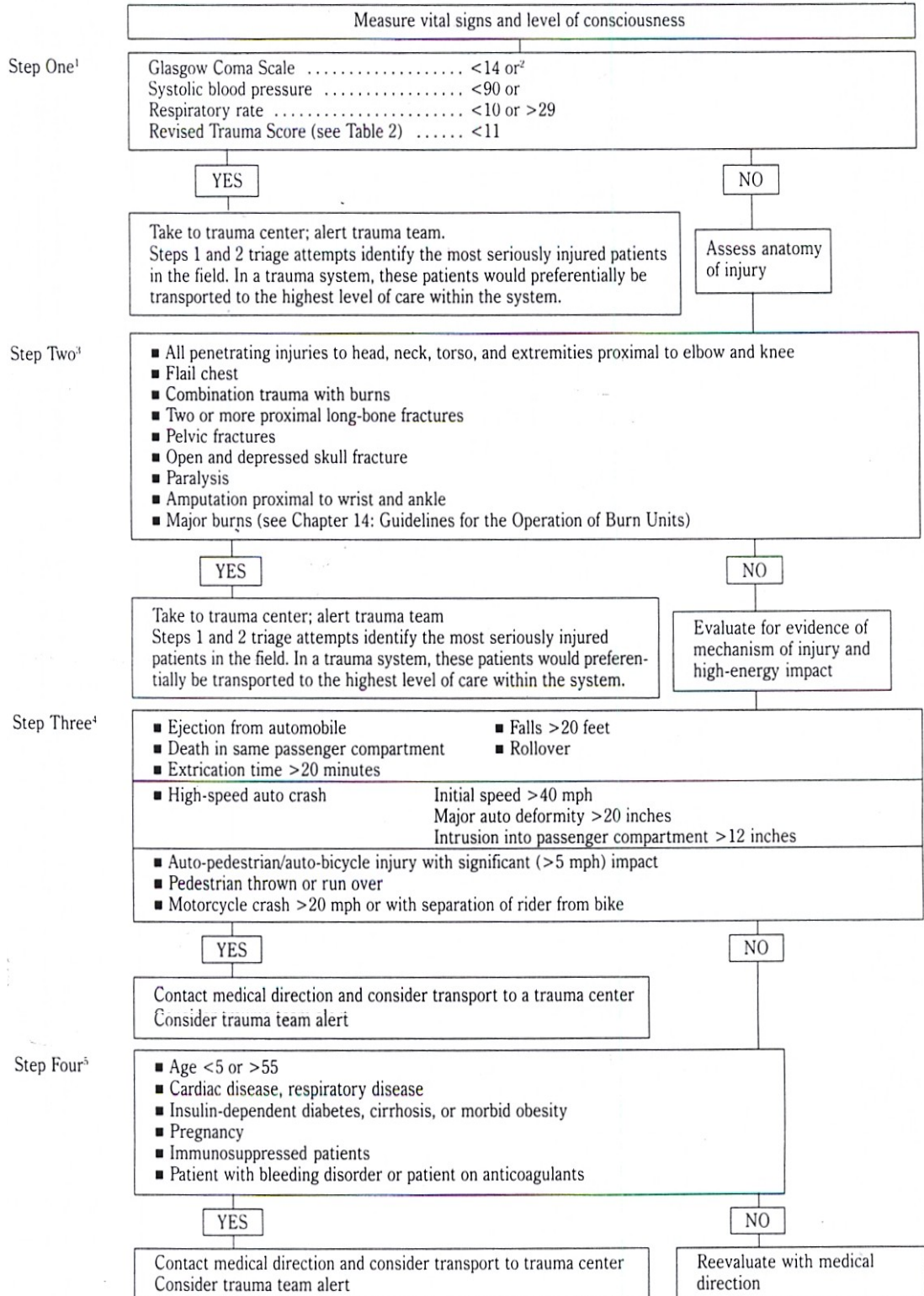
## EMT-I

IV NaCl, x 2 MAINTAIN SBP 90 mmHg

## PARAMEDIC

MONITOR ECG TREAT PER ACLS  
TREAT LIFE THREATS AS APPROPRIATE

**TABLE 1  
FIELD TRIAGE DECISION SCHEME**



**WHEN IN DOUBT TAKE TO A TRAUMA CENTER**

# GLASCOW TRAUMA SCORE

V-2-c

## GLASCOW COMA SCALE

<b>EYES</b>	SPONTANEOUSLY	4
	TO VERBAL STIMULI	3
	TO PAINFUL STIMULI	2
	NO RESPONSE	1
<b>BEST MOTOR RESPONSE</b>	OBEYS VERBAL COMMANDS	6
	PURPOSEFUL MOVEMENT TO PAIN	5
	FLEXION - WITHDRAWAL	4
	FLEXION - ABNORMAL	3
	EXTENSION	2
	NO RESPONSE	1
<b>BEST VERBAL RESPONSE</b>	ORIENTED & CONVERSES	5
	DISORIENTED & CONVERSES	4
	INAPPROPRIATE WORDS	3
	INCOMPREHENSIBLE WORDS	2
	NO RESPONSE	1

GCS TOTAL (3 – 15) \_\_\_\_\_

## REVISED TRAUMA SCORE

<b>GLASCOW COMA SCORE</b>	13 - 15	4
	9 - 12	3
	8 - 6	2
	4 - 5	1
	0 - 3	0
<b>RESPIRATORY RATE</b>	10 - 29	4
	MORE THAN 29	3
	6 - 9	2
	1 - 5	1
	0	0
<b>SYSTOLIC BLOOD PRESSURE</b>	MORE THAN 90	4
	76 - 89	3
	50 - 75	2
	1 - 49	1
	0	0

TABLE OF CONTENTS REVISED TRAUMA SCORE TOTAL (3 – 15) \_\_\_\_\_

# BURN EMERGENCIES

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
 INVOLVE HAZ-MAT if CHEMICAL or RADIOACTIVE NATURE  
 HIGH FLOW O2  
 COMPLETE ASSESSMENT  
 GATHER HISTORY  
 PLACE PT IN POSITION OF COMFORT  
 EXTREMITY BURNS OF 20% OR LESS RECIEVE WET DRESSINGS / WATER GEL PADS  
 TRUNK BURNS OR BURN EXCEEDING 20% BSA RECIEVE DRY DRESSING ONLY  
 CONTINOUS REASSESSMENT

## EMT-B

INVOLVE HAZ-MAT IF CHEMICAL OR RADIOACTIVE NATURE  
 HIGH FLOW O2 → COMPLETE ASSESSMENT → GATHER HISTORY  
 PLACE PT IN POSITION OF COMFORT  
**REASSESS & TRANSPORT WITH ALS INTERCEPT**  
 APPLY CARDIAC MONITOR (\* - See page II-2)  
 CONTACT MEDICAL CONTROL

## EMT-I

INITIATE IV OF 0.9% NaCl,TKO (Normal Saline), RUN AT KVO  
 TREAT LIFE THREATS AS APPROPRIATE  
 PROVIDE PAIN RELIEF  
**3 - 5 mg MORPHINE SULFATE IV PUSH;** Contact Medical Control for additional doses (Possible IM if cannot get IV **AFTER CONTACTING MEDICAL CONTROL**)

## PARAMEDIC

MONITOR ECG TREAT PER ACLS (ESPECIALLY IF BURN IS ELECTRICAL)  
 TREAT LIFE THREATS AS APPROPRIATE [TABLE OF CONTENTS](#)

# TRAUMATIC CARDIAC ARREST

FIRST RESPONDERS	EMT-B	EMT-I	PARAMEDIC
CARDIAC ARREST PRIOR TO EMS ARRIVAL OR IS ENTRAPPED AND CANNOT BE TREATED WITHIN 10 MINUTES CONTACT MEDICAL COMMAND			

FIRST RESPONDERS	EMT-B	EMT-I	PARAMEDIC
CARDIAC ARREST AFTER EMS ARRIVAL AND CAN BE DELIVERED TO ED WITHIN 10 MINUTES BEGIN BLS / ALS ENROUTE			

FIRST RESPONDERS	EMT-B	EMT-I	PARAMEDIC
CARDIAC ARREST AFTER EMS ARRIVAL AND CANNOT BE DELIVERED TO ED WITHIN 10 MINUTES BEGIN BLS / ALS ON SCENE WATCH FOR SIGNS OF LIFE WITHIN 10 MINUTES: <b>YES:</b> TRANSPORT WITH CONTINUED CARE <b>NO :</b> CONTACT MEDICAL COMMAND			

# REMOVAL OF TASER BARBS

## PREHOSPITAL PROCEDURE FOR THE REMOVAL OF TASER BARBS AND RELEASE OR TRANSPORT OF TASERED PATIENTS

### I. Purpose and Scope

Law enforcement has for several years as of late utilized the less-than-lethal weapon known as a Taser. The Taser uses two hooked probes attached to two wires shot from the hand unit. Once the probes are discharged, the unit delivers a debilitating shock to the subject for approximately five seconds. Once the shock has stopped, recovery is short. Shocks may be repeated.

EMS providers are called frequently to remove the Taser barbs from the subjects tazed by the police. Numerous agencies throughout the country have proven that removal of the barbs by EMS is safe and effective, and is cost-efficient in today's health care setting.

This protocol shall apply to all EMS providers of all levels operating under the Trumbull County Joint Committee of EMS orders.

Removal of Taser barbs is considered to be an ALS run for the purposes of cardiac monitoring of the tazed subject before removal.

### II. Indications for Transport

A. Patient's level of consciousness must not be altered. If there is alteration in level of consciousness, assess, treat, and consider transport per protocol.

B. If patient complains of chest pain, assess, treat, and transport pursuant to applicable protocol.

C. If patient desires to be transported, or police desire the patient to be transported, assess, treat, and transport pursuant to applicable protocol.

D. If the probe is embedded in the patient's eye, transport immediately, immobilizing the eyes as best as possible.

### III. Procedure and Protocol

A. EMS must realize that subjects who have been subdued maybe combative. The primary reason for the Taser is for a subject who is unruly or combative or who does not respond to police orders.

B. If the patient is combative, consider transport of the patient. Consider the use of restraints as necessary. Avoid the use of police restraints (handcuffs) without police presence in the ambulance.

C. Assess and secure the patient's airway and provide oxygen if and as necessary.

D. Ensure the patient is adequately restrained as described in Section III, Subsection B.

# REMOVAL OF TASER BARBS

(cont.)

E. Obtain baseline vital signs.

F. Carefully assess the patient's neurological status. The patient should be closely examined for signs of head injury and/or other injuries caused by a fall.

G. Ask about and look for signs of seizure activity following the Taser strike.

H. Immobilize the C-Spine if indicated.

I. Place patient on EKG monitor and obtain a rhythm strip. If dysrhythmia is present, proceed to the appropriate protocol (if the Taser itself did not cause the dysrhythmia, the most probable causes are stress, physical exertion, and/or drug/alcohol use), and transport.

J. **UNLESS PROBE IS EMBEDDED IN THE EYE**, remove the Taser probe. The probe is a sterile modified #8 McGill and Wright fish hook, and will only penetrate  $\frac{1}{4}$  of an inch. If the probe is embedded in the eye, dress and immobilize the eyes as best as possible, and transport the patient.

K. Secure the probe by placing it in a patient medication bag. Give the probe to the appropriate personnel from the police department. The Taser barbs are evidence.

L. Dress and bandage the wound.

M. Carefully document on the EMS report any injuries and/or medical problems, or lack thereof, related to the Taser strike. Also document older injuries that occurred prior to the Taser strike, as well as other injuries or remarkable findings noted on the patient. Use caution and care in documentation, as the patient care report may be subpoenaed in the future. Secure a signed refusal of care from the police if the patient is not to be transported.

N. If the EMS is going to transport the patient, a police officer should accompany the crew and ride in the patient compartment of the ambulance to the hospital. If this is not possible, the police officer should, at a minimum, follow the ambulance in the event that there is any further problem.

1. Monitor the patient frequently.

2. Notify the receiving hospital.

O. Should there be any question or issue regarding the removal or the patient at any time, contact medical command.

SECTION VI

PEDIATRIC  
EMERGENCIES

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# PEDIATRIC NORMAL VITAL SIGNS, GCS & APGAR

## NORMAL PEDIATRIC VITAL SIGNS

AGE	PULSE	RESPIRATIONS	BLOOD PRESSURE
NEWBORN	120 - 160	30 - 60	SBP 60 - 70
<1 YEAR	120 - 140	30 - 50	SBP = 70+(2 X AGE) DBP = 2/3 SBP
1 - 2 YEARS	100 - 140	30 - 40	
3 - 5 YEARS	100 - 120	20 - 30	
6 - 10 YEARS	80 - 100	16 - 20	

## MODIFIED COMA SCORE (PEDIATRIC GCS)

<b>EYES</b>	SPONTANEOUSLY	4
	TO VERBAL STIMULI	3
	TO PAINFUL STIMULI	2
	NO RESPONSE	1
<b>BEST MOTOR RESPONSE</b>	NORMAL SPONTANEOUS MOVEMENTS	6
	WITHDRAWS TO TOUCH	5
	WITHDRAWS TO PAIN	4
	ABNORMAL FLEXION	3
	ABNORMAL EXTENSION	2
	NO RESPONSE	1
<b>BEST VERBAL RESPONSE</b>	COOS, BABBLES	5
	IRRITABLE CRIES	4
	CRIES TO PAIN	3
	MOANS TO PAIN	2
	NO RESPONSE	1

## APGAR SCORING

	0	1	2
<b>APPEARANCE</b>	BLUE, PALE	PINK CORE DISTAL CYANOSIS	PINK BODYWIDE
<b>PULSE</b>	ABSENT	<100	>100
<b>GRIMACE</b>	NO RESPONSE	GRIMACE	CRIES
<b>ACTIVITY</b>	LIMP	FLEX ARMS/ LEGS	ACTIVE
<b>RESPIRATIONS</b>	ABSENT	SLOW	STRONG CRY

# PEDIATRIC ALLERGIC REACTION

GENERALIZED RASH      SWELLING      ITCHING

IF RESPIRATORY DISTRESS OR HYPOTENSION REFER TO  
ANAPHYLACTIC SHOCK PROTOCOL

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

IV / IO NaCl, TKO  
**BENADRYL 1mg/kg IM / IV**  
Consider ALS intercept

## PARAMEDIC

REASSESS PATIENT  
MONITOR ECG TREAT PER ACLS



# PEDIATRIC CARDIAC ARREST

## FIRST RESPONDERS

OPEN AIRWAY →CHECK BREATHING → CHECK FOR PULSE  
CONFIRM ALS ENROUTE  
INITATE BASIC LIFE SUPPORT IF NECESSARY  
PROTECT AIRWAY → ASSIST VENTILATION AS APPROPRIATE  
COMPLETE ASSESSMENT  
GATHER HISTORY  
CONTINOUS REASSESSMENT

## EMT-B

CONTINUE WITH BASIC LIFE SUPPORT  
**REASSESS & TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

IV / IO NaCl, TKO  
DO NOT DELAY TRANSPORT TRANSPORT TO START IV

## PARAMEDIC

QUICK LOOK & TREAT PER ACLS  
**EPI (1:10,000) 0.01mg/kg IV / IO or (1:1,000) 0.1mg/kg ET**

# PEDIATRIC DYSRHYTHMIAS

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

PULSE OXIMETRY  
**REASSESS & TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

IV / IO NaCl, TKO

## PARAMEDIC

MONITOR ECG TREAT PER ACLS  
PROCEED TO THE APPROPRIATE PROTOCOLS

# PEDIATRIC UNSTABLE BRADYCARDIA

**THE FOLLOWING GUIDELINES ARE TO BE FOLLOWED ONLY BY  
PARAMEDICS. ALL OTHER PROVIDERS REFER TO CARDIAC  
ARREST PROTOCOL OR CARDIAC DYSRHYTHMIA PROTOCOL**

PARAMEDIC

**SYMPTOMATIC BRADYCARDIA**

(HR <60/min with: DYSPNEA / ↓ LOC / SBP <80 / PULMONARY CONGESTION)

MONITOR ECG

IV NaCl, TKO

**EPI (1:10,000) 0.01mg/kg IV / IO or (1:1,000) 0.1mg/kg ET**

REPEAT q 3 MINUTES

WITH CONTINUED S/S

**\*\*ATROPINE 0.02mg /kg IV / IO / ET (MINIMUM DOSE 0.1mg)  
(TO MAX 1mg DOSE )**

RE-EVALUATE

**\*\* ATROPINE USE ONLY IN PEDS WITH KNOWN  
PRE-EXSISTING CARDIAC PROBLEMS**

# PEDIATRIC UNSTABLE

## TACHYCARDIA

**THE FOLLOWING GUIDELINES ARE TO BE FOLLOWED ONLY BY PARAMEDICS. ALL OTHER PROVIDERS REFER TO CARDIAC ARREST PROTOCOL OR CARDIAC DYSRHYTHMIA PRTOCOL**

PARAMEDIC

### **UNSTABLE TACHYCARDIA**

**(WHO HAS: DYSPNEA/ POOR PERFUSION/ DECREASED LOC)  
MONITOR ECG  
IV NaCl, TKO**

### **PSVT (NARROW COMPLEX HR >150)**

**\*WITH DECREASED LOC, ABSENT PERIPHERAL PULSES AND / OR DYSPNEA PROCEED TO CARDIOVERSION  
ADENOSINE 0.1mg/kg RAPID IVP with 3cc NaCl FLUSH  
IF NO CHANGE  
ADENOSINE 0.2mg/kg RAPID IVP with 3cc NaCl FLUSH  
IF NO CHANGE  
CONSIDER 0.25mg/kg VALIUM IVP FOR SEDATION  
SYNC CARDIOVERT @ 1J/ kg**

**MAX DOSEAGES OF ADENOSINE ARE 1<sup>st</sup> DOSE 6mg 2<sup>nd</sup> / 3<sup>rd</sup> DOSES 12mg**

### **V-FIB / PULSELESS V-TACH**

**DEFIBRILLATE @ 2J / kg / 4J / kg / 4J / kg**

**EPI (1:10,000) 0.01mg/kg IV / IO or (1:1,000) 0.1mg/kg ET (repeat every 3 – 5 minutes)**

**LIDOCAINE 1mg/kg IV / IO / ET**

**DEFIBRILLATE @ 4J / kg**

**LIDOCAINE 1mg/kg IV / IO / ET**

**DEFIBRILLATE @ 4J / kg**

# PEDIATRIC OBSTRUCTED AIRWAY

FIRST RESPONDERS

CONFIRM ALS ENROUTE  
PERFORM HEAD TILT-CHIN LIFT / JAW THRUST  
ATTEMPT TO VENTILATE / REPOSITION / REATTEMPT VENTILATION  
REMOVE VISIBLE OBSTRUCTION / SUCTION

EMT-B	EMT-I	PARAMEDIC
-------	-------	-----------

CONFIRM ALS ENROUTE  
PERFORM HEAD TILT-CHIN LIFT / JAW THRUST  
ATTEMPT TO VENTILATE / REPOSITION / REATTEMPT VENTILATION  
REMOVE VISIBLE OBSTRUCTION / SUCTION

**OBSTRUCTION  
CLEARED**

PULSE OXIMETRY  
HIGH FLOW O2  
COMPLETE ASSESSMENT FOCUS ON BREATH SOUNDS  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
REASSESS & TRANSPORT with ALS INTERCEPT

**OBSTRUCTION UNABLE  
TO BE CLEARED**

EMT-B	EMT-I
-------	-------

EMERGENT CONDITION TRANSPORT with ALS INTERCEPT  
CONTINUE EFFORTS TO CLEAR OBSTRUCTION

PARAMEDIC

LARYNGOSCOPY ATTEMPT TO REMOVE WITH MAGILL FORCEPS  
CRICOTHYROTOMY  
MONITOR ECG TREAT PER ACLS

# PEDIATRIC RESPIRATORY DISTRESS / ASYMMETRICAL BREATH SOUNDS

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & PULSE OXIMETRY**  
**TRANSPORT with ALS INTERCEPT**  
APPLY CARDIAC MONITOR (\* - See page II-2)  
CONTACT MEDICAL CONTROL

## EMT-I

IV / IO NaCl, TKO

## PARAMEDIC

MONITOR ECG TREAT PER ACLS  
**SUSPECTED TENSION PNEUMOTHORAX :**  
IMMEDIATE DECOMPRESSION  
**SUSPECTED HEMOTHORAX:**  
PPV with O<sub>2</sub> INTUBATE AS APPROPRIATE

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# PEDIATRIC RESPIRATORY DISTRESS / WHEEZES

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & PULSE OXIMETRY**  
**TRANSPORT with ALS INTERCEPT**  
CONTACT MEDICAL CONTROL  
ASSIST PT with own EPI-PEN AS INDICATED

## EMT-I

IV / IO NaCl, TKO  
**EPI 1:1,000 0.01 mg / kg SQ (IF SUSPECTED ALLERGIC CAUSE)**  
**ALBUTEROL 2.5mg AEROSOL (MAX OF 3 TREATMENTS)**  
If IMPROVED & ALLERGIC CAUSE **BENADRYL 1mg / kg IV,IO, IM**

## PARAMEDIC

MONITOR ECG TREAT PER ACLS  
If NO IMPROVEMENT CONSIDER INTUBATION (ORAL / NASAL)

# PEDIATRIC SEIZURES

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
 HIGH FLOW O2 INSERT NPA ONLY  
 COMPLETE ASSESSMENT  
 GATHER HISTORY  
 PLACE PT IN POSITION of COMFORT  
 CONTINUOUS REASSESSMENT

## EMT-B

CHECK BGL  
**REASSESS & TRANSPORT with ALS INTERCEPT**  
 CONTACT MEDICAL CONTROL

## EMT-I

IV / IO NaCl, TKO if STATUS EPILEPTICUS  
**VALIUM 0.25mg/kg IV** for STATUS EPILEPTICUS  
 CHECK BGL < 60 mg / dl : **D25 2cc/kg < 3 y.o.a. / 1cc/kg D50 >3y.o.a.**  
**>400mg / dl : NaCl 10cc/kg FLUID CHALLENGE**

## PARAMEDIC

MONITOR ECG TREAT PER ACLS  
 CONSIDER **VALIUM 0.5mg/kg** RECTAL ROUTE IF  
 IV UNAVAILABLE  
 BGL IN NORMAL RANGE **NARCAN IV**  
**<25kg 0.1mg/ kg IV**  
**>25 kg 2mg IV**  
 CONTACT MEDICAL CONTROL FOR REPEAT DOSE OF VALIUM IF  
 PERSISTENT SEIZURES BEYOND INITIAL DOSE

# PEDIATRIC SHOCK / ANAPHYLACTIC

## FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

## EMT-B

**REASSESS & PULSE OXIMETRY**  
**TRANSPORT with ALS INTERCEPT**  
CONTACT MEDICAL CONTROL

## EMT-I

IV/ IO NaCl, MAINTAIN SBP 90  
**EPI 1:1,000 0.01mg/ kg SQ**  
**ALBUTEROL 2.5mg AEROSOL (MAX OF 3 TREATMENTS)**  
**If IMPROVED: BENADRYL 1 mg/ kg IV, IO or IM**

## PARAMEDIC

MONITOR ECG TREAT PER ACLS

# PEDIATRIC SHOCK

## HYPOVOLEMIC/ SEPTIC/ NEUROGENIC

### FIRST RESPONDERS

CONFIRM ALS ENROUTE  
HIGH FLOW O<sub>2</sub>  
COMPLETE ASSESSMENT  
GATHER HISTORY  
PLACE PT IN POSITION of COMFORT  
CONTINUOUS REASSESSMENT

### EMT-B

**REASSESS & PULSE OXIMETRY**  
**TRANSPORT with ALS INTERCEPT**  
CONTACT MEDICAL CONTROL

### EMT-I

IV / IO NaCl 20cc / kg BOLUSES TO MAINTAIN SBP >90  
DEXTROSE CAN BE UTILIZED IF BGL <60  
**D50 1 cc / kg IF >20kg**  
**D25 2 cc / kg IF <20kg**

### PARAMEDIC

MONITOR ECG TREAT PER ACLS

# PEDIATRIC HIGH FEVER

## FIRST RESPONDERS

### **CONFIRM ALS ENROUTE**

COMPLETE ASSESSMENT

INSURE AIRWAY INTACT

GATHER HISTORY (IS THERE A KNOWN CAUSE? i.e. – EARACHE, COLD  
UPPER RESPERTORY INFECTION, DIAHRREA)

PLACE PT IN POSITION of COMFORT

CONTINOUS REASSESSMENT

## EMT-B

CHECK RECTAL TEMPERATURE WITH A RECTAL THERMOMETER

IF TEMPERATURE IS GREATER THAN 103 DEGREES, ASSIST WITH

ADMINISTRATION OF CHILDREN'S TYLENOL ACCORDING  
TO MANUFACTURE'S RECOMMENDATION

CHECK O2 SAT WITH PED PULSE OXIMETER

UNWRAP BODY TAKING CARE NOT TO OVER COOL PT

**REASSESS & TRANSPORT with ALS INTERCEPT**

## EMT-I

IF DEHYDRATED, IV PUSH / BOLUS NaCl, 20CC / KG

REASSESS FOLLOWING IV

## PARAMEDIC

MONITOR ECG TREAT PER ACLS

IF PATIENT GOES INTO SEIZURES, SEE PEDIATRIC SEIZURE PROTOCOL

# SECTION VII

## APPENDIX

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# PHARMACOLOGY DRUG LIST

ADENOCARD ( ADENOSINE)  
ALBUTEROL (PROVENTIL)  
AMIODARONE (CORDARONE)  
ASPIRIN  
ATROPINE  
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LIDOCAINE (XYLOCAINE)  
MAGNESIUM SULFATE  
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MORPHINE SULPHATE  
NALOXONE (NARCAN)  
NITROGLYCERIN  
OXYGEN  
ONDANSETRON (ZOFRAN)  
PHENERGAN  
PROCAINAMIDE  
SODIUM BICARBONATE (NaHCO<sub>3</sub>)  
SOLUMEDROL  
THIAMINE  
TORODOL (KETOROLAC)  
VALIUM (DIAZEPAM)  
VERSED (MIDAZOLAM)

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# STATEMENT ON USE OF PHARMACOLOGICAL AGENTS

## EXTREMELY IMPORTANT!

“We've known the dismal statistics for a while now. Each year as many as 98,000 Americans die as a result of human errors... “MORE THAN 7,000 of them--a higher number than those lost to workplace injuries--are killed because of mistakes in their medication. “

- Dr. Ian Smith Newsweek Magazine August 16, 2002 -

Emergency Medical Services crews, particularly Paramedics, are frequently faced with the decision of

- What medication do I give?
- What is the dosage?
- Will it help or hurt my patient?

There are an ever-increasing number of over-the counter-drugs, prescription drugs, and illicit drugs available to the public. When we are called to render aid to people in a healthcare crisis we are placed in a position of making what could be a life or death situation. For this reason, today's EMT, especially Paramedics, need to keep their knowledge of medications up-to-date. There are a number of medications administered by Paramedics operating under the medical authority of the Joint Committee of Emergency Medical Services in Trumbull County, Ohio. Paramedics need to know what drugs they can administer to a patient in a specific situation and know what kind of reaction they can expect.

- Will it help
- Will it hinder
- Will it have no effect

The drug boxes carried in the EMS unit contain a number of medications that do a variety of jobs. **DO YOU KNOW WHICH DOES WHAT OR HOW IT WILL AFFECT YOUR PATIENT?**

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# STATEMENT ON USE OF PHARMACOLOGICAL AGENTS

## BEFORE YOU ADMINISTER ANY MEDICATION, YOU SHOULD KNOW

- What is the drug being used?
- What class or category is this drug in?
- Does your patient have an allergy to this drug?
- What are its indications (Why are you using it)?
- What are its contraindications (Why or when would you NOT use it)?
- What are its effects (What does it do, how does it act)?
- What are its adverse effects (Will it harm the patient and in what ways)?
- What are its side effects (Will the patient sense heat, cold, nausea, vomiting, etc.)?
- What is the date on the medication container is the drug out dated?
- Is the fluid you are using clear or cloudy?

## KNOW THE MEDICATIONS IN YOUR DRUG BOX.

- KNOW WHAT THEY ARE FOR
- KNOW WHEN TO USE THEM
- KNOW WHAT DOSAGES TO GIVE
- KNOW WHEN NOT TO USE THEM

USE OF A MEDICATION SIMPLY BECAUSE IT IS IN THE PROTOCOL IS NOT AN ACCEPTABLE STANDARD OF MEDICAL CARE. WHEN THERE ARE QUESTIONS ABOUT MEDICATION ADMINISTRATION, CONSULT WITH THE MEDICAL CONTROL AT THE RECEIVING HOSPITAL.

## PHARMACOLOGY

### ADENOCARD (ADENOSINE) – pgs. IV-5, IV-6, IV-7, VI-7

Indications: Narrow complex paroxysmal supraventricular tachycardia refractory to vagal maneuvers.

Contraindications: Hypersensitivity, Allergy to Adenosine, 2nd & 3rd-degree heart block, Sinus node disease, Asthma.

Precautions: May cause transient dysrhythmias. COPD pts, Bradycardia, . Hypotension, Transient dysrhythmias, Facial flushing, headache, Dyspnea, bronchospasms, Chest pressure, Nausea

Dosage:

**Adults:** 6 mg rapid IV P with 10cc NaCl rapid flush repeated 2 times at 12 mg rapid IV P with 10cc NaCl rapid flush if no change.  
**Children:** 0.1 - 0.2 mg/kg RAPID IV P WITH 3cc NaCl FLUSH. Max dosages are 1st dose – 6 mg, 2<sup>nd</sup> / 3<sup>rd</sup> doses 12 mg.

### ALBUTEROL (PROVENTIL) - pgs. III-15-c, III-18-a, VI-10, VI-12

Indications: Bronchospasm and asthma in COPD. (not useful in CHF / Pulmonary edema)

Contraindications: Ventricular ectopy (Contact Medical Command); Hypertension (Systolic >200 mmhg or diastolic of >100 mmhg; Tachycardia >140 bpm; Caution with cardiovascular disease, Acute myocardial infection, Arrhythmia's. Previous full aerosol treatment within the last 30 minutes. (Use of patient hand held inhaler does not constitute aerosol treatment. Hypersensitivity or allergy to the drug. Contact medical control if in doubt before administering Proventil treatment.

If any of these conditions develop or if pulse increases more than 20 beats per minute, DISCONTINUE DRUG TREATMENT PROVENTIL IS NOT A SUBSTITUTE FOR OXYGEN. IF A PATIENT IS IN SEVERE RESPIRATORY DISTRESS, INTUBATE AND VENTILATE PATIENT.

Precautions: Pt may experience tachycardia, palpations, anxiety, nausea, cough, wheezing, and/or dizziness. Use caution with elderly, cardiac, or hypertensive pts.

Dosage: 2.5mg AEROSOL (Max of 3 treatments)

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**AMIODARONE (CORDARONE) - pgs. IV-8, IV-9**

Indications: VF/pulseless VT, Life-threatening ventricular and supraventricular dysrhythmias, Polymorphic VT and wide complex tachycardia, frequently atrial fibrillation.

Contraindications:

Hypersensitivity, cardiogenic shock, severe sinus bradycardia, or advanced 2<sup>nd</sup> or 3<sup>rd</sup> degree heart block, Medication-induced ventricular dysrhythmias, Hypotension, Bradycardia, Torsades de pointes, Profound sinus bradycardia.

Precautions: Hepatic impairment, pregnancy, nursing mothers, children.

Side Effects:

Hypotension, Bradycardia, PEA, CHF, Nausea, Fever, ARDS, Pulmonary fibrosis

Dosage:

Cardiac Arrest: 300 mg IV PUSH consider additional 150 mg IV push in 3-5 minutes.

Wide complex tachycardia (unstable V-Tach): 150 mg IVP over 10 minutes

**ASPIRIN - pg. IV-1**

Indications: Chest pain in suspected MI

Contraindications: Known hypersensitivity, ulcers

Dosage: 325 mg PO adult tab or four 81 baby chewable tablets)

**ATROPINE – pgs. IV-3, IV-4, VI-6**

Indications: Hemodynamically significant bradycardia, bradysystolic arrest, Asystol and organophosphate poisoning.

Contraindications: Allergy to Atropine, None others in emergency setting.

Precautions: AMI, glaucoma, tachycardia, Atrial Fibrillation or Atrial Flutter, 2<sup>o</sup> type II or 3<sup>o</sup> AV Block with wide QRS Complexes

Dosages – 1. Asystole.

**Adults:** 1 mg IV PUSH or ETT – Max 0.04mg/kg  
(repeat every 5 min.)

2. Bradycardia.

**Adults:** 0.5mg – 1mg IV PUSH repeated every 3 - 5 minutes. Maximum dose: .04 mg/kg

**Children:** 0.02 mg/kg IV PUSH (Maximum dose: 0.04 mg/kg)  
(Use Atropine only in Peds with known pre-existing Cardiac problems)

**BENADRYL (DIPHENHYDRAMINE ) - pgs. III-3, III-18-a, VI-2**

- Indications: Anaphylaxis, allergic reactions, and dystonic reactions.
- Contraindications: Allergy to Benadryl, Asthma, other lower respiratory diseases, and pregnancy or lactating females
- Precautions: May induce hypotension, headache, palpitations, tachycardia, sedation, blurred vision and drowsiness.
- Dosage: **Adults:** 25mg IV SLOW PUSH – (3 minutes) or 50 mg IM  
**Children:** 1 mg/kg SLOW IV PUSH or IM

**DEXTROSE (D50W) (D25) - pgs. III-7, VI-3, VI-13**

- Indications: Hypoglycemia, altered Mental Status of unknown origin, Coma of unknown origin, Seizures of unknown origin
- Contraindications: None in hypoglycemia.
- Precautions: Increased ICP. Determine BGL before administration. Ensure good venous access. Caution with

Alcoholics

- Side Effects: Neurologic Syndrome in alcoholics, Tissue Necrosis if infiltration

- Dosage: **Adults:** 1 AMP (25 grams) IV PUSH.  
**Children:** 2 cc/kg D25 IV PUSH

(**Neonate:** 4 ml/kg D12.5 IV PUSH dilute D25 2:1 with NS.)

**DIAZEPAM (VALIUM) – pgs. III-17, VI-7, VI-11**

- Indications: Status epilepticus, grand mal seizures,
- Contraindications: Hypersensitivity to the drug, shock, coma, acute alcoholism, depressed vital signs, obstetrical patients, neonates.
- Precautions: Depression, psychoses, myasthenia gravis, hepatic or renal impairment, addiction, elderly, COPD. Due to short half-life of the drug, seizure activity may recur.
- Side Effects: Respiratory depression, Hypotension, Drowsiness, Venous irritation
- Dosage: **Adults:** 5 mg slow IVP (If IV unable to be established, Paramedic may administer rectally). repeat if necessary  
**Children:** 0.25 mg/kg slow IVP. .

BE PREPARED TO VENTILATE PATIENT

**DILTIAZEM (CARDIZEM) – pg. IV-5**

Indications: Stable Tachycardia patient who is alert and oriented with good perfusion and without chest pain, dyspnea and pulmonary edema

Contraindications: Unstable Tachycardia

Dosage: 0.25 mg/kg IVP over 2 min.; If no change for 15 minutes  
0.35 mg/kg IVP over 2 min.

**DIPHENHYDRAMINE (BENADRYL) - pgs. III-3, III-18-a, VI-2**

Indications: Anaphylaxis, allergic reactions, and dystonic reactions.

Contraindications: Allergy to Benadryl, Asthma, other lower respiratory diseases, and pregnancy or lactating females

Precautions: May induce hypotension, headache, palpitations, tachycardia, sedation, blurred vision and drowsiness.

Dosage: **Adults:** 25mg IV SLOW PUSH – (3 minutes) or 50 mg IM  
**Children:** 1 mg/kg SLOW IV PUSH or IM

**DOPAMINE (INTROPINE) - pgs. III-18-a, III-18-b, IV-4**

Indications: Nonhypovolemic hypotension (70 to 100 mmHg) and cardiogenic shock.

Contraindications:

Allergy to Dopamine, Hypovolemic hypotension without aggressive fluid resuscitation, tachydysrhythmias, ventricular fibrillation, and pheochromocytoma.

Precautions: Occlusive vascular disease, cold injury, arterial embolism.  
Assure adequate fluid resuscitation of the hypovolemic patient.  
Ectopic beats and Tachycardia, Palpitations and angina, Ventricular tachycardia and Ventricular fibrillation, Hypertension, Headache, Nausea, Vomiting, Dyspnea

Dosage: RAPIDLY TITRATE FROM 10mcg/kg/min - 20mcg/kg/min (Maintain SBP 90)

**EPINEPHRINE 1:1000 - pgs. III-18-a, VI-6, VI-7, VI-10, VI-12,**

- Indications: Severe allergic reactions- Anaphylactic shock, stridor, wheezing. Airway compromise due to edema, Pediatric arrest
- Contraindications: Narrow angle glaucoma; hemorrhagic, traumatic or cardiac shock; coronary insufficiency; organic brain or heart disease; labor; hypersensitivity to sympathomimetic amines, age greater than 45 years of age, Cardiac history, Tachycardia, (Call Med Control)
- Precautions: >45 yoa, debilitated patients, hypertension, diabetes, hyperthyroidism, Parkinson's disease, tuberculosis, asthma, emphysema, & cardiac hx.
- Dosage: **Adult:** 0.3mg SQ  
**Children 10 – 16 yoa:** 0.3 SQ  
**Under 10 yoa:** 0.01 mg/kg SQ  
**Pediatric:** cardiac arrest / unstable bradycardia, tach. - 0.1mg/kg ET  
respiratory distress: 0.01 mg/kg SQ (suspected allergic cause)

**EPINEPHRINE 1:10,000 - pgs. IV-3 IV-9, VI-4, VI-6, VI-7**

- Indications: IVP or ETT for cardiopulmonary arrest.
- Contraindications: None for cardiopulmonary arrest.
- Dosage: **Adult:** ASYSTOLE - 1 mg IVP / ETT  
V-FIB / PULSELESS – 1mg IV or 2mg via ETT q 3 minutes  
**Pediatric:** 0.01 mg/kg IV / IO

**FUROSEMIDE (LASIX) – pg. III-15-b**

- Indications: Congestive heart failure and pulmonary edema.
- Contraindications: Hypersensitivity to furosemide or the sulfonamides, fluid and electrolyte depletion, pregnancy (except life-threatening circumstances), renal failure on dialysis, pneumonia
- Precautions: Infants, elderly, hepatic impairment, nephrotic syndrome, cardiogenic shock associated with acute MI, gout, or pts receiving digitalis or potassium - depleting steroids, hypotension
- Dosage: 40 mg IV, repeat after 5 minutes

## **GLUCAGON – pg. III-7**

- Indications: Hypoglycemia without IV access and to reverse beta-blocker overdose.
- Contraindications: Hypersensitivity to glucagons or protein compounds, Patients with Pheochromocytoma
- Precautions: Cardiovascular or renal impairment. Effective only if there are sufficient stores of glycogen in the liver. May cause nausea and vomiting.
- Dosage: 1 mg IM

## **KETOROLAC (TORODOL) – pg. V-1**

- Indications: Mild or moderate pain. ONLY FOR ISOLATED EXTREMITY INJURY OR KNOWN KIDNEY STONES
- Contraindications: Hypersensitivity to ketorolac, aspirin, or other NSAIDs, asthma, peptic ulcers, renal or hepatic impairment, pregnant, labor, surgical candidates, CVA.
- Precautions: Elderly, undiagnosed abdominal pain or injuries, CHF, heart disease, nursing mothers.
- Dosages: 30 mg IV unless >65 yoa, then 15 mg IV  
60 mg IM unless > 65 yoa, then 30 mg IM

## **LABEТЕLOL (Normdyne) HCL – pg. III-9**

Classification: Beta-Adrenergic blocking agents (Beta-blockers).

Used for: Management of symptomatic hypertensive crisis.

Indication for use: within the scope of TC Protocol Labetalol is administered for patients demonstrating signs and symptoms of Hypertensive Crisis. Protocol parameters are: “Systolic B/P > 180 OR diastolic B/P > 105.” Other S/S: Headache, N/V, N/T, Sensitivity to light, “Palpitations”, C.P., SOB. (JVD may be seen)

How Supplied: Is supplied in single use pre-filled syringe: 20mg/4 ml.

Contraindications: Active Asthma, Active CHF, Second or Third H.B., Any type of shock, Severe Bradycardia. History of COPD, EMPHYSEMA or Asthma use carefully. This drug may cause CHF in patients prone to “Flash CHF.” Use with caution in diabetics (this drug may mask some signs of hypoglycemia.) Can elevate insulin levels causing hypoglycemia. Seizure history - may cause tremors, or increase the likelihood of a seizure. Tricyclic antidepressants used with this may cause tremors. Cocaine use will block the effects of this drug. Use with caution if there are calcium channel blockers being used (Causes hypertension to worsen.)

(Dosages on next page)

**LABETELLOL (continued)**

Side Effects: Postural hypotension, dizziness, ringing in the ears, shortness of breath, flushing of the skin, urine retention, short term memory loss and Scalp tingling may occur.

Dosage: TC protocol: 10 mg IVP, slowly over two minutes.

Suggested Treatment: (Start with the basics: Exam V/S, P.Ox., IV, C/M, O2 (high flow), TRANSPORT - POC.) (Treat all underlying causes of hypertension first.), two sets of vital signs prior to administering 10 mg Labetalol (slow IVP,) observe/reassess V/S and contact medical control.

**LASIX (FUROSEMIDE ) – pgs. III-15-b**

Indications: Congestive heart failure and pulmonary edema.

Contraindications:

Hypersensitivity to furosemide or the sulfonamides, fluid and electrolyte depletion, pregnancy (except life-threatening circumstances), renal failure on dialysis, pneumonia

Precautions: Infants, elderly, hepatic impairment, nephrotic syndrome, cardiogenic shock associated with acute MI, gout, or pts receiving digitalis or potassium - depleting steroids, hypotension

Dosage: 40 mg IV, repeat after 5 minutes

**LIDOCAINE (Xylocaine) – pgs. IV-6, IV-8, IV-10, VI-7**

Indications: Pulseless ventricular tachycardia, PVC's, ventricular tachycardia (w/pulse).

Contraindications:

Hypersensitivity to amide-type local anesthetics, supraventricular dysrhythmias, Stokes-Adams syndrome, 2nd and 3rd-degree heart blocks, Hypotension and bradycardia.

Precautions: Hepatic or renal impairment, CHF, hypoxia, respiratory depression, hypovolemia, myasthenia gravis, shock, debilitated patients, elderly, family history of malignancy, hypothermia. May cause Bradycardia, Hypotension, Seizures, Slurred speech, Altered mental status

Dosages: Adult: TACHYCARDIA - 1.5mg / kg IVP; if no change rebolus 0.75mg / kg IVP every 5 – 10 min. (Max Dose 3mg/kg) V-FIB / PULSELESS V-TACH – 1.5mg/kg IVP or ETT PVC's – bolus 1 – 1.5 mg / kg IVP followed by 1 – 4 mg / minute infusion. If no resolution, repeat bous 0.5 – 0.75 mg / kg IVP every 5 – 10 minutes to max dose of 3.0 mg / kg

Pediatric: 1 mg/kg IV / IO / ET

## **MAGNESIUM SULFATE – pg. III-5-c**

For electrolyte correction. Used in patient with torsades de point. Also used as an Antidysrhythmic in cardiac arrest patients and pregnancy seizures.

GENERIC NAME: Magnesium Sulfate (“MAG-Sulfate”)

BRAND NAME: Magnesium Sulfate 50%.

CLASSIFICATION: Electrolyte.

USED FOR: Management of Toxemia (Pre-Eclampsia.) accompanied by seizures during pregnancy.

INDICATION FOR USE: within the scope of TC Protocol magnesium sulfate is administered for patients demonstrating signs and symptoms of Hypertensive Crisis, and seizures ( with no seizure history) during pregnancy. Other S/S: Headache, General lower extremity Edema, Altered vision acuity, N/V, N/T, pain in abdominal area, Seizure(s), unconsciousness, or altered level of consciousness.

HOW SUPPLIED: magnesium sulfate is supplied in single-use vial. 1 gm./ml.

(There is only one vial, a second dose or repeated dose will be difficult.)

CONTRAINDICATIONS: **DO NOT ADMINISTER IF THE FEMALE IS GOING TO DELIVER THE FETUS** (spontaneously aborting), **OR IS IN ACTIVE LABOR WHERE DELIVERY IS POSSIBLE WITHIN TWO HOURS.**

Do not administer if the female has history of: CHF, Heart Blocks, depressed respiratory drive, C.O.P.D, hypotension, head trauma or has Severe Bradycardia (less than 50 BPM.)

SIDE EFFECTS: This drug affects the central nervous system (brain and spinal cord) of the mother. Chest pain, Cardiac conduction defects, General muscle weakness, Lethargy, Headache, Low blood pressure, Respiratory depression, Visual disturbances, Flushing, Nausea, Vomiting, Palpitations, Constipation. Pulmonary edema, Muscular hyper-excitability.

In rare cases, Symptoms of magnesium toxicity (nausea, acute muscle weakness, loss of reflexes, inability to control fine motor movements, & muscle tremors) occasionally occurs during magnesium sulfate treatment. The medication calcium gluconate is given to treat the problem.

DOSAGE: TC protocol: “1 to 2 grams IVP, slowly over three to five minutes.”

SUGGESTED TREATMENT: (Start with the basics: Exam V/S, P.Ox., IV, C/M, O2 (high flow), TRANSPORT (Left Lateral Recumbent Position.) Start with the lower dosage of 1 gram slow IVP, observe/reassess V/S, and then administer a second dose (1gram) for a maximum dosage of 2 grams. If the seizures continue, contact Medical Control

**MIDAZOLAM (VERSED) – pgs. II-9, III-17, IV-6, IV-7**

Indications: Pre-sedation prior to Synchronized Cardioversion; Adjunct for Conscious patient Intubation; anti seizure med if valium fails or if pt is status epilepticus

Contraindications:

Hypersensitivity to benzodiazepines, narrow angle glaucoma, shock, coma, or acute alcohol intoxication.

Precautions: COPD, renal impairment, CHF, elderly.

Closely monitor patient's respiratory effort and O2 sat. If respiratory effort or effectiveness decreases significantly or if the patient becomes apneic, immediately begin ventilatory assistance.

Dosage: Administer 2 mg IVP as an initial dose. Contact med control for any additional dosages.

**MORPHINE SULFATE – pgs. III-15-b, IV-1 V-1**

Indications: Moderate to severe pain, MI, & reduce venous return in pulmonary edema.

Contraindications:

Hypersensitivity to opiates, undiagnosed head or abdominal injury, hypotension, or volume depletion, acute bronchial asthma, COPD, severe respiratory depression, or pulmonary edema due to chemical inhalation.

Precautions: Elderly, children, or debilitated patients. Naloxone should be readily available to counteract the effects of morphine.

Dosage: Respiratory distress: 3 mg slow IV (BP systolic should be >100 prior to admin)

Angina: 5 mg (significant chest pain & not hypotensive)

Pain management: 3 – 5 mg slow push (as appropriate)

**NALOXONE (NARCAN) – pgs. III-13, VI-3**

Indications: Unconsciousness or semi consciousness; Narcotic and synthetic narcotic overdose, coma of unknown origin; Signs / symptoms of respiratory compromise \ distress; No gag reflex

Contraindications:

Hypersensitivity to the drug, non-narcotic-induced respiratory depression. Do not give Narcan to an overdose patient who is conscious and talking to you.

Precautions: Possible dependency. Has a half-life shorter than most narcotics: pt may return to the overdose state. Ventricular dysrhythmias.

Dosage: Adult: 2 mg IV / Mucosal atomizer (1 mg in each nostril)

Pediatric: < 25 kg - 0.1 mg/kg IV

> 25 kg – 2 mg IV

## **NITROGLYCERIN – pg. IV-1**

- Indications: Chest pain associated with angina and acute myocardial infarction, and acute pulmonary edema.
- Contraindications: Hypersensitivity, tolerance to nitrates, severe anemia, head trauma, hypotension, increased ICP, patients taking sildenafil, glaucoma, and shock.
- Precautions: May induce headache that is sometimes severe. Nitroglycerine is light sensitive and will lose potency when exposed to the air.
- Dosage: 1 NTG every 5 min. to max dose of 3 NTG (NTG= 0.4 mg SL)

## **OXYGEN – pg. II-13**

- Indications: Hypoxia, Respiratory failure, respiratory insufficiency; respiratory distress. Use to supplement normal intake of room air medical or trauma pt to improve respiratory efficiency.
- Contraindications: No contraindications to oxygen.
- Precautions: COPD and very prolonged administration of high concentrations in the newborn.
- Dosage: NRB / 12 – 15 (25) LPM  
Nasal canula / 1 – 6 LPM

## **PHENERGAN – pg. III-10**

- Classification: Antihistamine used for management of symptomatic nausea.
- Indication for use: within the scope of TC Protocol Phenergan is administered for patients demonstrating signs and symptoms of Nausea and vomiting due to gastro-intestinal problems [Flu, food poisoning, with no signs of trauma]. Protocol parameters PRN for nausea after all other treatments.
- Supplied: in single use vial: 25 mg/1 ml.
- Contraindications: DO NOT use in children under two years of age this drug will cause violent seizures. Do not use if intoxicated (or with recent alcohol use) – causes seizures. Use cautiously in people with Cardiac histories, or severe Bradycardia. Use cautiously with people on sedatives. Use caution when combining with other depressants [i.e.: Morphine, Valium, and Benadryl, this will potentate their sedative effects.]
- Side Effects: Seizure. Involuntary muscle tremors. Marked drowsiness or tiredness, general muscle weakness, postural hypotension, slowed respirations or shortness of breath, dizziness, ringing in the ears, jaundice or flushing of the skin, light sensitivity. Possible Hyperglycemia. [Some people have an opposite reaction to antihistamines and a feeling of euphoria, excitement, and nervousness can be seen.]

**PHENERGAN (continued)**

Dosage: TC protocol: 12.5 mg - 25 mg IVP, or IM, IVP slowly over two minutes.

Suggested treatment\*: Start with the basics: Exam V/S, P.Ox., IV, C/M, O<sub>2</sub> (high flow), TRANSPORT - POC.) Young children (greater than 8 yrs.), or persons under 200 pounds: Start with the lower dosage of 12.5 mg slow IVP, observe/reassess V/S then contact medical control for a second dosage, and the amount.

Treatment suggestions were discussed with Tim Richards. ALWAYS contact medical control if there is a question on the APPROPRIATENESS of any treatment procedure(s).

**PROCAINAMIDE – pgs. IV-6, IV-8**

Indications: Ventricular fibrillation and pulseless ventricular tachycardia refractory to lidocaine.

Contraindication:

Hypersensitivity to procainamide or procaine, myasthenia gravis, and 2nd or 3rd-degree heart block.

Precautions: Hypotension, cardiac enlargement, CHF, AMI, ventricular dysrhythmias from digitalis, hepatic or renal impairment, electrolyte imbalance, or bronchial asthma.

Dosage: 20mg / min, IV-9

**SODIUM BICARBONATE (NaHCO<sub>3</sub>) pgs. III-13, IV-3**

Indications: Tricyclic antidepressant and barbiturate overdose, refractory acidosis, or hyperkalemia PEA (early in dialysis pts.)

Contraindications:

None when used in severe hypoxia or late cardiac arrest.

Precautions: May cause alkalosis if given in too large a quantity. It may also deactivate vasopressors and may precipitate with calcium chloride.

Dosage: 1mEq/kg IV

**Solumedrol – pgs. III-15-c, III-18-a**

GENERIC NAME: Methylprednisolone

BRAND NAME: Methylprednisolone Sodium Succinate.

CLASSIFICATION: Adrenocortical Steroid.

USED FOR: Management of an acute asthma attack, or respiratory distress.

In acute Anaphylactic Shock (after all other treatments.)

INDICATION FOR USE: Within the scope of TC Protocol Solu-Medrol is administered for patients demonstrating signs and symptoms of Acute Asthma Crisis (short of breath, diminished breath sounds, and harsh wheezing), or Respiratory involvement with Anaphylactic Shock.

HOW SUPPLIED: Solu-Medrol is supplied in a single-use vial 125mg/2ml.

CAUTIONS: **DO NOT ADMINSTER RAPIDLY** – THIS INCREASES THE RISK OF ARRHYTHMIAS OR CARDIAC ARREST.

CONTRAINDICATIONS: Do not administer to infants. Use with cautions if the patient is being treated for fungal infection(s).

SIDE EFFECTS: This drug can cause Hypertension, Bradycardia, Cardiac conduction defects, Flushing, Stomachache, Nausea, Vomiting, Skin rash, Muscle weakness.

DOSAGE: TC protocol: 125 mg IVP, slowly over two or three minutes. Flush after administering.

REFERENCE: TC Protocol section(s): 3 – 15-c (III-15-c) or 3 – 18-a (III-18-a).

SUGGESTED TREATMENT\*: (Start with the basics: Exam V/S, P.Ox., IV, C/M, O2 (high flow), TRANSPORT - POC.) Aerosol treatment (Albuterol), reassess V/S w/ O2 [wait few minutes], administer a second aerosol treatment, reassess V/S [waiting a few minutes],

Dosage: Administer 125 mg Solu-Medrol (slow IVP, over 2 minutes) observe/reassess and contact medical control. If the person has taken a breathing treatment regiment at home without relief, you can repeat the aerosol treatment, reassess V/S [waiting a few minutes] and contact Med control before administering second dosage, Solu-Medrol. (Do NOT delay transport to treat with Solu-Medrol.)

Treatment suggestions were discussed with Tim Richards. ALWAYS contact medical control if there is a question on the APPROPRIATNESS of any treatment procedure(s).

**THIAMINE – pg. III-13**

Indications: Coma of unknown origin, chronic alcoholism with associated coma, and delirium tremens.

Contraindications: None

Precautions: Known hypersensitivity to the drug.

Dosage: 100mg IV Push slowly

**TORODOL (KETOROLAC ) – pg. V-1**

Indications: Mild or moderate pain. ONLY FOR ISOLATED EXTREMITY  
INJURY OR KNOWN KIDNEY STONES

Contraindications:

Hypersensitivity to ketorolac, aspirin, or other NSAIDs, asthma, peptic ulcers, renal or hepatic impairment, pregnant, labor, surgical candidates, CVA.

Precautions: Elderly, undiagnosed abdominal pain or injuries, CHF, heart disease, nursing mothers.

Dosages: 30 mg IV unless >65 yoa, then 15 mg IV  
60 mg IM unless > 65 yoa, then 30 mg IM

**VALIUM (DIAZEPAM) – pgs. III-17, VI-7, VI-11**

Indications: Status epilepticus, grand mal seizures,

Contraindications: Hypersensitivity to the drug, shock, coma, acute alcoholism, depressed vital signs, obstetrical patients, neonates.

Precautions: Depression, psychoses, myasthenia gravis, hepatic or renal impairment, addiction, elderly, COPD. Due to short half-life of the drug, seizure activity may recur.

Side Effects: Respiratory depression, Hypotension, Drowsiness, Venous irritation

Dosage: **Adults:** 5 mg slow IVP (If IV unable to be established, Paramedic may administer rectally) repeat if necessary.

**Children:** 0.25 mg/kg slow IVP.

BE PREPARED TO VENTILATE PATIENT

**VERSED (MIDAZOLAM) – pgs. II-9,III-17, IV-6, IV-7**

Indications: Pre-sedation prior to Synchronized Cardioversion; Adjunct for Conscious patient Intubation; anti seizure med if valium fails or if pt is status epilepticus.

Contraindications:

Hypersensitivity to benzodiazepines, narrow angle glaucoma, shock, coma, or acute alcohol intoxication.

Precautions: COPD, renal impairment, CHF, elderly.

Closely monitor patient’s respiratory effort and O2 sat. If respiratory effort or effectiveness decreases significantly or if the patient becomes apneic, immediately begin ventilatory assistance.

Dosage: Administer 2 mg IVP as an initial dose. Contact med control for any additional dosages.

**If there is any doubt concerning the administration of any medication or any procedure covered in this protocol, consult with medical control at the intended receiving hospital.**

## PEDIATRIC MEDICATION LIST

<i>Medication</i>	<i>Dose</i>	<i>Route of Administration</i>
▪Acetaminophen (Tylenol)	10 mg/kg	PO
▪Adenosine	0.1 mg/kg	IV; IO
▪Albuterol	2.5 mg	Aerosol
▪Atropine	0.02 mg/kg	IV; IO; ET
▪Dextrose 25%	2cc/kg	IV
▪Diazepam (Valium)	0.25 mg/kg	IV; IO
▪Diazepam (Valium)	0.5 mg/kg	Rectal
▪Diphenhydramine (Benadryl)	1 mg/kg	IV
▪Epinephrine (1:10,000)	0.01 mg/kg	IV; IO
▪Epinephrine (1:1,000)	0.1 mg/kg	IV; IO; ET; Sub-Q
▪Lidocaine	1 mg/kg	IV; IO; ET
▪Morphine	0.1 mg/kg	IV; IM
▪Naloxone (Narcan)	0.1 mg/kg >25 kg 2mg	IV IV

# PEDIATRIC PREHOSPITAL MEDICATIONS

VII-4-b

<b>MEDICATION</b>	<b>DOSE</b>	<b>ROUTE</b>	<b>REMARKS</b>
Adenosine	0.1mg/kg	IV, IO	Indicated for SVT. May double second dose; maximum dose 6mg
Albuterol	2.5mg	Aerosol	Indicated for wheezing Minimum dose 0.1mg; maximum dose for child is 0.5mg; maximum dose for adolescent 1.0mg; may repeat X1. Also useful before intubating <5 years old. Blocks bradycardia due to vagal nerve stimulation
Atropine	0.02mg/kg	IV, IO, ET	For use in cases of cardiac arrhythmia. Atropine may be prepared and administered undiluted or may also be diluted in up to 10 ml of sterile water or normal saline. Dosage is 0.01 to 0.03 mg/kg body weight. Administer over a one minute period directly into a “Y” site port.

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IV = Intravenous    ET = Endotracheal    IO = Intraosseous    umg = Microgram    kg = Kilogram (Body Weight)    dl = Deciliter    ml = Milliliter

# PEDIATRIC PREHOSPITAL MEDICATIONS

VII-4-c

<b>MEDICATION</b>	<b>DOSE</b>	<b>ROUTE</b>	<b>REMARKS</b>
Dextrose 25% <sup>1</sup>	2cc/kg	IV, IO	Try to obtain bedside glucose level before administering. Administer if blood glucose <60mg/dl dilute 50% 1:1 with sterile water. Consult Medical Control if infant <1 month as solution may need further dilution
Diazepam (Valium )	0.25 mg/kg	IV, IO	Indicated for uncontrolled seizure activity/ Anticipate respiratory depression. Maximum dose 10mg
Diazepam (Valium)	0.5mg/kg	rectal	Indicated for uncontrolled seizure activity. Anticipate respiratory depression. Maximum dose 10mg
Diphenhydramine (Benedryl)	1mg/kg	SubQ	Useful in allergic reactions and anaphylaxis.
Epinephrine (1:10,000)	0.01ml/kg	IV, IO, ET	Commonly used in cardiac arrest rhythms. Use for all ET doses, and second and subsequent IV/IO doses. *The ET route has limited absorption, use the IV/IO route whenever possible.

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<sup>1</sup> = If 25% Dextrose is not available, dilute 50% Dextrose 1:1 with sterile water

# PEDIATRIC PREHOSPITAL MEDICATIONS

VII-4-d

<b>MEDICATION</b>	<b>DOSE</b>	<b>ROUTE</b>	<b>REMARKS</b>
Epinephrine (1:1,000)	0.1mg/kg (cardiac) .01 mg/kg (anaphylactic)	ET, IV, IO SubQ	Commonly used in cardiac arrest rhythms. Use for all ET doses, and second and subsequent IV/IO doses. *The ET route has limited absorption, use the IV/IO route whenever possible. Use for anaphylaxis. Maximum dose is 3 ml.
Lidocaine	1mg/kg	IV, IO, ET	Can repeat once. If successful, start continuous infusion at 20-50ugm/kg/min. Also useful before intubating for cerebral protection and decreases airway reactivity.
Morphine	0.1mg/kg	IV/IM	Useful for moderate pain. May cause respiratory depression. Hypotension and reflex bradycardia may develop from histamine release.
Naloxone (Narcan)	0.1mg/kg Or >25 kg, 2 mg	IV	Useful for unknown unconscious state or known opiate narcotic overdoses.

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IV = Intravenous    ET = Endotracheal    IO = Intraosseous    umg = Microgram    kg = Kilogram (Body Weight)    dl = Deciliter    ml = Milliliter

# SECTION VIII

# INTERHOSPITAL GROUND TRANSFER PROTOCOLS

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# INTERHOSPITAL GROUND TRANSFER PROTOCOLS

## BASIC LIFE SUPPORT (BLS)

1. Obtain a verbal patient report from an appropriate hospital staff member (nurse or physician), including:

- Age and sex of the patient
- Diagnosis
- Reason for transfer
- Level of consciousness and last set of vital signs
- Brief history and hospital patient assessment

**IF THE PATIENT IS NOT APPROPRIATE FOR BLS TRANSPORT, THIS IS THE TIME TO DISCUSS IT IN A FRIENDLY, SUPPORTIVE MANNER.**

2. Receive the patient's record and permission for transfer from the transferring facility.

3. Obtain and document a set of vitals prior to leaving the transferring facility and, as indicated, in transit. If unable to obtain vital signs in transit, document why they are unobtainable, and report reason to the accepting facility. If a nurse or physician obtains vital signs just before or during transport, document that the vitals were taken by the nurse or physician.

4. Document the patient's condition during transport.

5. Treat the patient during transport following the current Trumbull County Joint Committee of EMS Protocol (TCJCEMS).

**NOTE:** BLS transport does not include patients with IV's (except as noted below), Automatic Transport Ventilators or other ALS procedures in place.

6. Give a report to the appropriate receiving hospital staff member, including the report you received on the patient, and the patient's condition and treatment during transport.

7. EMT's may transport stable patients with saline or heparin wells in place that were initiated in a medical facility.

8. EMT's may transfer patients from a hospital to their home with an IV of Patient Controlled Analgesia (PCA) in place.

9. If the patient becomes unstable, contact the receiving hospital ED for orders.

# INTERHOSPITAL GROUND TRANSFER PROTOCOLS (Continued)

## ADVANCED LIFE SUPPORT (ALS)

**EMT-I's cannot transfer patients with IV drip medications.**

1. Obtain a verbal patient report from an appropriate hospital staff member (nurse or physician), including:
  - Age and sex of the patient
  - Diagnosis
  - Reason for transfer
  - Level of consciousness and last set of vital signs
  - Brief history and hospital patient assessment
  - Transfer Orders from the referring Physician
2. Receive the patient's record and permission for transfer from the transferring facility.
3. Obtain and document a set of vitals prior to leaving the transferring facility and, as indicated, in transit. If unable to obtain vital signs in transit, document why they are unobtainable, and report reason to the accepting facility. If a nurse or physician obtains vital signs just before or during transport, document that the vitals were taken by the nurse or physician.
4. Document the patient's condition during transport.
5. Treat the patient during transport following the Physician Orders. If the patient's condition changes treat the changes during transport following the current Trumbull County Joint Committee of EMS Protocol and contact the receiving hospital ED for orders.
6. Give a report to the appropriate receiving hospital staff member, including the report you received on the patient, and the patient's condition and treatment during transport.
7. Cellular telephone communication capability is required for agencies doing long distance transports.
8. The EMS Provider is to call the receiving hospital ER if the patient deteriorates and "on-line" physician direction is needed. Paramedics are expected to follow the Trumbull County Joint Committee of EMS Protocol and all standing orders as the patient requires.

**Note:** Any ongoing treatments, such as IV drip medications, must have accompanying transfer orders signed by the attending physician at the transferring hospital. If the EMS Provider feels the patient may not be stable for transfer, contact medical command for advice.

# INTERHOSPITAL GROUND TRANSFER PROTOCOLS

## I-1 INTRAVENOUS DRIP MEDICATION MAINTENANCE

If an ALS agency will be participating in interhospital ground transfers without hospital staff on board, the agency Medical Director (or designee) must provide an “in-service” regarding the use of these medications. Documentation of participation in such an “in-service” must be kept by the agency on each ALS provider who will participate in such transfers. If an agency wishes authorization to manage medications not included herein, the agency Medical Director should submit a request to the TCJCEMS for approval.

1. The following IV DRIPS may be used by Paramedics (in addition to those medications authorized for use as outlined in the treatment protocols), when ordered and provided by the transferring physician. Many of these medications are **NOT** carried or initiated by prehospital providers.
- 2. ALL OF THESE MEDICATIONS DRIPS MUST BE RUN ON INFUSION PUMPS AT ALL TIMES FOR ACCURATE DOSING AND TITRATION.**
3. If the patient deteriorates or has a significant change in status, or if medications ordered by the transferring physician must be discontinued, contact the receiving hospital ER immediately. Follow your existing protocol for patient changes.
4. If Medical command is sought at any point during a inter hospital transport, document the orders on the run sheet and contact the EMS coordinator after the transport for review of the case.

### IV DRIP MEDICATIONS

#### A. NITROGLYCERINE

1. Usual dosage: 10-50 mcg/min.
2. Monitor blood pressure every 5 minutes.
3. Discontinue drip if systolic blood pressure falls below 90 mm Hg, or if diminishing mental status occurs with diminishing blood pressure. If systolic blood pressure returns to above 100 mm Hg, follow the Suspected AMI Protocol and contact the receiving ED for Medical Command.

#### B. HEPARIN

1. Usual rate: 18 units/kg/hr.
2. Monitor patient for signs of bleeding around IV sites, hemoptysis, hematuria, or epistaxis.
3. Discontinue drip if patient exhibits any signs or symptoms of bleeding complications

# INTERHOSPITAL GROUND TRANSFER PROTOCOLS

## I-1 INTRAVENOUS DRIP MEDICATION MAINTENANCE (cont.)

### C. INSULIN (REGULAR)

1. Usual dose: 0.1 unit/kg/hour
2. Blood glucose must be monitored at least hourly
3. Discontinue drip if symptomatic hypoglycemia occurs and follow the Diabetic

Emergencies Protocol.

### D. POTASSIUM

1. Usual dose: not faster than 10 mEq/hour.
2. The patient must be on a cardiac monitor AT ALL TIMES during this infusion.

### E. MAGNESIUM

1. Usual dose:
  - a. LOADING DOSE: 2-4gm infused over 15-30 minutes.
  - b. MAINTENANCE: 1-4gm/hr not to exceed 40gm/day
2. If patient becomes lethargic or hypotensive, discontinue MAGNESIUM infusion.

### E. ANTIBIOTICS (Any)

1. Continue at the prescribed rate being utilized at the referring facility.
2. If the infusion completes during transport, D/C the tubing and place a saline lock unless other infusion orders exist
3. If other Antibiotics are ordered, hang and infuse at the ordered rate.
4. If a maintenance drip such as normal saline is ordered, hang and infuse at the ordered rate.
5. If there are any signs of an allergic reaction, stop the infusion and follow the existing protocol for anaphylaxis.

F. This protocol may be changed at any time and may have medications added or deleted at any time based on current needs as deemed necessary by the medical director. All changes will be forwarded to administrators who currently utilize the inter facility transport protocol in writing.

G. If a Paramedic is asked to transport any other medication that is not covered in this protocol, they may seek guidance in transporting the medication by contacting medical command at Trumbull Memorial Hospital ER. The transport can occur if the Paramedic and the medical command physician agree the medication can safely be transported.

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Ted Spirtos, MD, Medical Director

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Date

SECTION IX  
ADDENDUM

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# TABLE OF CONTENTS FOR ADDENDUM

All procedures in this addendum are optional or elective

CPAP – Continuous Positive Air Pressure 1-a,b  
Alternative Intraosseous Infusion (EZ-I/O, F.A.S.T.) 2-a-e  
King LT-D airway 3  
Blood Draw guidelines 4-a-c  
Rhino Rocket 5-a,b

# Continuous Positive Airway Pressure

**This protocol for the use of CPAP applies to all of those certified as the EMT-Basic, EMT-Intermediate, or EMT-Paramedic level who also hold current and valid protocol under the Trumbull County Joint Committee of Emergency Medical Services, and who have received appropriate training for its administration and use (i.e. manufacturer in-service with review of the protocol). First responders are specifically prohibited from using CPAP on patients.**

## **CPAP Inclusion**

### **Respiratory distress (2 or more of the following)**

- Retractions or accessory muscle usage
- Respiratory rate >25
- Pulse ox <92%

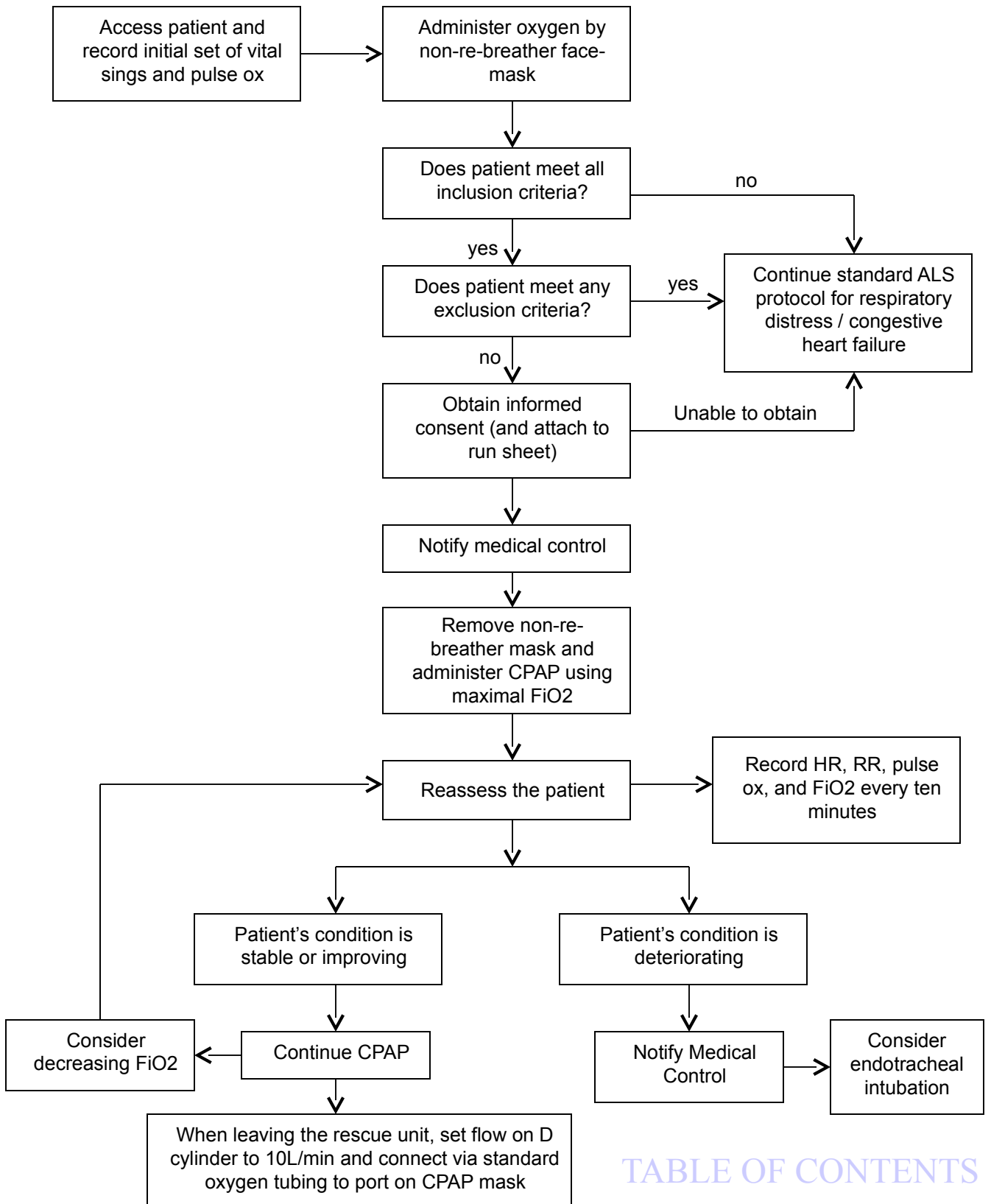
### **Presumed pulmonary edema (both of the following)**

- History of CHF
- Rales

## **Exclusions:**

- Respiratory or cardiac arrest
- BP <90 systolic
- Unresponsive to speech
- Inability to maintain airway patency
- Major trauma
- Vomiting or active upper GI bleed

# CPAP Protocol Flowsheet



# GUIDELINES for ALTERNATIVE INTEROSSEOUS INFUSION

## **Fluid Resuscitation**

1. IV's will be established at the earliest possible time.
2. Large-bore IV catheter will be utilized
3. Isotonic Fluids will be administered at a rate of 20-ml/kg fluid bolus.
4. Fluid resuscitation treatment will be aimed at keeping a systolic blood pressure of 90.
5. Fluid considerations will also take into account the level of consciousness.

## **Vascular Access**

1. Peripheral IV's will be attempted on all hypotensive patients.

When a peripheral line cannot be placed, the following are approved devices:

EZ I/O by Vidacare

## **Comprehensive Protocol Development Guide**

### **Training:**

The EZ-IO AD® & EZ-IO PD® infusion systems require specific training prior to use.

### **INDICATIONS:**

EZ-IO AD® (40 kg and over) & EZ-IO PD® (3 – 39 kg)

1. Intravenous fluids or medications are needed and a peripheral IV cannot be established in 2 attempts or 90 seconds **AND** the patient exhibits one or more of the following:

- a. An altered mental status (GCS of 8 or less)
- b. Respiratory compromise (SaO<sub>2</sub> 80% after appropriate oxygen therapy, respiratory rate < 10 or > 40 min)
- c. Hemodynamic instability (Systolic BP of < 90).

2. EZ-IO AD® & EZ-IO PD® may be considered PRIOR to peripheral IV attempts in the following situations:

- a. Cardiac arrest (medical or traumatic)
- b. Profound hypovolemia with alteration of mental status
- c. Patient in extremis with immediate need for delivery of medications and

or fluids.

**EZ IO** continued

**CONTRAINDICATIONS:**

Fracture of the bone selected for IO infusion (*consider alternate site*)

Excessive tissue at insertion site with the absence of anatomical landmarks (*consider alternate site*)

Previous significant orthopedic procedures (*IO within 24 hours, prosthesis – consider alternate tibia*)

Infection at the site selected for insertion (*consider alternate site*)

**CONSIDERATIONS:**

Flow rates:

Due to the anatomy of the IO space you will note flow rates to be slower than those

achieved with IV catheters.

Ensure the administration of an appropriate rapid syringe bolus (flush) prior to infusion **NO FLUSH = NO FLOW**

Rapid syringe bolus (flush) the EZ-IO AD® with 10 ml of normal saline

Rapid syringe bolus (flush) the EZ-IO PD® with 5 ml of normal saline

Repeat syringe bolus (flush) as needed

To improve continuous infusion flow rates always use a syringe, pressure bag or infusion pump

Pain:

Insertion of the EZ-IO AD® & EZ-IO PD® in conscious patients has been noted to cause mild to moderate discomfort (usually no more painful than a large bore IV). However, IO Infusion for conscious patients has been noted to cause severe discomfort

Prior to IO syringe bolus (flush) or continuous infusion in alert patients, SLOWLY administer Lidocaine 2% (Preservative Free) through the EZ-IO hub.

EZ-IO AD® Slowly administer 20 – 40 mg Lidocaine 2% (Preservative Free)

EZ-IO PD® Slowly administer .5 mg /kg Lidocaine 2% (Preservative Free)

**PRECAUTIONS:**

The EZ-IO AD® & EZ-IO PD® are not intended prophylactic use

**EQUIPMENT:**

EZ-IO® Driver

EZ-IO AD® or EZ-IO PD® Needle Set

Alcohol or Betadine Swab

EZ-Connect® or Standard Extension Set

10 ml Syringe

Normal Saline (or suitable sterile fluid)

Pressure Bag or Infusion Pump

2 % Lidocaine (preservative free)

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**EZ I/O** continued

**PROCEDURE:** *If the patient is conscious, advise of EMERGENT NEED for this procedure and obtain informed consent*

1. Wear approved Body Substance Isolation Equipment (BSI)
2. Determine EZ-IO AD® or EZ-IO PD® Indications
3. Rule out Contraindications
4. Locate appropriate insertion site
5. Prepare insertion site using aseptic technique
6. Prepare the EZ-IO® driver (Power or Manual) and appropriate needle set
8. Stabilize site and insert appropriate needle set
9. Remove EZ-IO® driver from needle set while stabilizing catheter hub
10. Remove stylet from catheter, place stylet in shuttle or approved sharps container
11. Confirm placement
12. Connect primed EZ-Connect®
13. Slowly administer appropriate does of Lidocaine 2% (Preservative Free) IO to conscious patients
14. Syringe bolus (flush) the EZ-IO® catheter with the appropriate amount of normal saline.
15. Utilize pressure (pressure bag or infusion pump) for continuous infusions where applicable
16. Begin infusion
17. Dress site, secure tubing and apply wristband as directed
18. Monitor EZ-IO® site and patient condition

**STERNAL I/O****STERNAL INTRAVENOUS GUIDELINES**

1. Sternal IO's will be considered for all adult (ages 16 and up) cardiac arrests and trauma patients whose Glasgow coma scale is 8 and under, where peripheral line cannot be placed.
2. Contraindications to Sternal IO's are as follows:
  - a. Trauma to the chest suspected Sternal fractures
  - b. skin damage / compromise at the infusion site
  - c. Pervious Sternotomy
  4. Extremely small adult
  5. Severe osteoporosis

**The F.A.S.T.1 Procedure****PREPARATION:**

1. Undo or cut shirt of patient to expose sternum
2. Identify the Sternal notch
3. Use aseptic technique to prepare the insertion site with the iodine prep pad followed by alcohol prep pads

## F.A.S.T. Procedure continued

### PROCEDURE:

1. Remove the top half of backing (labeled "Remove 1") from the Patch.
2. Locate the Sternal notch using an index finger.
3. Holding your index finger perpendicular to the skin. Align the locating notch in the Target Patch with the Sternal notch, keeping your index finger perpendicular.
4. Verify that the Target Zone (circular hole) on the Patch is directly over the patient's midline
5. Secure the top half of the Patch to the body by pressing firmly downward on the Patch, engaging the adhesive.
6. Remove the remaining backing (labeled "Remove 2") and secure Patch to patient.
7. Verify correct Patch placement by checking the alignment of the locating notch with the patient's Sternal notch, and making sure that the Target Zone is over the midline of the patient's body. .

*Note: The correct Patch placement is critical for safe and effective placement of the device*

8. Remove Sharps Cap from Introducer
9. Place Bone Probe cluster needles I Target Zone of Target Patch, and ensure that all the Bone Probe needles are within the Target Zone. Hold the Introducer perpendicular to the skin of the patient to ensure proper functioning of the depth – control mechanism.
10. Pressing straight along the Introducer axis, with hand and elbow in line, push with firm and constant force until a distinct release is heard and felt.  
***Warning:*** Apply the force perpendicular to the skin and along the long axis of the Introducer. Avoid extreme force, twisting and jabbing motions.
11. After the release, expose the Infusion Tube by gently withdrawing the Introducer along the same path used to insert it (perpendicular to the skin). The stylet Supports will fall away.
12. Locate the orange Sharps Plug, and place it on a flat surface with foam facing up. Keeping both hands behind the needles, push the Bone Probe cluster straight in to the foam. After the Sharps Plug has been engaged and the sharps are safely covered, reattach the clear Sharps Cap to the Introducer. This completes the final sharps protection.
13. Dispose of the Introducer using contaminated sharps protocols.
14. Connect the Infusion Tube to the right-angle female connector on the Target Patch.

*Note:* This connection is a slip luer.

15. Optional Step: Verify correct placement of Infusion Tube by attaching the enclosed syringe to straight female connector and withdrawing marrow into the Infusion Tube.

## **F.A.S.T. Procedure continued**

16. Attach the straight female connector to the source of fluid or drugs. Fluid can now flow to the site.
17. Place Protector Dome directly over Target Patch and press down firmly to engage the Velcro fastening. Ensure that the Infusion Tubing and right-angle female connector are contained under the dome.
18. The Dome can be removed by holding the Patch against the skin and peeling back the Dome Velcro.
19. Attach Remover Package to patient for transport.  
*Warning:* The Remover Package must be transported with the patient. It will be used later to remove the F.A.S.T.1 System  
*Note:* Do not breach the packaging since the Remover is sterile.

### **Optional Step: Increase Flow Rate**

20. Attach the syringe to the straight female connector on the Patch.
21. Increase fluid flow rate by flushing system with 100cc saline.
22. Reattach IV fluid line when flush is complete.

**\*\*Be sure to continuously reassess your patient during procedure and document all information.\*\***

# **GUIDELINES for ALTERNATIVE AIRWAYS**

\* If after each crew member, with proper training has taken 2 attempts at intubation, unsuccessfully, then consider this addendum procedure for an alternative airway.

The procedure is as follows:

- a. If ET intubation is unsuccessful, consider utilization of an approved alternate airway device (if properly trained)
- b. If the airway has not successfully been secured, place an oral airway, a nasal airway & bag with 2 providers (one making seal, one bagging)
- c. If air exchange not good, perform surgical airway.

APPROVED DEVICES: (with proper training)

KING LT-D AIRWAY

ENDOTRACHEAL TUBE INTRODUCER

In the event that a squad is BLS, the patient is pulseless AND apneic, The EMT – Basic who has been properly trained in the use of the KING LT\_D airway may attempt to insert the KING LT-D airway. EMS agencies must have proof of such training available upon demand of the JCEMS in TC.

# **GUIDELINES for BLOOD DRAW**

## **PREHOSPITAL PROCEDURE FOR COLLECTION AND SUBMISSION OF BLOOD SAMPLES IN PATIENTS WITH CARDIAC EVENTS**

### **I. Purpose and Scope**

Forum Health-Trumbull Memorial Hospital is accredited by the Society of Chest Pain Centers as a Chest Pain Center. This designation indicates that Trumbull Memorial Hospital is dedicated to the highest levels of recognition, treatment, and care for all patients suspected of having an injurious cardiac event such as a myocardial infarction or unstable angina.

A key factor in this accreditation is a recommendation set forth by the American Heart Association in its 2005 ECC Guidelines. This recommendation is a 90-minute “door-to-balloon” time, which supports the fact that patients who reach the cardiac catheterization lab within ninety minutes of entering a hospital have the best chance for positive outcomes from an injurious cardiac event.

Trumbull Memorial Hospital has identified that prehospital care providers utilizing 12-lead EKG telemetry capabilities along with obtaining blood for cardiac marker testing, specifically a compound known as Troponin, can greatly aid in meeting the American Heart Association’s “door-to-balloon” guideline.

Therefore, this policy applies to all prehospital care providers at the EMT-Intermediate and EMT-Paramedic level, authorized to draw blood, who are bringing chest pain patients to Trumbull Memorial Hospital’s Emergency Center.

### **II. Procedure**

A. Prehospital care providers dispatched to a chest pain call will follow the protocols under which the providers are permitted to function.

B. Upon determining that the patient requires a “cardiac workup,” to include a 12-lead EKG, IV, etc., the prehospital care provider will determine if the patient is in fact desirous to be transported to Trumbull Memorial Hospital.

1. If the patient is not going to TMH, the prehospital care provider will function as usual, obtaining and transmitting a 12-lead EKG (as available) and providing all other necessary treatments.

2. If the patient is going to TMH, the prehospital care provider will obtain and transmit to TMH ER a 12-lead EKG (as available), and, along with providing all other necessary treatments, obtain blood samples as designated herein.

C. The prehospital care provider, as stated above, will obtain a 12-lead EKG (if available) and transmit that EKG to the TMH ED at a number as designated by TMH. The provider(s) will then obtain a blood sample using the following procedure:

1. Acquire and open the pre-packaged cardiac blood draw kit provided to the EMS agency by TMH. The kit should contain all necessary supplies to draw the needed blood samples.

2. Draw the blood from either an IV site, or by performing a separate blood draw to obtain the blood. If drawing from an IV site, ensure that the tourniquet has not been on for an extended period of time, as this will cause hemolysis of the blood, making it useless for testing. Also, if drawing from an IV site, ensure that if the site was flushed, to draw and discard at least five ccs of blood before using any blood for a sample.

3. It is important to then fill the tubes IN THE FOLLOWING ORDER:

- a. Blue top
- b. Green top (two tubes)
- c. Purple top

Make sure to gently agitate the tubes that have agents (such as preservatives) inside them.

4. Tubes should be labeled using the labels provided, and should include the following information:

- a. Patient name (LAST, First MI)
- b. Patient date of birth and age
- c. Patient gender
- d. Date and time of draw
- e. Initials of prehospital care provider who drew the blood.

5. Preserve the samples and transport with the patient to the hospital, ensuring other treatments are performed as necessary.

D. Upon call-in to the hospital with the patient report, the provider(s) should notify the ED staff of the patient status, and that blood has been obtained.

E. Upon arrival at the ED, the providers and the patient will be met by a team ready to assess and treat the patient, and the providers will be directed to a room.

F. Any member of the prehospital care team will then fill out a lab “downtime” form to accompany the blood to the lab so that it may be processed.

G. Once the blood has been secured, EMS providers need to personally hand it to an RN, PCT or clinical staff member who is taking care of the patient. Get the staff member’s name and document the handoff (including times) on the EMS patient care report

In the event that EMS providers have drawn blood, but have not drawn all four tubes, providers must notify the staff which tubes were not drawn. This ensures that the proper samples are drawn.

H. The prehospital care team will then need to complete the patient care record, and that record will need to be left with the nursing staff responsible for the patient.

### III. Identification and Resolution of Problems

A. This procedure is a living document. As problems are identified and corrected, changes may be made. Notification will be made as necessary.

B. Prehospital care providers identifying problems should fill out a Continuing Performance Improvement Form, and forward it to the EMS Coordinator so that the problems may be rectified.

C. Prehospital care providers may contact the EMS Coordinator at (330) 841-9616.

Revision 1: 18 DEC 2006 [GBS]

Revision 2: 27 DEC 2006 [GBS]

Revision 3: 25 APR 2007 [GBS]

# GUIDELINES for the RHINO ROCKET

## **Indications and procedure for insertion of the Rhino Rocket**

(the Rhino Rocket is an optional item similar to other optional items in the protocol).

### **Indications**

An uncontrolled nosebleed that has not responded to other methods of bleeding control.

### **Contraindications**

The Rhino Rocket is contraindicated in facial trauma, specifically to the nose or sinuses, or where there is any gross deformity or suspected injury to the nose or sinuses.

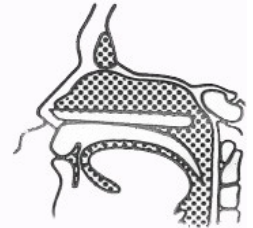
The Rhino Rocket may be used ONLY by paramedics. First Responders, EMTs-Basic or Intermediate may NOT use the Rhino Rocket. Proof of training in the device's use must be provided by the department or agency electing to utilize the equipment prior to its use by a protocolled individual, and documentation must be available upon the demand of the TCJCEMS.

# GUIDELINES for the RHINO ROCKET

## Rhino Rocket™ Instructions

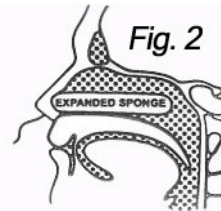
1. Insert compressed moisture sensitive expandable sponge into nasal cavity parallel to floor of nose or over the turbinate where gentle pressure is needed.

Fig. 1



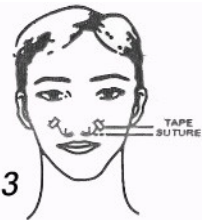
2. Moisture sensitive sponge should now expand. If no blood is present to allow expansion, add a few drops of saline.

Fig. 2



3. Secure strings to side of face with small piece of tape. Place loop around ear.

Fig. 3



4. The placement, number of packs as well as timing for removal should be decided clinically. In the average case, one pack is needed on each side and the packs should be removed within twenty-four (24) hours. More packs can be used when the airway is larger than normal.

Patented

**WARNING:**  
Important Information About Toxic Shock Syndrome (TSS)

Packings are associated with toxic shock syndrome (TSS). TSS is a rare but serious disease that may cause death. Scientists believe that TSS requires toxins produced by the staphylococcus aureus, a bacterium that sometimes causes infection.

**WARNING SIGNS:** Sudden fever of 102 degrees or more, vomiting, diarrhea, fainting or near fainting when standing up, dizziness, or a rash that looks like a sunburn. If these or other signs of TSS appear, see your physician immediately. If you have had warning signs of TSS in the past, you should consult with your physician before using.

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