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2003 Regional EMS Guidelines

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EASTERN CONNECTICUT EMERGENCY MEDICAL SERVICES COUNCIL, INC. MEDICAL ADVISORY COMMITTEE
REGIONAL BLS GUIDELINES

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GUIDELINE #1

DIRECT DIVERSION OF A PATIENT TO ANOTHER HOSPITAL

Routinely, especially in trauma, an Emergency Department Physician, acting in the capacity of Medical Control, may direct an ambulance to primarily transport a patient from the scene to another hospital emergency department. The following criteria should be met if such an action is to be carried out:

1. The indications for a level of care beyond the scope of the sending hospital, yet within the realm of the receiving hospital are clear-cut.
2. The difference in distances from the scene to the two hospitals involved is not of sufficient magnitude to contraindicate the diversion.
3. The sending facility's emergency department is out of service due to fire, contamination, or other circumstances that makes the facility unsafe or unusable.
4. The patient is non-emergent in the eyes of medical control and has requested the transfer. Medical Control must be consulted and must concur that the transfer is safe.

If numbers 1, 2, 3, or 4 do not apply, then patients will not be diverted without first being evaluated and stabilized by the diverting hospital. The receiving hospital should then receive notification.

NOTE: If a direct transfer from the scene is carried out, the sending emergency department should immediately call the receiving emergency department and apprise them of the transfer and the reasons for it. Document carefully on run form. *The Trauma Regulations must still be adhered to.*

GUIDELINE #2

STAFFING REQUIREMENTS AND PROCEDURES FOR TRANSFER

(Adopted from CEMSMAC Interfacility Transfer Guidelines)

I. Purpose:

The purpose of this guideline is to provide appropriate levels of care for patients during transport, in accordance with COBRA regulations and responsible sponsor hospital guidelines.

II. Responsibility

- A. COBRA regulations require all medical facilities and physicians who participate in Medicare to have a transfer affected through qualified personnel and transport equipment for each patient who must be transported. For transfers, this is the responsibility of the referring hospital.
- B. Personnel should be trained to deal with the current medical condition of the patient and any reasonably foreseeable complication that could occur during transport.
- C. Sponsored EMS providers have the responsibility of retrospectively notifying their medical director of the types of transfers being requested to facilitate assessment and training of personnel by the sponsor hospital.
- D. Patient care responsibility during transfer lies with the referring institution until the patient is received at another facility. Overlapping responsibilities with the EMS provider's sponsor hospital may occur if the patient deteriorates en route and unforeseen treatment is required.

III. Procedure

- A. Each sponsor hospital should have written protocols which specifically address those transfers encountered most frequently by their sponsored EMS services.
 - 1. Transfer staffing requirements:
 - a. The written protocols should address the minimal requirements for transfer personnel. Minimal requirements must be met on all transfers.
 - b. Examples of conditions which may require accompaniment by non-EMS personnel (MD, RN, RT) include:
 - i. Medications beyond the scope of paramedic training.
 - ii. Equipment beyond the scope of paramedic training.
 - iii. When the level of care required exceeds the training and capabilities of EMS personnel.
 - iv. When the attending physician directs that other staff are needed.
 - c. EMS personnel will not transfer patients receiving treatments or utilizing equipment for which they have not received documented training without being accompanied by personnel appropriately trained in such treatments/devices.
 - 2. Transfer Orders
 - a. Written orders for ALS care during transfer on a non-physician accompanied transport will be obtained by the paramedic from the referring hospital.
 - b. EMS personnel will receive patient history and a patient status report from the hospital staff sending the patient, and will have access to pertinent medical information.
 - c. In the event of a change in patient condition during a non-physician accompanied transport, standing orders appropriate to the patient condition will be implemented and medical control will be contacted for implementation of medical control options per sponsor hospital guidelines.
 - d. If the patient is not stabilized following these interventions and medical control is not available for consultation, the patient will be transported to the nearest appropriate facility for stabilization.
 - 3. Communication
 - a. EMS providers must follow their sponsor hospital guidelines regarding notification of medical control prior to transport of patients and regarding radio report to receiving facilities.
 - b. Any unanticipated deterioration of the patient en route should be communicated to the receiving facility, depending on location and radio reception availability.

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4. Documentation

- a. All patient transfers will have an EMS run form, or authorized equivalent, completed. All assessments, care, and interventions must be documented in keeping with current standards.
 - b. The name(s) of any hospital staff accompanying the patient should be documented on the run form.
 - c. A copy of the completed run form and of the transfer orders should be left at the receiving facility at the time of transfer.
 - d. A copy of the completed run form should be retained by the service.
 - e. A copy of both forms should be submitted to the provider's sponsor hospital in accordance with their guidelines for documentation.
- B. Questions concerning this guideline should be referred immediately to the EMS provider's sponsor hospital.
- C. Although this guideline was written primarily for interfacility transfers, it also applies to transfer from patients' homes, etc. These guidelines may not be applicable during mass casualty incidents. Consult your sponsor hospital for further information.

GUIDELINE #3

MASS GATHERINGS GUIDELINE

Purpose:

To define the procedures and guidelines for EMS Services & organizations who are called upon to be present for “Group Events”.

1. EMS services shall not provide any on-site medical care at group events without the full knowledge, cooperation and guidance of their *Sponsor Hospital Medical Director*.
2. The PSA holder(s) for the geographical area where the group event will take place *should* be the primary resource for group event coverage. The PSA holder may opt to provide coverage to a group event through a mutual aid agreement.
3. Each encounter with someone seeking medical attention shall generate an appropriate assessment and a medical control approved patient care record and/or log.
4. All patients who meet the Medical Directors guidelines for patient disposition shall be offered transportation via ambulance.
5. Patients who refuse transportation must meet the following criteria for competency to sign a refusal:
 - a. Must be at least 18 years of age, or accompanied by parent or guardian.
 - b. Must have had an appropriate assessment including vital signs.
 - c. Must be competent to understand the potential complications of refusing medical treatment and/or transport to a designated medical facility. The patient should be advised to seek immediate medical treatment for any further complications or persistence of symptoms.
6. Patients who are evaluated and/or treated, but who refuse transportation via ambulance, should provide name and phone number for a possible follow-up call.
7. Patients who accept treatment and transportation to a designated medical facility must be entered into the 911 system and all appropriate PSA providers should be notified for additional intervention or response.
8. All patient care records and patient refusals should follow the Sponsor Hospital QA format. This should include patient care record review for adherence to group event guidelines.
9. If any patients meet State criteria for transportation to a medical facility but they, or their parent or guardian, refuse transportation to a Medical Facility, they must sign an approved “Patient Refusal of Treatment or Transportation” form.
10. Anytime a patient will not sign the “Refusal of Treatment or Transportation” form, at least two witness signatures (may be the providers themselves) should be obtained corroborating the refusal to sign.

GUIDELINE #4

TRAUMA ALERT ACTIVATION

Trauma alert criteria is based on the presence of physiological abnormalities. Mechanism of injury alone is not grounds for a trauma alert activation. However, mechanism is important to heighten your index of suspicion. Trauma patients with any of the following physiologic derangement's require trauma alert activation:

- Hemodynamic instability - systolic BP < 90
- Respiratory distress or airway problems
- Altered mental status - GCS <13 (*Refer to Addendum #1*)
- Quadriplegia or paraplegia
- Penetrating injury to head, chest or abdomen
- Patient with flail chest
- Major electrical or major thermal burn (BSA >30% adults, >20% pediatric)
- Amputation of limb
- Two or more proximal long bone fractures
- Significant injuries above and below the diaphragm
- ED physician's discretion

It is important to notify the emergency department as soon as possible of the trauma alert. To request an alert the following procedure should be followed:

- Contact the emergency department charge nurse by radio or telephone
- Specifically state you are requesting a trauma alert
- Give patient approximate, age, sex, LOC, mechanism of injury and which of the criteria the patient meets.
- Vital signs should be obtained prior to trauma alert activation but should not significantly delay the trauma alert.
- Give an update as soon as possible.
- Estimated time of arrival to the emergency department

Note: If the ETA is > 10 minutes, a second med patch to the emergency department **must** be made with a set of vital signs. If reassessment and/or improvement in the patient's status warrants, the trauma alert may be cancelled.

Significant hypotension, as indicated for adult patients in the table below:

If unable to palpate a pulse at:	Systolic B/P is probably
Radial artery	< 90 mmHg
Brachial artery	< 80 mmHg
Femoral artery	< 70 mmHg
Carotid artery	< 60 mmHg

GUIDELINE #5

DO NOT RESUSCITATE (DNR)

(Taken from the State of Connecticut EMS Policy and Procedures Manual)

If there is a DNR bracelet or DNR Transfer Form and there are signs of life:

Contact Medical Direction before introducing any invasive procedures or therapies.

If there are no signs of life: DO NOT start CPR.

DNR Bracelet

A DNR bracelet shall be the only valid indication recognized by EMS providers that a DNR order exists for patients outside healthcare institution, other than those patients received by an EMS provider directly from a healthcare institution.

A valid DNR bracelet shall:

- a. be the correct color-orange
- b. have the correct logo
- c. be affixed to the patient's wrist or ankle
- d. display the patient's name and attending physician's name
- e. not have been cut or broken at any time
- f. Effective May 23, 2003, in accordance with Connecticut State Agency Regulations sections 19a-580d-1 to 19a-580d-9 inclusive, the use of the "Medic Alert" bracelets is now also being recognized, in addition to the plastic "orange bracelet" currently recognized by the Department. These bracelets are metal and more easily removed for bathing etc. and shall **contain the patients' name, the physician's name, the letter DNR and the words "Do Not Resuscitate"**.

DNR Transfer Form

- a. To transmit a DNR order during transport by an EMS provider between healthcare institutions, the DNR order shall be documented on the DNR transfer form.
- b. The DNR transfer form shall be signed by a licensed physician or a registered nurse and shall be recognized as such and followed by EMS providers.
- c. The DNR remains in place during transport as well as to the point of admission to the receiving facility.

Revocation of the DNR

- a. The patient or "authorized representative" may verbally tell a certified EMT they wish to alter their DNR status.
- b. This statement must be entered on the prehospital care report.
- c. Any witnesses present should support this statement.

GUIDELINE #6

GUIDELINES FOR WITHHOLDING RESUSCITATION

(Taken from the State of Connecticut EMS Policy and Procedures Manual)

Note: This guideline does not contain the new 1994 US DOT EMT-Basic National Standard Curriculum terminology.

Purpose:

To provide specific instruction regarding the protocols used to withhold or withdraw resuscitation in the field.

Introduction:

Local emergency responders and EMS personnel in Connecticut who are trained in and of the National Standard curricula are instructed to follow the most recent national guidelines of the American Heart Association for initiating CPR.

All clinically dead patients will receive all available resuscitative measures including cardiopulmonary resuscitation (CPR) unless contraindicated by one of the exceptions defined below. A clinically dead patient is defined as any unresponsive patient found without respirations and without a palpable carotid pulse.

The person who has the highest level of currently valid EMS certification, and who has direct voice communication for medical orders, and who is affiliated with an EMS organization present at the scene will be responsible for, and have the authority to direct, resuscitative activities.

In the event there is a personal physician present at the scene, who has an ongoing relationship with the patient, that physician may decide if resuscitation is to be initiated. In the event there is a Registered Nurse from a home health care or hospice agency present at the scene, who has an ongoing relationship with the patient, and who is operating under orders from the patient's private physician, that nurse (authorized nurse) may decide if resuscitation is to be initiated. If the physician or nurse decides resuscitation is to be initiated, usual Medical Control procedures will be followed.

Procedure:

The following conditions are the ONLY exceptions to initiating and maintaining resuscitative measures in the field on a clinically dead patient:

1. Traumatic injury or body condition clearly indicating biological death (irreversible brain death), limited to:
 - a. Decapitation: the complete severing of the head from the remainder of the patient's body.
 - b. Decomposition or putrefaction: the skin is bloated or ruptured, with or without soft tissue sloughed off, or there is the odor of decaying flesh. The presence of at least one of these signs indicated death occurred at least 24 hours previously.
 - c. Transection of the torso: the body is completely cut across below the shoulders and above the hips through all major organs and vessels. The spinal column may or may not be severed.
 - d. Incineration: ninety percent of body surface area full thickness burns as exhibited by ash rather than clothing and complete absence of body hair with charred skin.
 - e. Dependent lividity with rigor: when clothing is removed, there is a clear demarcation of pooled blood within the body, and major joints are immovable.
2. Pronouncement of death at the scene, of a patient age 17 or older, by a licensed Connecticut physician or authorized registered nurse by:
 - a. On-line Medical Control physician orders withholding resuscitative measures, or
 - b. On-line Medical control physician orders resuscitative measures to be stopped, or
 - c. Physician or authorized registered nurse at the scene in person, in consultation with the on-line Medical Control.
3. A valid DNR bracelet is present, when it:
 - a. Is on the wrist or ankle, and
 - b. Is intact; it has not been cut or broken, and
 - c. Has the correct logo; stylized hand in "stop" position and words EMS ALERT", and
 - d. Is the correct color (orange), Or

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- e. A “Medic Alert” bracelet containing the patients’ name, the physician’s name, the letter DNR and the words “Do Not Resuscitate”.
4. At a mass casualty incident, if clinical death is determined prior to patient’s arrival in the treatment area.

General Procedures:

1. In cases of decapitation, decomposition, transection of the torso, or incineration, the condition of clinical death must be determined by noting the nature and extent of the condition of the body as defined above. No CPR need be performed and Medical Control need not be notified.
2. In cases of dependent lividity with rigor, the condition of clinical death must be confirmed by observation of the following:
 - a. Reposition the airway and look, listen, and feel for at least 30 seconds for spontaneous respirations; respirations are absent.
 - b. Palpate the carotid pulse for at least 30 seconds; pulse is absent.
 - c. Auscultate with a stethoscope for lung sounds and visualize for chest movement for at least 30 seconds; lung sounds are absent.
 - d. Auscultate with a stethoscope for heart sounds for at least 30 seconds; heart sounds are absent.
 - e. Examine the pupils of both eyes with a light; both pupils are non-reactive.
 - f. Electrocardiographic monitoring by paramedic; finding of asystole OR a physician’s order by radio to withhold resuscitation.

If any of the findings are different than those described above, clinical death is NOT confirmed and resuscitative measures must be immediately initiated.

3. In all other patients age 17 years or older, not described above, the following will take place:
 - a. If the field technician arrives at the scene of a clinically dead patient before a medical order not to start resuscitative measures had been given, resuscitation will be initiated while communication is established, assessment information is gathered, and a medical decision is being made, except in cases of decapitation, decomposition, transection of the torso, or incineration.
 - b. Medical control must be established early to reduce delay, as resuscitative measures cannot be withheld until ordered by the physician. The on-line Medical Control physician will be given information about early assessment, findings, and procedures initiated. The physician may the order withholding resuscitation before complete resuscitative efforts have been initiated.
 - c. The on-line Medical Control physician may order that resuscitative measures underway by an EMT-Paramedic be stopped upon verification that no vital signs exist. Once an Advanced Cardiac Life support resuscitative cycle has been completed, by an EMT-paramedic on scene directing patient care, the patient will be assessed for absence of clinical response and the persistence of asystole. If these are present, contact may be made with an on-line Medical Control physician who may then order the EMT-Paramedic to stop resuscitative measures that are underway.
4. When a valid DNR bracelet is present, the Connecticut College of Emergency Physicians (CCEP) guidelines will be followed. Once a patient has been found not to be breathing, examination for a valid DNR bracelet will take place. If there is a valid bracelet, no mouth-to-mouth or other means of artificial respirations will be administered, and no external cardiac compressions will be initiated. If previously initiated, resuscitative measures will be **DISCONTINUED**.
5. A complete documentation of the initial examination, findings and resulting procedures (if any) will be entered on the EMS patient care record.
6. If EMS personnel are delayed or precluded from making an appropriate physical examination by law or fire officials protecting the integrity of the scene, they shall so note on their patient care form. If subsequent access to the patient is allowed, then EMS personnel shall proceed according to this protocol. EMS personnel are required to provide documentation of the patient’s physical condition only to the extent of the physical examination they performed.

Special Procedures:

2. In all cases when there is any suspicion of an unnatural death, local police authorities will be notified. Removal of the body will be done only after the police officer authorizes this.

3. A private physician at the scene who has an on-going relationship with the patient must produce identification showing the physician's name and the Connecticut license number (MD or DO). That physician may pronounce death on a clinically dead patient even if EMS personnel are present. The physician's pronouncement relieves the emergency personnel of the responsibility to begin or continue resuscitative measures. If the patient is not pronounced and the physician wishes to assume care of the patient, the physician must agree to assume responsibility for the patient's care and accompany the patient to the hospital in the ambulance if the patient is to be transferred to the hospital. The Medical Control hospital will be notified and the information will be documented on the EMS patient care form.
4. A Registered Nurse from a home health care or hospice agency at the scene, who has a ongoing relationship with the patient, and who is operating under orders from the patient's private physician and is authorized by law to pronounce death, may pronounce a clinically dead patient dead even if EMS personnel are present. The nurse's pronouncement relieves the emergency personnel of the responsibility to begin or continue resuscitative measures. The Medical control hospital will be notified and the information will be documented on the EMS patient care form.

Disposition of Remains:

2. Disposition of dead bodies is not the responsibility of EMS personnel, but efforts must be taken to insure that there is a proper transfer of responsibility for scene security. However, to be helpful to family, police, and others, EMS personnel may assist those who are responsible.
3. When a decision has been made to withhold or withdraw resuscitation, the body may be moved in one of the following ways:
 - a. When the body is in a secure environment (where it is protected from view by the public, from being disturbed or moved by unauthorized people) and police are not or should not be involved, the body may be removed by a funeral hearse. The attending physician should be notified if available and EMS personnel may leave. Example: a DNR patient at home.
 - b. When the body is in a secure environment and police are or should be involved, notify the police and the attending physician. If the attending physician is not available, the police may contact the office off the Chief Medical Examiner (203-679-3980 or 1-800-842-8820) for authorization to move the body by hearse, or the Medical Examiner may send a vehicle for the body. EMS personnel may leave. Example: an apparent overdose or injury at home.
 - c. When the body is not in a secure environment and police are not or should not be involved, contact medical Control for permission to transport the body to the hospital morgue. Example: on the street with an unruly crowd of people.
 - d. When the body is not in a secure environment and police are or should be involved, notify the police and the attending physician. If the attending physician is not available, the police may contact the Office of the Chief medical Examiner (203-679-3980 or 1-800-842-8820) for authorization to move the body by hearse, or the medical Examiner may elect to send a vehicle for the body. EMS personnel may leave after turning the scene over to other appropriate authority. Example: on the street.
4. The office of the chief Medical Examiner (860-679-3980 or 1-800-842-8820) must be notified of any death which may b subject to investigation by the Chief Medical Examiner, which includes almost all deaths which occur outside health care institutions. EMS personnel should determine that such notification has been made by the police, otherwise EMS personnel should make the notification **AND DOCUMENT ON THE PATIENT CARE RECORD.**
5. At other times the EMT feels the circumstances warrant, contact Medical Control for permission to transport the body to the hospital morgue.
6. When Medical control feels the circumstances warrant, medical Control may request that the body be transported to the hospital morgue.

Documentation:

1. A patient care record will be completed for each clinically dead patient who has resuscitation performed and for whom resuscitation was discontinued or was withheld. All medical Control orders will be noted on the patient care record.
2. In cases of decapitation, decomposition, transection of the torso, or incineration when resuscitation was discontinued or not initiated, detailed findings consistent with these conditions will be entered on the patient care report.
3. In cases of dependent lividity with rigor, when resuscitation was discontinued or not initiated, the following detail will be documented on the patient care record:
 - a. Breathing absent when airway was repositioned and assessed for at least 30 seconds.

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- b. Carotid pulse was absent upon palpation for at least 30 seconds.
- c. There were no audible lung sounds after examining the patient's chest with a stethoscope for at least 30 seconds.
- d. There were no audible heart sounds after examining the patient's chest with a stethoscope for at least 30 seconds.
- e. The pupils of both eyes are non-reactive.
- f. A view of an EKG in at least two (2) leads, for at least 12 seconds, which shows asystole.

GUIDELINE #7

EMS/FIRE EMERGENCY INCIDENT REHABILITATION GUIDELINE

1) Purpose

To monitor the physical and mental condition of response personnel operating at the scene of an emergency or training exercise with the intent that personnel do not deteriorate due to adverse effects of heat/cold exposure, physical stress, or hazardous materials exposure. This is done for the purpose of achieving early recognition and prevention of these effects that could jeopardize the safety of response personnel and the integrity of an emergency operation or training exercise. At any time, if any personnel in rehabilitation meet the exclusion criteria or become symptomatic of a health care problem, the EMS system will be activated following standard procedures.

2) Scope

This guideline shall apply to all personnel involved in and/or operating at the scene of an emergency or training exercise that are subject to heat/cold exposure or physical stress. Hazardous Materials Incidents have additional exclusion criteria that is used in conjunction with the NFPA 471-F96 ROP exclusion criteria.

3) Responsibilities

a) Incident Commander

The Incident Commander is responsible for the safety of *all* personnel at an incident. The Incident Commander shall institute Emergency Incident Rehabilitation when deemed necessary and have the responsibility to appoint a Rehabilitation Officer and/or sector. The Incident Commander may elect to make a site designation, and provide adequate provisions for nourishment replacement, medical evaluation, treatment, and monitoring or designate these responsibilities to another officer. The Incident Commander or designated officer will have personnel report to the rehabilitation area when it is deemed appropriate. The Incident Commander will be responsible to notify the local medical control anytime the Emergency Incident Rehabilitation Guideline is used. This will allow the local emergency room time to prepare for any potential problem. Local medical control will also be contacted at the conclusion of the incident.

b) Rehabilitation Officer

The Rehabilitation Officer should be a qualified EMT and has the responsibility to establish a rehabilitation area when instructed by the Incident Commander. This area shall be away from the scene of an emergency or training exercise to provide nourishment replacement, medical evaluation, treatment, monitoring, resting, and rehabilitation of needed personnel. If deemed necessary by the Incident Commander, a Logistics/Planning Officer may be established. The Logistics/Planning Officer will communicate with the Rehabilitation Officer to secure the necessary resources for the rehabilitation site. The Rehabilitation Officer communicates and reports to the Incident Commander. The Rehabilitation Officer will be responsible for submitting copies of the Emergency Incident Rehabilitation Reports to the appropriate medical control, for which town the incident occurs in, within 48 hours.

Individual departments and the Incident Commander are responsible for the accountability system used at an incident. The Rehabilitation officer will integrate the accountability system being used at the incident with the Rehabilitation Guideline.

Departments that use a tag system for personnel accountability, the tag shall accompany each person to the rehabilitation area. The tag will be checked in at the time on entry, then will be returned to the individual when exiting.

The rehabilitation area shall have only one clearly marked point of entry and exit where the personnel entry and exit logs, with times, will be kept.

Personnel Entry and Exit Log

All personnel at any incident, other than HAZMAT Technicians and Decon personnel at a Hazardous Materials Incident, shall be tracked using the Emergency Incident Rehabilitation Report.

Any HAZMAT incident that requires the use of chemical protective clothing Level A or Level B*, the HAZMAT Technician and Decon Personnel Rehabilitation Report shall be used. This report will be filled out for each person, each time the donning and doffing of chemical protective clothing occurs. This report will also be used for any personnel who becomes

symptomatic and/or at the request of the Operations Officer, Safety Officer, Rehabilitation Officer, or Incident Commander. This report meets the 29 CFR 1910.120 Code of Federal Regulations.

Climate Parameters

For incidents in which the heat index is greater than 100, a cool environment should be sought that is out of the elements and has the capabilities of mechanical cooling.

For air temperature with the wind chill factor included, of less than 40 degrees F or 5 degrees C, a warm environment out of the elements should be used.

The parameters can be established by contacting dispatch for weather information.

4) Resources

The Incident Commander or the designated officer is responsible to secure all the necessary resources required to staff and supply the rehabilitation area. Recommendations are as follows:

a) Transportation

Resources separate from the needs of the incident for moving personnel to and from the rehabilitation area if indicated by the climate parameters.

b) Fluids

Water, activity beverage, or oral electrolyte solutions at a minimum of 50/50, and ice chips for personnel that are nauseated is used as an initial fluid volume replacement. Any drink with caffeine or carbonation shall be excluded as an initial fluid volume replacement. These beverages may be given to personnel *after* an initial fluid volume replacement of a minimum of 16 ounces has been consumed.

c) Foods

Soup, broth, stew, fruits and sandwiches made **without** processed cold cuts** should be established for incidents greater than two hours in length.

d) Medical staff

BLS personnel shall monitor B/P, pulse, respirations, and pulse oximetry (if available). ALS shall be available in the rehabilitation area to evaluate or respond to other emergencies as needed. In the event of a Hazardous Materials Incident that requires the use of Chemical Protective Clothing Level A or Level B, an ALS unit will be designated to the rehabilitation area for HAZMAT Technicians and DECON personnel to run monitor strips and evaluate these personnel. A second ALS unit shall be used to monitor the remaining personnel and serve as an immediate back-up for the designated ALS unit listed above. In the event that no ALS unit is on the scene in any situation, an AED/SAED unit will be available at all times for emergency personnel.

5) Rest and rehabilitation time

This time shall be a minimum of 15 minutes and may exceed one hour, as determined by the rehabilitation officer based on his assessment or the exclusion criteria (see exclusion criteria).

6) Accountability

All personnel reporting to the rehabilitation area shall be required to sign in with a time of entry. Personnel may not leave until released by the rehabilitation officer with the time of exit recorded. The Rehabilitation Officer shall notify the Incident Commander and/or Safety Officer of any personnel who leaves the rehabilitation area without authorization or against medical advice.

Note: Any personnel who enters and does not have their time recorded, will not be allowed to leave until a documented period of 15 minutes is recorded.

7) Medical Evaluation

It is recommended that personnel's baseline vital signs as established through medical records be available to the rehabilitation officer and/or sector at the time of the incident. This can be accomplished by creating a personnel inventory file

with baseline vital signs and keeping them in a designated piece of apparatus or location such as a lap top computer or dispatch center for easy access.

a) Exclusion criteria (NFPA 471-F96 ROP)

- 1) Blood pressure that does not drop to 90 mmHg diastolic or drop to within 10 mmHg of the person's baseline vital signs as documented through the personnel inventory file within 20 minutes.
- 2) Pulse rates that do not drop below 110 or are irregular, 20 minutes after entering the rehabilitation area.
- 3) Respiration rates that do not drop below 24, 20 minutes after entering the rehabilitation area.

Note: The rest and rehabilitation time starts when the personnel are within the perimeters of the exclusion criteria numbers 1-3 mentioned above.

- 4) Oxygen saturation through pulse oximetry (if available) of less than 92.

Note: Exposure to carbon monoxide and or cold extremities may give false readings. If the extremities are cold, re-warm and then take a reading. If you suspect exposure to carbon monoxide (smoke, etc.) transport them to a hospital for evaluation by a physician.

- 5) Body temperature (oral) less than 97 degrees F or 36 degrees C or greater than 100 degrees F or 38 degrees C.

Fluids, nourishment, rest, and medical monitoring should continue until personnel no longer meet the exclusion criteria.

If after 30 minutes personnel have not met the exclusion criteria, or by recommendation of the rehabilitation officer, the individual shall be transported to a hospital for evaluation by a physician.

b) Securing incident scene

It is recommended that at any incident where climate parameters are met, or incidents being greater than 4 hours of operation, all personnel will enter the Rehabilitation area prior to dismissal from the scene.

8) Hazardous Material Incidents

The rehabilitation area shall contain a separate area for HAZMAT Technicians and Decon personnel for the purpose of meeting the 29 CFR 1910.120 Code of Federal Regulation.

a) HAZMAT Exclusion criteria

All personnel at a HAZMAT incident shall be pre-screened prior to operating at the incident. All personnel shall not exceed the exclusion criteria (NFPA 471-F96 ROP) listed above. Hazardous Material Incidents also include the following additional exclusion criteria.

- 1) Any open sores, large areas of rash, or significant sunburn.
- 2) Any wound that currently has sutures or sutures that were removed from a wound within the last 48 hours.
- 3) Any minor wound not covered with a dressing and a bandage or Band-Aid.
- 4) Presence of nausea, vomiting, diarrhea, fever, upper or lower respiratory infection, heat illness, or heavy alcohol consumption within the last 72 hours, all of which contribute to dehydration.
- 5) Any alcohol consumption within the past 6 hours.
- 6) Pregnancy or any chance of pregnancy.
- 7) New prescription medications taken within the past two weeks, or over the counter medications such as cold, flu, or allergy medicines, taken within the last 72 hours. Personnel falling within this criteria may be cleared to operate at an incident by medical control, or the HAZMAT Rehabilitation Officer. These personnel require additional documentation including the name of the releasing person, their title, and time of release.
- 8) Any encapsulated personnel whose weight reduces by 3 percent or greater from the first weight recorded on the HAZMAT Technician and Decon Personnel Rehabilitation Report.

On any personnel that this weight reduction occurs, said personnel will be forbidden from performing any activities in the HOT ZONE‡ for a minimum of twenty-four hours. They may be assigned non-physical support activities in the COLD ZONE§.

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Note: Reference Material

NFPA 471-F96 ROP

NFPA 1581

OSHA 1910.120

Emergency Incident Rehab FEMA FA-114

McMullen MD

Brady/IFSTA Fire Service Emergency Care

END NOTES

* The use of Level A and Level B Chemical Protective Clothing is determined by the nature of the Hazardous Materials Incident. This Chemical Protective Clothing often involves body encapsulation of personnel, requiring different dimensions of rehabilitation monitoring.

** Processed cold cuts such as salami (any type), bologna, veal loaf etc. and hot dogs do not break down in the digestive system easily, as the body slows this system down to provide more energy to vital organs. Nausea, vomiting and the chance of aspiration are increased if processed cold cuts are used.

‡ Hot zone is the area where exposure or potential exposure to the chemical can occur.

§ Cold zone is the area that no exposure is likely to occur and is where operations and the staging of additional resources occurs.

Rehabilitation personnel should be mindful of the potential emotional stress that can occur at any incident.

EMS and rehabilitation personnel should be mindful of signs and symptoms of injury or illness that may require immediate medical intervention and transport from the scene or rehabilitation area.

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Emergency Incident Rehabilitation Report <i>(Not to be used for HAZMAT Technicians and DECON Personnel at HAZMAT Incident)</i>				Incident Number: _____		Page: ___ of ___	
				Type of Incident: _____			
				Date: _____			
Name/Department	Time	B/P	Pulse	Resp.	Skin color/temp	Pulse Ox	Taken By
Baseline V/S from inventory file B/P: P: R:							
Complaints/Condition							
Returned to Incident:	Yes Time: _____ Initials: _____	No	Transported to Medical Facility: _____ Initials: _____		Yes Time: _____ Where: _____ By: _____		No
Name/Department	Time	B/P	Pulse	Resp.	Skin color/temp	Pulse Ox	Taken By
Baseline V/S from inventory file B/P: P: R:							
Complaints/Condition:							
Returned to Incident:	Yes Time: _____ Initials: _____	No	Transported to Medical Facility: _____ Initials: _____		Yes Time: _____ Where: _____ By: _____		No
Name/Department	Time	B/P	Pulse	Resp.	Skin color/temp	Pulse Ox	Taken By
Baseline V/S from inventory file B/P: P: R:							
Complaints/Condition:							
Returned to Incident:	Yes Time: _____ Initials: _____	No	Transported to Medical Facility: _____ Initials: _____		Yes Time: _____ Where: _____ By: _____		No
Name/Department	Time	B/P	Pulse	Resp.	Skin color/temp	Pulse Ox	Taken By
Baseline V/S from inventory file B/P: P: R:							
Complaints/Condition:							
Returned to Incident:	Yes Time: _____ Initials: _____	No	Transported to Medical Facility: _____ Initials: _____		Yes Time: _____ Where: _____ By: _____		No



**HazMat Technician and Decon Personnel
Rehabilitation Report**

To be completed on all suited team members for each donning and doffing, and personnel who become symptomatic, and/or at the request of any Incident Command Officer. To be copied and forwarded to medical control within 24 hours for review.

Name: _____ Date: _____

Dept: _____ SSN: _____

Location of Incident: _____ City/Town: _____

Incident C/O: _____ Rehab Officer: _____

Material Involved: _____

Medical nature of chemical (ref MSDS): _____

Level of protection (circle): A) High B) Low C) Other: _____

Decontamination type (circle): A) Wet B) Dry C) Other: _____

Type of potential exposure (circle): Inhalation/Ingestion/Skin Absorption/Suit only

Pre-Suit Exam:

Hx: Med RX and/or OTC: _____

New prescription meds within the past 2 weeks; Y/N: Name: _____

_____ Name of private physician: _____

Non-prescription meds taken within the past 2 weeks: _____

ETOH consumption within the past 6 hours; Y/N: _____ Allergies: _____

ETOH consumption within the past 72 hours; Y/N: _____

Cleared to operate at incident: Y/N By whom: _____ Time: _____

Baseline vitals from inventory file: Pulse: _____ B/P: _____ Resp: _____

P.E.: Time: _____ Pulse: _____ B/P: _____ Resp: _____ Temp: _____ Weight: _____

Skin lesions or wounds: _____

Lung sounds: _____ Mental Status: A V P U Pulse ox: _____

EKG Strip

Decon Report page 1

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Time totally suited: _____ **Time totally unsuited:** _____ **Total time suited:** _____

Post exposure exam

Hx: Complaints _____

After immediate doffing

P.E.: Time: _____ Pulse: _____ B/P: _____ Resp: _____ Temp: _____ Weight: _____

Skin lesions, rashes, or wounds: _____

Lung sounds: _____ Mental Status: A V P U Pulse ox: _____

EKG Strip

10 minutes after doffing

P.E.: Time: _____ Pulse: _____ B/P: _____ Resp: _____ Temp: _____ Weight: _____

30 minutes after doffing

P.E.: Time: _____ Pulse: _____ B/P: _____ Resp: _____ Temp: _____ Weight: _____

OK to re-enter: Yes/No Explanation, if No: _____

Transported to medical facility: Yes/No Destination, if Yes: _____

Transported by: _____

Copy of this report faxed or sent with individual to medical facility: Yes/No Time: _____

Above individual advised of potential side effects as required by OSHA 1910.120 Yes/No

Explanation, if No: _____

Name (Printed) of person giving information: _____

Signature of above individual: _____ Time: _____

Decon Report page 2

GUIDELINE #8

EMS GUIDELINE FOR PULSE OXIMETRY

1. Purpose

Pulse Oximetry is an **(optional) adjunct**, that measures the oxygen saturation ratio of oxyhemoglobin to the sum of all hemoglobin. Simply put, it measures the amount of oxygen in the blood.

Pulse Oximetry can also be used as a pulse monitor when it concurs with a palpated radial pulse. Pulse Oximetry saturation levels should be reported to ALS Providers, as part of the initial patient history report.

2. Scope

Pulse Oximetry is to be used as an assessment adjunct, **never** as a primary assessment tool. Pulse Oximetry should be attached to the patient **after** vital signs.

Oxygen administration should not be delayed while awaiting applications and results of Pulse Oximetry.

3. Pulse Oximetry Perimeters

The percentage of oxygen in a patient's blood can indicate the degree of respiratory distress and hypoxia a patient is experiencing. Assessment percentages of oxygen levels for patients are as follows:

Pulse Oximetry reading 95% - 100% is considered normal.

Pulse Oximetry reading 90% - 95% is considered mild hypoxia.

Pulse Oximetry reading 90% or less - is considered hypoxic and requires close monitoring of the patient, patient's vital signs, and ALS intervention.

Note: Oxygen administration should be based on a patient's signs and symptoms, and the patient assessment findings. **(Pulse Ox readings are never to be used as the determining factor for the application of oxygen).**

4. Procedure

A) For patients under the age of five years old, a pediatric oximetry probe shall be used. For patients greater than five years old, the regular oximetry probe should be sufficient. If you apply the regular oximetry probe and find it does not fit securely, apply the pediatric oximetry probe to the patient.

B) Apply the oximetry probe to the finger over the nail bed, and have the patient breath normally, not having them take deep breaths.

C) Read the saturation percentage and pulse rate, verify that the pulse rate shown, concurs with a palpated radial pulse.

D) Document the saturation percentage read, if the palpated pulse concurs, and the time.

5. Potential False Reading Situations

A) Nail polish, dyes, or false nails on a patient's nail bed.

Note: Nail polish may be removed from one finger with a nail polish remover pad. This should not delay treatment or transportation of a patient, and most often can be done during transportation. False nails should never be removed.

B) Exposure to and inhalation of carbon monoxide, i.e. smoke inhalation.

C) Oximetry probe is not placed over the finger properly.

D) Patient is hypothermic of even a few degrees.

E) Patient is hypotensive.

F) Patient is taking drugs that have vasoactive actions.

G) Patient has a vascular disease.

H) Strong ambient light such as direct sunlight.

I) Medical diagnostic dyes the patient has consumed within the last 24 hours.

J) Oximetry probe placed over blood blister on patient's nail bed.

K) Oximetry probe placed on same extremity that blood pressure cuff is on.

GUIDELINE #9

LIMITATION ON I.V. MEDICATION AND ALS SKILLS

1. Paramedic Transport of Patients with I.V. Medications

On occasion, Paramedics are called upon to transport patients from one health-care facility to another, who have hyperal or medications running I.V. on a pump.

Paramedics may transport patients with medications and/or a pump running after they have attended an inservice specific to the medications being administered (including use and possible side effects) and operation of a pump:

A partial list of medication Paramedics may not transport with unless an R.N. accompanies the patient in the ambulance:

Chemotherapeutic Agents

TPA

Streptokinase

Nitroprusside

Blood/Blood products

Central Parenteral Nutrition (TPN)

2. Paramedic transport with special equipment.

Paramedics may transport patients with specialized equipment after they have attended an inservice specific to that type of equipment.

3. The Relationship Between the State Mobile Intensive Care Guidelines and the Regional Paramedic Guidelines.

The State of Connecticut Mobile Intensive Care Guidelines have been received and accepted by the Eastern Connecticut Medical Advisory Committee. The guidelines include the widest possible range of Advanced Life Support (ALS) procedures, some of which currently are not authorized in eastern Connecticut. Specifically, the following procedures and drugs are not approved for initiation by any ALS unit based in eastern Connecticut.

Procedures:

1. Nasogastric tube insertion
2. Foley catheter insertion

Medications:

1. Aminophylline
2. Dobutamine
3. Nitrous Oxide

The regional guidelines, as adopted and amended by their sponsor hospital, should be used by all eastern Connecticut ALS personnel as their operational standard in the day-to-day care of patients.

GUIDELINE #10

MEDICAL CONTROL IN THE EVENT OF COMMUNICATIONS FAILURE

This does not apply to controlled substances—On rare occasions, communications may be impossible, for one reason or another, between an ambulance and the hospital providing Medical control. When such a situation occurs, EMTs, EMT-Is, and Paramedics may, when the circumstances clearly warrant, perform skills and/or give medications within their level of training that normally require the authorization of Medical Control.

For such to occur, the medical need of such an action must be clearly present as outlined by the regional guidelines, and the medical urgency of the situation must be such that awaiting communication with the hospital would be detrimental to the well-being of the patient. The circumstances surrounding such an unusual action on the part of the EMS personnel must be well documented on the Patient Care Report. All such cases will be carefully reviewed to ensure that the above guidelines were followed.

GUIDELINE #11

EMD GUIDELINES

As identified in the State EMS Plan, EMD is the “missing link” in the chain of survival for citizens needing emergency medical care. EMD must be approached as a critical system element offered to all emergency callers, 24 hours a day, 365 days a year and not on a sporadic basis. Benefits of an EMD system are:

1. It is the first “1st responder”- the emergency dispatcher can give time critical, life-saving advice over the telephone before the emergency responders arrive.
2. Based on locally approved protocols, the proper emergency response is dispatched. This is possible because of the uniform and systematic interrogation of the caller.
3. Minimizes inappropriate and dangerous “hot” responses to non-critical emergencies. Reduces accidents and resultant liability.

With the implementation of and Enhanced 9-1-1, the public has come to expect the concurrent implementation of an EMD program. This has been further amplified by the award winning television show “Rescue 9-1-1” in which virtually every episode includes the use of emergency medical dispatch.

NOTE: EMD criteria for the dispatch of paramedic units should be utilized. Preexisting paramedic dispatch criteria with **local medical control** supersedes this guideline statement.

GUIDELINE #12

DOCUMENTATION OF PATIENT CARE/NO PATIENT RUN

All emergency medical provider services, first responders, basic ambulances, and paramedics who provide care to a patient will complete its own individual Patient Care Record and will bring it to the emergency department with the patient. A member of the first responder service would be encouraged to accompany the patient to the emergency department if at all possible.

Please note that documentation is required by state regulation for ALL trauma patients.

No Patient/Patient Refusal Documentation

1. Purpose:

To provide uniform standards for Emergency Medical Service (EMS) providers for those situations in which they respond to a request for EMS services, but do not transport a patient to a receiving medical facility.

2. Rationale:

During the course of operations, EMS systems regularly encounter situations in which they are asked to respond to the scene of an emergency, but after arriving at the scene, the patient(s) is (are) not transported to a receiving medical facility. In some systems, these No-Patient-Runs (NPRs) can account for a significant number of their overall responses.* Additionally, these calls represent one of the single highest causes of litigation against EMS providers.**

The recommendations described in this document are simply guidelines by which services may initiate their own operating procedures regarding NPRs. It should be stated that in the event that the EMS provider is presented with a situation which is not specifically covered by standard procedure, the best decision is that which is in the best interest of the patient.

3. Procedures:

Procedure #1: *Canceled En Route*

Documentation Overview:

In the event an EMS response is canceled while the EMS unit is en route to the call, the ambulance crew should complete an approved Patient Care Report (PCR) detailing the following information.

Date of Service

Time of:

Call

Dispatch

Activation

Cancellation

Available

Identity of Caller (*by Name or Agency*)

Incident Location

Incident Type (*MVA, Medical, Medical Alarm, Welfare Check, etc.*)

Identity of 'Cancelor' (*by Name or Agency*)

Rationale:

By documenting the response to the call and subsequent cancellation, the agency will be able to reference the specific details of the incident in the event that a patient later is discovered, or the call is brought into question for any reason.

Procedure #2 No Patient On-Scene

Documentation Overview:

In the event an EMS response is initiated and after arrival of the ambulance it has been determined that there is no patient on-scene, the ambulance crew should complete an approved Patient Care Report (PCR) detailing the following information:

Date of Service

Time of:

Call

Dispatch

Activation

Cancellation

Available

Identity of Caller (*by Name or Agency*)

Incident Location

Incident Type (*MVA, Medical, Medical Alarm, Welfare Check, etc.*)

Narrative of On-scene Conditions (*What was found on-scene, who provided information, etc.*)

Names and Service Numbers of Responding EMS Personnel

Support Services On-Scene

Police, Fire, Visiting Nurse, etc.

Signature of Person(s) Completing Report

Rationale:

By thoroughly documenting the scene findings, the agency will be able to reference the specific details of the incident in the event that a patient later is discovered, or the call is brought into question for any reason.

Procedure #3: Patient On-Scene Without Complaint —See Accompanying Algorithm on page 12.

Overview:

The EMS provider must follow good medical judgment in these situations. A typical scenario would be the EMS response to an MVA and on arrival, they find a patient without medical complaint.

However, if there is a mechanism of injury, and in the judgment of the EMS provider the patient should be medically evaluated, every attempt should be made to convince the patient to allow ambulance transportation to a local medical facility. should the patient refuse this offer of transport, a refusal against medical advice should be obtained (see Procedure #4).

In either event, a full PCR should be completed following the format described in Procedure #1.

Procedure #4: Patient Refusal - Adult

Overview:

One of the most challenging situations we face as EMS providers is when a patient who you believe needs to be taken to a medical facility for definitive care refuses ambulance transportation. There may be numerous reasons a patient may refuse medical care, but by addressing the patient's concerns and by presenting ourselves as medical professionals, we can usually convince the patient that allowing medical care is in the patient's best interests.

Mental Competency Defined:

From a medical-legal perspective, only '*mentally competent adults*' are able to refuse medical care. By definition, *mentally competent* requires that the patient be fully conscious and alert, and be aware of their surroundings. Such things as head injury, drug or alcohol use, and emotional stress may impair the ability of the patient to make informed, rational decisions. Therefore, a patient who appears to be mentally incapacitated is not legally capable of refusing medical care and transport to a receiving medical facility is warranted despite the patient's wishes.

Determining the Reason for Refusing Care:

When faced with a patient refusing medical care, the EMS provider can help the patient make an appropriate decision by employing the following techniques:

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1. Be willing to take the necessary time to gain the patient's undivided attention. In some cases, it may be necessary to utilize an interpreter if the patient is unable to understand the EMS provider due to a language barrier.
2. Ensure that the assessment of the patient's emotional, intellectual, and physical status is performed to determine if the patient comprehends the information the provider needs to convey (risks, consequences, alternatives, etc.)
3. After completing a thorough assessment, communicate your findings in clear, concise language. Avoid vague ambiguous wording such as, "Well, if you feel worse..." Telling a patient you saw "PVCs" on the monitor may not communicate the urgency of the need for treatment.
4. Employ the use of friends and/or family members to assist in convincing the patient to seek immediate medical attention.
5. Attempt to determine the underlying reason for the patient's apprehension regarding ambulance transport. Many patients may be concerned over seemingly minor issues such as financial requirements, care of family or pets, or embarrassment.

If, in your opinion, the patient is in need of immediate medical attention and the patient is still refusing medical care, establish contact with a **Medical Control Physician** via telephone or C-Med. Explain the situation to the physician and seek advice. In some cases, it may be advisable to allow the on-line physician to speak directly with the patient in an effort to convince the patient of the need for further medical evaluation.

Finally, if in spite of your best efforts, the patient still refuses transport, you can help minimize the potential risk of legal consequences by utilizing the following criteria:

1. Offer transportation at least **three (3)** times.
2. Fully explain the **potential medical consequences** of refusing care to the patient (and to a family member if possible).
3. Ask the patient **direct questions**, such as, "What did I just tell you to do if the bleeding starts again?"
4. Advise the patient (and family if present) of **alternative treatment resources** i.e., private physician, transportation by private vehicle, recall of 9-1-1 etc.

Documentation:

You should document the following on your PCR:

Patient Demographics

Name
Address
Date of Birth
Phone Number
Next of Kin

Physical Evaluation

Vital Signs, including primary/secondary survey findings.
Mechanism of injury
Assessment of the patient's mental state and ability to make an informed decision

Special Notation of the Following

Any potential use of alcohol, drugs or chemical substances
head trauma
functional or Organic Mental Syndrome
Normal vs. abnormal vital signs
Significant or suspicion of significant illness or injury

Patient Recommendations

What consequences were explained to the patient, *up to and including death*.
Who the consequences were explained to

Once completed, the RMA form should be **signed by the patient** and a **witness** (Police Officer, Family member, or other 'third party'). The witness should not be the EMS provider, as it may represent a 'your word vs. their word' legal opportunity. Provide the patient with a copy of the RMA and ask him to explain, in his own words, the possible consequences of not receiving immediate medical treatment. In the event the patient refuses care and refuses to sign the PCR, document this fact and have the witness attest to the refusal to sign.

Special consideration needs to be taken in situations when the patient's primary language is other than English. If the EMS agency operates in an area where there is a high prevalence of non-English speaking patients, PCRs need to be developed which specifically address these other languages.

Procedure #5 Patient Refusal - Minors

Definition of Minor:

Under Connecticut General Statutes (CGSS), a minor is defined as a person under the age of eighteen (18). As a minor, these individuals are not authorized to make decisions regarding medical treatment. As EMS providers, we are authorized to treat minor patients under the doctrine of 'Implied Consent', meaning that if the patient were able to authorize treatment, they would wish to receive such treatment. The law provides that it is reasonable to believe that a responsible parent or guardian would consent to care if he were present.*°

In some cases, a minor may be '**Emancipated**'. Minors are granted emancipation by the court system and , as such, are deemed by the courts to be responsible for their own actions and decisions. If the patient is an emancipated minor, they possess the legal capacity to refuse medical care, providing the other conditions are met.

Legal Capacity:

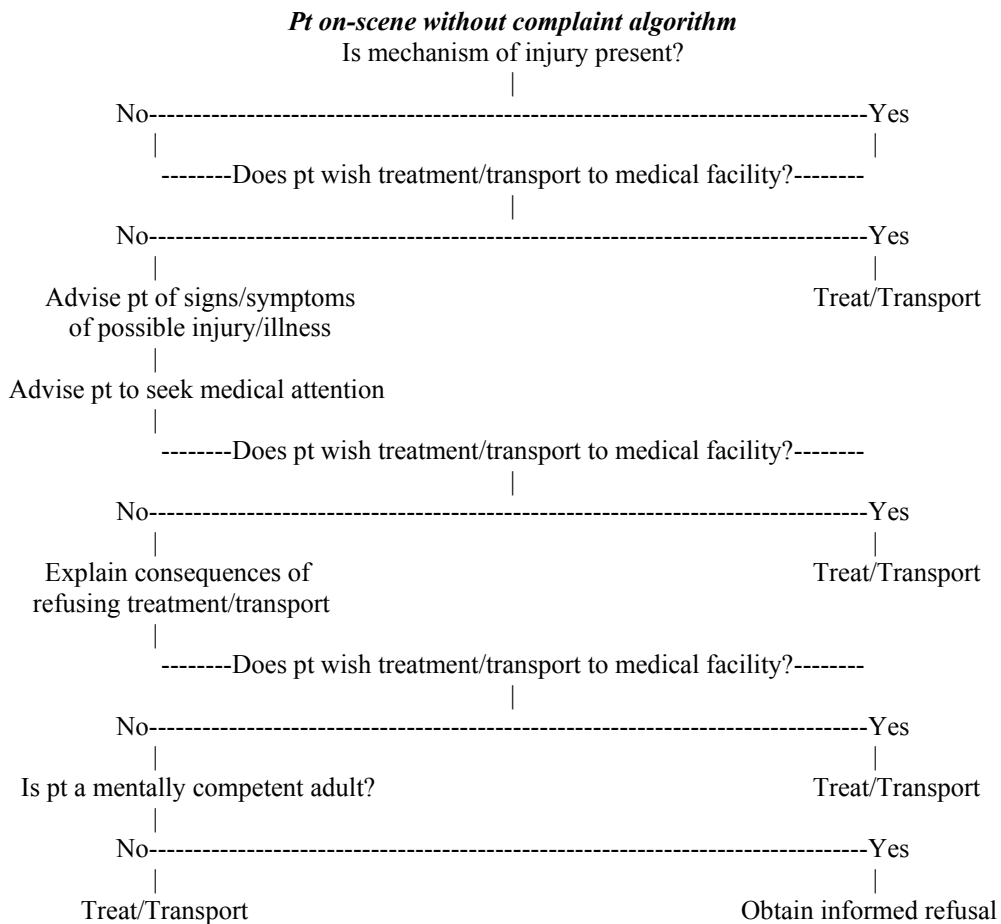
Considering these two aspects, **minors do not have the legal capacity to refuse medical care**. The decision to make medical care available rests with the EMS provider under Implied Consent. Therefore, to assure that the best interests of the patients are properly served, all minors who suffer injury or illness should be transported to a medical facility. Once at the receiving facility, the facility will make attempts to reach the patient's legal guardian in order to determine the medical treatment wishes of the guardian as they pertain to the minor.

On-Scene Considerations:

In the event an EMS provider responds to an emergency scene and is presented with a minor patient who has any physical signs or symptoms of injury or illness, **transport the patient** to an appropriate receiving facility. If a guardian is present (i.e., parent) they may make the decision regarding the treatment and transport of the minor. If the guardian refuses care and/or transport, it is the guardian who signs the refusal form as the responsible party.

Guardians Refusing Care for a Sick or Injured Minor:

There may be times when the guardian refuses medical care and/or transportation even when the minor has serious illness or injury. The reasons may be religious or economic. However, if the on-scene EMS providers believe that the patient may suffer grave medical consequences if left on-scene, consult a Medical Control Physician for advice. If the physician agrees that further medical evaluation is necessary, request police assistance to facilitate transport.



GLOSSARY

Altered Mental Status: A state of mind that is not normal for the patient; a condition in which the patient is not oriented to person, place, or time (not necessarily all three together).

Emancipated Minors: Children who are free from parental care and responsibility and, therefore, have control over their own lives and are free to make their own decisions; legally considered to be an adult.

Expressed Consent: Condition in which the patient agrees to the treatment plan and gives the EMT permission to proceed, which understanding any risks associated with the treatment.

Implied Consent: Condition in which EMT's have legal permission to provide treatment to a person who is mentally, physically, or emotionally unable to provide expressed consent or otherwise able to agree to the treatment when treatment is needed due to a serious or life-threatening injury or illness. Care is given on the assumption that the patient would ask for and agree to treatment if able to.

Medical Control: The process of physicians ensuring that EMT care given to an ill or injured patient is medically appropriate.

Neglect: The act of not giving attention to a child's needs.

Patient Care Report (PCR): A form used to document the events occurring during a patient encounter, including the minimum data set of patient and administrative information.

GUIDELINE #13

MINIMUM CRITERIA FOR ACTIVATING PARAMEDIC RESPONSES

1. **Abdominal or Back Pain:** If associated with chest pain or decreased level of consciousness.
2. **Allergic Reactions:** If associated with sudden onset of respiratory distress, throat swelling, and/or hives.
3. **Burns:** If over 15% of total body surface, burns involving the face, electrical, or a question of victims trapped in a structure.
4. **Carbon Monoxide or other Chemical Inhalation or Exposure:** If associated with respiratory distress or decreased LOC.
5. **Cardiac or Respiratory Arrest:** All.
6. **Chest Pain:** If a patient is over 30 or if associated with faintness or respiratory distress.
7. **Childbirth:** If contractions are less than 5 minutes apart or if the patient has the urge to push.
8. **Diabetic Problems:** If associated with changes in levels of consciousness.
9. **Breathing Difficulties:** All.
10. **Environmental Emergencies:** Hypothermia, drowning, or lightning injuries.
11. **Bleeding:** If uncontrolled or associated with decreased level of consciousness.
12. **Overdose, Poisoning:** If associated with decreased level of consciousness.

GUIDELINE #14

ADDITIONAL PARAMEDIC UTILIZATION GUIDELINES

(adapted from CEMSMAC *Paramedic Utilization Guidelines*)

1. If an EMS Provider is treating a patient that meets EMD criteria for dispatch of a paramedic, and a paramedic has not been simultaneously dispatched, one should be requested if the time to the paramedic's arrival is shorter than the time it would take to transport to the hospital.
2. If a paramedic unit is called, an effort should be made to package and transport the patient to an appropriate intercept location, thereby minimizing the time it will take to receive paramedic care.
3. An EMT requesting a paramedic unit should attempt to make radio contact as soon as possible with the responding paramedic unit to apprise needs and circumstances and to confirm intercept location.
4. Upon arrival, the paramedic assumes medical supervision and responsibility for the patient(s). Other EMS Providers at the scene should assist the paramedic as appropriate to their level of care.

GUIDELINE #15

EMT-B PATIENT ASSISTED PHARMACOLOGICAL INTERVENTIONS

The following guidelines that contain pharmacological interventions are written for current EMT's who are certified to the "B" curriculum. Assisting patients with the administration of their own medications requires the adherence to these guidelines as well as holding certification in the EMT-B standards.

Any patient who is awake, alert, aware, and verbal and who insists on taking their own prescribed medication, when it does not meet the criteria outline in these guidelines, has the expressed right to self-administer said medication in accordance with their physician orders. Such actions shall be documented on the run forms in accordance with Guideline 12.

Any deviation of these guidelines must be clearly documented and immediately reported to Medical Control after the call. The call is then subject to fact-finding, remediation, and disciplinary action if deemed necessary by Medical Control.

NOTE: Services that *carry* epinephrine auto-injectors must have additional training and state MICS approval.

Definitions:

OFF-LINE Medical Control Procedure - Intervention may be given to patient based on signs and symptoms without first contacting and talking with medical control.

ON-LINE Medical Control Procedure - Direct contact with medical control must be made and an order for intervention received prior to treating patient with a specific intervention. The order must come from an MD., PA., or an R.N. directed by an MD., or PA., and documenting the person giving the order and the time the order was granted or denied.

EXPRESSED CONSENT - Type of consent in which a patient expressly authorizes the EMT-B to assist them in providing pharmacological intervention based upon the indications set forth by the prescribing physician to treat a medical condition.

GUIDELINE #16

PARAMEDIC RESPONSE FOR EMT-B PHARMACOLOGICAL INTERVENTION

From the time that a request for Emergency Medical Service response is received, and at any time during the emergency call, information gathered by the dispatcher, first responder, or basic ambulance indicates that the patient has taken their own medications or has been assisted with their own medications to treat signs and symptoms of presenting illness. Verify or confirm that an ALS response has been initiated if they have been automatically dispatched to the call or initiate an ALS response to the call if they have not been dispatched.

The Paramedic response unit will not be canceled to any emergency call that a patient has used pharmacological intervention to treat signs and symptoms of the presenting illness. Even if the patient has positive therapeutic response from the intervention. Example: chest pains relieved with NTG, improved LOC with any form of glucose on diabetic patients. ALS will be responsible to evaluate and monitor the patient's therapeutic effect from the pharmacological intervention and possibly provide additional or supplemental advanced level care.

GUIDELINE #17

RESPIRATORY DISTRESS

Activate ALS

Asthma is the most common disorder presenting with bronchospasm. Patients may present with mild to severe distress and management is based upon severity. **Chronic Obstructive Pulmonary Disease** is the result of any disease process that decreases the pulmonary system's ability to perform ventilation. Symptoms include persistent shortness of breath on exertion (with or without chronic cough) and less than one-half normal breathing capacity. Increased chest diameter (barrel chest) and pursed-lip breathing are often seen in patients with advanced forms of this condition.

General Procedures:

1. Bring the SAED/AED unit to the patient's side.
2. Adminster oxygen. Refer to attached addendum #2 for appropriate concentrations.
3. Perform an appropriate assessment Including:
 - a. determining if the patient has metered dose inhaler medications.
 - b. Have they exceeded the maximum dose.
4. Prevent/treat for shock as necessary.
5. Initial transport as soon as possible with or without Paramedics.

See Addendum #3 for Administration of Metered Dose Inhaler.

GUIDELINE #18

CHEST PAIN/PALPITATIONS

Activate ALS

Chest pain is characterized in a variety of ways, most commonly squeezing, dull pressure, and pain radiating down the arms or jaw. It may also be associated with sweating, difficulty breathing, anxiety, feeling of impending doom, irregular pulse rate, abnormal blood pressure, epigastric pain, and nausea/vomiting. All chest pain patients must be carefully monitored until a definitive diagnosis can be made at the hospital.

General Procedures:

1. Assure SAED/AED at patient's side
2. Administer oxygen. Refer to attached addendum #2 for appropriate concentrations.
3. Perform an appropriate assessment including:
 - a. Reoccurrence: Has this happened before?
 - b. Region: Where does it hurt?
 - c. Pertinent positives/negatives: Signs/symptoms
 - d. Viagra use.
4. If the patient has a systolic blood pressure of less than 100mmHg and/or altered level of consciousness:
 - a. Place patient in supine position if tolerated.
 - b. Transport as soon as possible with or without ALS.
5. If the patient is alert and has a systolic blood pressure of 100 mmHg or greater:
 - a. Initiate transport as soon as possible, with or without ALS.
 - b. If the patient has been prescribed nitroglycerin and has the nitroglycerin with them, assist with administration.
 - c. Administer 4 chewable baby aspirin (324 mg) **if MIC approved**.
 - d. Document all times of administration.

See Addendum #4 for Administration of Nitroglycerin and Aspirin.

GUIDELINE #19

CARDIAC ARREST

Activate ALS

The need for early defibrillation is clear and should have the highest priority. Per the AHA, for every minute that a heart is in a shockable rhythm and defibrillation is delayed, the patient's chance of survival is decreased by 10%.

General Procedures:

1. Non-Traumatic Arrest
 - a. Follow most current AHA Guidelines/Sponsor Hospital for procedure to use SAED/AED.
 - b. If certified to do so, follow Sponsor Hospital guidelines for procedure to use esophageal-tracheal combi-tube or PTL.
 - c. Transport as high priority. Transport should not be delayed awaiting arrival of paramedic.
2. Traumatic Arrest
 - a. Provide cervical immobilization.
 - b. Transport as high priority. Transport should not be delayed awaiting arrival of paramedic.
 - c. Transport to the closest receiving hospital according to State Trauma Guidelines.
3. Hypothermic Patients
 - a. Patients in ventricular fibrillation with profound hypothermia (extremely low core body temperature, < 85°F) do not respond well to defibrillation.

Special Considerations:

1. If the patient has an implantable pacemaker/defibrillator located in the right clavicular area, move the right electrode pad 2 inches away. Never place an electrode over anything: i.e. pacemaker, defibrillator, nitro paste or patch, etc. If the patient has an abdominal implanted cardiac defibrillator (AICD), it will not effect the placement of electrode pads.
2. Remove nitro patches/paste.

Resuscitation efforts must be continued until relieved by hospital staff or other emergency provider except as follows:

- a. Exhaustion of team member(s)
- b. Directed to stop by on-line medical direction, on-scene paramedic, or on-scene, identified, licensed PHYSICIAN (with approval of medical direction).
- c. Patient is resuscitated
- d. Valid DNR order

Withholding resuscitation:

Refer to Guideline #6 for Withholding Resuscitation and Guideline #5 for DNR Orders.

See Addendum #5 for Semi-Automatic Defibrillator procedure.

GUIDELINE #20

ALTERED MENTAL STATUS

Consider Activating ALS

Altered mental status is an indicator of central nervous system (CNS) injury or illness. A common grouping of the causes for altered mental status is the following: **(AEIOU-TIPS)** Alcoholism, Epilepsy, Insulin, Overdose, Underdose, Trauma, Infection, Psychiatric, and Stroke. Since the interpretations of a single term varies from one person to another, it is always best to describe the patient using the Glasgow Coma Scale or AVPU system.

General Procedures:

1. Bring The SAED/AED unit to the patient's side
2. Adminster oxygen. Refer to attached addendum #2 for appropriate concentrations.
3. In cases of suspected head/neck injury, ensure cervical spine immobilization.
4. Obtain Glasgow Coma Scale and AVPU.
5. Prevent/treat for shock as necessary.
6. Initial transport as soon as possible with or without Paramedics.
7. Do not administer anything by mouth

CVA/Stroke/Brain Attack:

The event is usually sudden in onset but progresses slowly. Temporary signs and symptoms may indicate a TIA. It is the transient nature of the symptoms making diagnosis and treatment difficult. Symptoms associated with a TIA usually resolve within 24 hours. The signs and symptoms of a stroke are similar to a TIA but are permanent. They may include transient blindness in one eye, confusion numbness or weakness, paralysis, difficulty with speech and comprehension, difficulty with swallowing, loss of balance, and changes in sensation.

Specific Procedures:

1. Attempt to identify time of onset for signs and symptoms for CVA/Stroke. **IF WITHIN 3 HOURS, BRIEF SCENE TIME AND RAPID TRANSPORT TO HOSPITAL IS ESSENTIAL.**

Cincinnati Prehospital Stroke Scale

Facial Droop (have patient show teeth or smile)

- Normal- both sides of face move equally
- Abnormal- one side of face does not move as well as the other side.

Arm Drift (patient closes eyes and holds both arms straight out for 10 seconds)

- Normal- both arms move in the same or both arms do not move at all
- Abnormal- one arm does not move or one arm drifts down compared to the other

Abnormal Speech (have patient say "you can't teach an old dog new tricks")

- Normal- patient uses correct words with no slurring
- Abnormal- patient slurs words, uses the wrong words, or is unable to speak

Interpretation: If any 1 of these 3 signs is abnormal, the probability of stroke is 72%.

Diabetic Emergencies:

Symptoms associated with hypoglycemia include fatigue, malaise, irritability, trembling, headache, cold sweats, tachycardia, confusion, seizure, and coma.

Specific Procedures:

1. Perform an appropriate assessment including:
 - a. Patient has history of diabetes.
 - b. Patient takes medication for diabetes
 - c. Patient took medication
 - d. Patient's last oral intake
2. If the patient is a known diabetic AND conscious and alert with a gag reflex, administer oral glucose (see addendum). After 10 minutes, this may be repeated. If the patient has an altered level of consciousness or is unconscious (**P** or **U** on evaluation of AVPU), **do not administer anything by mouth.**

See Addendum #6 for Administration of Oral Glucose.

Seizures:

Some seizure patients may describe an "aura" just prior to the seizure. The seizure may be followed by a post-ictal state or complete coma, depending upon the cause.

Specific Procedures:

1. Once seizure has abated, be certain that the oropharynx is clear of secretions and/or vomitus.
2. Place patient in the recumbent position.

GUIDELINE #21

ALLERGIC REACTION AND ANAPHYLAXIS

Consider Activating ALS

Anaphylaxis is an acute, generalized, and violent antigen-antibody reaction that can become fatal. Anaphylaxis may present as a mild to severe response. Management is based upon the severity of the reaction. Most reactions occur within thirty minutes, although the onset of symptoms varies from several seconds to hours. **Severe anaphylaxis** manifests with hypotension or impending airway obstruction with wheezing and/or stridor with accessory respiratory muscle use.

An **allergic reaction** is a hypersensitivity to an antigen. It is usually non-life threatening, with hives and itching, but without signs and symptoms of respiratory distress or hypoperfusion.

General Procedures:

2. Administer oxygen. Refer to attached addendum #2 for appropriate concentrations.
3. Perform an appropriate assessment, including:
 - a. Patient has history of allergies
 - b. Substance patient was exposed to
 - c. How the patient was exposed
 - d. Time of exposure
 - e. Age of patient
 - f. Determine if patient has taken any medications in an attempt to relieve symptoms
4. Prevent/treat for shock as necessary
5. Initiate transport as soon as possible with or without Paramedics.

Severe Reactions: Patient may complain of itching and grossly distorted hives, with or without difficulty swallowing or difficulty breathing. **WATCH FOR UPPER AIRWAY OBSTRUCTION WITH STRIDOR.** Wheezing may be audible without a stethoscope **OR MAY BE ABSENT.** Patient MAY show signs of shock (hypoperfusion).

Specific Procedures:

1. Place patient in position appropriate for condition.
2. Transport as soon as possible. **FOR SEVERE REACTIONS, TRANSPORT IMMEDIATELY. PARAMEDIC INTERCEPT SHOULD BE CALLED AS SOON AS POSSIBLE.**
3. Determine if patient has prescribed preloaded epinephrine available, if not, **ESTABLISH MEDICAL CONTROL IMMEDIATELY AND REQUEST ORDERS FOR THE ADMINISTRATION OF SERVICES EPI-PEN (IF EQUIPPED).**
4. Assist with/administer epinephrine auto-injector as needed.
5. Document actions taken and patient response to medication.

See Addendum # 7 for Administration of Preloaded Epinephrine Auto-Injector

GUIDELINE #22

Overdose / Poisoning

CONNECTICUT POISON CONTROL CENTER:

1-800-343-2722

***Activate ALS ***

Poisoning may be the result of exposure to toxic substances from **ingestion, inhalation, injection or skin absorption**. Signs and symptoms of serious poisoning include: coma, cardiac dysrhythmia, gastrointestinal disturbance, respiratory depression, and hypotension/hypertension. **General management principles should be directed towards patient's clinical status and suspected cause for their clinical condition. Due to the complex nature of poisonings and substance abuse emergencies, it is strongly recommended that Medical Control/Poison Control be contacted.**

Principal: Treat the patient, not the poison. Contact Poison Control Center rather than relying solely on label instructions. Bring all containers, bottles, and labels of poison agents to the receiving facility. If exposure is to a hazardous material, follow protocols established by the incident command structure.

General Procedures

1. Ensure scene safety and maintain appropriate body substance isolation precautions for toxic chemicals and blood and body fluids (gloves, face mask etc.). If patient presents as an IV drug abuse/overdose, be cautious for needles and other drug paraphernalia and dispose of appropriately (legal implications may require EMS providers to give the drug paraphernalia to law enforcement authorities). Never place your hands in patient's pockets.
2. Administer oxygen. Refer to attached addendum #2 for appropriate concentrations.
3. Identify offending agent and route of exposure and include history of:
 - **Substance ingested (if known)**
 - **Time of ingestion**
 - **Amount ingested**
 - **Gag reflex status – can the patient protect their own airway**
4. Initiate transport as soon as possible with or without ALS.

See Addendum #8 for Administration of Activated Charcoal.

GUIDELINE #23

ENVIRONMENTAL EMERGENCIES

Consider Activating ALS

Hypothermia/Cold Emergencies:

Hypothermic patients must be handled gently, as jarring movements may cause cardiac arrest.

General Procedures:

2. Remove all clothing (by cutting clothing to limit patient movement) and prevent further heat loss with use of blankets.
3. Administer oxygen. Refer to attached addendum #2 for appropriate concentrations.
3. Perform an appropriate assessment.
4. Determine patient's hemodynamic status: Assess pulse and respiratory rates for a period of 60 seconds to determine pulselessness or profound bradycardia.
2. If patient is in cardiopulmonary arrest, apply AED and, if indicated, defibrillate up to a **total of three shocks**, if AED authorized.
3. Contact MEDICAL CONTROL: Medical Control may order further defibrillations with AED as patient rewarms.
4. Initiate transport as soon as possible with or without ALS.

NOTES

- Handle all hypothermia patients with care. Rough handling may precipitate ventricular fibrillation.
- Once you have started CPR-do not give up!
- Protect injured areas from pressure, trauma and friction. Do not rub. Do not break blisters
- Do not allow the patient to ambulate if a limb has started to thaw.
- Do not allow the limb to thaw if there is a chance that the limb may refreeze before evacuation is complete.
- THE HYPOTHERMIC PATIENT IS NOT DEAD UNTIL HE/SHE IS WARM AND DEAD!

Heat Cramps/Exhaustion/Stroke:

Heat cramps commonly occur in the patient who exercises and sweats profusely, and subsequently consumes water without adequate salt. Signs and symptoms include normal temperature with hot sweaty skin, mild tachycardia, and normal BP. **Heat exhaustion** results from excessive fluid and electrolyte loss through sweating and lack of adequate fluid replacement when a patient is exposed to high environmental temperatures for a sustained period of time. Signs and symptoms include nausea, lightheadedness, anxiety, confusion, cool clammy skin, tachycardia, and low or normal BP with orthostatic changes. **Heat stroke** results when the body suddenly loses the ability to control internal heat dissipation. Activity during time of exposure to heat can increase the loss of fluid to the point of hypovolemia. Heat stroke can also result in seizures. Signs and symptoms include hot flushed skin, tachycardia with thready pulse, abnormally high or low BP, or altered level of consciousness.

General Procedures:

1. Administer oxygen. Refer to attached addendum #2 for appropriate concentrations.
2. Perform an appropriate assessment.
3. Remove patient to cool area and place patient in a supine position.
2. Provide rapid cooling as soon as possible. **CAUTION: Do not over-chill patient, observe for shivering. If shivering occurs, discontinue active cooling procedures.**
 - a. Loosen or remove all unnecessary clothing, while protecting privacy.
 - b. Apply cool packs to armpits, neck, and groin.
 - c. Use evaporation techniques if possible (fans, open windows).
 - d. Keep skin wet by applying water with wet towels or sponges.

3. For Heat Cramps and/or Heat Exhaustion: administer sips of water if patient is responsive and not nauseated.

Drowning/Near Drowning Emergencies

Drowning is defined as death that is the result of asphyxia due to airway obstruction secondary to laryngospasm and/or aspiration of liquid into the lungs after submersion and occurs within twenty-four (24) hours after submersion. **Near-Drowning** is defined as a submersion episode that results in survival (full or partial recovery) or temporary survival that ultimately leads to death after a period of twenty-four (24) hours. Drowning begins with accidental or intentional submersion in any liquid, of which fresh and salt water drowning are the most common. Fresh-water drowning/near-drowning and salt-water drowning/near-drowning have different physiologic mechanisms leading to asphyxia. However, out of hospital management of these patients is the same: treatment must be directed toward correcting severe hypoxia. Factors affecting survival include the patient's age, length of time submerged, general health of the victim, type and cleanliness of liquid medium, and water temperature that may contribute to the effectiveness of the **mammalian diving reflex** (decreased respirations, decreased heart rate, and vasoconstriction with maintenance of blood flow to the brain, heart, and kidneys).

General Procedures:

1. Ensure scene and rescuer safety. Call appropriate public safety agencies: police, fire, and/or rescue teams, including scuba teams to properly stabilize the scene and safely rescue the victim(s) from the source of submersion.
2. Consider need for additional EMS unit(s) for rescuer rehabilitation and/or treatment.
3. Maintain appropriate body substance isolation precautions.
4. maintain an open airway and assist ventilations as needed, immediately upon obtaining access to patient.
5. Ensure spinal stabilization and immobilization if indicated (i.e., unwitnessed event, unconscious patient, or mechanism of injury).
6. Once the patient is rescued and is placed in a safe environment, rescuers may administer specific emergency care such as suctioning the airway and use of airway adjuncts as indicated. Administer oxygen. Refer to attached addendum #2 for appropriate concentrations.
7. Determine patient's hemodynamic stability and symptoms. Continually assess Level of Consciousness, ABCs and Vital Signs. Treat all life threatening conditions as they become identified. Initiate CPR when appropriate and follow AED guideline.
8. Obtain appropriate SAMPLE history including:
 - a. Length of exposure
 - b. Temperature of water
 - c. Potential for injury.
9. Initiate transport as soon as possible with or without ALS.
10. If suspected hypothermia: see **hypothermia/cold emergencies** as above.
11. Secure patient with a pulse in left lateral trendelenburg position. Cover to prevent heat loss and treat for shock.
12. Ongoing assessment will be performed according to patient's condition.

GUIDELINE #24

BEHAVOIRAL EMERGENCIES

A behavioral emergency is any change in mood or behavior that requires immediate attention. Behavioral emergencies range from persons who may be regarded as a danger to themselves or others to less intense situations in which a patient may momentarily lack the ability to cope with stress and anxiety.

General Procedures:

1. Perform scene size-up
 - a. If the patient **HAS THE POTENTIAL TO ACT IN AN** aggressive or combative manner, displays a weapon, **OR HAS POSSIBLE ACCESS TO A WEAPON** immediately summon police for assistance and EMS personnel should **WITHDRAW TO A SAFE AREA**.
 - b. When the situation is stabilized, perform initial assessment. Note that numerous medical conditions may mimic a behavioral emergency. Consider the following:
 - Low blood sugar (hypoglycemia)
 - Alcohol and/or drug use
 - Head trauma
 - Lack of oxygen (hypoxia)
 - CVA/Stroke
2. If patient restraints are required, ensure police AND ADEQUATE PERSONNEL ARE present.
 - a. If police supply restraint (i.e. handcuffs) police must accompany patient in ambulance.
 - b. If service applies restraints, document time of restraint of all 4 extremities
 - c. Assess distal PMS
 - d. Never release a restraint unless needed to perform life-saving measures.
 - e. Contact receiving hospital at earliest convenience.
3. Evaluate the patient for the possibility of self-destructive behavior and/or suicidal ideations.
4. Transport with law enforcement assistance, if necessary.

Protect against false accusations:

1. ***Documentation of abnormal behavior exhibited by patient is very important.***
2. ***Have witnesses, in attendance, especially during transport, if possible.***
3. ***Accusing EMT-Bs of sexual misconduct is common by emotionally disturbed patients. Have help: same sex attendant and third party witness.***

GUIDELINE #25

ELECTRICAL BURNS

Consider Activating ALS

Electrocution

Electrical injuries are a relatively common, complex and potentially devastating form of trauma. The manifestations and severity of electrical trauma encompass a wide spectrum, ranging from a transient unpleasant sensation due to brief contact with low-intensity household current to instantaneous death and massive injury from high-voltage electrocution/lightning injury. Unlike thermal burns, electrical injuries commonly involve multiple body systems with the potential to pose difficult challenges regarding accurate assessment and proper management. Therefore, injury due to electricity may include burns to the skin and deeper tissues, cardiac rhythm disturbances and associated injuries from falls and other trauma. The amperage, voltage, type of current (AC vs. DC) duration of contact, tissue resistance and current pathway through the body will determine the type and extent of injury. Higher voltage, greater current, longer contact and flow through the heart are associated with worse injury and worse outcome. In general, lightning exposure/contact may result in the most severe form of electrical injury.

EMT-BASIC PROCEDURES

1. Ensure scene safety, i.e. by ascertaining that the source of electricity is removed from the patient and the rescue area.
2. Call appropriate public safety agencies for assistance if needed.
3. Maintain appropriate body substance isolation precautions.
4. Maintain an open airway and assist ventilations as needed. Assume spinal and other potential traumatic injuries when appropriate and treat accordingly.
5. Administer oxygen. Refer to attached addendum #2 for appropriate concentrations.
6. Control/stop any identified life threatening hemorrhage (direct pressure, pressure points, etc.)
7. If patient is in cardiopulmonary arrest: Initiate CPR with BVM and supplemental oxygen and apply AED.
8. Activate ALS intercept, if deemed necessary and if available.
9. Initiate transport as soon as possible with or without ALS
10. Obtain appropriate S-A-M-P-L-E history related to event
 - a. voltage source,
 - b. time of contact,
 - c. path of flow through body
 - d. unresponsiveness or seizures.
11. Assess patient for entry and exit wounds, particularly under rings or other metal objects.
12. Manage burn injuries and/or entrance and exit wounds as indicated.
13. Monitor and record vital signs every 5 minutes at a minimum if unstable, or every 15 minutes if stable.
14. If patient's BLOOD PRESSURE drops below 100 systolic: treat for shock.
15. Notify receiving hospital.

See Addendum # 10 for Evaluation of Burns and Burn Injury Charts.

GUIDELINE #26

ABDOMINAL PAIN (NON-TRAUMATIC)

Consider Activating ALS

Acute abdominal pain may have a sudden onset and may present as mild to severe in nature. The **acute abdomen** refers to the relatively sudden onset of severe abdominal pain (although gradual onset of pain leading to an acute abdomen does occur) signifying a potential abdominal catastrophe. It is often associated with nausea, vomiting, guarding, rebound tenderness, and abdominal distention.

General Procedures:

1. Administer oxygen. Refer to attached addendum #2 for appropriate concentrations.
2. Perform an appropriate assessment, including:
 - a. Surgical history
 - b. Female patients-last menstrual period (LMP)
 - c. Prior episodes
3. Allow the patient to assume a comfortable position, unless contraindicated. Bending of the knees and hips may help reduce pain.
4. Initiate transport as soon as possible with or without Paramedics.

NOTES

Women should be assessed for obstetrical/gynecological emergencies.

GUIDELINE #27

OBSTETRICAL AND GYNECOLOGICAL EMERGENCIES

Consider Activating ALS

Obstetrical and Gynecological Emergencies may include ectopic pregnancy, hypertension in pregnancy (preeclampsia), or seizures in pregnancy (eclampsia, sexual assault, and vaginal hemorrhage).

General Procedures:

1. Administer oxygen. Refer to attached addendum #2 for appropriate concentrations.
2. Perform an appropriate assessment including the following if applicable:
 - a. Obtain Labor/Gestational History
 - Gravity (# of times pregnant)
 - Parity (# of offspring)
 - History of obstetrical complications/prenatal care
 - Expected date of delivery
 - Length of time between contractions (Start of one contraction to start of the next)
 - Length of contractions
 - Presence/absence of membrane rupture
 - Possibility of multiple births
3. Transport priority will be defined by patient's condition.

Trauma in Pregnancy

1. Transport as soon as possible in the left lateral recumbent position unless a back or neck injury is suspected.
2. If back or neck injury is suspected, secure patient to a long board then tip board and patient to the left. Support with pillows or blankets.
3. Provide emotional support.

Sexual Assault: criminal assault situations require initial and on-going assessment/management and psychological care.

1. Body substance isolation
2. Non-judgmental attitude during SAMPLE focused assessment.
3. Crime scene protection.
4. Examine genitalia only if profuse bleeding present.
5. Use same sex EMT-Basics for care when possible.
6. Discourage the patient to bathe, void, or clean wounds.
7. Reporting requirements.

***For the following emergencies, immediate transport is required, with or without ALS.
Contact medical direction for guidance.***

Limb Presentation:

1. If the presenting fetal part is a limb, prevent further delivery by placing the patient in the head down, pelvis up position.
2. If the presenting part is the placenta (placenta previa), vaginal hemorrhage should be treated by placing a trauma dressing over the vagina and placing the patient in the left lateral recumbent position.

Breech

1. If the presenting part is the buttocks, or both-legs first, be prepared to assist in delivery of the fetus. Place patient in the head down pelvis up position.
2. Do not pull on the pelvis or legs of the baby.
3. If torso delivers and head remains in vagina, place sterile glove in vagina with palm toward baby's face. With index finger and middle finger, form a "v" around the baby's nose, helping to push the vaginal wall away from the baby's face.

Prolapsed Cord:

1. Place patient on knees with head down on stretcher (Bent knee chest position).
2. Place two gloved fingers in the vagina near the presenting cord in order to prevent the baby from crushing the cord.
3. Wrap cord in sterile, moist towel.
4. *Transport must be careful, smooth, and steady.*

Notes

Place all pregnant patients in the left lateral recumbent position if possible.

If pregnant patient is hypersensitive (systolic pressure greater than 150, diastolic pressure greater than 100), be prepared to treat for grand mal seizure and arrange for paramedic intercept.

GUIDELINE #28

LABOR AND DELIVERY

In general, the most common decision to be made with an expectant mother in labor is whether to attempt delivery of the infant at the scene or transport the patient to the hospital. Factors that effect this decision include the frequency of contractions, prior vaginal deliveries, urge to push, and the presence of crowning. The urge to push and/or the presence of crowning indicate that delivery is imminent. In such cases, consideration should be given to delivering the infant on the scene or in the ambulance. Those conditions that require immediate transport, despite the threat of delivery, include: prolonged membrane rupture, breech presentation, cord presentation, extremity presentation, evidence of meconium staining and nuchal cord (cord around the infants neck).

General Procedure:

1. Adminster oxygen. Refer to attached addendum #2 for appropriate concentrations.
2. Perform an appropriate assessment including:
 - a. Obtain Labor/Gestational History
 - Gravidity (# of times pregnant)
 - Parity (# of offspring)
 - History of obstetrical complications/prenatal care
 - Expected date of delivery
 - Length of time between contractions (Start of one contraction to start of the next)
 - Length of contractions
 - Presence/absence of membrane rupture
 - Possibility of multiple births

Delivery Procedure:

1. Position mother for delivery. Place her on her back, knees drawn up and spread apart, raise buttocks with a pillow or blanket.
2. Wash hands, open OB delivery kit, put on sterile gloves, drape mother.
3. Coach mother to breathe deeply between contractions and to push with contractions.
4. As the head crowns, control it with gentle pressure and support the head during delivery and examine the neck for the presence of a looped (nuchal) umbilical cord. **If the cord is looped around the neck, gently slip it over the infant's head (if unable to do so, clamp the cord in two places and cut between the clamps to release the cord).**
5. Suction the mouth, then the nose of the infant as soon as possible.
6. Support the infant's head as it rotates for shoulder presentation.
7. With gentle pressure, guide the infant's head downward to deliver the anterior shoulder and then upward to release the posterior shoulder. Complete delivery of the infant.
8. Hold infant firmly with head down to facilitate drainage of secretions. Clear infant's airway of any secretions with bulb syringe, mouth first and then the nose.
9. Apply two clamps to umbilical cord after pulsations stop. Place one clamp approximately 6" from the infant and the second 2-3" from the first. Cut the cord between the clamps.
10. Dry infant. Wrap in towels/blankets, and cover the infant's head. **The biggest threat to a newborn in an out-of-hospital delivery is hypothermia. Keep the baby and the environment EXTREMELY warm.**
11. Place the infant on the mother's abdomen for mother to hold and support.
12. Record infant's gender, time of birth, and geographical locations
13. If infant resuscitation is not necessary, record APGAR score at 1 and 5 minutes post-delivery.
14. **If infant resuscitation is necessary, follow the newborn resuscitation guideline.**
15. Deliver if the placenta: (DO NOT DELAY TRANSPORT)

- a. As the placenta delivers, encourage the mother to push with contractions.
 - b. Hold placenta with both hands, place in a plastic red bag and transport to the hospital with mother. NEVER pull on the umbilical cord to assist placenta delivery.
 - c. Evaluate perineum for tears. If present, apply sanitary napkins to the area while maintaining direct pressure.
 - d. Uterine massage as needed.
16. Transport and notify hospital as soon as possible.

APGAR SCORING SYSTEM

Calculate the APGAR scores at 1 and 5 minutes of life. Determination of the APGAR scores should not delay resuscitation.

PHYSICAL SIGN	0 POINTS	1 POINT	2 POINTS
<i>HEART RATE</i>	Absent	< 100	>100
<i>RESPIRATORY EFFORT</i>	Absent	Slow, irregular (or weak cry)	Normal (or strong cry)
<i>MUSCLE TONE</i>	Limp	Some flexion	Active motion
<i>REFLEX IRRITABILITY</i>	No response	Grimace, some motion	Cough or sneeze, vigorous cry
<i>COLOR</i>	Blue, pale	Mucous membranes pink, nail beds blue	Mucous membranes and nail beds pink

See Addendum #11 for Pediatric Vital Signs Chart & APGAR Scoring System.

GUIDELINE #29

PEDIATRICS

Pediatric Considerations

Vital Signs

- 0-3 years of age—No blood pressure-capillary refill only
- Pulse
- Respirations
- Level of consciousness
- Skin color and temperature
- Capillary response

Airway

0-1 years of age-

- OPA goes in anatomically correct. Utilize a tongue depressor or thumb to hold the tongue while inserting airway.
- Utilize a bulb syringe for suctioning
- Neutral position to open the airway

Epiglottitis

- Typically between the ages of 3-7.
- Sudden onset of high fever, painful to swallow, patient sitting in tripod position and drooling.

Specific Procedures

1. Blow-by high flow oxygen only.
2. Transport patient in patient's position of comfort.
3. **EXTREME CAUTION NEEDED NOT TO STIMULATE CHILD DUE TO POSSIBILITY OF OBSTRUCTING THE AIRWAY. TRUE LIFE-THREATENING EMERGENCY-DO NOT GO NEAR OR TOUCH THE FACIAL AREA.**

Seizures

Most often associated with fever

Specific Procedures

1. Remove clothing to cool the patient-be careful of hypothermia
2. Complete SAMPLE including the following:
 - Prior seizures
 - Normal seizure pattern
 - Anti-seizure medications
 - Fever-If so,
 - How high
 - Sudden onset

See Addendum #11 for Pediatric Vital Signs Chart.

Addendum #1

GLASGOW COMA SCALE

	CHILD/ADULT	INFANT	SCORE
EYES	Open spontaneously during initial assessment	Open spontaneously during initial assessment	4
	Open to verbal stimulus	Open to verbal stimulus	3
	Open only to painful stimulus	Open only to painful stimulus	2
	Do no open during initial evaluation period.	Do no open during initial evaluation period.	1
VERBAL	Oriented to person, place and time	Coos and babbles	5
	Converses, but is disoriented or confused	Irritable and cries	4
	Disoriented , speech clear but inappropriate	Cries to pain	3
	Garbled . Includes grunting moaning, non-specific sounds	Moan to pain	2
	No verbal responses to any stimulation	No verbal responses to any stimulation	1
MOTOR	Obeys verbal commands by moving extremities or facial muscles (if C-spine injuries)	Moves spontaneously and purposely.	6
	Can localize a painful stimulus by moving an extremity to an injured area in a purposeful manner	Withdraws to touch	5
	Withdraws an extremity from painful stimulus, but unable to localize/prevent recurring pain	Withdraws in response to painful stimulus	4
	Abnormal flexor response to painful stimulus, i.e. Decorticate (flexion) posturing	Abnormal flexor response to painful stimulus, i.e. Decorticate (flexion) posturing	3
	Abnormal extensor response to painful stimulus, i.e. Decerebrate (extension) posturing	Abnormal extensor response to painful stimulus, i.e. Decerebrate (extension) posturing	2
	No response , no motion to any painful stimulus	No response , no motion to any painful stimulus	1

Glasgow Coma Score = “eyes” score + “verbal” score + “motor” score:

Addendum #2

OXYGEN THERAPY

All patients in respiratory distress should receive oxygen therapy. COPD patients given oxygen can have their respiratory drive suppressed and start retaining CO₂. Watch them closely and be prepared to assist with ventilations. **COPD patients** in shock or severe distress should receive 50-100% oxygen. COPD patients in moderate distress should receive oxygen via nasal cannula at 4-5 LPM. Otherwise COPD patients should receive 1-2 LPM via nasal cannula or the concentration that they are receiving with home O₂ therapy.

Respiratory Status	Patient Presentation	SpO₂	Equipment Flow Rate	Delivered Concentration
NO DISTRESS	Unlabored, normal respiration, warm, dry, pink skin	95-100%	None required	

Respiratory Status	Patient Presentation	SpO₂	Equipment Flow Rate	Delivered Concentration
MILD DISTRESS	Slightly increased respirations, mild dyspnea associated with chest pain, asthma, or COPD	91-94%	Nasal Cannula 2-3 LPM	24-40%

Respiratory Status	Patient Presentation	SpO₂	Equipment Flow Rate	Delivered Concentration
MODERATE DISTRESS	Respiratory rate ~2 times normal, accessory muscle use, acral cyanosis: fingers, toes, lips. All associated with trauma, chest pain, asthma/COPD, CVA	86-90%	Non-rebreather mask 15-25LPM	90% or greater

Respiratory Status	Patient Presentation	SpO₂	Equipment Flow Rate	Delivered Concentration
SEVERE DISTRESS	Shallow, labored respirations, cyanosis, poor respiratory effort. All symptoms associated with shock, trauma, inhalation injury, and near drowning	<86%	BVM, ETT/NTT	90-100%

Respiratory Status	Patient Presentation	SpO₂	Equipment Flow Rate	Delivered Concentration
RESPIRATORY ARREST	No respiratory effort		BVM, ETT/NTT or any other approved assisted ventilation devices	

Addendum #3

Administration of Metered Dose Inhaler (MDI)
Off-Line Medical Control procedure

1. Assure:
 - a. Correct medication (only the following fast acting inhalers):
 - Albuterol (Trade names: Proventil, Proventil HFA, Ventolin)
 - Pirbuterol (Trade name: Maxair)
 - Metaproterenol (Trade name: Alupent)
 - Isoetharine (Trade names: Bronkosol, Bronkometer)
 - Terbutaline Sulfate (Trade names: Brethine, Brethaire)
 - b. Correct patient
 - c. Correct route
 - d. Correct dose.
2. Check expiration date. Advise Medical Control if outdated.
3. Patient alert enough and capable of using inhaler.
 - a. Inhaler is at room temperature or warmer.
 - b. Shake inhaler vigorously several times.
 - c. Remove oxygen adjunct from patient.
 - d. Have patient exhale deeply.
 - e. Have patient put his/her lips around the opening of inhaler, and depress handheld inhaler as he/she begins to inhale deeply
 - f. Instruct patient to hold breath for as long as he/she comfortably can (so medication can be absorbed).
 - g. Replace oxygen.
 - h. Allow patient to breathe a few times and repeat procedure for second dose.
4. Record time and dose of medication and any effects on the patient.
5. Monitor patient, record and report any changes in patient's condition to medical control.

Addendum #4

Administration of Nitroglycerin
Off-line Medical Control Procedure

1. Verify patient's systolic blood pressure (BP) is over 100mmHg.
2. Assure correct medication, patient, route, and that patient is alert and verbal.
3. Question patient on time of last dose and effect, if any (i.e. decrease in pain).
4. Check medication expiration date. If medication has expired, contact medical control for direction.
5. Wearing gloves, have patient lift tongue and place tablet or spray under tongue, unless patient is able to do this by him/herself.
6. Instruct patient to allow tablet to dissolve under tongue.
7. Recheck BP within 3-5 minutes and prior to administration of next dose.
8. If BP is above 100 mmHg systolic and patient has not reached maximum dosage of three, repeat dose.
9. Record time of dose, effects of dose (i.e. decrease in chest pain, any side effects such as bitter taste, headache, or falling BP).
10. Be prepared to place patient in supine position in the event that they become hypotensive.

Administration of Aspirin
Off-line Medical Control Procedure
Requires State MIC Approval

1. Confirm the patient is having chest pain suggestive of a myocardial infarction.
2. Establish the patient's mental status is awake and alert.
3. Hand the patient 4 chewable baby aspirin to place in mouth.
4. Instruct the patient to chew and swallow the tablets
5. Reassess the patient's condition.
6. Document time and dose of administration, vital signs and effect.

Addendum #5

Semiautomatic or Automatic External Defibrillator
Off-line medical control procedure

1. Establish unresponsiveness, breathlessness and pulselessness.
2. Apply defibrillation pads to the patient's chest at the right sternal border and left lower ribs.
3. **Defibrillation comes first.** One defibrillation-authorized person operates defibrillator. If additional rescuers are available, ventilations and/or compressions can be initiated, however defibrillation is the highest priority.
4. *Never activate SAED/AED in moving vehicle. Pull over and stop.*
5. Clear patient from tie to head and initiate analysis of rhythm.
6. If shock indicates, reassess that patient is clear and verbalize "stand clear"
7. Deliver shock. Re-analyze rhythm. (Some AED units will do this without operator intervention)
8. Deliver 2 additional shocks if directed by AED unit.
9. Check pulse
 - a. If pulse present, check breathing and assist ventilations as necessary.
 - b. If no pulse, resume CPR for one minute
10. Reanalyze rhythm
 - a. If indicated, repeat shocks
 - b. If no shock indicated, check pulse and continue CPR for one minute if indicated.
11. Repeat analysis of rhythm at intervals of one minute during CPR.
12. When a total of 6 shock have been delivered or 3 no shocks have been indicated, package and transport patient.

Addendum #6

Administration of Oral Glucose
Off-Line Medical Control procedure

1. Assure signs and symptoms of hypoglycemia and altered mental status with known history of medication-controlled diabetes.
2. Assure patient is alert, awake, aware and that the *patient can verbalize back to you* (EMT-B), when evaluating ability to swallow and protect their airway.
3. Have suction unit readily available.
4. Administer glucose between cheek and gum on tongue depressor making the dose approximately the size of a tablespoon (approx. 1/2 tube).
5. Observe patient for swallowing, have patient open mouth to verify glucose swallowed.
6. Repeat dose size and observe patient until one tube has been used.
7. Reassess and monitor patient's level of consciousness (LOC) and airway patency.
8. Record time of dose and any effects on the patient (example increased LOC).
9. If at any time during the administration of the glucose, the patient becomes unresponsive or seizes, remove the tongue depressor and suction the remaining glucose from the mouth.
10. Monitor patient, report and record any change in patient's condition to Medical Control.

Addendum #7

ADMINISTRATION OF PRELOADED EPINEPHRINE AUTO-INJECTOR
Patient's own or services on board auto-injector

1. Bring SAED/AED unit to the patient's side
2. Obtain patient's prescribed auto-injector or obtain services auto-injector.
 - a. Ensure auto-injector is prescribed for the patient you are treating, or
 - b. Obtain services auto-injector, using on-line medical control.
 - c. Check expiration date of the auto-injector.
3. Remove safety cap from the auto-injector.
4. If time permits, swab the area to be injected with alcohol, if available.
5. Place tip of auto-injector against the patient's thigh.
 - a. Lateral portion of the thigh.
 - b. Midway between the hip and knee.
6. Push the injector firmly against the thigh until the injector activates.
7. Hold the injector in place until the medication is injected, at least 10 seconds.
8. Record order, extremity used, activity, and time of injection.
9. Dispose of injector in biohazard container.
10. Monitor patient for reoccurrence of signs/symptoms. Patient transport *is* necessary because signs/symptoms can reoccur.
11. A second injection may be administered, if available and under the orders of MEDICAL CONTROL, after 5 minutes if necessary.
12. If patient's BLOOD PRESSURE drops below 100 systolic: treat for shock.

Addendum #8

Administration of Activated Charcoal
Requires On-Line Medical Direction
Activate paramedic response

1. *Medication name:*
 - Generic - activated charcoal
 - Trade - SuperChar, InstiaChar, Actidose, etc.
2. *Indications:*
 - a. Poisoning by mouth
 - b. Delay in transport of patient to ER of > 1 hour
3. *Contraindication:*
 - a. No delay in transportation of patient to ER
 - b. Altered level of consciousness (LOC)
 - c. Ingestion of acids or alkalis
 - d. Unable to swallow
 - e. Hydro-carbon ingestion
4. *Medication form:* 12.5 grams of activated charcoal, premixed in water, is recommended.
5. *Dosage:*
 - Adults - 25 grams or as directed by medical control.
 - Infant/child - 12.5 grams or as directed by medical control.
6. *Administration:*
 - a. Persuade patient to drink medication. This may be difficult due to mud- like consistency. May be better tolerated by patient if a covered container with a straw is used.
 - b. If patient starts to gag, retch, or vomit, stop giving activated charcoal.
 - c. Suction airway if needed.
 - d. Periodically stir or shake solution to prevent charcoal from settling.
 - e. Record time and any effects on the patient.
 - f. Monitor patient, report and record any change in patient's condition to Medical Control, including a decrease in mental status.

Addendum #9

MAST / PASG

The use of MAST/PASG remains a highly debated issue in EMS. As medical control, we advocate the use of this device more for splinting and stabilization purposes than for the treatment of shock. When used as a splint, this skill remains off-line medical control, but on-line medical control is required when considering this garment for the treatment of shock.

Indications

- Multi-system trauma with systolic BP <90 mmHg, if no penetrating injury of chest or abdomen
- Unstable pelvic fractures
- Splinting of lower extremity fractures

Absolute contraindication

- Patients with signs/symptoms of pulmonary edema

Relative contraindications

- Signs/symptoms of CHF (Congestive Heart Failure)
- Head injury
- Impaled objects to lower extremities or abdomen
- Penetrating chest trauma or abdominal trauma
- Intrathoracic or uncontrolled bleeding above the diaphragm
- Late pregnancy (only the leg sections should be used)

Procedure

- Secure an airway and supplement with 100% oxygen
- Assess lung fields for signs of pulmonary edema
- Clothing should be removed, protecting the patient from environmental conditions
- Apply the garment
Abdominal section should be below the last rib and diaphragm
Allow access to the genital region
- **Pelvic splinting:** inflate the garment to 30 mmHg, legs first then the abdominal section
- **Anti-shock:** inflate the garment to 100 mmHg
- Reassess vital signs and lung sounds

Addendum #10

EVALUATION of BURNS

Superficial burns

- Injury to dermis only
- Red, inflamed skin, painful to touch
- Generally no pre-hospital treatment needed

Partial thickness burns

- Injury to both epidermis and dermis
- Skin presents with reddened areas, blisters, or open, weeping wounds
- Usually very painful
- Significant fluid loss occurs with subsequent shock

Full thickness burns

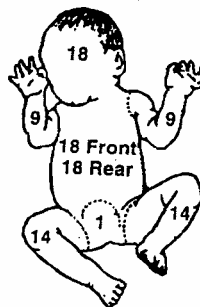
- Injury to the epidermis, dermis, and subcutaneous tissue (possibly deeper)
- May look charred or leathery
- Not painful (although associated second degree burns will cause pain)
- No capillary refill

BURN INJURY CHARTS

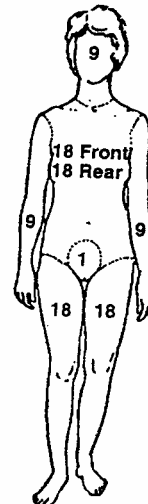
(Count only in partial thickness and full thickness burns)

The size or extent of a burn wound is expressed as a percentage of the total body surface area. It can be calculated by using the Rule of Nines.

Infants & Children <8 Years



Children ≥ 8 Years & Adults



EASTERN CONNECTICUT EMERGENCY MEDICAL SERVICES COUNCIL, INC. MEDICAL ADVISORY COMMITTEE
REGIONAL BLS GUIDELINES

Palm Rule: The size of the patient's palm = 1% TBSA

Addendum #11

PEDIATRIC VITAL SIGNS CHART

Weight and vital signs by age group

Age	Weight		Respiration	Pulse	Systolic Blood Pressure
	kg	lbs.			
Newborn	3-4	6-9	30-50	120-160	60-80
6 month –1 yr.	8-10	16-22	30-40	120-140	70-80
2-4 years	12-16	24-34	20-30	100-110	80-95
5-8 years	18-26	36-55	14-20	90-100	90-100
8-12 years	26-50	55-110	12-20	80-100	100-110
> 12 years	> 50	> 110	12-20	60-90	100-120

APGAR SCORING SYSTEM

Calculate the APGAR scores at 1 and 5 minutes of life. Determination of the APGAR scores should not delay resuscitation.

PHYSICAL SIGN	0 POINTS	1 POINT	2 POINTS
<i>HEART RATE</i>	Absent	< 100	>100
<i>RESPIRATORY EFFORT</i>	Absent	Slow, irregular (or weak cry)	Normal (or strong cry)
<i>MUSCLE TONE</i>	Limp	Some flexion	Active motion
<i>REFLEX IRRITABILITY</i>	No response	Grimace, some motion	Cough or sneeze, vigorous cry
<i>COLOR</i>	Blue, pale	Mucous membranes pink, nail beds blue	Mucous membranes and nail beds pink

Addendum #12

**COMBITUBE
REQUIRES STATE MICS APPROVAL**

The Esophageal Tracheal Combitube is an airway device designed for emergency or difficult intubation, providing sufficient ventilation whether the airway is placed into the esophagus or into the trachea.

Training Level Requirements

EMT-Basic, EMT-Intermediate, Paramedic

Authorization

Those trained and approved by the Sponsor Hospital in the use of the Combitube.
On or Off Line dependant upon medical control.

Indications

- Pulseless and apneic patient

Contraindications

- Patients under the age of 16 years
- Patients under 5' or over 6'6" in height
- Ingestion of a caustic substance
- Severe oral or facial trauma
- Esophageal disease
- Patients with a tracheostomy

Procedure

- Hyperoxygenate the patient
- Lift the mandible and tongue away from the posterior pharynx
- Place the Combitube so that it follows the natural curve of the pharynx
- Insert and advance tube gently until the printed ring is aligned with the teeth
- Do not force the tube. If the tube meets resistance, withdraw it and reinsert it
- Once properly placed inflate the #1 blue balloon with 100-140 cc of air (posterior pharyngeal balloon)
- Inflate the #2 white tube balloon with 20 cc of air (distal balloon)
- Begin ventilation through the longer, blue tube. If auscultation of lung sounds is positive and auscultation of the gastric insufflation is negative, continue ventilations
- If auscultation of lung sounds is negative and gastric insufflation is positive, immediately begin ventilations through the shorter, clear tube. Confirm tracheal ventilation by auscultation of lung sounds and absence of gastric insufflation.

Removal of the Combitube

- Reassure the patient and have suction ready
- Remove 100-140 cc of air from #1 blue tube
- Remove 20 cc of air from #2 white tube
- Gently withdraw the Combitube and suction the patient as necessary

Addendum #13

**PHARYNGO-TRACHEAL LUMEN AIRWAY (PTL)
REQUIRES STATE MICS APPROVAL**

1. FUNCTION:

The PTL is designed to function adequately in either the esophagus or the trachea, thus permitting the artificial ventilation of the lungs in a cardiac arrest patient while preventing vomiting and gastric distention.

2. INDICATIONS:

The PTL may be used if all the following conditions are present:

- a. The patient is five feet or taller.
- b. The patient is in cardiopulmonary arrest.

3. CONTRAINDICATIONS:

The PTL should not be used in any of the following situations:

- a. If spontaneous respiratory efforts are present, gag reflex.
- b. If the patient is under five feet tall.
- c. If the patient is less than 14 years of age.
- d. If known esophageal disease is present.
- e. If the patient has swallowed a known corrosive substance.
- f. Stoma

4. AUTHORIZATION:

Those trained and approved by local medical control in the use of the PTL do not require permission for its use if the patient fulfills the criteria outlined.

5. PROCEDURE FOR INTUBATION:

Once the need for the PTL has been established, it should be inserted as follows:

- a. Assemble the equipment.
 - PTL, *do not inflate cuffs, white cap open, slide clamp open*
 - Water-soluble lubricant
 - Suction equipment
 - Oxygen delivery device
 - Gloves
 - Goggles, face protection.
- b. Check all equipment.
- c. Lubricate PTL #3 long tube.
- d. Position head, hyperextend (except for trauma patient where neutral in-line position must be maintained).
- e. Open and clear the mouth of any debris, suction if necessary.
- f. Hyperventilate the patient with 100% oxygen for 15 to 30 seconds.
- g. Lift the lower jaw (mandible) and tongue away from the posterior pharynx.
- h. Gently guide the PTL along the base of the tongue and into the airway until the teeth are against the teeth strap. Secure the neck strap. Close white cap.
- i. Inflate balloon cuffs with tube #1.
- j. Attempt to ventilate the patient through the short green tube #2.
- k. Check the patient for chest rise and breath sounds. If the chest rises and breath sounds are heard, the long clear tube #3 is in the esophagus and ventilation is achieved as with an EOA. Continue ventilating through tube #2.

- l. If the chest does not rise and no breath sounds are heard, you can assume the long clear tube is in the trachea. Remove the stylet from tube #3 and ventilate the patient through this tube #3.
- m. Verify lung sounds on both sides anteriorly and both axillae. Also listen over the epigastrium.
- n. If no lung sounds are heard when ventilation either tube #2 or #3, remove PTL, hyperventilate for one minute and attempt to re-intubate. A maximum of two attempts with the PTL will be acceptable.
- o. Continuously monitor the patient and the pilot balloon. If any air leakage occurs, the balloons may need more inflation. Leaks may be identified around the mouth and nose.

6. PROCEDURE FOR DECOMPRESSING THE STOMACH:

The abdomen may be decompressed by suctioning the non-airway tube #2 or #3 with an 18 French suction catheter. If no suctioning is performed, do not remove the stylet from tube #3.

7. PROCEDURE FOR EXTUBATION:

Remember that extubation is likely to cause vomiting and regurgitation.

- a. Reassure the patient.
- b. Have suction ready and roll the patient on their side.
- c. Remove the white cap from the deflation port to simultaneously deflate both cuffs.
- d. Carefully withdraw the airway, stay alert for vomiting, suction as needed.
- e. Supplement patient with high concentration oxygen.

8. PARAMEDIC/EMERGENCY DEPARTMENT PHYSICIAN INTERVENTION:

- a. Verify chest rise and lung sounds during ventilation.
- b. If lung sounds are heard while ventilating tube #2, prepare for ETI.
- c. Check ETI equipment.
- d. Hyperventilate patient for at least 30 seconds.
- e. Slide clamp over oropharyngeal cuff inflation line.
- f. Remove white cap, deflating oropharyngeal cuff.
- g. Loosen PTL neck strap and move PTL to the left side of the patient's mouth.
- h. Insert laryngoscope into right side of the mouth and sweep the oropharyngeal cuff and the tongue to the left and attempt vocal cord visualization.
- i. Complete ETI by passing ET tube through vocal cords, inflate cuff and verify while ventilating, checking chest rise and lung sounds.
- j. Slide clamp to full open position with white cap open, remove neck strap, and remove the PTL.
- k. If ventilation is being accomplished through tube #3, verify tracheal placement by checking for chest rise and lung sounds. Direct visualization may also be considered if chest rise and lung sounds are inconclusive. If the PTL is confirmed in the tracheal position, the PTL may be left as the primary airway and may also be utilized for drug administration as outlined in the American Heart Association Cardiac Life Support Guidelines.

NOTE

- a. When you remove the airway, use special precautions to prevent regurgitation/aspiration.
- b. Do not deflate cuffs or remove the PTL Airway until:
 1. Patient has a spontaneous and effective respiration and a return of gag and swallowing reflexes.
 2. An endotracheal tube had been inserted and its cuff inflated in the trachea.
 3. The stomach has been decompressed via suction catheter.
 4. Patient has been turned on his/her side and there is an effective suction device ready in case of vomiting.