Emergency Training & Consulting
New Jersey BLS Medical Treatment Protocols

Introduction

This document is designed to assist NJ EMTs and BLS agencies in the provision of care to their patients. These are considered guidelines, and are not intended to replace good judgment by the provider. In addition, once Advanced Life Support arrives and initiates treatment, they are to be considered the higher medical authority and may deviate from these guidelines as they and their medical command dictate.

It is not the intention of these guidelines to allow a BLS agency or an EMT to act outside of its scope of practice. Directives from the New Jersey Department of Health Office of EMS may supersede these guidelines at any time.

Contents

1: Abdominal Pain

Introduction: Abdominal pain is a common complaint and may represent serious life threatening emergency.

Protocol

- Primary Assessment and Treatment
  - Be alert for and treat shock
  - Consider medications and past medical history that may alter vital signs
- Secondary Assessment
  - Visualize and Palpate Abdomen (for rigidity, rebound, tenderness)
  - Document findings
- Treatment and Transportation
  - Administer oxygen as per the Oxygen Administration Guideline
  - For patients with nausea, the EMT may have the patient inhale an alcohol pad for potential relief of the nausea. This should be self administered, and the patient should be monitored while doing so. Do not do so if the patient has abnormal vital signs or dyspnea.
- Transport in position of comfort
  - Do not administer anything by mouth (NPO)
  - Patients suspected of pregnancy (females between 15 and 55 who still have their uterus and intact fallopian tubes) or known to be pregnant beyond 20 weeks gestation should be transported to a facility capable of obstetrics, unless unstable or an imminent delivery, then the closest emergency department may be appropriate
- Specific Documentation and Assessment
  - Onset, duration, location and description of pain
  - Last food intake
  - Last menstrual period and possibility of pregnancy
  - Bowel function
  - Changes in urinary function
  - Vomiting (description)
  - Current Medications
  - Actions taken to correct problem prior to your arrival
- Indications for ALS
  - Although most abdominal pain can be safely treated and transported by BLS, the following are examples of where ALS should be requested:
    - Abnormal vital signs including SBP < 90, HR > 120
    - History of trauma with rigidity or guarding (transport to a trauma center)
    - History of aneurysm with severe abdominal or back pain
    - Possibility of early pregnancy (<12 weeks) with severe pain (Ectopic pregnancy is a true emergency)

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jan 2019

Introduction: To establish a protocol for requesting ALS if they have not been dispatched.

Protocol

- ALS should be requested for any patient with unstable vital signs.
- BLS should not wait for ALS to arrive at the scene (except for cardiac arrest – see that protocol.) If the patient is ready for transport, initiate transport and make radio contact with the inbound unit and meet line of sight if ALS is indicated.
- ALS should be dispatched to the following calls:
    - Allergic Reaction with low blood pressure or breathing difficulty
    - Altered Mental Status
    - Chest Pain/Cardiac Emergencies
    - CVA
    - Diabetic Emergencies (low blood glucose [<80] or elevated blood glucose with altered mental status or heart rate over 120
    - GI Bleeding – Vomiting or Rectal (especially if on anticoagulation or hear rate over 120)
    - Abnormal vital signs (HR >120, SBP <90)
    - Overdose
    - Psychiatric patients requiring sedation, consistent with Excited Delirium
    - Respiratory Distress
    - Seizures that are active or new onset
    - Trauma meeting trauma center protocol or unstable vital signs
    - Unconscious Person
- If ALS is not available or not called for one of these complaints, request them or document why they were not called (due to proximity to the hospital for example)
- Consider calling ALS for any patient in severe pain that may be able to be managed by ALS

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Updated: 1 Jan 2019

Introduction: This protocol will assist the provider in the use of the AED and the management of cardiac arrest, based on the latest AHA Guidelines as well as nationally accepted treatment guidelines.

Protocol

Primary Assessment and Treatment

- A report of a patient being unconscious and/or in cardiac arrest will have the AED and suction brought to the patient's side
- For suspected cardiac cause cardiac arrest:
  - Initiate continuous chest compressions at 100-120 per minute
  - Place a nasal cannula with high flow rate of oxygen (10+ L/m)
  - Place bilateral NPAs
  - Exception: pediatric, trauma, suspected respiratory cause (drowning, overdose) or suspected obstructed airway – all to be managed with traditional CPR including ventilations.
  - When a third EMS provider is available, may initiate interspersed BVM ventilations at 6-8 breaths per minute, but do not pause compressions to do so. Continue the high flow NC oxygen
- If arrest is witnessed or quality compressions are in progress, then immediately place the AED and analyze. Follow prompts.
- If arrest is not witnessed or quality compressions are not in progress, then start compressions. Perform at a rate of 100-120 per minute. Perform 200 compressions. Place pads and analyze with an AED. Placement of pads should not stop compressions.
- If a shock is advised for 2 consecutive analyses (resistant ventricular fibrillation), then change pad position for the 3 and future shocks – if Anterior-Posterior change to Base-Apex and vice versa. Ensure pads are well adhered.
- Compression fundamentals
  - Allow full relaxation of the chest.
  - CPR should be stopped for no more than 10 seconds at any time.
  - Utilize a metronome if available
  - The provider performing CPR should swap out with another provide every minute in order to maintain quality CPR. Relievers should position themselves on the opposite side to allow for an immediate switch.
- It is appropriate to initiate CPR and treat the patient on scene – it is not necessary to attempt to initiate rapid transport to the hospital unless the cardiac arrest had a traumatic cause as the efficacy of CPR is significantly decreased by patient movement. At least 15 minutes of on scene CPR is appropriate, after which determine the location of ALS. If anticipated to arrive within 5 min, await their arrival.
- Mechanical CPR Assist devices can be utilized if they are available, including but not limited to the AutoPulse or Lucus devices, however placement of these devices should not prevent good quality CPR. Studies have not definitively proven that these devices are superior to good, quality human compressions. Their most clear benefit is during movement and transport. Mechanical CPR should not be used until transport unless there is insufficient staff on scene.
- Expect transport to a PCI capable hospital if ROSC is accomplished and ALS is on scene.

Dead on Arrival

- In order for the EMTs to determine a patient is DOA and not attempt resuscitation, one or more of the following must be present
  - Valid DNR or POLST associated with cardiopulmonary arrest
  - Rigor Mortis
  - Dependent Lividity
  - Severe traumatic injuries that would preclude reasonable chance of survival
  - Traumatic cardiac arrest in an entrapped patient

LVAD Patients

- For LVAD patients in cardiac arrest (unresponsive, no respiratory effort, delayed capillary refill, no palpable pulses) then unless instructed otherwise, intimate chest compressions
- Do not use mechanical CPR

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jan 2019

Introduction: These patients may be considered to have altered mental status, and may have medical complications as well.

Protocol

Primary Assessment and Treatment

- Protect yourself and others. Only approach a patient if you have enough backup and Law Enforcement Support, and the scene is as safe as possible
- Protect the Airway
- One EMT must assume leadership role – multiple people may increase the patient's confusion and agitation

Secondary Assessment

- Consider medical causes of abnormal behavior (hypoxia, hypovolemia, hypoglycemia, head injury)
- Attempt to establish a rapport with the patient
- Speak in a calm, quiet voice – move slowly when approaching and caring for the patient

Treatment and Transport

- Request ALS if signs and symptoms of Excited Delirium are present:
  - Extreme Violent or Aggressive Behavior
  - Sweating profusely
  - Removing clothes or is naked
  - Rapid breathing, drooling
  - Incoherent shouting and yelling
- Restrain the patient only if necessary to protect the patient and others. This includes patients where there is a physician order or a patient that has been placed in protective custody by law enforcement (suicidal, psychiatric order, incompetent, lacks capacity to refuse care)
- Patients should never be placed face down in restraints. There should be no pressure on the chest wall. Best position is supine with one hand above the head and one at the side.
- Handcuffs are not to be used unless police accompany the patient in the ambulance compartment.
- Transport in a calm and quiet manner.
- Be prepared for Sudden In Custody Death Syndrome.
- Suicidal patients are not permitted to refuse – involve law enforcement.

Specific Documentation

- Any previous psychiatric history
- Possible ingestion of prescription or non-prescription drugs
- Possible underlying organic cause – brain tumor, chemotherapy, hypoglycemia, hyperglycemia
- Document reason for and type of restraint used. Monitor patient status.
- Presence or absence of trauma
- Vital signs – agitation is not an excuse to omit vital signs. Respiratory rate and pulse rate, along with palpable radial pulses indicating a SBP of > 80 can often be taken early.

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Updated: 1 Jan 2019

Protocol

Indications
- Altered mental status including unconscious patients
- Facial trauma

Manual
- If trauma suspected, perform a jaw thrust
- If trauma not suspected, perform head tilt/chin lift

Nasopharyngeal Airway (NPA)
- NPA airways should be placed in patients with an altered mental status and:
  - Jaw clenched not permitting an oral airway
  - Intact gag reflex
  - Are particularly useful in alcohol intoxication, seizures, diabetics, narcotic overdoses

Oropharyngeal Airway
- OPAs are the standard airway unless the gag reflex does not permit
- Measure form tragus of ear to the center teeth
- For adults, typically placed upside down in the mouth and rotated into place
- For pediatrics, place using tongue blade, sliding airway over tongue
- After placement, ensure air movement continues by listening to lung sounds

Obstructed Airway

Primary Assessment
- Assess ability to breath, speak or cough, assess for stridor
- If air exchange is present, do not interfere – encourage coughing
- Be alert for complete obstruction/respiratory arrest
- If no air exchange, perform Heimlich maneuvers
- If obstruction removed, check for spontaneous respirations
- Be prepared to perform CPR

Secondary Assessment
- Assess level of consciousness
- Reassess airway frequently
- Assess skin color for pallor or cyanosis
- Assess for bilateral breath sounds

Treatment and Transportation
- Supplemental ventilations with oxygen
- Maintain body temperature
- Transport immediately to the closest facility, notify the hospital

Specific documentation
- Cause and duration of obstruction
- Method used to relieve obstruction
- Treatment and response
- Changes in respiratory status and level of consciousness
- Suction should be brought to the bedside for any unconscious or altered mental status report

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jul 2013

Protocol

- Primary Assessment and Treatment
  - Assess level of consciousness
    - A: Alert
    - V: Verbally responsive
    - P: Painful stimuli responsive
    - U: Unresponsive
  - Assess Airway
    - Place NPA or OPA if tolerated (Ref. Protocol #5)
    - Suction as necessary
  - Assist Ventilations as necessary
  - Oxygen – high concentration
  - Consider the possibility of trauma and immobilize spine if indicated
- Secondary Assessment
  - Observe for rash, or other lesions
  - Observe for tubes and other adjuncts
  - Look for Medic Alert necklace or bracelet
- Treatment and Transport
  - Request ALS
  - Transport immediately, if indicated for trauma
  - Maintain an open airway
  - Maintain body temperature
  - Consider insulin shock, if conscious and able to maintain airway, administer oral sugar
- Specific Documentation
  - Time and onset
  - Precipitating cause if known
  - Current Medications
  - Level of consciousness prior to and after treatment
- Additional
  - Consider causes
    - Narcotic overdose if small pupils, decreased respiratory rate
    - Other drug ingestion
    - Low blood sugar if history of diabetes or access to DM medications
    - Stroke if headache, vomiting
    - Head injury if signs of trauma
    - Carbon Monoxide
    - Seizure
    - Sepsis if febrile

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Updated: 1 Jul 2013

Perform the following:

- Conduct scene size-up, primary assessment & immediate life-saving interventions
- Promptly administer oxygen by NRBM at 10-15 liters/minute or by NC at 6 liters/minute, if a NRB is not tolerated. If available, monitor SpO2
- Request ALS considering their availability & hospital proximity. Minimize on scene time.
- Obtain baseline vital signs, SAMPLE history & conduct a secondary assessment attentive to cardiopulmonary deterioration.
- If available, consider epinephrine therapy for patients with suspected life-threatening anaphylaxis (allergic reaction with a compromised airway, breathing or circulatory performance).
    - Airway swelling or compromise
    - Respiratory distress or arrest
    - Shock (Ex. No radial pulse, Systolic BP <90, tachycardia)
- Prompt transport is important – DO NOT delay transport to administer this treatment.

Side effects:

Anxiety	Headache	Nausea	Hypertension	Vomiting
Nervousness	Tremors	Chest Pain	Cardiac arrhythmias	

Contraindications:

- No contraindications when used in life threatening anaphylaxis
- Medication is discolored, cloudy, precipitated or expired
- Use cautiously (relative contraindication) in the setting of coronary disease or ischemia when jeopardy to airway, breathing or circulation is unclear

Administration

- Administer the auto-injector to the lateral thigh according to the manufacturer's recommendations
- Assure the receiving hospital is notified
- Properly dispose of auto-injector in a sharps container
- Utilize the patient's auto-injector if available
- Note dose, time of administration and patient response & communicate this to ALS and receiving hospital staff
- Notify OEMS within 72 hours
- Provide OEMS with a copy of the patient care report with final emergency department diagnosis and disposition within 45 days

Dosages:

- Adult dosage – 0.3mg (for patients over 30kg – 66 lbs)
- Pediatric dosage – 0.15mg (for children under 30kg – 66 lbs)

Note that this dosing is different from the NJ OEMS Guidelines (Adult dosage for 4 years and older), however it is consistent with the manufacturers and FDA recommendations.

REMEMBER: WHEN QUESTIONS OR CONCERNS ARISE – CONTACT MEDICAL CONTROL:
Dr. Lavelle @ 215-776-0584

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Sep 2015

Protocol:

Bleeding Control

- Follow universal precautions
- Primary Assessment
  - Control profuse bleeding
    - Apply direct pressure
    - Elevate extremity
    - If available and necessary, place tourniquet to extremity with uncontrolled bleeding or for the need for the provider to perform other interventions
      - Commercial device with a windlass is preferred (CAT or SOFT-T)
      - Place as proximally on the extremity as possible to ensure all wounds are controlled.
      - Reassess the TQ regularly during transport.
      - If bleeding continues a second TQ can be placed proximal to the first.
    - Hemostatic Agents
      - Can be utilized if available and necessary for bleeding control
      - Wipe off excess blood from wound but do not remove any clot
      - CoTCCC preferred agents:
        - Combat Gauze (CG) Z-fold
        - Celox Gauze Z-fold 5'
        - ChitoGauze
      - Press agent into wound (packing)
      - Hold pressure for 3 minutes, secure in place
  - Be alert for and treat shock
  - Apply high concentration oxygen if significant blood loss, altered mental status, signs of major trauma
- Secondary Assessment
  - Perform full assessment to identify other injuries
- Treatment and Transport
  - Continue bleeding control techniques
  - Transport to trauma center if a traumatic cause
- Specific Documentation
  - Wound size and characteristics
  - Approximate blood loss
  - Control techniques including time of tourniquet placement

Amputations

- Primary Assessment
  - Control external bleeding, including using a tourniquet as above
  - Assess for and treat shock
  - Administer high flow oxygen if significant blood loss or respiratory distress
- Secondary Assessment
  - Assess for other injuries
- Treatment and Transportation
  - Elevate stump if possible
  - Gently rinse stump with saline
  - Apply dry dressing to the stump
  - Care for amputated part
    - Wrap part in gauze moistened with sterile saline
    - Place part in sterile bag, label if possible
    - Place bag in ice
  - Transport to trauma center with pre-notification

    - If part cannot be located, initiate transport and have other EMS units attempt to locate and transport part when found
- Specific Documentation
    - Time and cause of amputation
    - Approximate blood loss
    - Care given to amputated part

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Nov 2017

Ensure own safety with appropriate personal protective equipment.
Be sure that patient is disconnected from electricity.

- Primary Assessment and Treatment
  - Always suspect spinal injury in electrical burns or explosive events – immobilize the spine
  - Stop the burning process with cool water
  - Prevent hypothermia – cover burns and cover patient
  - Be alert for and treat
    - Airway compromise and respiratory distress – administer high concentration oxygen
    - Shock
    - Traumatic injury
- Secondary Assessment
  - Continue to monitor airway for progressive problems
  - Expect respiratory distress with burns of the face, head, neck or chest
  - Perform total assessment to identify all injuries, en route if necessary
  - Estimate depth and % of body surfaces burned
  - Electrical burns – assess for entrance and exit wounds
- Treatment and Transportation
  - If traumatic injury is present, it is the priority – transport to a trauma center or a combined trauma/burn center
  - Remove jewelry, diaper (if present in infant) and clothing the is not adhered to the burn area
  - Clean dressings: <20% TBSA - moist dressings are acceptable if necessary to control pain, >20% TBSA – dry dressings are indicated
  - Treat other injuries
  - Do not break blisters
  - Maintain body temperature
  - Chemical on skin
    - Considered a HazMat incident – notify appropriate resources
    - If dry powder, remove clothing and brush chemical off
    - Flush skin for up to 20 minutes unless contraindicated
    - Monitor for hypothermia
  - Chemical in eye
    - Flush eye with sterile saline or water for 20 minutes
- Specific Documentation
  - Mechanism of injury
  - Length of exposure
  - Information on contaminant
  - Specific areas of contamination
  - Treatment and response
  - Depth and percentage of burns
  - Location and description of all injuries
- American Burn Association – Burn Center Referral Criteria
  - These patients should be considered for referral to a burn center unless trauma is present. When no burn center is within 30 minutes of the call location, transport to a local hospital or a trauma center is acceptable.
    - Partial Thickness burns of greater than 10% of the total body surface area
    - Burns that involve the face, hands, feet, genitalia, perineum or major joints
    - Third degree burns
    - Electrical burns, including lightening injury
    - Chemical or inhalation burns

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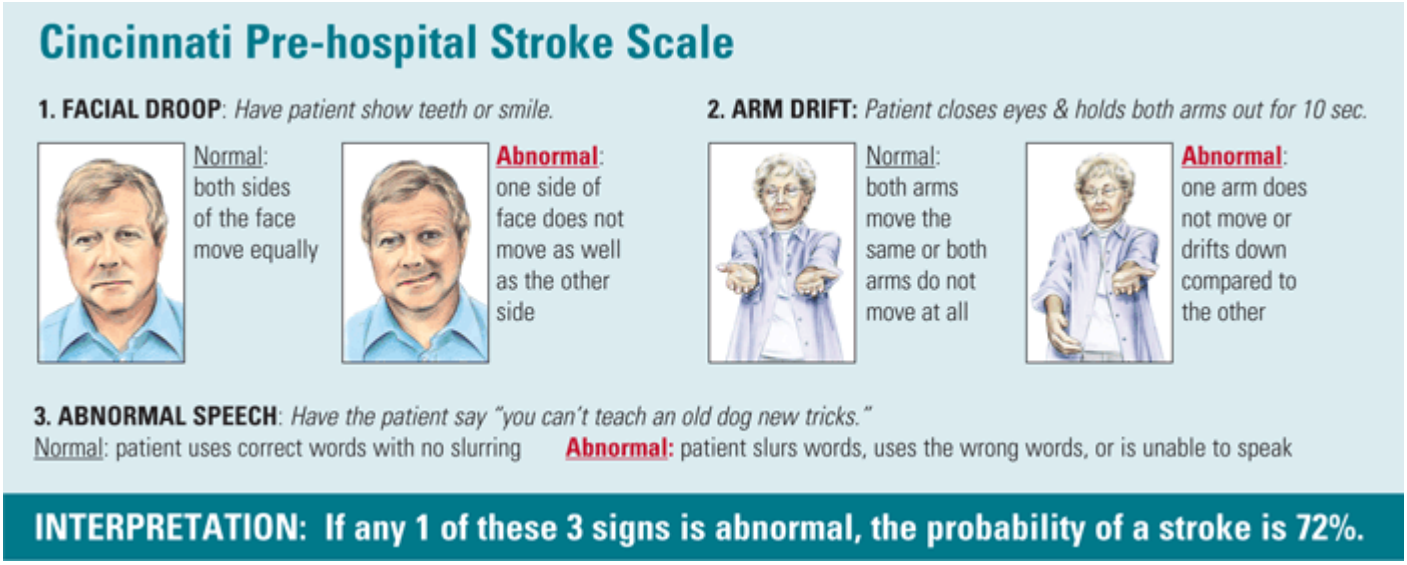
Updated: 1 Jul 2013

Introduction: Strokes are considered true emergencies as there may be treatment options available if the patient arrives at the hospital in time.

Protocol

- Request ALS if not already dispatched
- Primary Assessment
  - Protect airway, suction as needed, be prepared to ventilate the patient
  - Administer high flow oxygen if altered mental status, low pulse oximetry or shortness of breath. (As per American Stroke Association guidelines, omit oxygen none of these conditions are present.)
  - Measure blood pressure accurately
- Secondary Assessment
  - Neurological assessment – distal motor strength in all extremities
  - Check pupils, hand strength and the ability to move extremities
  - Perform Cincinnati Stroke Scale and Glasgow Coma Scale
  - Determine if patient has history of diabetes
- Treatment and Transport
  - Determine exact time of onset of symptoms if possible. Onset of less than 4.5 hours may permit advanced treatment.
  - Rapid transport to closest stroke center. (Primary or Comprehensive) (Do not await ALS, but attempt to rendezvous line of sight)
    - If closest hospital's CT scanner is out of service, then it is appropriate to bypass that facility and transport to the next hospital
    - ALS may indicate transport to a comprehensive stroke center or thrombectomy capable center. BLS should follow this request as a medical command order.
- Specific Documentation
  - History of condition & Time of Onset
  - AVPU
  - Pupil Reaction
  - Weakness, facial droop, slurred speech, paralysis or urinary incontinence
  - Changes in responses
  - Glasgow Coma Score and Cincinnati Stroke Scale



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Perform the following:

- Conduct scene size up, primary assessment & immediate life-saving interventions. Have an AED nearby and ready.
- Administer oxygen per the Oxygen Administration Protocol.
- Avoid exerting the patient (ie. If possible, patient should be carried) and place in a position of comfort unless necessitated by other factors
- Request ALS considering their availability & hospital proximity. Consider transport to a receiving facility with emergency cardiac catheterization (PCI) capability. Minimize on scene time.
    - Do not recall ALS in a patient over 35 y/o with chest pain unless a cardiac cause can essentially be ruled out. Many patients have atypical chest pain (reproducible, right side, comes and goes) but still have a cardiac cause. Normal vital signs can be present in a myocardial infarction.
- Obtain baseline vital signs, SAMPLE history & conduct a secondary assessment attentive to contraindications to fibrinolytic therapy (recent bleeding, surgery, etc.) and cardiac compromise

NITROGLYCERIN Administration

Indications:

- Patient currently experiencing chest discomfort of suspected cardiac cause
- Age 18 years and older
- Most be prescribed for and supplied by the patient

Adverse Effects

Headache Bradycardia Flushing Cardiovascular collapse Hypotension
Lightheadedness Methemoglobinemia

Administration

- Assist with one tablet or spray under the tongue
- Reassess chest discomfort using 1-10 pain scale and vital signs after 1-2 minutes
- Repeat one dose of NTG every 5 minutes until a maximum of three has been administered for any one episode
- Note dose, time of administration, patient response & communicate this to ALS and receiving facility staff

Contraindications:

- 3 doses of NTG within a 15 minute period prior to or during episode
- Systolic BP <100
- Recent head injry
- Phosphodiesterase (PDE) inhibitor (erectile dysfunction drugs such as Viagra & Cialis) use within 72 hours
- NTG has expired

REMEMBER: WHEN QUESTIONS OR CONCERNS ARISE – CONTACT MEDICAL CONTROL

ASPIRIN Administration

Indications

- Patient currently experiencing chest discomfort of suspected cardiac cause
- Patient is 19 years or older
- Supplied by patient or EMS

Contraindications

- Known hypersensitivity or allergy to ASA
- 325mg of ASA taken in the past 24 hours
- Bleeding or active bleeding disorder
- Pregnancy
- Suspicion of thoracic or abdominal aortic aneurysm
- ASA is expired

Adverse Effects

Anaphylaxis Angioedema Nausea Vomiting Bleeding Stomach irritation

Administration

- Administer non-enteric coated tablets/powder to a cumulative dose of 324 mg (using 81 or 162mg tablets) or 325 mg (using regular adult tablets) in the past 24 hours
- Have the patient thoroughly chew then swallow the ASA tablet(s), even if the tablet is not a chewable ASA. A small sip of water may be given if the patient cannot chew well (e.g., dentures are not in)
- Minimize interrupting mask oxygen
- Note dose, time of administration and patient response & communicate this to ALS and receiving facility staff

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Updated: 1 Sep 2015

Protocol

GENERAL

- Primary Assessment and Treatment
  - Assess for presence of Labor
  - Be alert for, and treat, shock
- Secondary Assessment
  - Assess for presence of vaginal bleeding
  - Determine onset and duration of contractions
  - Determine due date and number of babies (call for additional resources if multiple babies are present)
  - Determine is water has broken and describe color of fluid
  - Visualize perineum and prepare for birth if:
    - Bulging or crowning
    - Urge to push, bear down or move bowels
    - If cord, limb or severe bleeding is apparent, see ABNORMAL DELIVERY below
  - Do not permit mother to go to the restroom
- Treatment and Transportation
  - Reassure mother
  - If no signs of impending birth, consider routine transport
  - Transport patient to a hospital capable of obstetrics, unless the patient is unstable or imminent delivery.
  - If supine, tilt patient to one side to alleviate pressure on blood vessels in the abdomen

NORMAL DELIVERY

- If cord is around the baby's neck, gently loosen and slip over the head before rest of body is delivered
- As soon as the head has been delivered, suction the mouth and nose with a bulb syringe
- Once delivered, dry baby and keep the baby warm
- Double Clamp and cut cord 8 inches from the baby
- Assess respiratory status, pulse and APGAR Score:

SIGN	0	1	2
Appearance	Blue/Pale	Mix Blue/Pink	All Pink
Pulse	Absent	<100	>100
Grimace	No Response	Grimace	Cough/Sneeze/Cry
Activity	Limp	Extremity Flexion	Active
Respiratory	Absent	Slow/Irregular	Good/Crying

- Be prepared to resuscitate baby:
  - If HR < 60 perform CPR
  - If HR < 100 provide oxygen and/or BVM
- Place baby on mother's abdomen
- Assess mother and treat for shock if necessary
- Transport immediately, do not wait for delivery of placenta
- Transport to a facility with obstetric capability

continued

ABNORMAL DELIVERY

- Spontaneous Abortion
  - Birth of fetus prior to term delivery
  - Bring fetus and tissue to hospital
  - Initiate CPR and resuscitation if greater than 24 week gestation or signs of life
- Breech Birth
  - Transport immediately to a hospital with obstetric capability
  - Notify destination facility of situation
  - Administer High flow Oxygen to the mother
- Prolapsed Umbilical Cord
  - Place mother in knee chest position – on her knees with chest on the stretcher, or alternatively, in high Trendelenburg position with hips elevated
  - Administer oxygen to mother
  - Insert gloved hand into the vagina and place gentle pressure on the baby's head to relieve pressure on the cord
  - Transport immediately to a hospital with obstetric capability
- Heavy Vaginal Bleeding before delivery
  - Assess and treat shock
  - Administer oxygen
  - Place mother on left side to avoid compression of the inferior vena cava
- Heavy Vaginal Bleeding after delivery
  - Firmly massage lower abdomen until uterus becomes hard
  - Encourage mother to breast feed baby
  - Monitor and treat for shock
  - Administer oxygen
  - Transport immediately to a hospital with obstetric capability
- PreEclampsia/Eclampsia
  - Monitor for and treat seizures
  - Transport quietly

DOCUMENTATION

- Number of pregnancies and number of births
- Length of previous labors
- Due date
- Time water broke and description of fluid
- Date and time of delivery
- APGAR scores at 1 minute and 5 minutes, and every 5 minutes if less than 8
- Separate chart for each baby

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Sep 2015

Introduction: To establish a protocol for the appropriate transport destination of patient

Protocol

- Patients should be transported to the most appropriate medical facility
- This may include
    - Trauma center
    - Facility with the ability to perform psychiatric monitoring
    - Facility with obstetric capability
    - Facility with appropriate medical testing ability such as CT scans
    - Facility with advanced medical staff such as surgical specialists
    - Facility where the patient has been previously treated and there is significant medical records at that facility
- Provider will use discretion in determining the bypass of one facility to transport to another, but it is reasonable and appropriate to do so, within reason
- Satellite Emergency Departments are appropriate for:
    - BLS type complaints who are unlikely to be admitted
    - Patients that are not acutely intoxicated
    - Patients that are not violent
    - Patients that are unstable with no ALS available, where it is believed that the staff of the SED can assist in life saving procedures.
- Diversion
    - Diversion is a request by the hospital to transport elsewhere because they feel they cannot treat the patient effectively based on volume or other circumstances
    - EMS should honor the diversion unless:
        - Diversion is cancelled by a regional medical authority
        - ALS is not available and the patient is unstable
        - The patient refuses to go to another hospital (ensure that the risks are explained to the patient and document this in the chart)
        - The EMS provider believes that bypassing the closest hospital would place the patient at greater risk
        - Online Medical Command orders destination to be the diverting hospital

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Aug 2017

Do not allow insulin to be administered by family or bystanders.

Protocol

- Primary Assessment and Treatment
  - Assess level of consciousness
  - Assess airway and suction as necessary and follow the Airway Protocol
  - Neurological assessment (AVPU)
  - Administer oxygen if unconscious or altered mental status
- Secondary Assessment
  - Assess breath for fruity odor
  - Skin color and temperature
  - Pupil reaction
  - Determine GCS
  - If the family has a glucometer and wishes to use it to test the patient's sugar, that is acceptable as long as it does not delay transport significantly
  - If the family has a Glucagon injection prescribed for the patient and the patient is believed to be hypoglycemic, the family may administer the injection if they desire to do so
- Treatment and Transport
  - If unconscious, allow nothing by mouth
  - If conscious with intact gag reflex, administer substance high in sugar
  - Maintain body temperature
- Specific Documentation
  - Type, dose and time of hypoglycemic medications
  - Time and amount of food eaten
  - Recent or current illness
  - Heavy exercise or high stress
  - Possible pregnancy
- Additional
  - Consider other causes of altered mental status
  - Assess for trauma
  - If violent, retreat and request backup from police
  - If patient has had sugar increased by BLS, ALS or family, follow guidelines for obtaining refusal of care. Use caution in accepting a refusal from a patient who is on oral medications only as these medications often last longer than the food ingested. Consider assisting with oral intake.

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jul 2013

Reference: New Jersey Do Not Resuscitate (DNR) Orders Outside of the Hospital, developed by Medical Society of New Jersey. Available at www.msnj.org/Resources/Reports/DNRGuidelines.pdf

Introduction: This Protocol is to assist the BLS provider in managing a patient when presented with a DNAR order, or when advised by the family or caregivers that a DNAR order exists but is not immediately available. The term DNAR is more commonly used in the healthcare system (rather than DNR) as it demonstrates that resuscitation is attempted, but not guaranteed during a cardiac arrest.

Protocol

- A DNAR order is written by a physician, or in some cases, by an APN (Advanced Practice Nurse) or PA (Physician Assistant). A Living Will, Advanced Directive or a Health Care Proxy is not a DNAR and are not utilized in the prehospital environment.
- The valid Out-of-Hospital DNAR order shall be honored by EMS if:
    - The valid OOH DNAR order form is available to the EMS Personnel or prominently displayed on a headboard, bedside stand, bedroom door or refrigerator, or the patient is wearing an appropriately recognized DNAR bracelet.
    - EMS Personnel shall honor a revocation of the DNAR order by the patient, surrogate or physician
- Relation to other care: EMS Personnel should provide all appropriate treatment to the patient except CPR and resuscitative efforts (BVM ventilation)
- If the patient is in cardiac and/or respiratory arrest with a valid OOH DNAR order, EMS personnel should:
    - Assess the patient for the absence of breathing and/or heartbeat
    - Confirm that the order is for the patient being assessed
    - Evaluate for exceptions as listed below
    - If MICU is not on scene, follow local protocol for obtaining a pronouncement. MICU should not be permitted to continue to the scene in emergency mode if the DNAR is being honored
- If the patient is not in cardiac and/or respiratory arrest, EMS personnel should:
    - Assess the patient and provide all appropriate treatment
    - Provide transportation to the hospital if appropriate
    - Bring a copy of the valid OOH DNAR with the patient and provide it to the destination facility
    - Honor the valid OOH DNAR if cardiac and/or respiratory arrest occurs during transport
- If a patient is reported to have a OOH DNAR, but it is not available to the EMS personnel:
    - Assess the patient to determine the presence of cardiac and/or respiratory arrest. If not in arrest, continue all normal treatment and transport
    - If the patient is in cardiac arrest, assess for obvious signs of death in which resuscitation efforts would not be initiated regardless of the DNAR. If present, do not initiate resuscitation. These include:
        - Rigidity
        - Dependent lividity
        - Obvious traumatic death such as decapitation
        - Signs of tissue breakdown and decomposition
    - If obvious signs of death are not present, then CPR should be initiated until the DNAR can be provided. Transport should be done as normal.
- A valid OOH DNAR does not necessarily need to be on the MSNJ (Medical Society of NJ) paperwork. In some cases at SNF (skilled nursing facilities) the order may be entered on the medical orders section of the patient's chart. EMS personnel must assess the order to determine validity. Photocopies are acceptable, as are DNARs from other states as long as the key information is provided on the DNAR.
- A DNAR may be honored even if first responders have initiated resuscitation. EMS personnel should assess the patient and evaluate the DNAR and terminate resuscitative efforts if appropriate to do so.
- Exceptions
    - EMS personnel may consider not honoring the DNAR in the following circumstances:
        - Family disagreement on scene with potential hostility towards EMS. Although family who are not the patient's surrogate (documentation of this status should be on the DNAR) normally cannot revoke a DNAR, it is not reasonable to place the EMS provider in a position where they are threatened by the family. Transport to allow the ED to assist in the situation.

        - Public location. In the event that the cardiac arrest occurs in a public location, it may not be reasonable to honor the DNAR and leave the patient in the location. Initiate transport to the hospital in non-emergency mode and upon arrival at the facility, advise the emergency department of the situation and follow their directions.
        - Accidental overdose. Many patients with a DNAR are on medication that can suppress respiration. In the event that the patient has a pulse but has respiratory suppression from a narcotic that can be easily reversed, the EMS personnel may consider BVM assist and transport/awaiting MICU arrival to further evaluate the situation. An accidental overdose may rob the patient of what time they have left.
- Once the decision has been made to terminate or not initiate resuscitation, the EMS provider should notify the family. Although other emergency calls may take precedence, providers should assist the family in any way possible during this difficult time.
- Documentation of the call should include a copy of the DNAR (if possible) and a full description of the patient assessment and circumstances involving the honoring of the DNAR.
- It is not appropriate for MICU to not treat a patient with a DNAR if that treatment is indicated.
- EMS Personnel may contact the Medical Director, or local medical command hospital for assistance if needed.

POLST Form

In February 2013, a new POLST form was released by the New Jersey Hospital Association. This form is different from the DNAR in that it can contain a variety of orders (not just related to resuscitation) and also that it is backed by New Jersey law. Healthcare providers are required to follow the orders in the POLST. It is intended to eventually replace the OOH DNAR.

- Out of Hospital DNR and DNAR forms still remain valid, and should be honored
- The POLST is signed by a physician or nurse practitioner as well as the patient/surrogate
- Photocopies are acceptable
- The general concepts in the DNAR section above can also apply to POLST forms.

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jul 2013

Purpose

- A patient run report is a complete and concise record of what happened to the patient. It should provide the emergency department with a thorough history of the illness or incident, the chief complaint, care provided, and improvement or deterioration in condition upon arrival at the emergency department. In addition, the patient run report is a legal record that supports your actions and judgment.

Procedure

- Complete a patient run report on each patient
- The patient run report must be completed within 24 hours, preferably before the end of the crew member's shift. This includes being signed and locked.
- Utilize E-PCR (electronic patient care report) as required by state law.
- Documentation – the patient run report should contain the following:
    - General patient information
    - Location of the incident
    - Status and position of patient upon your arrival
    - Chief complaint, history of illness or incident, mechanism of injury and description of scene
    - Other people or agencies who provided care or information at the scene
    - Head to toe assessment findings
    - Complete vital signs
    - Changes in patient status
    - What was done prior to your arrival and by whom
    - Time log
    - Times and details of care you provided and patient's response to treatment
    - Specific documentation items listed at the end of each protocol
    - Crew members providing care
    - Justification of lights and siren, if utilized
    - Utilize drop down boxes for medications, procedures and other activities.

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jan 2019

Purpose

- To establish a procedure for EMS Rehab at a fire scene, technical rescue event or other similar activity

Procedure

- Rehab is to be established at the request of the incident commander
- It generally requires at least 4 personnel to establish the rehab sector
- These individuals should not be allocated to transport civilians or firefighters from the scene – another ambulance should be requested.
- Protocols for return to work criteria should be established in advance. In the absence of any local criteria, those listed below should be utilized
- Specific Procedure
    - Upon entry to the rehab sector, the following is to be assessed:
        - Presence of chest pain, dizziness, shortness of breath, weakness, nausea or headache
        - General complaints such as cramps or aches and pains
        - Symptoms of heat or cold related stress
        - Changes in gait, speeches or behavior
        - Alertness and orientation to person, place and time
    - Vital Signs
        - Pulse rate
        - Respirations
        - Blood pressure
        - Pulse oximetry (if available)
        - Carbon monoxide assessment (if available)
    - Vital signs should be assessed on presentation and every 10 minutes until released
    - In order to be released the firefighter should be
        - Complaint free
        - Have completed at least 10 minutes of rest and recovery
        - Have a heart rate less than 100 (Or significant decrease from the entry value)
        - Have a blood pressure less than 180/100
        - Have a respiratory rate less than 24
- If a firefighter refuses to follow the direction of EMS
    - Notify the Safety Officer
    - Notify the Incident Commander
    - Document the situation
- If a firefighter needs to be transported
    - Follow local protocol
    - Notify the Safety Officer
    - Notify the Incident Commander
    - Notify the firefighter's company commander
- Keep a record of all those who undergo rehab and their vitals

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Updated: 1 Jul 2013

Cold Emergencies

- Primary Assessment
  - Handle all hypothermic patients carefully – rough handling may precipitate cardiac arrest
  - Take vital signs for at least 1 minute to be sure not to miss a very slow heart rate or respiratory rate
  - Administer warmed oxygen if possible
- Secondary Assessment
  - Identify mechanism of injury
  - Assess for other injuries
- Treatment and Transportation
  - Place in warm environment as soon as possible
  - Remove wet clothing gently. Wrap patient in dry blankets.
  - Protect from pressure, trauma and friction
  - Do not rub injured areas. Do not break blisters.
  - Apply warm packs wrapped in towels to groin, lateral chest and neck. Warm the vehicle.
- Specific Documentation
  - Duration of exposure and precipitating events
  - Changes in mental status
  - Treatment rendered
  - Injuries, signs and symptoms and parts affected by frostbite

Heat Emergencies

- Primary Assessment
  - Remove patient from the heat source
  - Loosen restricting clothing
  - Assess airway
  - Administer oxygen if altered mental status
  - Be alert for and treat shock
- Secondary Assessment
  - Perform neurological assessment (AVPU)
  - Be alert for seizures
- Treatment and transport
  - Administer nothing by mouth if altered mental status
  - Begin cooling if altered mental status (heat stroke)
  - Ice packs to groin, under arm
  - Wet down with water and fan
- Specific Documentation
  - Heat source
  - Treatment and response

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Updated: 1 Jul 2013

Protocol

- Primary Assessment and Treatment
  - Assess for other life threatening injuries
  - In the event of an isolated eye chemical exposure, initiate irrigation for at least 20 minutes. A Morgan eye lens can be utilized if available. Utilize saline or sterile water if available.
  - Perform visual acuity as soon as possible, and document the results. If an eye chart is not available, use any writing/print/count fingers/light perception status
  - Perform an examination of the eye and related structures
  - If no signs of globe rupture or impaled object, assess extra ocular muscles and pupillary function
- Secondary Assessment
  - In the event of an impaled object, do not remove the object. Stabilize the object with a cup or similar device and patch the other eye as well
  - For significant eye trauma, patch both eyes
- Transport
  - Transport to a trauma center if immediate eye care is needed

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Protocol

- General Approach
  - Crews should establish a routine that will permit an orderly assessment and rapid history taking
  - Both crew members are responsible for the care of the patient regardless of who writes the chart
  - Vital signs should be obtained within the first 10 minutes of patient contact or there should be documentation as to why this was not possible. Vital signs include a respiratory rate, pulse rate and blood pressure. If the agency has pulse oximetry capability, and the patient has a respiratory complaint, then this should be obtained as well
  - Assessment should include both pertinent positives and negatives and these should be documented as well
  - Patients in the care of ALS should still have vitals and other care documented in the chart, even if these vitals were obtained by the ALS provider
  - Trauma patients should have transport initiated within 10 minutes
  - Any care that deviates from protocols or accepted norms should have documentation as to why this was necessary

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Protocol

- When approaching the scene of an accident involving any hazardous substance:
  - Approach from an upwind and uphill direction if possible
  - Move bystanders and keep them away from incident scene
  - Do not walk into or touch any spilled material
  - Avoid inhaling fumes, smoke and vapors, even if no hazardous materials are suspected
  - Do not assume gases or vapors are harmless
  - Minimize contact with a contaminated patient
  - Do not remove contaminated patients from the scene – decontaminate
- Patient Care
  - Determine Substance and obtain MSDS and other paperwork
  - Take care not to contaminate crew, ambulance or other individuals
  - Patients can initiate self decon as soon as possible
    - Decon is generally not necessary for a strict gas exposure such as carbon monoxide
    - Removal of clothing can remove more than 70% of hazardous substances from a victim
  - Notify hospital of substance
  - Follow other protocols as indicated
- Documentation
  - Hazardous material decontamination procedures employed
  - Length and route of exposure

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Reference: Referenced from the NJ OEMS website

Protocol

Making an Informed Decision

When a patient is seriously injured, EMS personnel need to decide whether transportation by ambulance or helicopter will get the patient to the trauma center sooner. There are several considerations in making this decision:

- Ground travel time to the nearest trauma center (e.g., distance, traffic congestion)
- The helicopter's estimated time of arrival (ETA), the transfer time, and flight time to the trauma center
- Whether multiple patients are involved

Guidelines

Generally, the factors which should be taken into account are:

- Ground transport should be used for an un-entrapped patient who is within 30 minutes ground travel time from a trauma center.
- Entrapped patients are an exception to the 30-minute rule, if the helicopter can reach the scene while the patient is being rescued or extricated.
- The helicopter should generally be called to a scene which is more than 30 minutes by ground from a trauma center.
- Keep in mind that, while a helicopter is fast once in the air, getting to the landing zone and loading the patient can easily add 5 to 10 minutes, or more, to on scene time.
- Consider requesting a helicopter for incidents involving more than three critical patients. Additional manpower, communication with medical control, and transport options can be obtained by using the air medical helicopter system.
- Consider patient condition – isolated injuries unlikely to worse can often be transported by ground at less risk to the patient
- Stable vital signs in a patient awake and alert usually indicate the patient can be transported by ground
- If a helicopter has been requested by a first responder, and BLS finds that there is no indication for the helicopter, BLS should cancel the helicopter, with consultation with responding ALS
- Providers should understand that there is a significant increase in risk of flight over ground transport
- The vast majority of patients transported to a trauma center never have an operation and spend hours in the emergency department receiving CT scans and other testing. With this in mind, saving 10 minutes by air is not often indicated.
- In general, the only patients that are truly time sensitive and need to get to the trauma center immediately have:
    - Penetrating trauma to the torso
    - Unstable vital signs
    - Unconscious/Unresponsive
- Follow CDC Field Trauma Triage Guidelines

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Updated: 1 Jan 2019

Protocol

- Impaled objects should be immobilized in place and not removed unless they are interfering with critical patient care (CPR, Bleeding control)
- If the object is large then it may need to be cut prior to initiating transport
- If the object cannot be cut, consider calling for a physician to respond to the scene prior to its removal
- Conducted Electric Weapons
    - It is recognized that many entities consider CEW barbs impaled objects. However it is recognized that these barbs are removed by law enforcement officers routinely both in training and intentional use; and that other 'impaled objects' such as an IV placed by a paramedic in a diabetic patient are routinely removed by the paramedic if the patients refuses transport.
    - There is nothing in the National EMS Scope of Practice Model, National EMS Core Content or National EMS Education Standards prohibiting the removal of an impaled object.
    - Thus, ETC agencies are permitted to remove CEW barbs (but are not required to) under the following protocol
        - Barbs should not be removed if in or near the eye, neck, breast or groin, or embedded in bone or the spine
        - Full patient assessment should be done, treat other conditions
        - Cut wires if still attached
        - Expose the area where barbs are attached
        - With the non-dominant hand stabilize the skin around the barb
        - With the dominant hand grasp the barb at the base and pull quickly to remove it
        - Place barb in a sharps box or the CEW cartridge
        - Control bleeding and dress wounds
        - If there is any difficulty or concern then abort the attempt and transport to the hospital

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Nov 2014

- Purpose
  - To prevent transmission of all blood borne pathogens
- Procedure
  - Universal precautions consist of
    - Gloves if contact with blood/body fluids may occur. Replace gloves when soiled. Do not wear gloves when driving.
    - Gown, impervious to fluids if soiling of clothing with blood/body fluids may occur
    - Mask, if patient has a potential respiratory infection or if blood/body fluids may be aerosolized
    - Goggles, if blood/body fluids may be splattered
    - Handwashing before and after contact with all patients
    - Avoid mouth to mouth resuscitation – use adjunctive aids
  - Contaminated articles must be properly bagged for disinfecting or disposal
  - Sharp items must be disposed of in a puncture proof container
  - Blood spills must be cleaned with 1 part bleach to 10 parts water
  - Wounds from needle sticks or blood/body fluid exposure must be cleaned immediately and immediate medical attention must be sought.
- Documentation
  - Any needle stick or blood/body fluid exposure must be documented on an incident report and include the patient's name, date of call and hospital patient transported to
  - Notify Supervisor and/or department Designated Officer immediately upon exposure
- Special Circumstances
  - If an individual has a potential exposure to a serious communicable disease, has minimal to no symptoms but requires evaluation at a hospital or other location, then it is permissible to have this individual transported in an alternative vehicle with the goal of preventing contamination of an ambulance. This can only be done if doing so would not be expected to adversely affect patient outcome. Medical Command contact and approval is recommended.
  - If at the direction of a public health official, an alternative destination is required (regional treatment and testing heath care facility for example) then it is permissible for an agency to bypass a local hospital in favor of the regional facility. This should only be done if the patient is stable and doing so would not be expected to adversely affect patient outcome.

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Updated: 1 Nov 2014

Reference: OEMS memo, August 12, 2004.

Protocol

- The MARK-1 kit may be used by an EMS first responders, Emergency Medical Technician Basic (EMT-B) and Emergency Medical Technician Paramedics certified through the New Jersey Department of Health and Senior Services, or recognized and functioning with a New Jersey EMS agency;
- The Mark-1 kit may not be used on civilian and/or other victims;
- The MARK-1 kit will be issued only in deployment to credible threats and/or actual nerve agent use. The kits will be issued and carried during a period of orange or red threat level.
- The determination of an actual event or credible threat will be made by the Commissioner of Health and Senior Services or their designee.
- The MARK-1 kits will be issued to the EMS individual only for their tour of duty.
- At the conclusion of the shift, the kits are to be turned in to the appropriate EMS representative or secured under lock and key if they are not going to be redeployed.
- No EMS personnel will take possession of any MARK-1 without proper authorization of agency management The kits should never be removed from the agency nor shall they be acquired for personal use outside of the agency;
- EMS personnel are responsible to maintain possession and integrity of the issued kits;
- The MARK-1 kits are for on-duty staff acting in an official EMS capacity;
- All EMS personnel shall complete training on self-injecting devices prior to them being issued the MARK-1;
- All EMS personnel that are supplied with MARK-1 kit during their tour of duty will be given a refresher in-service prior to issuance;
- The issuing agency will maintain these kits and up to date training records. The kits shall remain securely sealed and verification of medication must be completed every shift.
- The Department of Health and Senior Services retains the right to audit training and maintenance records of the Mark I kits as deemed necessary by OEMS Staff

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jul 2013

- Purpose
  - To identify the appropriate use of the MAST (Medical Anti-Shock Trousers)
- Reference
  - NAEMSP Position Paper: Use of the Pneumatic Anti-Shock Garment
- Procedure
  - The role of MAST pants has been significantly decreased
  - Based on NAEMSP Recommendations, the following are patients in which the MAST may be of benefit:
    - Hypotension due to ruptured Abdominal Aortic Aneurysm
    - Hypotension due to suspected pelvic fracture
    - Anaphylactic shock unresponsive to standard therapy
    - Otherwise uncontrollable lower extremity hemorrhage
    - Severe traumatic hypotension (palpable pulse, blood pressure not obtainable)
  - MAST is not indicated in:
    - Adjunct to CPR
    - Diaphragmatic rupture
    - Penetrating thoracic injury
    - Pulmonary edema
    - To splint fractures of the lower extremities
    - Extremity trauma
    - Abdominal evisceration
    - Acute myocardial infarction
    - Cardiac tamponade
    - Cardiogenic shock
    - Gravid uterus
  - If used, the proper size is indicated – adult MAST should not be used for pediatric patients
  - Once inflated, MAST should not be deflated until arrival at the hospital
- Documentation
  - Mechanism of injury
  - Indication for use
  - Time inflated

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- Purpose
  - To establish a protocol for the transportation of a patient with an IV in place
  - IV may have been placed by an physician or other provider on scene or placed by a paramedic who then requires the patient to be transported without a medic in attendance due to mass casualty incident or other circumstance
  - Patient may have had an IV, central line or PICC (Peripherally inserted central catheter) placed for chronic treatment
- Procedure
  - If this line is an existing line placed for chronic treatment, and this line is normally monitored by the patient or family member independently of any medical staff, then the BLS crew and EMT can transport this patient
    - The rate and administration of the fluid or medication should not be changed unless it is believed it is significantly contributing to the patient's condition
    - This could include
      - Infiltration causing pain
      - Narcotic administration in a patient that is hypotensive or experiencing an altered mental status or respiratory status
- If this line was placed by a physician, physician's office, then that facility can cap the IV to an IV lock status, and the patient can be transported
- If this line was placed by advanced life support who cannot go with the patient due to mass casualty or other circumstance, then BLS can transport the patient following the direction of the ALS provider.
  - This should be a rare circumstance.

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jul 2013

- Protocol
  - Use caution if patient has been exposed to a hazardous substance – decontaminate prior to treatment and transport
- Primary Assessment and Treatment
  - Assess level of consciousness
  - Assess airway and suction, as necessary
  - Be alert for and treat respiratory arrest with BVM, airway and 100% Oxygen
  - Be alert and treat shock
- Secondary Assessment
  - Continue to reassess airway
- Treatment and Transportation
  - Swallowed poison
    - Do not give anything by mouth unless directed to do so by Poison Control
  - Inhaled poison
    - Remove patient to fresh air
    - Administer high flow oxygen if Pulse ox < 94%, short of breath or abnormal lung sounds
  - Poison on skin
    - Remove contaminated clothing, If powder, brush from skin
    - Flush skin with water
  - Poison in eye
    - Flush eyes with saline or any potable liquid for 10 minutes prior to transport
  - Maintain body temperature
  - Bring information on agent to hospital
- Suspected opiate overdose if Naloxone is available/Squad is a BLS Squad
  - Indicated for respiratory distress or arrest of suspected opiate overdose cause
  - Ensure ALS has been requested
  - 2mg Version
    - For age over 5 y/o, administer 1mg intranasal in each nostril for a total of 2mg
    - For age 1-4 y/o, administer 1mg intranasal in one nostril
    - Support respirations for 3-5 minutes on scene before initiating transport
    - After 3-5 minutes if there is still respiratory depression a second dose of 2mg naloxone can be administered
  - 4mg Version
    - For all ages, one click up one nostril is the full dose
    - If law enforcement has administered a 4mg dose or multiple doses, no additional doses after the one EMS 4mg dose (total of 8+mg) – ventilate and initiate transport, consider other causes
    - If no prior doses EMS can administer a second and final 4mg dose after 3-5 minutes
  - Be prepared for agitation, withdrawal, vomiting
  - If the patient becomes awake and alert, has normal vital signs and is breathing normally, ALS may be recalled.
  - Contraindications
    - Known hypersensitivity or allergy
    - Medication is discolored, cloudy, precipitated or expired
- Specific Documentation
  - Type and amount of poison
  - Method of exposure & Time since exposure
  - Respiratory & Neurological status
  - Steps taken prior to EMS arrival, including any civilian or law enforcement naloxone doses, the time given and the clinical response (vomiting, agitation, etc.)
  - Document Naloxone use by BLS on page 8 of emsCharts and the dropdown boxes on ImageTrend
  - Notify OEMS of use utilizing web based Naloxone Reporting Form within 24 hours

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jan 2019

- Purpose
  - To assure that patients requiring oxygen receive the appropriate concentration, using the correct device
- Procedure
  - Assess airway, breathing and circulation
  - High concentration should not be withheld from COPD patients if it is needed
  - Be prepared to assist ventilations
  - Oxygen is not automatically given to patients, including ALS patients, chest pain, CVA, etc.
  - Oxygen is indicated for patients with:
    - Shortness of Breath
    - Appearance of respiratory distress
    - Pulse Oximetry below 94%
    - Abnormal Lung Sounds
    - Altered Mental Status including unconsciousness
    - Diving related emergencies
    - Extreme abnormal vitals signs (HR>140, SBP<80 for example)
    - Suspected Carbon Monoxide poisoning
  - If none of the above are present, then oxygen is not indicated and should not be administered
  - Pulse Oximetry
    - Reference Pulse and Carbon Monoxide Oximetry
    - If pulse oximetry is utilized, it should not be used to deny a patient oxygen who is in respiratory distress
    - Pulse Ox is helpful for identifying patients that are hypoxic but are not having any signs or symptoms of distress
    - Document room air pulse ox and pulse ox after oxygen has been placed
- Devices
  - To assist ventilations, use a positive pressure device
    - Bag valve mask resuscitator with reservoir
    - Use of a PEEP Valve or a BVM with a built in PEEP is recommended. This will require a tight seal on the patient's face with the BVM at ALL times, not just during ventilation to be effective
    - Avoid positive pressure/demand valve
  - Nasal Cannula
    - Flow rate 2-6 l/m
  - Non Rebreather
    - Flow rate 10-15 l/m
    - Humidifier can be used with fresh sterile water for asthma and other patients that may benefit from humidified oxygen.
- Documentation
  - Time and method of oxygen administration
  - Liter flow of oxygen delivered
  - Response to therapy
    - Vital signs before and after administration
    - Skin color and condition before and after administration
    - Relief of symptoms

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Reference: NJ Protocols on Croup/Epiglottitis

Protocol

- Respiratory Distress, inspiratory stridor and recent history of upper respiratory infection, suspect:
  - Croup if one or more of the following is present:
    - Low grade fever
    - Harsh barking cough
    - Sternal retractions
  - Epiglottitis if one or more of the following is present:
    - Lack of immunizations (the HiB vaccine protects against most Epiglottitis)
    - High grade fever
    - Muffled voice
    - Inability to swallow
    - Drooling
    - Patient sitting upright and reluctant to lie down
    - Toxic appearance
- Primary Assessment and Treatment
  - Administer humidified oxygen, use blow by if necessary
  - Assist respirations if necessary
- Secondary Assessment
  - Assess lung sounds and capillary refill
  - Insert nothing in the mouth and do not attempt to visualize the oropharynx
- Treatment and Transport
  - Maintain body warmth and be careful not to agitate the patient
  - Transport in position of comfort, but in an approved manner for the age of the child
  - Follow albuterol treatment protocol if agency and EMT are credentialed to do so.
- Specific Documentation
  - Onset and duration of symptoms
  - Who accompanied the patient
  - Treatment provided and the response
  - History of prior illness

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jan 2019

Protocol

Introduction

- It is recognized that patients have the right to self determination of medical care, within specific guidelines
- Patient Non-Transport represents one of the greatest risks to an emergency provider and emergency organization

Procedure

- Any patient that desires to not go to the hospital should have an assessment and vital signs taken. This includes lift assists and patient assists.
- If after the findings of the assessment are provided to the patient, they may refuse care if the following are present:
    - Patient is alert and oriented and is able to comprehend the risks of refusing transport. This mean EMS must explain these risks to the patient.
    - Patient is not overly intoxicated on drugs or alcohol that impairs the ability of the patient to comprehend the risks. The ingestion of alcohol alone does not necessarily make a patient incompetent to make decisions regarding their healthcare.
    - Patient is 18 years old or is otherwise emancipated (financially independent, military service, etc.)
- The patient should sign a refusal form and a witness (preferably a family member or friend) should sign that EMS did not coerce the patient to sign
- Law Enforcement may place a patient in protective custody and require transport, but the law enforcement officer must accompany the ambulance unless the patient has willingly agreed to go to the hospital.
- A verbal refusal or refusal by action may be encountered when the patient refuses to sign, be assessed or accept the taking of vital signs. This situation should be well documented, including why the patient does not want to be transported. At no time should the EMS provider place themselves at risk in order to obtain a refusal.

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Nov 2017

Reference: NJ Respiratory Distress Protocol

Perform the following:

- Conduct scene size up, primary assessment and immediate life-saving interactions. Have an airway adjunct, ventilation & suction devices nearby and ready.
- Promptly administer oxygen as tolerated by the patient and, if available, titrate with pulse oximetry to desired SpO2
- Place the patient in a position of comfort. (preferable seated in fowler's position)
- Request ALS considering their availability & hospital proximity
- Obtain baseline vital signs, SAMPLE history and conduct a secondary assessment attentive to respiratory fatigue, failure or arrest.

Short Acting Bronchodilator (Albuterol) for Wheezing

Indications

- Must be prescribed for and supplied by the patient or provided by the agency if approved and credentialed
- Form may include metered dose inhaler (MDI) or nebulizer
- Alert patient physically able to use inhaler or nebulizer
- Dyspnea & Signs of respiratory distress associated with bronchospasm (breath sounds diminished or wheezing, retractions, etc.)

Contraindications

- Medication is expired
- Known hypersensitivity or allergy to the medication
- Inability of the patient to physically assist in using the device
- Maximum prescribed dose has been met or exceeded prior to EMS arrival
- For SVN or HFN, solution is discolored, cloudy or precipitated
- For handheld nebulizer with albuterol, Age <1 y/o or > 65 y/o

Administration - MDI

- Obtain and use spacer if available
- Determine the number of puffs that make one dose per physician order
- Coach the patient to exhale, depress canister while inhaling, hold breath as long as comfortable, then exhale slowly through pursed lips or nose
- Separate puffs within one dose with 30-60 seconds of oxygen
- May repeat one full dose once if indications remain after 5 minute reassessment unless the repeat dose would exceed the maximum prescribed dose

Administration – Nebulizer (for approved and credentialed agencies)

- For patients with known COPD or asthma, and is wheezing
- Age 1-65 years old
- Not allergic to albuterol
- If patient has a history of angina, myocardial infarction, arrhythmia or congestive heart failure, must obtain online medical command
- Select mouthpiece or mask delivery
- Dose: 0.083% (2.5mg/3cc)
- Assemble & supply O2 to nebulizer at 6-10 LPM, according to manufacturer's specifications
- Coach patient to slowly & deeply inhale the mist, hold breath as long as comfortable & then exhale slowly
- Tap nebulizer as necessary to encourage solution to accumulate & settle into cup/bowl & sustain mist delivery

- Replace the original oxygen device after administration concludes
- May repeat once if indications remain after 10 minutes for a total of 2 doses
- Note dose(s), time(s) of administration & patient response & communicate this during transfer of care to ALS and/or receiving facility staff
- Document on E-PCR using drop down menus
- Document all history and physical information as specified in the initial training, including HPI, PMH, Borg Scale
- Obtain discharge diagnosis on all patients to which the EMT administers albuterol

CPAP

Indications

- Dyspnea & signs of respiratory distress associated with pulmonary edema (breath sounds diminished, wheezing, or significant rales; retractions; etc.)
- Continuation of CPAP therapy in progress prior to EMS arrival or initiated by ALS.
- Supplied by the patient or by EMS

Contraindications

- Respiratory failure or apnea
- Hypotension (SBP < 100 mm Hg)
- Pneumothorax
- Facial, laryngeal, or pulmonary trauma
- Tracheoesophageal fistula
- Recent tracheal, esophageal, or gastric surgery
- Active or anticipated vomiting or upper GI bleeding
- Failure to tolerate or completely seal CPAP mask

Administration

- Limit CPAP to no more than 10 cm H2O unless directed by medical control or patient prescription
- Brief patient on what to expect & how to cooperate when CPAP mask is applied
- Assemble & supply O2 to CPAP device according to manufacturer's specifications
- Assure a snug fit of CPAP mask & adequate O2 supply
- Reassess for tolerance of therapy, gastric distention, respiratory fatigue or failure, hypotension, &, if available, SpO2 desaturation
- Be prepared to abandon CPAP & provide original O2 therapy or assisted ventilation
- If possible, notify receiving facility prior to arrival that patient is receiving CPAP
- Note therapy, CPAP pressure, & patient response & communicate this during transfer of care to ALS and/or receiving facility staff

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jan 2019

Reference – this protocol is based on the following:

- NJSA 39:3-50, 3:54-7 through 21, 3:69, 4:91 and 4:92
- NJSA 2A:53A-12 through 13.1
- NJSA 2A:62A-1 et seq.
- NJAC 13:24
- New Jersey EMS Vehicle Operations/Safety Guidelines (June 12, 2013)

Protocol

- A vehicle is only an emergency vehicle when it is displaying flashing lights and using a siren in accordance with state laws and regulations. This also requires that the vehicle's emergency equipment be used in response to an emergency call.
- The driver of the emergency vehicle is never relieved from the requirement to obey all laws and to operate the vehicle with due regard for the safety of other motorists or pedestrians
- None of the "good Samaritan" laws protect the driver of an emergency vehicle in the event of a lawsuit arising from the operation of a motor vehicle
- State laws and regulations permit the operation of emergency warning lights and siren only when responding to an actual emergency or fire call. Once the ambulance arrives at the scene, the patient's condition must be assessed. Only if the patient's condition warrants, may emergency lights and siren be used. If the patient is stable, there is no emergency as defined by the rules and transport without lights and siren should be utilized.
- Emergency lights and sirens may not be used for routine transports when the patient is stable. A patient that is being treated by ALS does not automatically warrant lights and siren.
- Misuse of emergency warning lights could result in summonses being issued to the operator, and conviction of an offense could lead to fines and revocation of the "emergency vehicle privilege"
- According to the EMS Vehicle Operations/Safety Guidelines:
    - Patients that do not require ALS will NOT be transported with lights/siren.
    - Patients transported with lights and siren will have the reason justifying their use documented in the patient chart
    - The EMS provider primarily responsible for patient care will determine the mode of transportation

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jul 2013

Protocol

- Do not attempt to open or force anything into the mouth
- If actively seizing, attempt to protect patient from injury
- Primary Assessment
    - Administer high concentration oxygen if still seizing or altered mental status
    - Suction airway as necessary
    - Be prepared to assist respirations, both during and immediately after the seizure
    - Utilize cervical immobilization if signs of trauma or trauma is suspected
- Secondary Assessment
    - Monitor airway and respirations
    - Assess for trauma
    - After the seizure determine level of consciousness
    - Evaluate neurological status
    - Prepare for additional seizures
- Treatment and transportation
    - Remove constricting clothes
    - Consider underlying problem
    - Maintain body temperature
    - Treat any injuries
    - Transport
- Specific Documentation
    - Any history of seizures
    - Medications taken and compliance
    - Any alcohol or drug use
    - Any recent trauma
    - For children, if febrile
    - Time, onset and duration of seizure
    - Description of seizure

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Updated: 1 Jul 2013

Protocol

- Protect scene and preserve evidence
- Evaluate for and treat any injuries
- Primary Assessment and Treatment
    - Be alert for and treat shock
- Secondary Assessment
    - Perform total assessment to identify any injuries
    - Take care to protect patient dignity and do not overexpose the patient
- Treatment and Transportation
    - Do not allow the patient to bathe, douche or change clothes
    - If possible, have crew member of the same sex treat the patient
- Specific Documentation
    - Mechanism of injury
    - History of injury

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Protocol

- Purpose
  - To determine the presence of shock and to correct circulatory inadequacy that causes a deteriorating trend of the following:
    - Decreasing level of consciousness
    - Restlessness, anxiety, lethargy
    - Delayed capillary refill
    - Cyanotic, cool, clammy or pale skin
    - Nausea or vomiting
    - Rapid, shallow respirations (>24/min) progressing to slow labored respirations
    - Rapid, weak pulse (>100/min)
    - Decreasing systolic blood pressure (<90mmHg or loss of radial pulse)
- Procedure
  - Consider trauma as a cause and immobilize spine if necessary
  - Assess airway and bilateral breath sounds
  - Perform total assessment to identify other injuries
  - Control external bleeding
  - Elevate lower extremities
  - Maintain body heat
  - Transport immediately
- Documentation
  - Frequent vital signs
  - Mechanism of injury
  - Change in patient's status

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Reference: Joint NAEMSP and ACS-COT Statement (PREHOSPITAL EMERGENCY CARE 2013;17:392-393), EMS SPINAL PRECAUTIONS / SPINAL MOTION RESTRICTION, NJ EMS MICU ADVISORY COUNCIL, POSITION STATEMENT AND GUIDELINES FOR DEVELOPMENT OF PROTOCOLS

Exclusions

Patients suffering from Blunt Trauma (including MVCs) do not any restriction or immobilization if all of the following conditions exist during your initial exam:

- No altered mental status (GCS <15)
- No complaint of midline neck pain – at any time following trauma.
- No weakness, tingling, or numbness
- No evidence of intoxication from history and physical.
- No distracting injury – Any injury or situation that may alter the patient's perception of pain or which hinders the responder's assessment.
- No concerning mechanism of injury meeting trauma center criteria - CDC Field Trauma Triage criteria Box 3 (e.g. ejection from vehicle, falls >20', vehicle-patient impact >20 mph)
- No inability to communicate (including language barrier)

If the patient has any of the above conditions, then proceed to the following:

Protocol

- Use of a long spine board should be limited to extrication and transferring of the patient to the EMS cot and not as a transporting device on an EMS cot
- If the patient is a student at an educational institution with a Certified Athletic Trainer present, discuss care with the AT as their protocols may differ. Use of the longboard may be acceptable in these cases to prevent delays and on scene debate.
- Spinal Motion Restriction: Definition is the application of a cervical collar and the maintenance of the spine in neutral alignment on and ambulance cot
    - Patients that are ambulatory or able to be ambulatory (can get out of a car on their own) can have a collar placed and ambulate to the EMS cot. The cot should be placed directly next to the patient. The patient should not be permitted to walk long distances or into the hospital – all movement is on the cot.
    - If the patient is not ambulatory (unable to stand or walk) then a long spine board or scoop may be used to move the patient to the EMS Cot. A scoop is preferred. Once on the EMS Cot, the long spine board or scoop will be removed from under the patient.
- Reliable patients with penetrating trauma to the head, neck, or torso should not need spinal motion restriction provided:
    - Demonstrate no evidence of spinal injury including absence of any neurological complaints
    - Have no secondary mechanisms of injury that may increase the risk of blunt spinal trauma
- Appropriate patients who should undergo spinal motion restriction include those with
    - Blunt trauma and altered level of consciousness
    - Spinal pain or tenderness
    - Neurologic complaint (e.g., numbness or motor weakness)
    - Anatomic deformity of the spine
    - High-energy mechanism of injury and any of the following:
        - Drug or alcohol intoxication
        - Inability to communicate
        - Distracting injury
    - 65 years of age or older
- If the patient has injuries resulting from blunt trauma then spinal motion restriction will be utilized
    - Place a collar and place the patient on the cot with the head at approximately 20-30 degrees, unless hypotensive

Considerations

- Patients >65 years of age with evidence of head trauma should be considered for spinal motion restriction with a collar even if they have no neck pain.
- Patients may remain on the long spine board for the transport to the hospital if the crew feels it is necessary to minimize delay in the transport of a critical patient
- Patients who do not require spinal motion restriction should be treated carefully, with minimal movement/jostling. At the hospital, the patient should be moved to the hospital stretcher using a slide board or a taut sheet
- Patients found to be immobilized on a longboard by other EMS can be log rolled off the longboard once on the EMS Cot. EMS crews may opt to transport on the long spine board and later educate the other EMS as appropriate.

Helmet Removal

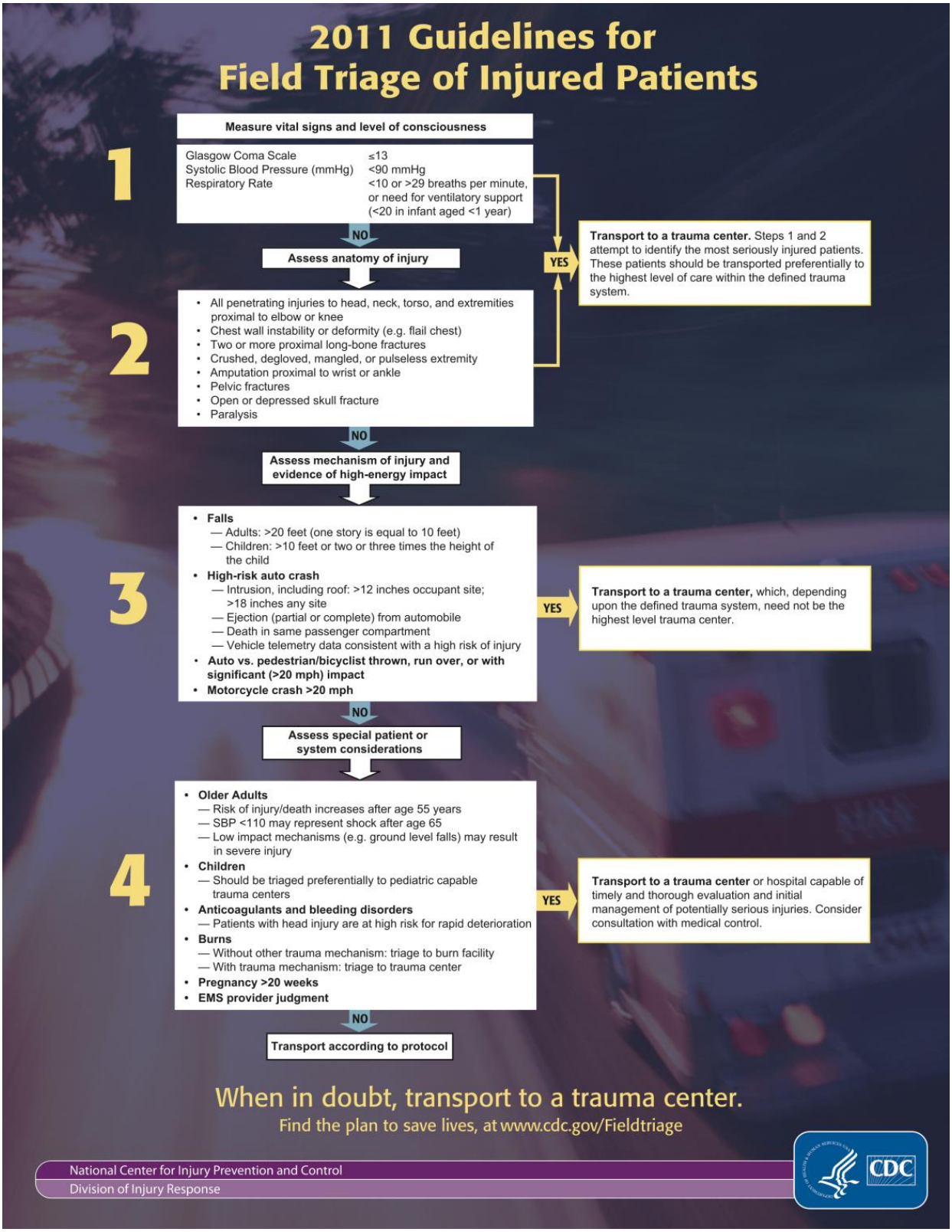
- Purpose
    - The purpose of removing the helmet is to provide immediate access to the airway and face, to allow assessment for bleeding and to allow movement of the head from flexed position (caused by the helmet) to neutral alignment. The cervical spine must be protected while removing the helmet.
    - If the patient is stable and no immediate threat to airway and breathing, it may be acceptable to remove the cage from the helmet, if immobilization can be accomplished while keeping the neck inline.
- Procedure
    - Do not tilt helmet backwards
    - One provider provides immobilization
    - Second provider rotates the helmet as needed to clear the face and back of the head
    - Prevent flexion of the head and maintain manual inline immobilization
    - Once helmet is removed, place the patient into the neutral midline position and apply collar; log roll and secure to the longboard
- Documentation
    - Mechanism of injury
    - Type of helmet and method used to remove it
    - Manual cervical immobilization was maintained
    - Patient was secured to the longboard
    - Patient's condition and vital signs
    - Need for helmet removal

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jul 2016

Protocol

- Primary Assessment and Treatment
- Be alert for and treat shock
- Control bleeding
- Assess for other life threatening conditions
- Secondary Assessment
- Perform total assessment to identify other injuries en route to hospital
- Check pulses and sensation distal to injury before and after splinting
- Consider any wound near a fracture to be a result of open fracture
- Bandage wounds prior to splinting
- If no pulses present distal to long bone fracture, attempt to reposition to regain pulse. Stop if severe pain or resistance encountered.
- Treatment and Transportation
    - Closed femur fracture – use traction splint. Do not use if lower extremity or knee injury or fracture.
    - Pelvic fractures
        - If suspected, do not rock the pelvis
        - Use pelvic binder or tied sheet to stabilize
    - Hip fracture – secure to opposite leg
- Specific Documentation
    - Cause of injury
    - Type of injury
    - Time of injury
    - Repeated pulse checks

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jul 2013


2011 Guidelines for
Field Triage of Injured Patients
1
Measure vital signs and level of consciousness
Glasgow Coma Scale ≤13
Systolic Blood Pressure (mmHg) <90 mmHg
Respiratory Rate <10 or >29 breaths per minute, or need for ventilatory support (<20 in infant aged <1 year)
NO
YES
Assess anatomy of injury
2
All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee
Chest wall instability or deformity (e.g. flail chest)
Two or more proximal long-bone fractures
Crushed, degloved, mangled, or pulseless extremity
Amputation proximal to wrist or ankle
Pelvic fractures
Open or depressed skull fracture
Paralysis
Transport to a trauma center. Steps 1 and 2 attempt to identify the most seriously injured patients. These patients should be transported preferentially to the highest level of care within the defined trauma system.
NO
Assess mechanism of injury and evidence of high-energy impact
3
Falls
— Adults: >20 feet (one story is equal to 10 feet)
— Children: >10 feet or two or three times the height of the child
High-risk auto crash
— Intrusion, including roof: >12 inches occupant site; >18 inches any site
— Ejection (partial or complete) from automobile
— Death in same passenger compartment
— Vehicle telemetry data consistent with a high risk of injury
Auto vs. pedestrian/bicyclist thrown, run over, or with significant (>20 mph) impact
Motorcycle crash >20 mph
YES
Transport to a trauma center, which, depending upon the defined trauma system, need not be the highest level trauma center.
NO
Assess special patient or system considerations
4
Older Adults
— Risk of injury/death increases after age 55 years
— SBP <110 may represent shock after age 65
— Low impact mechanisms (e.g. ground level falls) may result in severe injury
Children
— Should be triaged preferentially to pediatric capable trauma centers
Anticoagulants and bleeding disorders
— Patients with head injury are at high risk for rapid deterioration
Burns
— Without other trauma mechanism: triage to burn facility
— With trauma mechanism: triage to trauma center
Pregnancy >20 weeks
EMS provider judgment
YES
Transport to a trauma center or hospital capable of timely and thorough evaluation and initial management of potentially serious injuries. Consider consultation with medical control.
NO
Transport according to protocol
When in doubt, transport to a trauma center.
Find the plan to save lives, at www.cdc.gov/Fieldtriage
National Center for Injury Prevention and Control
Division of Injury Response
CDC

Protocol:

Immediately perform the following:

- Scene size up and primary assessment
- Initially administer oxygen as dictated by National EMS Education Standards for the Emergency Medical Technician according to patient condition
- Place the patient in a position of comfort unless necessitated by other factors.
- Ensure that advanced life support (ALS) has been requested and monitor response time.
- Obtain baseline vital signs and obtain the SAMPLE history.
- Conduct the focused history and physical exam.

Indications

- Any patient where Oxygen Saturation is a concern
- Any patient where hypoxia is suspected.
- Any patient where Carbon Monoxide is a concern

Contraindications/Cautions

Pulse oximetry readings may be inaccurate or even absent in the following conditions:

- Shock/hypoperfusion
- Hypothermia- Reduces peripheral perfusion
- Excessive movement (Combative, seizures)
- Nail Polish- must remove polish
- Carbon Monoxide inhalation
- Cigarette smokers tend to give a slightly higher than normal reading
- Anemia patients will produce higher readings but they have a decreased Hgb level.
- COPD patients may show chronically low SpO2

Contraindicated in Cardiac Arrest patients

Administration

- Assess pulse oximetry in any patient meeting the indications above.
- If patient is a victim of smoke, fire exposure or is suspected to have been in a CO rich environment, operate Pulse/CO-oximeter according to manufacturer's recommendations
- Assess pulse rate. Readings where pulse rates disagree by greater than 5 beats per minute or SpO2 < 80% are likely inaccurate or unreliable and should not be used or reported.
- Document Pulse and CO oximeter readings on patient care report.

Carbon Monoxide

- If CO poisoning is suspected, then the patient should be treated for poisoning even if CO is not detected with a Co-oximeter.
- Levels over 10% are concerning in all patients
- Levels over 5% are concerning in non-smokers
- Levels between 5-10% may bed normal in smokers
- Treatment of CO poisoning is 100% oxygen via NRBM, even is asymptomatic

REMEMBER: WHEN QUESTIONS OR CONCERNS ARISE, CONTACT MEDICAL CONTROL

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jul 2013

Protocol:

For Penetrating Chest Wounds

- Place an occlusive dressing
- Dressing with a valve/vent is preferred (Asherman, Bolin, SAM Chest Seal)
- If no valve is present then monitor the patient for the development of a tension pneumothorax – if it develops release the seal briefly to relieve the pressure

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Apr 2014

Background:

Most jellyfish envenomations are mild and do not require EMS treatment. However some can cause severe pain and the actions of the EMT or Beach Patrol member may be able to decrease this severe pain. Additionally, systemic reactions are possible.

Protocol:

- Remove victim from the water
- Providers to wear thick or double gloves
- Remove any tentacles or jellyfish material with forceps or gloved hand
- Apply 5% Acetic Acid (household vinegar) to the sting area for up to 30 minutes
    - Do not use fresh water
    - Salt water can be utilized if vinegar is not available, but may increase release of venom
    - Avoid ammonia, alcohols, meat tenderizers
    - Goal is to rinse away tentacles
    - Commercial Sting No More is an alternative and may be more beneficial
- If available immerse a stung extremity in hot water for 20 minutes. If large trunk area, take a hot shower for 20 minutes. Heat packs may be a reasonable alternative.
- Assess for anaphylaxis and other injuries. Initiate immediate transport if found and request ALS if signs of anaphylaxis are noted
- For large area envenomation consider hot shower which may deactivate the venom
- Additional considerations for self-treatment if EMS or BP member is the victim:
    - Benadryl 50mg PO
    - Topical Hydrocortisone 1%
    - Ibuprofen 800mg PO

Approved by: Ken Lavelle, MD, Medical Director
Updated: 1 Jul 2017