

Lexington County

Emergency Medical Services

Intermediate Standing Orders

I have received a personal copy of the 2008 edition of the Lexington County EMS Intermediate Standing Orders Protocols I - XXIII and Appendix A - C. . I understand that these Standing Orders are effective October 27th, 2008 and replace any previous issued Standing Orders.

I understand that the Lexington County EMS Training Office will provide me with updates for my personal copy, however it is my responsibility to keep my copy current.

Finally I acknowledge that I may only practice at the level of my certification, and/or the level approved for me by Lexington County EMS and the Medical Control Physicians.

Providers Signature

Date

Medical Control Physician Signature

Date

EMS Director Signature

Date

Training Officer Signature

Date

LEXINGTON COUNTY EMERGENCY MEDICAL SERVICES



INTERMEDIATE STANDING ORDERS

REVISED October 6th, 2008

GENERAL GUIDELINES FOR PROTOCOL USAGE

AUTHORIZATION

The following Standing Orders are written for the guidance of Lexington County Emergency Medical Service personnel to facilitate the rapid administration of care to stabilize the ill or injured and insure their safe treatment.

These Lexington County EMS Standing Orders are to be used by personnel designated by the Lexington County EMS Medical Control Physicians and EMS Director. These protocols are to direct the provision of routine intermediate life support care by EMS personnel.

APPLICATION OF THESE PROTOCOLS

Clinical presentations may require more than one set of Standing Orders to maximize prehospital care. In general, any combination of the following Standing Orders may be utilized, as deemed necessary by Lexington County EMS personnel, to effectively stabilize a patient.

PURPOSE

The primary purpose of these protocols is to serve as guidelines for prehospital care. Quality prehospital care is the direct result of comprehensive education, accurate patient assessment, good judgment, and continuous quality improvement. All EMS personnel are expected to know the protocols and understand the reason for their use.

MEDICAL DIRECTION

Providing high quality prehospital emergency medical care is the responsibility of all EMS personnel employed by Lexington County Emergency Medical Service. SC State law requires all EMTs and Paramedics function under the direction of an approved EMS Medical Control Physician. The Medical Control Physician functions autonomously as administrator of clinical care and medical ethics for the EMS personnel who work under his or her medical license.

STANDARD OF CARE

Lexington County EMS believes in maintaining the highest standard of care as defined by current medical science, protocols, federal, state and local laws. It is impossible to produce a set of standing orders that addresses every situation or that is perpetually up to date. Amendments, updates or changes may be provided as necessary. It is the responsibility of the employee to maintain a current copy of the Standing Orders. EMS personnel shall not perform any step or steps in a standing order or protocol if they have not been trained to perform the procedure or treatment in question.

PROTOCOLS AND STANDING ORDERS

Only authorized EMS personnel may use these standing orders. All EMS personnel must adhere to the standards defined in these protocols, or face revocation of medical control if these standards are violated or not followed.

PROTOCOL GENERAL STATEMENTS

1. Trauma patients not categorized below shall be transported to the closest available level III trauma center (LMC). Patients that have sustained any of the following will be transported directly to the Level 1 Trauma Center at Palmetto Health Richland.:
 - a. Multiple trauma with trauma scores of ≤ 10
 - b. Traumatic head injuries with a Glasgow Trauma Score (GCS) ≤ 12
 - c. Amputation proximal to the wrist or ankle
 - d. Obvious signs of injury and are < 12 years of age
 - e. More than 2 extremity fractures proximal to the elbow or knee
 - f. Flail chest or 1st /2nd rib fractures
 - g. Crush, de-gloved, or mangled extremity
 - h. Burns $>20\%$ total body surface area with associated multi-trauma
 - i. Spinal trauma with signs of spinal cord injury/paralysis
 - j. Clinically apparent pelvic fracture
 - k. Signs of hemodynamic instability (Tachycardia > 120 , Tachypnea >25 , or hypotension with Systolic BP <90) AND any of the following modifiers:
 - i. MVA with ejection of the patient from the vehicle
 - ii. Death of an occupant in patient's vehicle with associated injury to the patient
 - iii. Fall > 20 feet
 - iv. Fall > 10 feet or two to three times the height of a child
 - v. Auto versus pedestrian or bicycle
 - vi. Motorcycle accident with rider ejection
 - vii. Extrication > 20 minutes or rollover with obvious signs of injury
 - viii. Intrusion >12 inches on occupant side or intrusion >18 inches on any side

Mechanism alone does not qualify the patient for Level I trauma center. In fact, a patient who is stable, regardless of the MOI with no distracting injuries, burns, crushing, degloving, etc. must be transported to the Level III.

Any patient with significant trauma and any of the following conditions should be transported to a Level 1 Trauma Center at Palmetto Health Richland:

1. Patients ≤ 12 or ≥ 65 years of age.
2. Patients with bleeding disorders or on anticoagulant medications.
3. Patient with end stage renal disease requiring dialysis.
4. Pregnant patients > 20 weeks gestation.

Any patient with isolated severe burns as outlined below should be transported directly to the burn center via helicopter if available. In the insistence that helicopter transport is unavailable the patient should be transported to the Lexington Medical Center or hospital of patient choice.

- a. Third degree burns greater than 5% BSA (body surface area) in any age group;
- b. Second and third degree burns greater than 10% BSA of patients under 10 or over 50;
- c. Second and third degree burns greater than 20% in other age groups;
- d. Second and third degree burns involving the face, hands, feet, genitalia, perineum, and major joints

Any trauma patient with airway compromise / obstruction in which personnel are unable to secure an adequate airway should be diverted to the nearest hospital for airway management. An adequate

airway is defined as any method that provides airway patency (i.e. jaw-thrust, OPA, NPA, LMA, and ETT)

2. No patients with trauma scores ≤ 11 or with any degree of burns will be transported to Dorn Veterans Administration Medical Center.
3. IV attempts should ideally be initiated enroute except in cases of cardiac arrest, entrapment, combativeness from hypoglycemia or seizures, or if the urgency of the patient's condition dictates a more immediate need for IV access. Personnel may elect to attempt an external jugular after two failed attempts at peripheral access or as a first attempt if no suitable site is felt to be present peripherally. Scalp veins may only be used after contacting Medical Control.
4. Verbally repeat all orders received prior to their initiation.
5. Intermediates may not place patients on a cardiac monitor, unless they are enroute to ALS Backup or with a paramedic.
6. EMS personnel functioning under the Lexington County EMS Medical Control System may accept orders from an on-scene physician when a patient is being transported from the physician's office and the ordering physician accepts responsibility for the patient. The on-line medical control physician must approve **any care, which differs significantly from the standard of care**, prior to initiation of that care. If a controversy arises with an on-scene physician, place the on-scene physician in contact with the on-line medical control physician via telephone or radio. The prehospital provider's responsibility reverts to off-line medical direction (i.e., existing EMS protocols) or on-line medical direction at any time when the private physician is no longer in attendance.

Intermediates may accept orders from a licensed physician at the scene provided the following conditions are met:

- The physician at the scene properly identifies himself or herself as such
 - Has established a physician-patient relationship
 - Agrees to accept responsibility for the patient's care
 - Agrees to accompany the patient to the hospital
 - Agrees to sign the patient care report
- A. In the event the on-scene physicians DOES NOT accept the above conditions, personnel should follow established protocols and standing orders and contact medical control for direction.
 - B. Personnel may contact medical control and have the physician speak with the on-line medical control physician if necessary.
7. Pediatric Protocols apply to patients twelve years (12) or less.
 8. All patients that use home oxygen will be transported at the patient's prescribed rate. If the patient is maintaining an oxygen saturation $<90\%$, the flow rate will be slowly titrated upward to maintain an oxygen saturation $\geq 90\%$.

9. The primary goal of airway management is to provide adequate oxygenation. Recent medical literature has brought into question the practice of pre-hospital intubation, especially in pediatric patients, due to low success rates and poor recognition of esophageal intubation. We feel that intubation **is an appropriate** pre-hospital intervention, but demand that the focus remain on **airway management** to avoid becoming preoccupied with intubation. Intermediates should utilize good decision-making skills when addressing the management of ABC's and may elect to intubate if they feel it is appropriate for the patient's condition. Intermediates should not delay transport to their ALS or the hospital in their efforts to intubate. They should be reminded that other means are available as airway interventions especially if ventilations are adequate with BVM and airway adjunct.
10. Airway management assumes recognition of the potential for c-spine injury in appropriate clinical settings and the proper precautions to prevent neurological injury during airway maneuvers.
11. Intraosseous lines may be used in both adults and children for vascular access after two unsuccessful attempts at venous access in patients with cardiac arrest or major trauma. In all other cases, Online Medical Control must be contacted.

If there exists any doubt as to the best course of treatment for a patient, contact Online Medical Control.

Andrew Donato, MD MCO

Date

LEXINGTON COUNTY EMERGENCY MEDICAL SERVICES
INTERMEDIATE LEVEL LIFE SUPPORT STANDING ORDERS

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LEXINGTON COUNTY EMERGENCY MEDICAL SERVICES
ANDREW DONATO, MD MCO / T. BRIAN HOOD, EMS DIRECTOR
10/06/2008

INTERMEDIATE PROTOCOL I – ADULT General Medical/Trauma

GENERAL: This protocol addresses treatment of patients who present with conditions that do not fall under a more specific protocol, but that the Intermediate determines a need for oxygen therapy and/or vascular access.

ACTIONS:

1. Assess the patient and manage ABC's.
2. Call for ALS backup if indicated.
3. Immobilize the spine as determined by the Spinal Immobilization Protocol.
4. Administer O₂ to maintain an O₂ saturation \geq 96% unless on home O₂, then maintain an oxygen saturation of \geq 90%.
5. Apply pulse oximeter.
6. Initiate INT or IV NS as necessary.
7. Perform BGL if necessary.
8. Contact *Medical Control*.

Considerations:

Victims of trauma, or medical patients with suspected internal bleeding or dehydration require IV Normal Saline (0.9%).

Andrew Donato, MD MCO

Date

INTERMEDIATE PROTOCOL II – ADULT Cardiac Arrest

GENERAL: This protocol addresses treatment of patients who are **unresponsive, apneic and pulseless.**

ACTIONS:

1. Assess the patient and determine absence of pulse/spontaneous respirations.
2. Call for ALS Backup.
3. Administer chest compressions at a rate of 100 per minute for 2 minutes (200 compressions).
4. Initial airway management with OPA and either NRB or BVM depending on available manpower.
5. Apply AED after initial 200 compressions and manage via appropriate voice prompts.
6. If shock indicated, deliver shock and immediately resume compressions for additional 2 minutes.
7. Initiate an IV NS at KVO rate.
8. Intubate and confirm placement with CO2 detector
9. Contact *Medical Control*.

Andrew Donato, MD MCO

Date

INTERMEDIATE PROTOCOL III – SUSPECTED MI / CHEST PAIN

GENERAL: This protocol addresses treatment of patients with signs and symptoms of ischemic chest pain. Typically the onset of chest pain will be acute, severe, constant, and unrelenting without intervention. This protocol addresses only those patients over 30 years of age.

ACTIONS:

1. Assess the patient and manage ABC's.
2. Call for ALS Backup.
3. Administer O₂ at 10-15 lpm NRB to maintain an oxygen saturation of $\geq 96\%$, unless on home O₂, then titrate O₂ delivery to maintain an oxygen saturation of $\geq 90\%$.
4. Apply pulse oximeter.
5. If patient is apneic, cyanotic, or exhibiting severe signs of respiratory distress, assist respirations with PPV

1. Assist the patient with self-administration (chew) of four (4) **baby Aspirin 81mg** each or one (1) **adult Aspirin 324mg**.
2. Initiate IV NS.
3. Assist the patient with self-administration 0.4 mg **Nitroglycerin Sublingual**.
4. Repeat 0.4 mg **Nitroglycerin Sublingual** every 5 minutes to a total of 3.
5. Contact *Medical Control*.

Considerations:

DO NOT ADMINISTER Nitroglycerin if the patient (male or female) has ingested Viagra within the previous 24 hours or Cialis or Levitra in the past 48 hours. Maintain patient privacy when inquiring about these meds.

DO NOT ADMINISTER Nitroglycerin unless it belongs to and is prescribed to the patient.

DO NOT ADMINISTER Aspirin unless it belongs to the patient.

DO NOT ADMINISTER Aspirin if the patient exhibits signs or symptoms of aortic dissection, such as a severe sudden tearing chest or abdominal pain, pain radiating into the back, unexplained low back pain, diminished or absent pedal pulses, or cold lower extremities. Contact Medical Control.

DO NOT ADMINISTER Aspirin if the patient has an ACTIVE Ulcer or hypersensitivity to aspirin. Contact Medical Control for further advice on administration if any questions.

If no IV access is available, withhold NTG.

Nitroglycerin must be discontinued if a normotensive patient has sustained a mean drop of 10%, or a hypertensive patient has sustained a mean drop of 30%.

Andrew Donato, MD MCO

Date

INTERMEDIATE PROTOCOL IV – ADULT Respiratory Distress

GENERAL: This protocol addresses treatment of patients who present with respiratory distress. Respiratory distress is a sign of many conditions including asthma, chronic obstructive pulmonary disease, congestive heart failure and anaphylaxis.

ACTIONS:

1. Assess the patient and manage ABC's.
2. Consider calling for ALS backup if patient does not improve on oxygen therapy or is in need of medications therapy.
3. Administer O₂ at 10-15 lpm NRB to maintain an oxygen saturation of $\geq 96\%$, unless on home O₂, then titrate O₂ delivery to maintain an oxygen saturation of $\geq 90\%$.
4. Apply pulse oximeter.

1. **If patient is an apneic, cyanotic, or exhibiting severe sign of respiratory distress, assist respirations with PPV.**
2. **Assist patient with self-administration of inhaler if signs of asthma/COPD present. Whenever possible, have patient use spacer device.**
3. **Initiate INT or IV NS. Administer fluid bolus of 300cc NS in anaphylaxis with BP < 90.**
4. **Contact *Medical Control*.**

1. **If patient is exhibiting signs/symptoms of CHF (i.e. pulmonary edema/rales), be prepared to initiate CPAP therapy.**
2. **Call for ALS back up.**
3. **If patient is conscious and able to cooperate, apply CPAP. Set CPAP level by titrating to effect but not to exceed 10cmm H₂O of PEEP.**
4. **Apply & continuously monitor pulse oximeter and end-tidal CO₂.**
5. **Initiate immediate transport.**
6. **Initiate INT enroute only.**

Considerations:

Metered-dose inhalers of short-acting Beta-agonists are helpful in acute exacerbations of reactive airway disease. Assure that the inhaler belongs to and is prescribed to the patient. The following inhalers may be given in the wheezing patient with respiratory distress:

- | | |
|------------------------|-------------------------------|
| -Albuterol | (Proventil, Ventolin, Volmax) |
| -Terbutaline | (Brethine) |
| -Metoproterenol | (Alupent, Metaprel) |
| -Pirbuterol | (Maxair) |
| -Albuterol/ipratropium | (Combivent) |

DO NOT ADMINISTER inhalers containing salmeterol (Serevent) or formoterol (Foradil) in acute respiratory distress on the basis of reactive airway disease. These medications are for chronic management ONLY and have no place in treating acute exacerbations.

 Andrew Donato, MD MCO

Date

INTERMEDIATE PROTOCOL V – ADULT Altered Mental Status

GENERAL: This protocol addresses treatment of patients who present with an altered level of consciousness. Patients may experience AMS due to conditions such as trauma, syncope, hypoglycemia, infection, alcohol, overdose and seizures. The scene size-up and initial assessment should be used to rule out necessary spinal immobilization. If in doubt, any patient in which trauma cannot be ruled out, must have spinal immobilization maintained.

ACTIONS:

1. Assess the patient and manage ABC's.
2. Call ALS back up.
3. Administer O₂ at 10-15 lpm NRB to maintain an oxygen saturation of $\geq 96\%$, unless on home O₂, then titrate O₂ delivery to maintain an oxygen saturation of $\geq 90\%$.
4. Apply pulse oximeter
5. If patient is apneic, cyanotic, or exhibiting severe signs of respiratory distress, assist respirations with PPV
6. Initiate IV NS.
7. Perform BGL.
8. Move to specific protocol.

ADULT Insulin Shock

1. If BGL < 65, administer 25 grams **D50**.
2. If conscious and able to swallow, oral glucose may be administered.
3. Reassess BGL
4. If patient becomes alert & BGL > 65, may cancel ALS back-up and transport patient to hospital.

ADULT Hypotension

1. Trendelenberg and cover patient.
2. If systolic BP < 90mm Hg, administer 300cc bolus NS (0.9%). Repeat once if needed.
3. Request ALS and Contact *Medical Control*.

Considerations:

Caution against use of fluid boluses in patients with history of or current signs of CHF or in renal failure/dialysis patients.

ADULT Overdose

- 1. Request ALS back-up if patient has AMS or hemodynamically unstable (i.e. systolic BP <90 or HR <60 or >120 bpm).**
- 2. Administer Activated Charcoal 1 gram/kg in cases of significant OD < 4 hours post-ingestion.**

Contraindications to charcoal administration include isolated ingestion of a substance known to not adsorb to activated charcoal (iron, lithium, or lead), need for endoscopy (caustic ingestions), or ingestion of a substance that may cause rapid mental status changes. Patients with potential for rapid AMS require airway protection prior to charcoal administration to prevent possible aspiration.

ADULT Seizures

- 1. Request ALS backup.**
- 2. Contact *Medical Control*.**

Andrew Donato, MD MCO

Date

INTERMEDIATE PROTOCOL VI – ADULT Heat Related Illness

GENERAL: This protocol addresses treatment of patients with heat-related signs and symptoms. Heat related illness describes a broad range of conditions from heat exhaustion to heat stroke. Heat exhaustion is a form of hypovolemic shock, which requires fluid replacement, but not rapid cooling. Heat stroke is characterized by hot, usually dry skin with AMS and requires aggressive cooling measures.

ACTIONS:

1. Assess the patient and manage ABC's.
2. If any serious symptoms (other than simple heat cramps) are present, call for ALS Backup.
3. Administer O₂ at 10-15 lpm NRB to maintain an oxygen saturation of $\geq 96\%$, unless on home O₂, then titrate O₂ delivery to maintain an oxygen saturation of $\geq 90\%$.
4. Apply pulse oximeter.
5. If patient is apneic, cyanotic, or exhibiting severe signs of respiratory distress, assist respirations with PPV

- 1. If signs of HEAT STROKE are present, initiate aggressive cooling measures by applying ice packs to the axilla and groin and cover the patient with cold, wet sheets.**
- 2. Initiate IV NS.**
- 3. If systolic BP <90 mm HG or heart rate ≥ 120 , Trendleburg and infuse 300 cc NS.**
- 4. Reassess patient and if systolic BP remains <90 mm HG or heart rate ≥ 120 , infuse another 300 cc NS.**
- 5. Contact *Medical Control*.**

Considerations

None

Andrew Donato, MD MCO

Date

INTERMEDIATE PROTOCOL VII – ADULT Trauma

GENERAL: This protocol addresses treatment of patients that present with signs and symptoms of significant trauma. Significant trauma should be determined by assessing the mechanism of injury as well as the signs and symptoms observed in the patient.

ACTIONS:

1. Assess the patient and manage ABC's with C-spine immobilization.
2. If patient has ANY signs of significant injury or if patient meets Level I transfer criteria, immediately call for ALS Backup.
3. Administer O₂ at 10-15 lpm NRB to maintain an oxygen saturation of $\geq 96\%$, unless on home O₂, then titrate O₂ delivery to maintain an oxygen saturation of $\geq 90\%$.
4. Apply pulse oximeter.
5. If patient is an apneic, cyanotic, or exhibiting severe sign of respiratory distress, assist respirations with PPV.

1. **Initiate IV NS.**
2. **If systolic BP <90 mm HG, Cover, Trendelenberg and infuse 300 cc NS.**
3. **Reassess patient and if systolic BP remains <90 mm HG, infuse another 300 cc NS.**
4. **A second IV NS may be initiated if necessary and time permits.**
5. **Contact *Medical Control*.**

Considerations:

Airway management is the first priority. Trauma patients whose condition dictates transport to the Trauma Center should be diverted to the closest facility for airway intervention before completing transport if adequate airway support cannot be provided. An adequate airway is defined as any method that provides airway patency, (i.e. jaw-thrust, OPA, NPA, LMA, etc.).

In head injuries, assess BGL.

IV therapy must be initiated with the largest bore catheter possible.

Patients that have sustained any of the following will prompt immediate call for ALS backup and be transported directly to the Level 1 Trauma Center at Palmetto Health Richland:

- a. Multiple trauma with trauma scores of ≤ 10
- b. Traumatic head injuries with a Glasgow Trauma Score (GCS) ≤ 12
- c. Amputation proximal to the wrist or ankle
- d. Obvious signs of injury and are ≤ 12 years of age
- e. Penetrating thoracoabdominal trauma
- f. Signs of hemodynamic instability (Tachycardia > 120 , Tachypnea > 25 , or hypotension with Systolic BP < 90) and any of the modifiers listed in Protocol General Statement#1.

 Andrew Donato, MD MCO

Date

PROTOCOL VIII-ADULT Tourniquet

GENERAL: This protocol addresses the treatment of patients that present with significant hemorrhage due to penetrating extremity trauma or amputation.

ACTIONS:

1. Assess patient and manage ABC's.
2. Administer O₂ 10-15 lpm NRB.
3. Apply direct pressure to wound.

- 1. If bleeding is not controlled with direct pressure, apply tourniquet to affected extremity.**
- 2. Initiate IV NS. If systolic BP < 90, infuse 300cc NS. Repeat NS bolus once if no response.**
- 3. Reassess tourniquet and pulses at least every 5 minutes.**
- 4. Contact Medical Control.**

Considerations:

In patients with significant extremity hemorrhage and a concurrent need for airway management or other emergent interventions, a tourniquet may be immediately applied without the need for a trial of direct pressure. After the emergent procedures are completed, direct pressure may be applied and the tourniquet released to assess for adequacy of hemorrhage control via direct pressure. Reapply tourniquet if bleeding not adequately controlled.

Similarly, in mass casualty situations, a tourniquet may be immediately applied to patients with significant extremity hemorrhage without the need for a trial of direct pressure in order to facilitate a more expedient control of hemorrhage with better utilization of resources.

Andrew Donato, MD MCO

Date

INTERMEDIATE PROTOCOL IX – ADULT Burns

GENERAL: This protocol addresses treatment of patients that present with significant burns. Always assess the depth and extent of the burn injury.

ACTIONS:

1. Immobilize the spine as determined by the Spinal Immobilization Protocol.
2. Assess the patient and manage ABC's.
3. Call for ALS Backup if patient meets criteria for burns center.
4. Administer O₂ at 10-15 lpm NRB, unless on home O₂, then titrate O₂ delivery to maintain an oxygen saturation of $\geq 90\%$.
5. Apply pulse oximeter.
6. If patient is apneic, cyanotic, or exhibiting severe signs of respiratory distress, assist respirations with PPV

1. **Initiate IV NS.**
2. **If systolic BP <90 mm HG, infuse 300 cc NS.**
3. **Reassess patient and if systolic BP remains <90 mm HG, infuse another 300 cc NS.**
4. **A second IV NS may be initiated if necessary and time permits.**
5. **If 1st or 2nd degree burns are present <20% BSA, apply Burn Dressings.**
6. **If 1st, 2nd degree burns >20% or 3rd degree burn, apply dry dressings or sterile burn sheets.**
7. **Contact *Medical Control*.**

Considerations:

Airway management is the first priority. Always assess for signs of potential airway injury, such as facial burns, singed nasal hairs, carbonaceous sputum, hoarseness/stridor, or drooling. An adequate airway is defined as any method that provides airway patency, (i.e. jaw-thrust, OPA, NPA, LMA, etc.).

Stop the burning process. Extinguish any flames on patient; remove smoldering clothing, and any constricting jewelry. Leave any clothing that is melted to the skin by cutting around it.

IV therapy must be initiated with the largest bore catheter possible.

A complete list of criteria for burn center referral is in Appendix A. The following is an abbreviated listing of those criteria that are appropriate for consideration of helicopter transport from the field to the burn center:

- a. Third degree burns greater than 5% BSA (body surface area) in any age group;
- b. Second and third degree burns greater than 10% BSA of patients under 10 or over 50;
- c. Second and third degree burns greater than 20% in other age groups;
- d. Second and third degree burns involving the face, hands, feet, genitalia, perineum, and major joints.

The remaining criteria not found here are more appropriate for evaluation of hospital-to-hospital transfer.

In cases of serious carbon monoxide poisoning, contact Medical Control to determine if the patient should be transported to Palmetto Richland for access to the hyperbaric chamber. Symptoms include AMS or near-syncope, significant confusion, seizures, respiratory distress/failure, hypotension, severe chest pain, or cardiac arrest. Consideration for transfer should also be given to pregnant patients with significant exposure.

Andrew Donato, MD MCO

Date

INTERMEDIATE PROTOCOL X – PEDIATRIC General Medical/Trauma

GENERAL: This protocol addresses treatment of PEDIATRIC patients who present with conditions that do not fall under a more specific protocol, but that the Intermediate determines a need for oxygen therapy and/or vascular access.

ACTIONS:

1. Assess the PEDIATRIC patient and manage ABC's.
2. Call fro ALS back up if indicated.
3. Immobilize the spine as determined by the Spinal Immobilization Protocol.
4. Administer O₂ to maintain O₂ saturation \geq 96%. If not tolerated, use blow-by O₂.
5. Apply pulse oximeter.
6. Initiate INT or IV NS as necessary.
7. Perform BGL if necessary.
8. Contact *Medical Control*.

Considerations:

Victims of trauma, or medical patients with suspected internal bleeding or dehydration require IV Normal Saline (0.9%).

Andrew Donato, MD MCO

Date

INTERMEDIATE PROTOCOL XI – PEDIATRIC Cardiac Arrest

GENERAL: This protocol addresses treatment of PEDIATRIC patients who are **unresponsive, apneic and pulseless.**

ACTIONS:

1. Assess the patient and manage ABC's.
2. Call for ALS Backup.
3. Begin CPR. Hyperventilate patient with 100% O2 via PPV.
4. Apply AED as soon as possible. Follow the voice prompts.
5. Initiate an IV NS at KVO rate.
6. Intubate and confirm placement with CO2 detector
7. Contact *Medical Control*.

CONTRAINDICATIONS TO AED USE:

***AEDs are not to be applied to children under 1 years of age.**

***AEDs are not to be applied to children 1-8 years of age unless pediatric pads are available.**

Andrew Donato, MD MCO

Date

INTERMEDIATE PROTOCOL XII – PEDIATRIC Respiratory Distress

GENERAL: This protocol addresses treatment of PEDIATRIC patients who present with respiratory distress. Children with potential or probable respiratory failure should receive rapid, aggressive airway management. The highest concentration of oxygen available is delivered. The child is maintained in a position of comfort. Basic airway maneuvers are employed to open and maintain the airway: oral or nasopharyngeal airway placement; neutral, in-line positioning of the head, neck and shoulders; and anterior displacement of the chin or jaw to facilitate an open mouth. Foreign bodies are removed, if present. Patients in severe distress will present with accessory muscle use, retractions, and ability to speak only 1-2 words, grunting, tachypnea, and cyanosis.

ACTIONS:

1. Assess the patient and manage ABC's.
2. In patients with moderate to severe signs and symptoms, call for ALS backup.
3. Administer O₂ at 10-15 lpm NRB to maintain an O₂ saturation of 96%. If not tolerated, use blow-by O₂.
4. Apply pulse oximeter.
5. If patient is apneic, cyanotic, or exhibiting severe signs of respiratory distress, assist respirations with PPV.
6. Assist patient with self-administration of inhaler if signs of asthma present. Whenever possible, have patient use spacer device.
7. Initiate INT---- **ONLY AFTER** the child's need for ventilation and oxygenation has been met.
8. Contact *Medical Control*.

Considerations:

Metered-dose inhalers of short-acting Beta-agonists are helpful in acute exacerbations of reactive airway disease. Assure that the inhaler belongs to and is prescribed to the patient. The following inhalers may be given in the wheezing patient with respiratory distress:

- | | |
|------------------------|-------------------------------|
| -Albuterol | (Proventil, Ventolin, Volmax) |
| -Terbutaline | (Brethine) |
| -Meteproterenol | (Alupent, Metaprel) |
| -Pirbuterol | (Maxair) |
| -Albuterol/ipratropium | (Combivent) |

DO NOT ADMINISTER inhalers containing salmeterol (Serevent) or formoterol (Foradil) in acute respiratory distress on the basis of reactive airway disease. These medications are for chronic management ONLY and have no place in treating acute exacerbations.

Andrew Donato, MD MCO

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INTERMEDIATE PROTOCOL XIII – PEDIATRIC Altered Mental Status

GENERAL: This protocol addresses treatment of patients who present with an altered level of consciousness. Patients may experience AMS due to conditions such as trauma, syncope, hypoglycemia, infection, alcohol, overdose and seizures. The scene size-up and initial assessment should be used to rule out necessary spinal immobilization. If in doubt, any patient in which trauma cannot be ruled out, must have spinal immobilization maintained.

ACTIONS:

1. Assess the patient and manage ABC's.
2. Call for ALS Backup.
3. Administer O₂ at 10-15 lpm NRB to maintain an O₂ saturation of 96%. If not tolerated, use blow-by O₂.
4. Apply pulse oximeter.
5. If patient is apneic, cyanotic, or exhibiting severe signs of respiratory distress, assist respirations with PPV
6. Initiate INT or IV NS if hypotensive.
7. Perform BGL.
8. Move to specific protocol.

PEDIATRIC Insulin Shock

- 1. If conscious and able to swallow, oral glucose may be administered.**
- 2. Contact *Medical Control*.**

Considerations:

DO NOT ADMINISTER oral glucose in any patient who has altered mental status and may have problems protecting their airway.

PEDIATRIC Hypotension

- 1. Trendelenberg and cover patient.**
- 2. If signs of shock, administer 20 cc/kg NS bolus to a maximum of 300 cc per bolus. Reassess and repeat once if needed.**
- 3. Contact *Medical Control*.**

Considerations:

Signs of shock include diminished peripheral pulses, capillary refill > 2 seconds, altered mental status, cold and mottled extremities, severe tachypnea, and decrease urinary output. Tachycardia ALONE is a relatively nonspecific finding and AGE-SPECIFIC hypotension is a late finding.

PEDIATRIC Overdose

- 1. Request ALS back-up if patient exhibits AMS or is hemodynamically unstable (i.e. systolic BP <90 or HR < 60 or > 120).**
- 2. Administer Activated charcoal 1 gram/kg in cases of significant OD < 4 hours post-ingestion. DO NOT ADMINISTER charcoal containing sorbitol in**

Contraindications to charcoal administration include isolated ingestion of a substance known to not adsorb to activated charcoal (iron, lithium, or lead), need for endoscopy (caustic ingestions), or ingestion of a substance that may cause rapid mental status changes. Patients with potential for rapid AMS require airway protection prior to charcoal administration to prevent possible aspiration.

PEDIATRIC Seizures

- 1. Call for ALS back-up.**
- 2. Contact Medical Control.**

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Date

INTERMEDIATE PROTOCOL XIV – PEDIATRIC Heat Related Illness

GENERAL: This protocol addresses treatment of patients with heat-related signs and symptoms. Heat related illness describes a broad range of conditions from heat exhaustion to heat stroke. Heat exhaustion is a form of hypovolemic shock, which requires fluid replacement, but not rapid cooling. Heat stroke is characterized by hot, usually dry skin with AMS and requires aggressive cooling measures.

ACTIONS:

1. Assess the patient and manage ABC's.
2. If any serious symptoms (other than simple heat cramps) are present, call for ALS Backup.
3. Administer O₂ at 10-15 lpm NRB to maintain an O₂ saturation of $\geq 96\%$. If not tolerated, use blow-by O₂.
4. Apply pulse oximeter.
5. If patient is apneic, cyanotic, or exhibiting severe signs of respiratory distress, assist respirations with PPV

- 1. If signs of HEAT STROKE are present, initiate aggressive cooling measures by applying ice packs to the axilla and groin and cover the patient with cold, wet sheets.**
- 2. Initiate IV NS.**
- 3. If signs of shock are present, Trendelenberg and infuse 20 cc/kg NS to a maximum of 300 cc per bolus.**
- 4. Reassess patient and if signs of shock remain, infuse another 20 cc/kg NS to a maximum of 300 cc per bolus.**
- 5. Contact *Medical Control*.**

Considerations

None

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Date

INTERMEDIATE PROTOCOL XV – PEDIATRIC Trauma

GENERAL: This protocol addresses treatment of PEDIATRIC patients that present with signs and symptoms of significant trauma. Significant trauma should be determined by assessing the mechanism of injury as well as the signs and symptoms observed in the patient.

ACTIONS:

1. Assess the patient and manage ABC's with C-spine immobilization.
2. If patient has ANY signs of significant injury or if patient meets Level I transfer criteria, immediately call for ALS Backup.
3. Administer O₂ 10-15 lpm NRB to maintain an O₂ saturation of $\geq 96\%$. If not tolerated, use blow-by O₂.
4. Apply pulse oximeter.
5. If patient is apneic, cyanotic, or exhibiting severe signs of respiratory distress, assist respirations with PPV

1. **Initiate IV NS.**
2. **If signs of shock are present, cover, Trendelenberg and infuse 20 cc/kg NS to a maximum of 300 cc per bolus.**
3. **Reassess patient and if signs of shock remain, infuse another 20 cc/kg NS to a maximum of 300 cc per bolus.**
4. **A second IV NS may be initiated if necessary and time permits.**
5. **Contact *Medical Control*.**

Considerations

Airway management is the first priority. Trauma patients whose condition dictates transport to the Trauma Center should be diverted to the closest facility for airway intervention before completing transport if adequate airway support cannot be provided. An adequate airway is defined as any method that provides airway patency, (i.e. jaw-thrust, OPA, NPA, LMA, etc.).

In head injuries, assess BGL.

IV therapy must be initiated with the largest bore catheter possible.

Patients that have sustained any of the following will prompt immediate call for ALS backup and be transported directly to the Level 1 Trauma Center at Palmetto Health Richland:

- a. Multiple trauma with trauma scores of ≤ 10
- b. Traumatic head injuries with a Glasgow Trauma Score (GCS) ≤ 12
- c. Amputation proximal to the wrist or ankle
- d. Obvious signs of injury and are ≤ 12 years of age
- e. Penetrating thoracoabdominal trauma
- f. Signs of hemodynamic instability (Tachycardia > 120 , Tachypnea > 25 , or hypotension with Systolic BP < 90) and any of the modifiers listed in Protocol General Statement#1.

Andrew Donato, MD MCO

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INTERMEDIATE PROTOCOL XVI – PEDIATRIC Burns

GENERAL: This protocol addresses treatment of PEDIATRIC patients that present with significant burns. Always assess the depth and extent of the burn injury.

ACTIONS:

1. Immobilize the spine as determined by the Spinal Immobilization Protocol.
2. Assess the patient and manage ABC's.
3. Call for ALS Backup per above criteria.
4. Administer O₂ 10-15 lpm NRB.
5. Apply pulse oximeter.
6. If patient is apneic, cyanotic, or exhibiting severe signs of respiratory distress, assist respirations with PPV

- 1. Initiate IV NS.**
- 2. If systolic signs of shock exist, cover, Trendelenberg and infuse 20 cc/kg NS to a maximum of 300 cc per bolus.**
- 3. Reassess patient and if signs of shock remain, infuse another 20 cc/kg NS to a maximum of 300 cc per bolus.**
- 4. A second IV NS may be initiated if necessary and time permits.**
- 5. If 1st or 2nd degree burns are present <20% BSA, apply Burn Dressings.**
- 6. If 1st, 2nd degree burns >20% or 3rd degree burn, apply dry dressings or sterile burn sheets.**
- 7. Contact *Medical Control*.**

Considerations:

Airway management is the first priority. Always assess for signs of potential airway injury, such as facial burns, singed nasal hairs, carbonaceous sputum, hoarseness/stridor, or drooling. An adequate airway is defined as any method that provides airway patency, (i.e. jaw-thrust, OPA, NPA, LMA, etc.).

Stop the burning process. Extinguish any flames on patient; remove smoldering clothing, and any constricting jewelry. Leave any clothing that is melted to the skin by cutting around it.

IV therapy must be initiated with the largest bore catheter possible.

A complete list of criteria for burn center referral is in Appendix A. The following is an abbreviated listing of those criteria that are appropriate for consideration of helicopter transport from the field to the burn center:

- a. Third degree burns greater than 5% BSA (body surface area) in any age group;
- b. Second and third degree burns greater than 10% BSA of patients under 10 or over 50;
- c. Second and third degree burns greater than 20% in other age groups;
- d. Second and third degree burns involving the face, hands, feet, genitalia, perineum, and major joints.

The remaining criteria not found here are more appropriate for evaluation of hospital-to-hospital transfer.

In cases of serious carbon monoxide poisoning, contact Medical Control to determine if the patient should be transported to Palmetto Richland for access to the hyperbaric chamber. Symptoms include AMS or near-syncope, significant confusion, seizures, respiratory distress/failure, hypotension, severe chest pain, or cardiac arrest. Consideration for transfer should also be given to pregnant patients with significant exposure.

Andrew Donato, MD MCO

Date

PROTOCOL XVII – General Protocol Guidelines for Intermediates

GENERAL: The following is a detailed explanation of several statements that are contained in the majority of your protocols. The first five “actions” are essentially the same throughout all of the protocols. The statements are kept brief in the actual protocols to keep the format more easily readable in an emergency setting. The following will more fully explain what is expected from each action.

1. Assess the patient and manage the ABC’s.
 - Evaluate the patency of the airway and manage with basic maneuvers as indicated—jaw thrust, OPA, NPA, etc.
 - Evaluate ventilatory rate and effort for adequacy and manage as indicated—supplemental O₂, assist respirations with BVM/PPV and OPA or NPA, LMA and ETT as necessary.
 - Basic airway assessment and management are skills that must be mastered by all Intermediates. An individualized systematic approach must be developed. When in doubt, err on the side of aggressive management.
2. Call for ALS Backup.
 - Self-explanatory but needs to be done and documented as specified in each protocol.
3. Administer O₂ at “rate specified” “to maintain a saturation of $\geq 96\%$, unless ...”
 - Many protocols will specify O₂ delivery system and rate. If not specified, the Intermediate will decide between O₂ at 4-6 lpm NC or 10-15 lpm NRB based on their patient assessment. When in doubt, use a NRB.
 - Patients on home O₂ or with a history of COPD should receive the lowest flow rates of O₂ that will maintain a saturation of $> 90\%$, even if specific protocol calls for a higher flow rate.
4. Apply pulse oximeter.
 - Self-explanatory but needs to be done and documented.
5. Initiate IV NS.
 - All patients with urgent/emergent conditions require an IV NS at either KVO rate or with fluid boluses as indicated. Reserve INT for stable patients who require access, but not fluid therapy (e.g.: hypoglycemia, seizure, etc.). The Intermediate may elect to start INT instead of IV NS in any patient where it is felt there will be no need for fluid therapy.
 - In all patients, if BP, 90, administer 300cc bolus NS or 20cc/kg for children. Repeat for one additional 300cc bolus as needed to keep BP > 90 .
 - Initiate fluid therapy cautiously in patients with CHF, renal insufficiency or failure, dialysis patients, and in children.

Andrew Donato, MD MCO

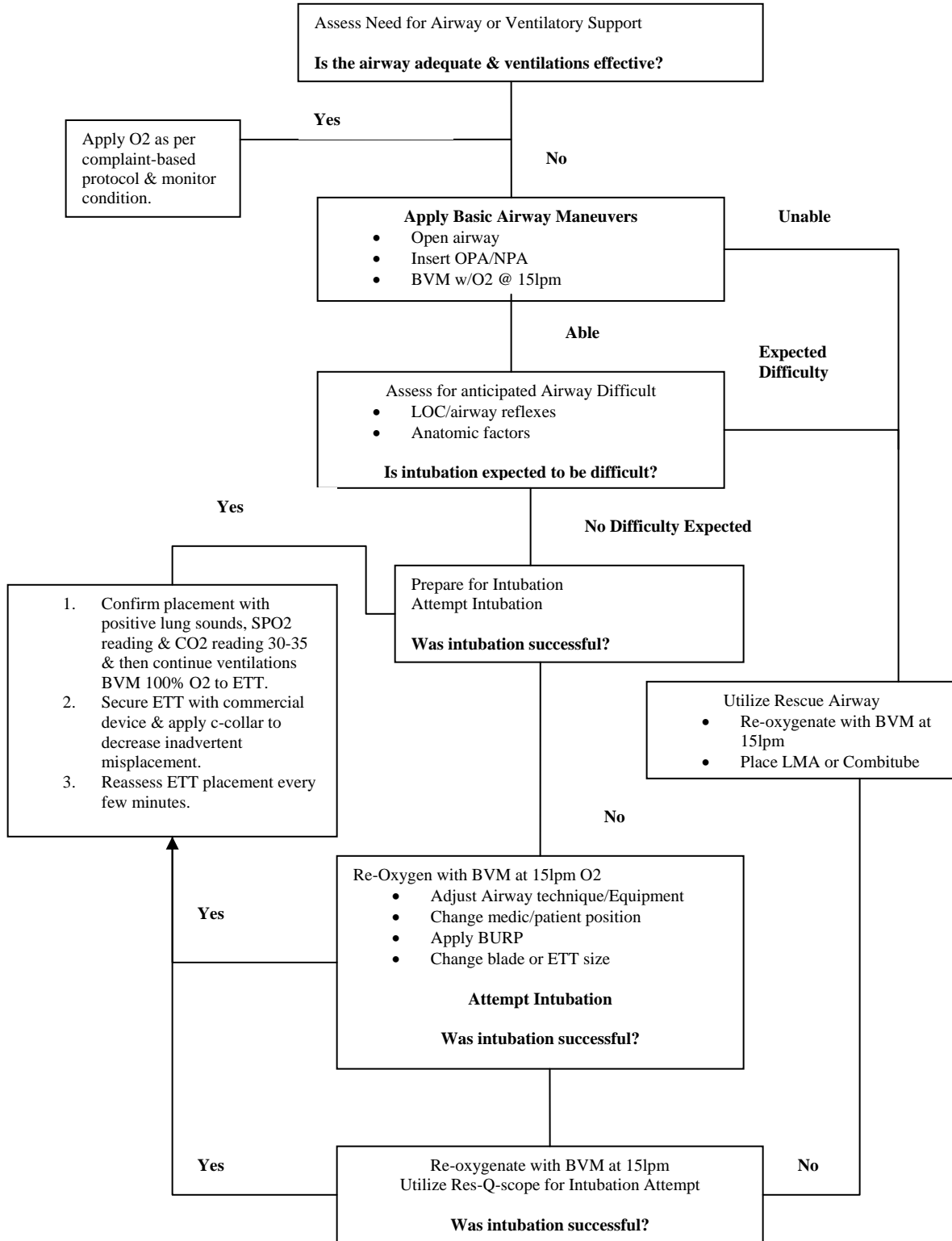
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PROTOCOL XVIII – AIRWAY MANAGEMENT

GENERAL: This protocol addresses treatment of patients who present with airway or ventilatory compromise or potential airway or ventilatory insufficiency.

Considerations:

- Assessment of difficult airway traits should include the following:
 - Level of Consciousness and protective airway reflexes
 - Patient awake or combative
 - Intact gag reflex
 - Presence of trismus or teeth clenching
 - Anatomic factors
 - Obesity
 - Short neck
 - Facial or airway trauma
 - Overbite/underbite
 - Anterior vocal cords
 - Large epiglottis
 - Poor neck flexibility
 - Small mouth or limited mouth opening
 - Mallampati score
 - Environmental/other factors
 - Confined or restricted space
 - Cervical spine immobilization
 - Vomitus/blood in airway
 - Entrapment
 - Epistaxis
 - Foreign body in airway
- The following subsets of patients should be considered to have a need for airway management or ventilatory support:
 - Any patient who is apneic or who has agonal respirations (<8 breaths/min).
 - Any patient with compromised airway reflexes in spite of adequate ventilatory effort (eg.: unresponsive pt without gag reflex).
 - Any patient with compromised ventilatory effort in spite of intact airway reflexes (eg.: pulmonary edema)
 - Any patient with adequate ventilatory effort and intact airway reflexes, but potential for compromise due to disease course (eg.: closed head injury, burns with airway involvement, anaphylaxis).
- The goal of definitive airway management (intubation) is rapid correct placement of endotracheal tube in an effort to avoid the risk of hypoxia while concurrently minimizing the chance for aspiration. During intubation attempts the patient's SPO2 reading should be monitored and if SPO2 reading begins to fall or attempt is greater than 30 seconds, then attempt should be stopped and patient re-oxygenated with BVM & 100% O2.
- If at any time a provider feels that intubation will be unsuccessful due to anatomical difficulties or patient conditions then they should immediately utilize an alternative airway as a primary means for airway management.
- Any patient who needs ventilatory support with BVM should receive a definitive airway (i.e. ETT, Combitube or LMA). OPA & BVM should only be utilized as a temporary airway & ventilatory management unless all other definitive airway management has failed.
- It is imperative that the provider assess and document the effectiveness of airway and ventilatory management. The provider will assess and document the following signs of effective airway and ventilator support:
 - Presence or absence of lung sounds and epigastric sounds.
 - CO2 reading.
 - SPO2 reading.
 - Presence or absence of chest rise & fall with ventilations.



Andrew Donato, MD
Medical Control Officer

Date

PROTOCOL XIX – Documentation

GENERAL: This protocol provides EMS personnel with guidance in the documentation of the patient care report. The Patient Care Report (PCR) is a medical and legal document used by personnel to record a variety of data concerning the patient's current illness or injury, treatment rendered by the EMS provider, subsequent improvement or worsening of the patient's condition, past medical history and patient billing information.

The PCR and the Patient Transfer Form (LCF 529) must be completed for each patient treated or transported by Lexington County EMS, the completed Patient Transfer Form (LCF 529) white copy should be left with the receiving facility at the time of patient delivery. This ensures continuity of patient care by making available to the ED a detailed, accurate record of the patient's prehospital condition, treatment and response to the treatment provided.

The following guidelines should be used:

- Correct spelling is essential
- Use only standard abbreviations
- Describe the patient's condition, treatment rendered, and improvement or worsening of the patient's condition relative to the treatment given in as much detail as possible
- Statements contained in the narrative must be objective or state only known facts or observations

All PCR Narratives must include the following:

1. Chief Complaint (CC) – This is the reason the patient or bystander called EMS or most life-threatening condition.
2. History of Present Illness (HPI) – Includes all pertinent information related to the patient's chief complaint. This includes OPQRSTI.
3. Past Medical History (PMH)(Hx) – Relative medical history
4. Medications (Meds) – Note any prescription medications or OTC medications related to their condition
5. Allergies (ALL) – List all known allergies
6. Physical Exam (PE) – Document the patient's level of consciousness, general appearance, signs and symptoms, pertinent negatives and any other physical findings (HEENT, Neck, Chest, Lungs, Lung Sounds, Abdomen, Extremities and Neurological Exam)
7. Treatment (Rx) – Anything and everything that you do to the patient and the patient's response. This should be a linear recounting of what you did in the order you did it and anything that occurred that caused you to deviate from the standard of care and why.

Andrew Donato, MD MCO

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PROTOCOL XX –Refusal of Treatment or Transport

GENERAL: This protocol provides EMS personnel with guidance in the management of situations in which patient's do not provide consent to treat or transport. More detailed information is outlined in the No Transport Situations Standard Operating Procedure.

EMS personnel must approach every call for assistance with the attitude that they are there to transport the patient. Personnel must approach all patients with the attitude of "To which hospital do you want to be transported". Personnel must not indicate in any way that the patient should not be transported.

When a patient declines any treatments or transport, every effort should be made to advise the patient of the need for the treatments and transport. Under no circumstances should a patient be advised that not receiving treatments or being transported is a wise decision.

A. Assess Mental Capacity

Mental capacity addresses whether the patient has any condition, such as intoxication, dementia, Alzheimer's, or even a traumatically or medically induced condition, such as hypoxia, head injury, or hypoglycemia, which can affect their mental status. To be mentally competent, a person should generally be alert and oriented to person, place, time and the event (CAOx4).

B. Advise Patient

Advise the patient of their condition. Your patient's decision to refuse care must be a conscious one made with all of the information that a reasonable person would find important to the decision-making process. You should inform the patient of the potential consequences of their refusal, including, if appropriate, the possibility of death or long-term disability. You should also advise them of alternatives available, to include recalling 911 if they reconsider. Whenever possible, involve family in the decision-making process.

C. Ensure Understanding

Ensure that the patient understands your advice. Ask them to repeat the information back to you. Their refusal must be knowing and voluntary. Make several attempts at getting them to consent.

D. Document

As a minimum, your documentation should include:

1. A history of the event
2. A description of the patient and the scene as you found them
3. Chief Complaint, signs and symptoms, vital signs
4. Specific words used by the patient to indicate understanding
5. Specific consequences of which you informed the patient
6. Instructions given to the patient in the event of persistent or worsening symptoms
7. The patient's or guardian's signature

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Date

PROTOCOL XXI – Treatment of Impaired / Suicidal / Homicidal Patients

GENERAL: This protocol provides EMS personnel with guidance in the management of situations in which the patient’s judgment is impaired to the extent that they are incapable of making medical decisions on their own.

Any person who has demonstrated any suspicious or obvious suicidal ideation (e.g., talks of suicide, or indirectly talks of suicide “the world would be a better place without me,” etc.), has made a suicidal threat, or has demonstrated self-destructive behavior. Any patient that demonstrates suicidal or homicidal intentions or gestures is not capable of making medical decisions for themselves. Patients, who have voiced threats of harm to themselves or others, no matter how minor, are not competent to make decisions regarding their care and must be transported regardless of their refusal of care. These threats or gestures do not have to be witnessed by the crew.

Any patient, who exhibits signs of alcohol or drug intoxication to the degree that their ability to make medical decisions for themselves is impaired, must be transported regardless of their refusal of care.

If there is any concern about the situation, you must contact the Shift Supervisor or On-line Medical Control.

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PROTOCOL XXII – Spinal Immobilization

GENERAL: This protocol provides EMS personnel with guidance in the management of situations in which spinal immobilization may not be a necessary treatment.

The evaluation of a suspected spine injured patient begins with the scene size-up and mechanism of injury. In the event that a survey of the scene indicates that the forces involved are significant enough to cause potential spinal injuries, the patient must be placed in spinal precautions. These mechanisms include, but are not limited to:

- High speed vehicle crashes
- Falls greater than 10 feet
- Cranial facial injuries
- Selected penetrating wounds with possible spinal involvement

The next most important factor in the assessment of spinal injury is the patient history. An injured patient must be calm, cooperative, sober, and alert before spinal injury clearance can take place. If the patient is deemed reliable, medical providers should proceed to the physical examination and assessment for distracting injuries. Factors, which make an exam of a patient unreliable, include:

- Acute stress reaction
- Head injury
- Intoxication
- Abnormal mental status
- Communication barrier
- Distracting injuries

Distracting injury has been recognized as a critical component in the spinal injury assessment. Distraction injuries may include any injury that produces clinically apparent pain that might distract the patient from the pain of a spine injury. Distracting injuries may include, but not be limited to, head injury; upper or lower back pain, chest pain, abdominal or pelvic pain, and extremity trauma. If any significantly distracting injury is believed to be present, the patient must be immobilized.

The prehospital assessment of tenderness should include, but not be limited to, the palpation of the posterior midline spine. Any abnormal physical examination finding(s) indicate a need for spinal immobilization.

The next part of the examination should include assessment of motor and sensory deficits from spine injury. Any abnormal neurological examination finding(s) indicate a need for spinal immobilization.

If none of the Clinical Criteria for spinal immobilization are present, immobilization is not required.

In the event that personnel are in doubt as to whether a patient needs spinal immobilization, the patient must be immobilized.

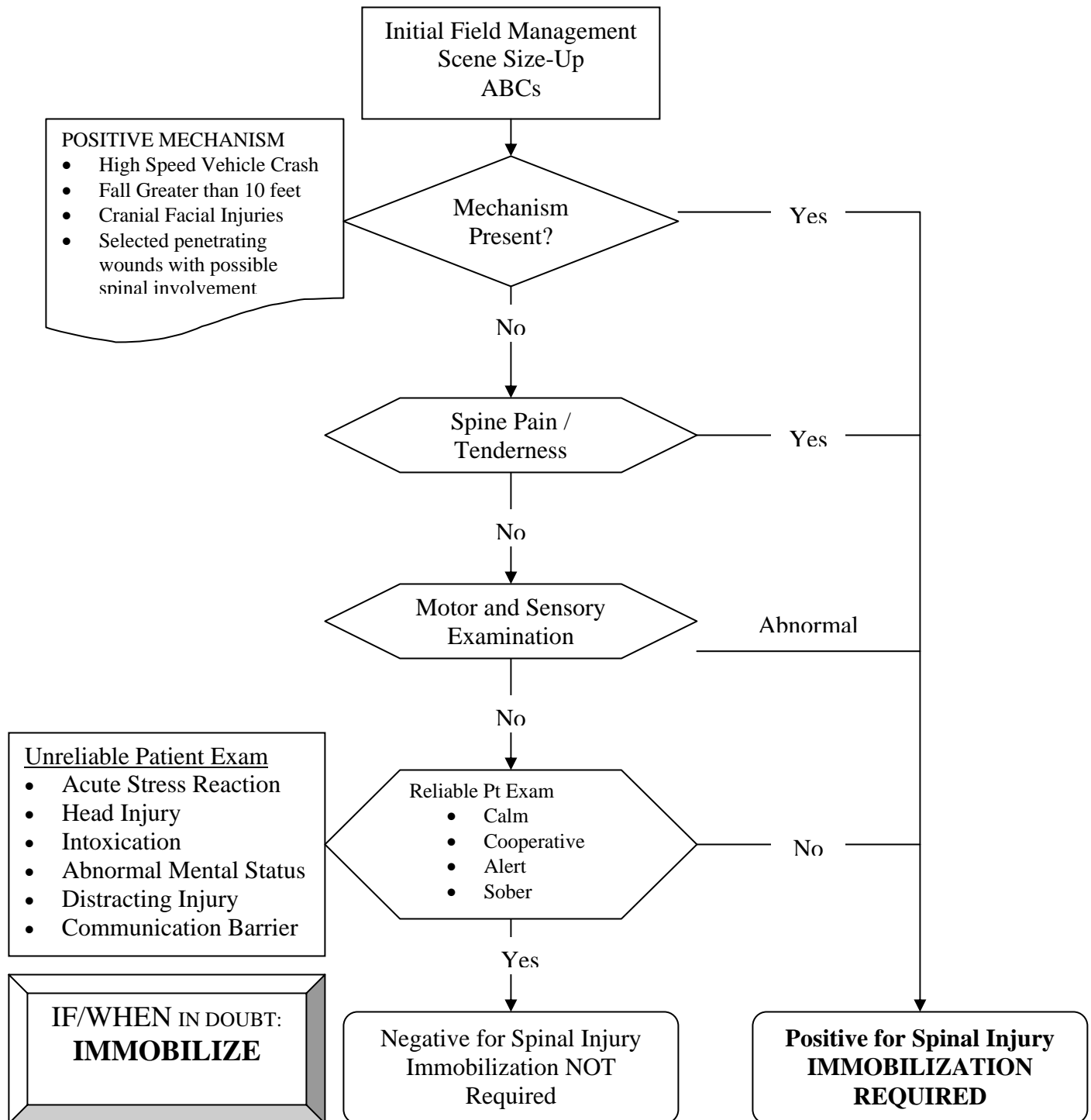
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PROTOCOL XXII – Spinal Immobilization (Continued)

Spinal Immobilization Protocol

Clinical Criteria for Initial Assessment of Spinal Injury



Andrew Donato, MD MCO

Date

PROTOCOL XXIII – Patient Restraint

GENERAL: This protocol addresses treatment of patients who present a danger to themselves or others. Under normal circumstances, EMS personnel should not attempt to restrain a violent patient without assistance from Law enforcement. However, EMS personnel may physically restrain any patient who presents a significant danger to themselves or others. An attempt at verbal de-escalation must be attempted first.

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

1. Get assistance from law enforcement as soon as possible. If available, get the law enforcement officer to accompany the patient in the back of the ambulance.
2. Soft wrist and ankle restraints along with cravats or folded sheets are the only materials authorized for use by EMS personnel. Reeves Sleeves will not be used to restrain personnel unless extremity restraints are also used. Hard restraints, such as handcuffs, should be avoided unless law enforcement personnel are immediately available and they are applied in such a way that ALS procedures may be performed.
3. Use techniques that will cause no injury to the patient (i.e. the minimum amount of force possible and 5 personnel should be used to secure the restraints).
4. Caution should be used to not restrict the respiratory efforts of the patient. Patients will not be transported in the prone position.
5. Pulse, movement, sensation, capillary refill and pulse oximetry will be checked frequently following the application of restraints to assure distal circulation and proper oxygenation.
6. Contact the receiving medical facility as soon as possible and advise them of the specifics of the situation and the reason for the restraints.
7. Prehospital personnel must consider that aggressive or violent behavior may be a symptom of a medical condition, such as head injury, alcohol or drug intoxication, metabolic disorders, and psychiatric disorders. Standing Orders shall be implemented as needed.
8. Document all pertinent details including:
 - a. Assessment
 - b. Reason for restraint
 - c. Specific restraint procedures, including attempts to de-escalate the situation
 - d. Frequency of reassessment
 - e. Care during transport
 - f. Signatures of witnesses if possible.

Considerations:

All patients should be continuously monitored for changes in/but not limited to: Level of Consciousness, airway (compromise), respiration (pattern and rate) and circulation (central and distal) before and after application. If changes in the patient's condition occur the need for the restraints will be reevaluated and removed immediately if they are no longer considered essential or negatively impacting patient care (condition).

Andrew Donato, MD MCO

Date

PROTOCOL XXIV – Death in the Field

GENERAL: This protocol addresses the issue of determining the need for resuscitation in patients with no signs of life. The goal is to provide EMS personnel with definitive criteria for field death pronouncement.

ACTIONS:

1. Assess patient and establish the absence of spontaneous respirations and circulation.
2. Patient may be pronounced according to the following:

WITHOLDING RESUSCITATION---Resuscitation need **NOT** be attempted in patients in whom any of the following are met:

- Massive traumatic injury, such as decapitation, incineration, severe skull crushing injury, etc.
- Rigor mortis, profound lividity, or bodily decomposition.
- Patient already pronounced by medical examiner, coroner, or physician licensed to practice in SC.
- A valid DNR order is present.

DISCONTINUING RESUSCITATION---Once resuscitation has been initiated, it will continue until one of the following is met:

- Effective spontaneous circulation and respirations are restored.
- Resuscitation efforts are transferred to providers of at least equal skill level.
- Staff is physically unable to continue resuscitation efforts.
- On-line medical control or on-scene physician issues an order to discontinue efforts.
- A valid DNR order is presented to crew after efforts initiated.

*****Resuscitation efforts may be terminated ONLY via on-line medical control once efforts are initiated. An exception to this is cases where bystander CPR is in progress but determined to be ineffective by the paramedic AND patient shows no signs of life or potential for resuscitation.**

*****The above protocols apply ONLY to patients who present with asystole. All other arrest rhythms should receive ACLS intervention unless countermanded by valid DNR order or by on-line medical control.**

3. If above criteria is not met, initiate CPR and utilize appropriate arrest protocol.

CONSIDERATIONS:

If termination of efforts occurs BEFORE patient is placed in the unit, this is considered the same as if the patient were found dead at the scene. If termination of efforts occurs AFTER the patient is placed in the unit, then patient will be transported to the facility from which the termination order originated.

After on-scene pronouncement, EMS may leave the scene upon arrival of the appropriate law enforcement, coroner, or as advised by the shift supervisor.

Always secure a copy of the valid DNR order, especially in cases where resuscitation efforts are withheld or withdrawn on the basis of this order.

Andrew Donato, MD MCO

Date

PROTOCOL XXV – Alternate Transport Protocol

GENERAL: This protocol delineates a population of patients that may be transported to Lexington Medical Center Urgent Care Facility in Irmo or Lexington community instead of a hospital in situations where the Urgent Care transport will significantly expedite the return of that unit to service.

ACTIONS:

1. The Crew Chief must evaluate the patient and determine that evaluation and treatment can be done at the LMC Urgent Care Facilities
2. The crew discusses the option of transport and obtains consent from the patient to be transported to a LMC Urgent Care Facility
3. The transport is handled as though it were a transport to Lexington Medical Center. Which includes a detailed radio report to the receiving Lexington Medical Center Urgent Care facility
4. Proper documentation is completed. Copy of Patient Care Report should be left at the receiving facility.

Andrew Donato, MD MCO

Date

PROTOCOL XXV– Alternate Transport Protocol (Continued)**Alternate Transport Criteria****CRITERIA:**

1. Extremity injury without neurovascular compromise or deformity.
2. MVC with low risk of injury and stable vital signs.
3. Superficial lacerations with hemostasis.
4. Respiratory infection without tachypnea or respiratory compromise.
5. Dermatologic symptoms/signs without co-morbid condition.
6. Febrile illness 3 months of age or greater who appears in no acute distress with other noted symptoms i.e. earache, sore throat, cold symptoms, etc
7. Minor dental complaints.
8. Headache with history of same without neurologic signs or symptoms.
9. Asthma with no other signs of respiratory distress and a room air saturation greater than 94 %.

Exclusions:

1. Patients less than 3 months or greater than 80 years of age.
2. Cardiac related chest pain.
3. Chief complaint of abdominal pain.
4. Altered mental status such as CVA symptoms, seizures or head injuries.
5. Patients requiring medications other than inhalation therapy.
6. Mental health
7. Intoxication / drug overdose
8. Any trauma patient with RTS less than 12 or significant mechanism for injury.
9. Pregnant patients with abdominal pain or vaginal bleeding.
10. Pregnant patients of 16 weeks or greater gestation.
11. Suspected hip/femur fractures as evidenced by shortening or rotation of the extremity
12. Extremity injuries with obvious deformity or dislocation
13. Patients with multiple complaints and /or a chief complaint related to a known medical history such as CHF, COPD, Diabetes, CAD etc ...
14. After 9:00 pm

DIVERSION:

1. Wait times such that it could cause unnecessary delays in patient care.
2. Equipment / services not available i.e. CT, lab etc ...
3. Staffing concerns.

Diversion will be a decision made between the lead (zone 1) physician and the coordinator / charge nurse. The Urgent Care director will be notified and then the Lexington Co. EMS supervisor will be notified (600-0509). The EMS supervisor will be updated every 2 hours with the status of the diversion.

Andrew Donato, MD MCO

Date

APPENDIX A
Burn Center Criteria

Criteria for injuries requiring referral to a burn center as established by the American Burn Association

1. Partial thickness burns greater than 10% total body surface area (TBSA).
2. Burns that involve the face, hands, feet, genitalia, perineum, or major joints - Circumferential burns of the extremities and/or chest. *
3. Third-degree burns in any age group.
4. Electrical burns, including lightning injury.
5. Chemical burns.
6. Inhalation injury.
7. Burn injury in patients with preexisting medical disorders that could complicate management, prolong recovery, or affect mortality.
8. Any patients with burns and concomitant trauma (such as fractures) in which the burn injury poses the greatest risk of morbidity or mortality. In such cases, if the trauma poses the greater immediate risk, the patient may be initially stabilized in a trauma center before being transferred to a burn unit. Physician judgment will be necessary in such situations and should be in concert with the regional medical control plan and triage protocols.

*Circumferential burns are the recommendation of Doctors Hospital in Augusta Georgia and not currently listed in the American Burn Association Referral Criteria.

Andrew Donato, MD MCO

Date

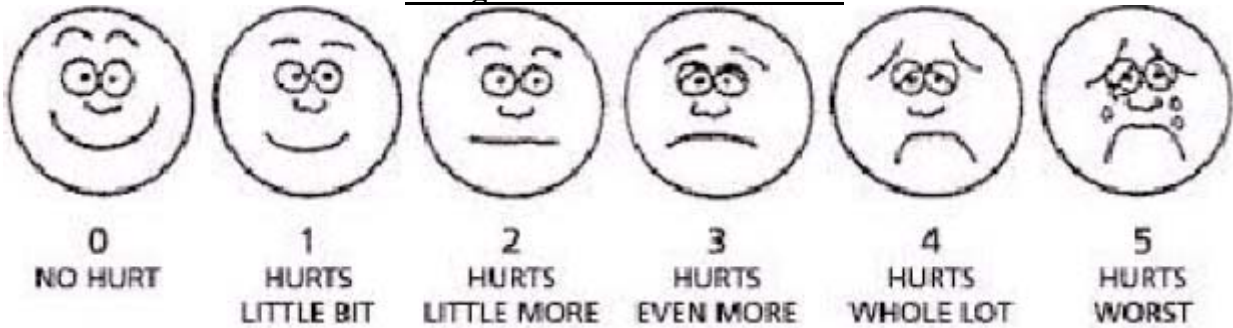
APPENDIX B**Pediatric measurements****Age Adjusted Vital Signs and Equipment Sizes**

Age	Length (cm)	Weight (Kg)	Avg. SBP	Normal Pulse	Normal Resp.	ET Tube Size	Blade Size
Pre-Term	0-53 cm	< 2.5	-	120-170	40-60	2.5-3.0 Uncuffed	0
Term NB	54-58 cm	2.5-4.0	60-70	100-170	40-60	3.0-3.5 Uncuffed	1
3 Months	59-65 cm	6	70-80	100-170	30-50	3.5 Uncuffed	1
6 Months	66-74 cm	8	80-100	100-170	30-50	3.5-4.0 Uncuffed	1
1 Year	75-86 cm	10	80-100	100-170	30-40	4.0-4.5 Uncuffed	1-2
2 Years	75-86 cm	12	94	100-160	20-30	4.5 Uncuffed	2
4 Years	87-99 cm	16	98	80-130	20-28	5.0 Either	2
6 Years	100-113 cm	20	102	70-115	20-28	5.5 Either	2
8 Years	114-132 cm	25	106	70-110	16-24	6.0 Cuffed	2-3
10 Years	133-158 cm	34	110	60-105	16-24	6.5 Cuffed	2-3
12 Years	159-189 cm	41	114	60-100	16-24	7.0 Cuffed	3
Normal SBP = $90 + (2 \times \text{age in years})$ Minimum SBP = $70 + (2 \times \text{age in years})$							

APPENDIX C

Pediatric Assessment Aids

Wong-Baker FACES Pain Scale



Instructions

Explain to the patient that each face is for a person who feels happy because they have no pain (hurt) or sad because they have some or a lot of pain.

Face 0 is very happy because they do not hurt at all

Face 1 hurts just a little bit

Face 2 hurts a little more

Face 3 hurts even more

Face 4 hurts a whole lot more

Face 5 hurts as much as you can imagine, although you do not have to be crying to feel this bad

Ask the patient to choose the face that best describes how he/she is feeling

Apgar Scale (evaluate @ 1 and 5 minutes postpartum)				
	Sign	2	1	0
A	Activity (muscle tone)	Active	Arms and legs flexed	Absent
P	Pulse	>100 bpm	<100 bpm	Absent
G	Grimace (reflex irritability)	Sneezes, coughs, pulls away	Grimaces	No response
A	Appearance (skin color)	Normal over entire body	Normal except extremities	Cyanotic or pale all over
R	Respirations	Good, crying	Slow, irregular	Absent

PEDIATRIC ASSESSMENT AIDS (CONTINUED) Glasgow Coma Scale		
ADULT/CHILD		INFANT
Eye opening	E	Eye opening

APPENDIX

Spontaneous	4	Spontaneous
To speech	3	To speech
To pain	2	To pain
No response	1	No response
Best motor response	M	Best motor response
Obeys verbal command	6	Normal movements
Localizes pain	5	Localizes pain
Flexion - withdraws from pain	4	Withdraws from pain
Flexion - abnormal	3	Flexion - abnormal
Extension	2	Extension
No response	1	No response
Best verbal response	V	Best verbal response
Oriented and converses	5	Coos, babbles
Disoriented and converses	4	Cries but consolable
Inappropriate words	3	Persistently irritable
Incomprehensible sounds	2	Grunts to pain/restless
No response	1	No response
<p>E + M + V = 3 to 15 90% less than or equal to 8 are in coma Greater than or equal to 9 not in coma 8 is the critical score Less than or equal to 8 at 6 hours - 50% die 9-11 = moderate severity Greater than or equal to 12 = minor injury Coma is defined as not opening eyes, not obeying commands, and not uttering understandable words.</p>		