Lowndes County Fire Rescue

Procedural Protocols

Effective _____, ____

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RESPONSIBILITIES OF PREHOSPITAL PATIENT CARE PROVIDERS AND THE COORDINATION OF EMS RESOURCES AT A SCENE

The provision of patient care is a responsibility given to certified and/or licensed individuals who have completed a medical training and evaluation program specified by the State of Georgia Department of Health and Human Resources. Pre-hospital providers are required to practice to the standards of the certifying agency (DHR) and the protocols set forth and agreed to by the Lowndes County Medical Director within this manual.

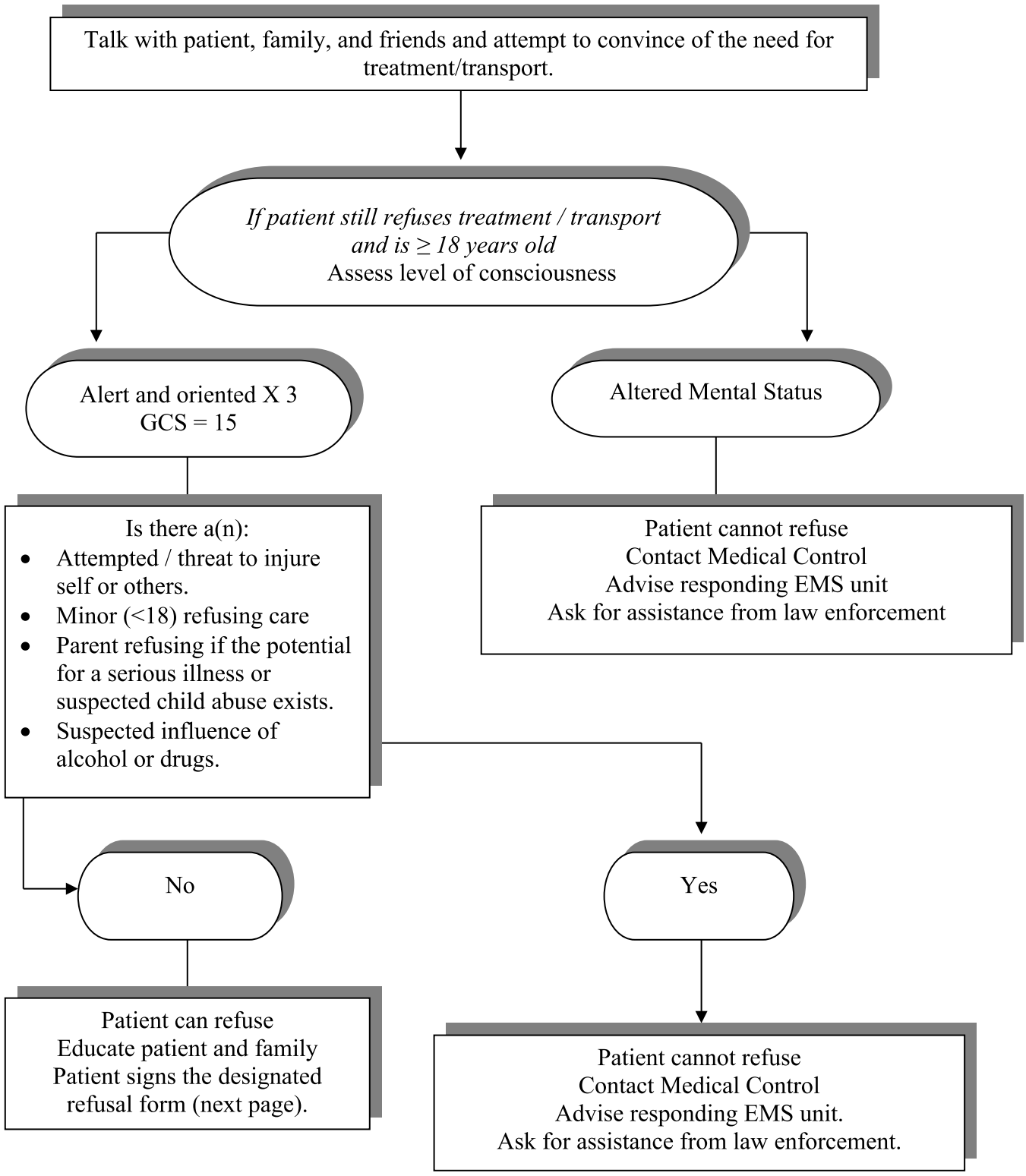
Patient care takes place in many settings, some of which are hazardous or dangerous. The equipment and techniques used in these situations are the responsibility of locally designated, specially trained and qualified personnel. Emergency incident scenes may be under the control of designated incident commanders who are not emergency care providers. These individuals are generally responsible for scene administration, safe entry to a scene or decontamination of patients or responders. When access to a scene is restricted because of safety concerns or other limitations, **medical direction of patient care by certified medical personnel is essential.** This can be provided by trained responders using appropriate personal protective equipment or by communicating instruction to those responders moving or extricating the patient.

STATEMENT OF POLICY

Pursuant to the provisions of public health law, the individual having the highest level of pre-hospital certification and is responding with authority, "has a duty to act" and therefore is responsible for providing and/or directing emergency medical care and the transportation of a patient. Such care and direction shall be in accordance with all State of Georgia standards of training, applicable State and regional protocols and may be provided under direct Medical Control.

The Federal Emergency Management Agency (FEMA) has established the National Interagency Incident Management System (NIIMS) as the standard command and control system for emergency operations. The Incident Command system (ICS) does not define who is in charge, rather it defines an operational framework to manage many types of emergency situation. One essential component of ICS is Unified Command. Unified command is used to manage situations involving multiple jurisdictions, multiple agencies, or multiple technical needs. The specific issues of the directions and provision of patient care and the associated communications among responders must be integrated into each single or unified command structure and be assigned to the appropriately trained personnel to carry out.

PATIENT REFUSALS AGAINST MEDICAL ADVICE



WITHOLDING OR TERMINATION OF RESUCITATION

In all situations where any possibility of life exists, make every effort to resuscitate. ***DO NOT TERMINATE*** resuscitation efforts if:

- Patient is under age 18.
- Patient is visibly pregnant.
- Arrest may be due to hypothermia, drug overdose, toxins, or electrocution.
- Any ROSC or neurologic signs.

DO NOT INITIATE resuscitation if:

- Obvious death in the field: absence of vital signs and any of the following:
    - Decapitation
    - Decomposition
    - Rigor mortis
    - Dependent lividity
    - Incineration
    - Visual massive trauma to brain or heart, incompatible with life.
- Valid DNR order

DNR Orders and Other Advanced Directives:

- Advanced Directives and Living Wills are addressed in State Code: OCGA Chapter 32 Title 31.
- If a family member does not want the DNR Order to be honored, continue care until EMS arrival.
- If medics are advised that the patient has an existing DNR Order, but the document **IS NOT PRESENT AT THE SCENE**, initiate CPR.
- If presented with a document other than a valid DNR Order, such as a Living Will or Durable Power of Attorney, which appears to be an Advanced Directive, regarding resuscitation, initiate BLS until EMS arrives or is contacted for guidance.

CRIME SCENE OPERATIONS

If you believe a crime has been committed, immediately contact law enforcement. Scene safety is paramount. Protect yourself and other EMS personnel. Once a crime scene is deemed safe by law enforcement, initiate patient contact and medical care.

- Do not touch or move anything at a crime scene unless it is necessary to do so for patient care.
- Have all EMS providers use the same path of entry and exit.
- Do not walk through fluids on the floor.
- Observe and document original location of items moved by crew.
- When removing patient clothing, leave it intact as much as possible.
- Do not cut through clothing holes made by gunshot or stabbing.
- If you remove any items from the scene, such as impaled objects or medication bottles, document your actions and advise investigating officers.
- Do not sacrifice patient care to preserve evidence.
- Do not go through the patient's personal effects.
- If the patient is obviously dead, contact the responding EMS Squad and advise for directions to withhold resuscitative measures, and do not touch the body.

DOCUMENTATION

Documentation information becomes the legal record of a patient's history and treatment by pre-hospital personnel. It may be used as defense or prosecution if an EMS provider is charged with medical negligence. All narratives must be in CHART form using the templates within ImageTrend.

For every patient contact where the Fire Department makes initial patient contact, the following must be documented in the CHART format in the "Additional Narrative" section on the ImageTrend Fire Incident Report:

- A clear history of the present illness, including chief complaint, time of onset, associated complaints, pertinent negatives, and mechanism of injury.
- A complete physical exam appropriate for the emergency condition.
- Level of consciousness using the AVPU method.
- At least one complete set of vital signs. A complete listing of treatments performed in chronological order.
- For extremity injuries, neurovascular status must be noted before and after immobilization.
- For potential spinal injuries, document motor function before and after immobilization.
- Vitals will be documented every 5 minutes for critical patients and every 15 minutes for non-critical patients.
- Documentation of what EMS Squad patient care was turned over to.

Supporting laws and legal documentation can be found in:
O.C.G.A. § 19-7-5, O.C.G.A. § 31-8-82, O.C.G.A. § 30-5-4

SUSPECTED ABUSE

All healthcare providers are obligated by law to report cases of suspected child, elder, or vulnerable adult abuse.

Report all alleged or suspected abuse or neglect to the appropriate agency. Georgia Code requires providers to report incidents of abuse to their county's public children services agency or a municipal or county peace officer.

Simply notifying hospital personnel about concerns of maltreatment do not meet mandated EMS reporting responsibilities. If any maltreatment is suspected, the EMS provider MUST, by law, notify the local public children services agency or law enforcement as soon as possible.

Physical abuse and neglect is often difficult to determine - the following are indicators of possible abuse:

- Injuries scattered on many areas of the body.
- Malnutrition or lack of cleanliness.
- Any fracture in an child under 2 years of age.
- Injuries in various stages of healing.
- More injuries than are usually seen in other children of the same age.

Initial Management:

- DO NOT confront or become hostile to the parent or caregiver.
- Treat any obvious injuries.
- In cases of suspected sexual abuse or assault:
    - Discourage patient from washing and/or using the restroom.
    - If the child/patient has not changed clothes, transport patient in these clothes.
    - If clothes have been removed but unwashed, bring clothes and underwear with patient in a paper (not plastic) bag.
    - Do not delay transport to search for evidence.

Reporting:

- Report your suspicions to the responding EMS crew.
- Notify the local public children services agency or law enforcement as soon as possible. **You are legally responsible reporting your suspicions.**
- **DO NOT** initiate the report in front of the patient or caregiver.

Documentation:

- Document any statement the child/patient makes in their own words.
- All verbatim statements made by the patient, the parent, or caregiver should be placed in quotation marks.
- Document unexplained injuries, discrepant history, delays in seeking medical care, and repeated episodes of suspicious injuries.
- Document history, physical exam findings, environmental surroundings, and notification of EMS personnel in the patient narrative on your report.

SPINAL MOTION RESTRICTION

Spinal Motion Restriction (SMR) is a term that includes C-Spine immobilization. The primary goal of a Pre-Hospital Provider, in patients with a potential spinal injury, is to "do no harm", stabilize and transport. However, some patients with trauma can be considered for selective immobilization, to avoid morbidity associated with immobilization (skin pressure, respiratory difficulty).

The traditional method of performing "C-Spine immobilization" is still used and widely accepted. The patient is advised not to move and manual control of their neck is maintained with two hands by a provider. A cervical collar is then placed on the patient's neck. They are then carefully manipulated, minimizing motion of the spinal column, to a long spine board.

Two validated and commonly used criteria to determine need for field immobilization are the NEXUS criteria and the Canadian C-Spine Rule. These screening criteria may be used in stable, alert trauma patients, with no communication barrier.

NEXUS Low-Risk Criteria
Stable, conscious trauma patients with no communication barriers may be transported without spinal immobilization if they meet **ALL FIVE** of these criteria:

- No posterior midline cervical-spine tenderness.
- No evidence of intoxication.
- No altered mental status.
- No focal neurologic deficit.
- No painful distracting injuries.

Canadian C-Spine Rule

- Any high risk factor? (any one mandates immobilization)
    - Age over 65 years
    - Dangerous mechanism
    - Numbness or tingling in extremities
- Any low-risk factor? (if any are no, immobilize)
    - Simple rear end MVC
    - Ambulatory at any time at scene
    - No neck pain at scene
    - No midline c-spine tenderness.
- Ability to voluntarily rotate the neck?
    - Patient voluntarily able to actively rotate neck 45 degrees to right and left
    - If unable, immobilize

MEDICATION ADMINISTRATION

Assisting Patient with Taking OTC and/or Own Prescription Medications
Georgia Scope of Practice allows all levels of EMT to assist patients in taking their own prescribed medications and/or over-the-counter medications. Medications must be approved by local medical Control by radio or phone.

Auto Injector Drug Delivery

- All levels of EMS licensure are allowed to administer epinephrine parentally to patients experiencing anaphylaxis. EMT and EMT-I may administer by auto-injector only.
- All levels of licensure are allowed to administer unit dose commercially pre-filled containers or auto injectors for the administration of life saving medications intended for self, peer, or patient rescue in hazardous materials situations.

Sub-Lingual Drug Delivery

- EMT and higher levels of licensure are allowed to administer certain medications via the sub-lingual route.
- Patients should be advised to allow the medications to dissolve under their tongue. They should not chew or swallow medications.
- Medications approved to be delivered via the sub-lingual route are:
    - Nitroglycerine tablets
    - Nitroglycerine spray

Nasal Drug Delivery

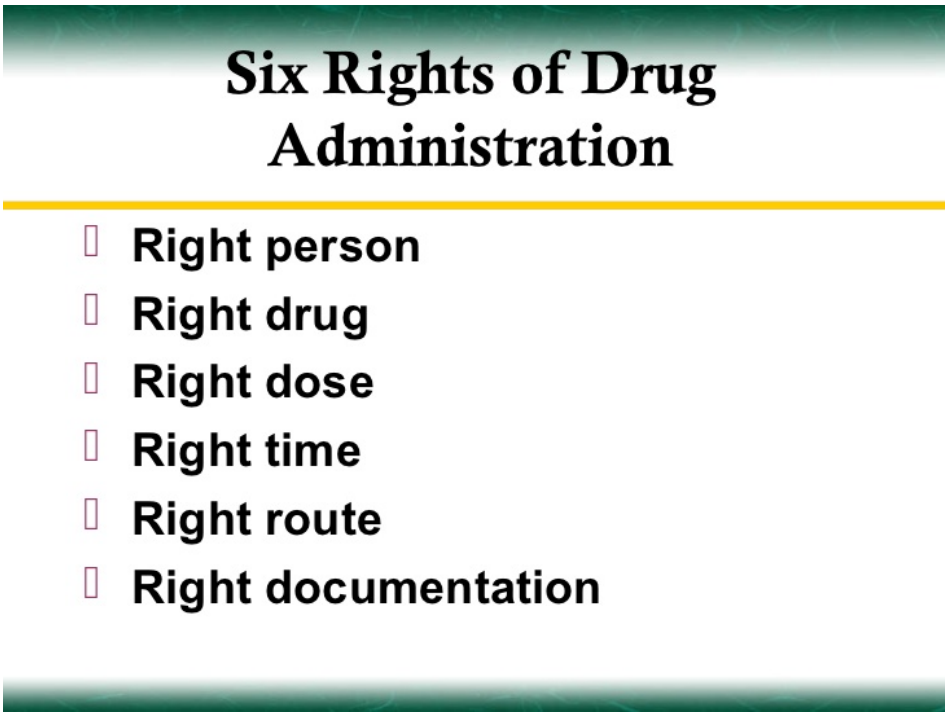
- Medications administered via the IN route require a higher concentration of drug in a smaller volume of fluid than typically used in the IV route. In general, administer no more than 1 mL of volume per nostril.
- Do not administer medications via the IN route if the patient's nose is bleeding or if nasal congestion or nasal discharge is present. Nasal administration does not always work for every patient and is less likely to be effective if the patient has been abusing vasoconstrictors, such as cocaine.
- Medications approved to be delivered IN are:
    - Naloxone

Nebulized Drug Delivery

- All levels of EMS licensure are allowed to deliver inhaled medications through a nebulizer or through use of metered-dose-inhaler to patients with difficulty breathing.
- Treatment should continue until medication in reservoir is depleted.
- Patient monitoring should include pulse, respiratory rate, and breath sounds

MEDICATIONS

There are certain medications that are allowed within the scope of this document and in Lowndes County Fire Rescue Medical and Trauma Protocols that each medic should be familiar with. Additionally, medics should be versed in proper medication administration and adherence to the “6 Rights” of medication administration.



Medication information and guidelines are on the following pages.

Albuterol (Proventil®, ProAir®, Xopenex®)

Indication: Bronchodilator in reversible airway obstruction due to reactive airway disease, asthma, COPD, CHF, anaphylaxis or other respiratory conditions causing bronchospasm.

Adult dose range: 2.5-5 mg as needed. Pre-hospital personnel may assist a patient with self-administration of their MDI.

Pediatric dose range: If less than 15kg- 2.5 mg; if > 15 kg- up to 5mg

Time to onset: 5 to 15 minutes (if inhaled)

Contraindications:

- Hypersensitivity to albuterol
- Adult heart rate above 180 bpm w/o contacting Med Control
- Pediatric heart rate above 220 bpm w/o contacting Med Control

How is it given?

- Via nebulization or metered dose inhaler

What should be monitored?

- Heart rate
- CNS stimulation
- Respiratory status

Major drug interactions:

- Beta blockers (decrease effect)
- MAO inhibitors and TCA's (may increase cardiovascular effects)
- Other sympathomimetic aerosol bronchodilators or epinephrine should not be used concomitantly with Albuterol, including over-the-counter-aerosols.

What side effects/potential complications are expected?

- Tachycardia, palpitations, pounding heartbeat
- GI upset, nausea
- CNS stimulation
- Tremors

Are there any special instructions/considerations?

- Patient may need assistance and coaching with the treatment

Aspirin

Indication: Onset chest pain suggestive of MI signs/symptoms

Adult dose range: 160mg-325mg chewable tablets

Pediatric dose range: Not recommended

Time to onset: 15 to 30 minutes

Contraindications:

- **DO NOT GIVE TO PEDIATRIC PATIENTS**
- Hypersensitivity to aspirin
- Stomach ulcers
- GI Bleeding

How is it given?

- Orally

What should be monitored?

- Heart rate
- Respiratory Rate

Major drug interactions:

- Blood Thinners

What side effects/potential complications are expected?

- Do not give large amounts of water to drink, as vomiting may occur
- Relatively contraindicated in persons with asthma

Epinephrine (Adrenalin®)

Indication: Anaphylaxis

Adult dose range:
- 0.3 mg (1:1,000) SQ or IM using an auto-injector.
- Repeat every 5-10 minutes as needed for respiratory and hemodynamic support

Pediatric dose range:
- Patient >30kg 0.3 mg IM using an auto-injector
- Patient 10-30kg 0.15mg IM using junior auto-injector

Time to onset: 3-10min

Duration of effect: 3-5 minutes IV

Contraindications:
- Hypersensitivity to epinephrine

How is it given?
- Auto-injector

What should be monitored?
- Blood pressure
- Heart rate
- Pulmonary function

What side effects/potential complications are expected?
- Tachycardia, palpitations, angina
- Flushing, hypertension

Are there any special instructions/considerations?
- For anaphylaxis, give epinephrine early and often

Ipratropium (Atrovent®)

Indications: Bronchial asthma and reversible bronchospasm associated with COPD

Adult dose range: 0.5 mg

Pediatric dose range: Contact Medical Control for advisement on use

- Not recommended for use in pediatrics under the age of 12 years.
- Over 12 years, may administer 0.5mg adult dosage.

Time to onset: 30 minutes to 1 hour

Contraindications:

- Hypersensitivity to ipratropium
- Not indicated for acute treatment of bronchospasms

How is it given?

- Nebulized; may also assist patient with MDI

What should be monitored?

- General patient assessment
- Respiratory effort

What side effects/potential complications are expected?

- Palpitations
- Anxiety, dizziness
- Nausea/Vomiting

Are there any special instructions/considerations?

- Caution should be used when administering to elderly patients and those with cardiovascular disease or hypertension

Naloxone (Narcan®)

Indication: Antidote for narcotic agonists

Adult Dosage Range: 0.4-2 mg , may repeat at 2-3 minute intervals

Pediatric Dosage Range: Initial dose of 0.01mg/kg IV/IO, if no clinical improvement: administer 0.1mg/kg IV/IO. Maximum dose of 2mg

Time to onset: Within 2 minutes

Contraindications:

- Hypersensitivity to naloxone
- Caution in patient known to be narcotic dependent

How is it given?

- Nasal via Mucosal Atomization Device (MAD)
- Via Auto-Injector

What should be monitored?

- Blood pressure
- Respiratory rate
- Heart rate

Major Drug Interactions:

- Decreased effect of narcotic analgesia
- May precipitate acute narcotic withdrawal in patient who is narcotic dependent

What side effects/potential complications are expected?

- Rare, but sometimes seen side effects:
    - Hypertension
    - Hypotension
    - Tachycardia
    - Cardiac arrest
    - Nausea/vomiting
    - Dyspnea
    - Pulmonary edema
    - Diaphoresis

Are there any special instructions?

- Effectiveness is due to narcotic reversal, not to an effect on opiate receptors. Therefore, adverse events occur secondary to reversal (withdrawal) of narcotic analgesia and sedation, which can cause severe reactions.

Nitroglycerin (Nitroquick®, Nitrostat®)

Indication: Angina pectoris; pulmonary/systemic hypertension

Adult Dosage Range: Sublingual: 0.4mg tab, 0.4 mg spray- may repeat once every 5 minutes to a max of 3 doses; ½-1 inch paste for transdermal administration.

Pediatric Dosage Range: Contraindicated

Time to onset: Sublingual - 1 to 3 minutes

Contraindications:

- Withhold from any patient taking erectile dysfunction drugs within last 72 hours; consult Medical Control
- Hypersensitivity to nitroglycerin
- Increased ICP
- Systolic blood pressure less than 110 mmHg

How is it given?

- Sub-lingual

What should be monitored?

- Level of consciousness
- Blood pressure
- Heart rate

Major Drug Interactions:

- Alcohol, beta-blockers, calcium channel blockers may enhance nitroglycerin's hypotensive effect
- Sildenafil and other drugs for erectile dysfunction may increase vasodilatory effects and result in severe irreversible hypotension

What side effects/potential complications are expected?

- Headache
- Dizziness
- Hypotension/orthostasis
- Postural syncope
- Tachycardia

Are there any special instructions?

- Do not chew or swallow sublingual dosage forms
- Keep patient supine when possible and monitor blood pressure frequently

Oral Glucose (Glutose®, Insta-Glucose®)

Indications: Conscious patient with suspected hypoglycemia

Adult dose range: 15g PO

Pediatric dose range: 7.5g PO

Time to onset: 5 to 10 minutes

Contraindications:

- Decreased level of consciousness
- Inability to swallow
- Nausea/vomiting

How is it given?

- Oral

What should be monitored?

- Level of consciousness
- Blood glucose

Major drug interactions:

- None in the emergency setting

What side effects/potential complications are expected?

- Nausea/vomiting
- Improvement in blood sugar levels

Are there any special instructions/considerations?

- Must be swallowed.
- Check glucose readings before and at least 10 minutes after administration

Oxygen

Indications: Hypoxia, carbon monoxide toxicity

Adult dose range: 24-100 percent (FiO2) as required

Pediatric dose range: 24-100 percent (FiO2) as required

Time to onset: rapid

Contraindications:

- None in the emergency setting

How is it given?

- Inhalation, positive pressure assist

What should be monitored?

- Level of consciousness
- Pulse oximetry

What side effects/potential complications are expected?

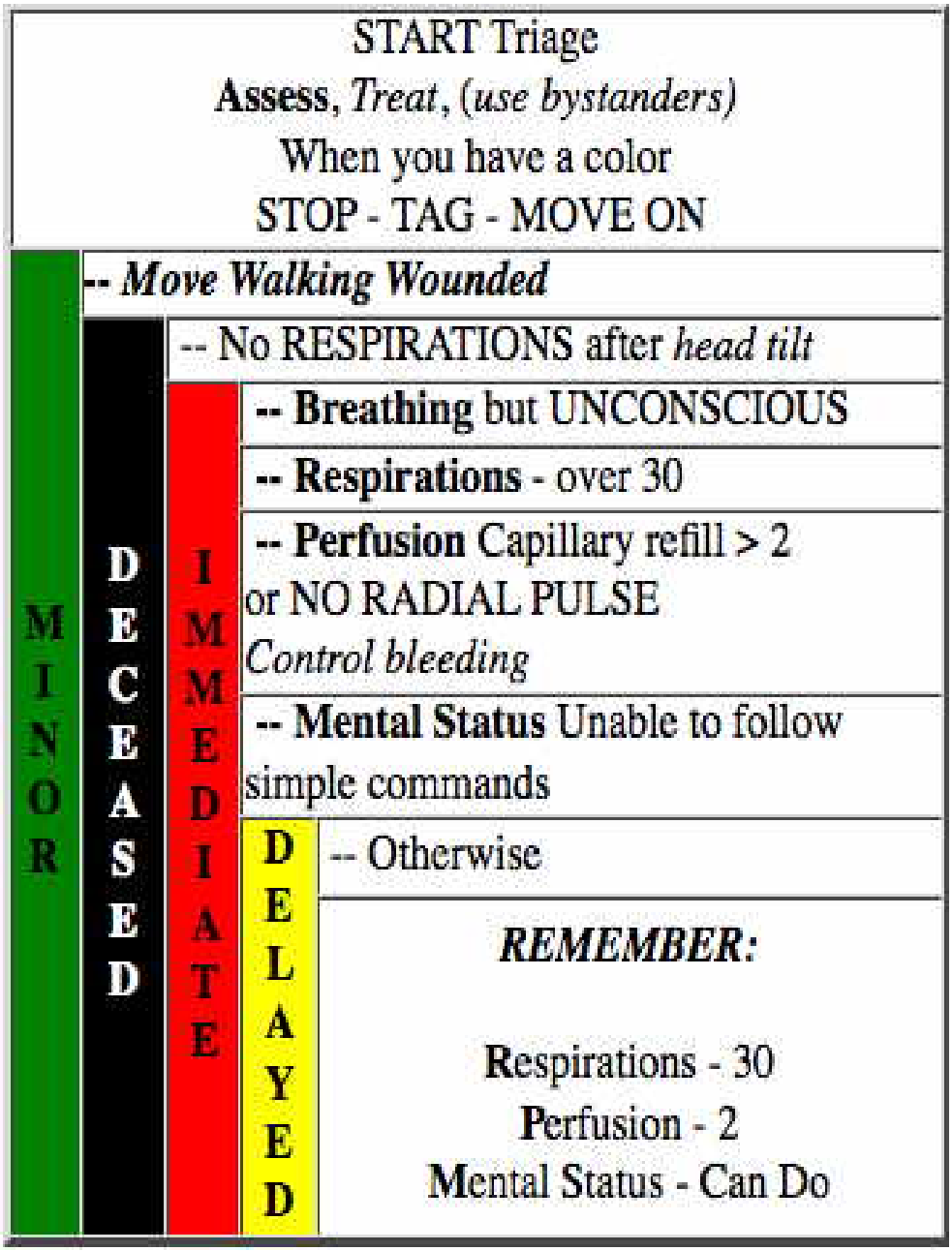
- Drying of mucus membranes without humidification
- Improvement of hypoxic event as indicated by patient presentations, pulse rates, and SpO2 readings

Are there any special instructions/considerations?

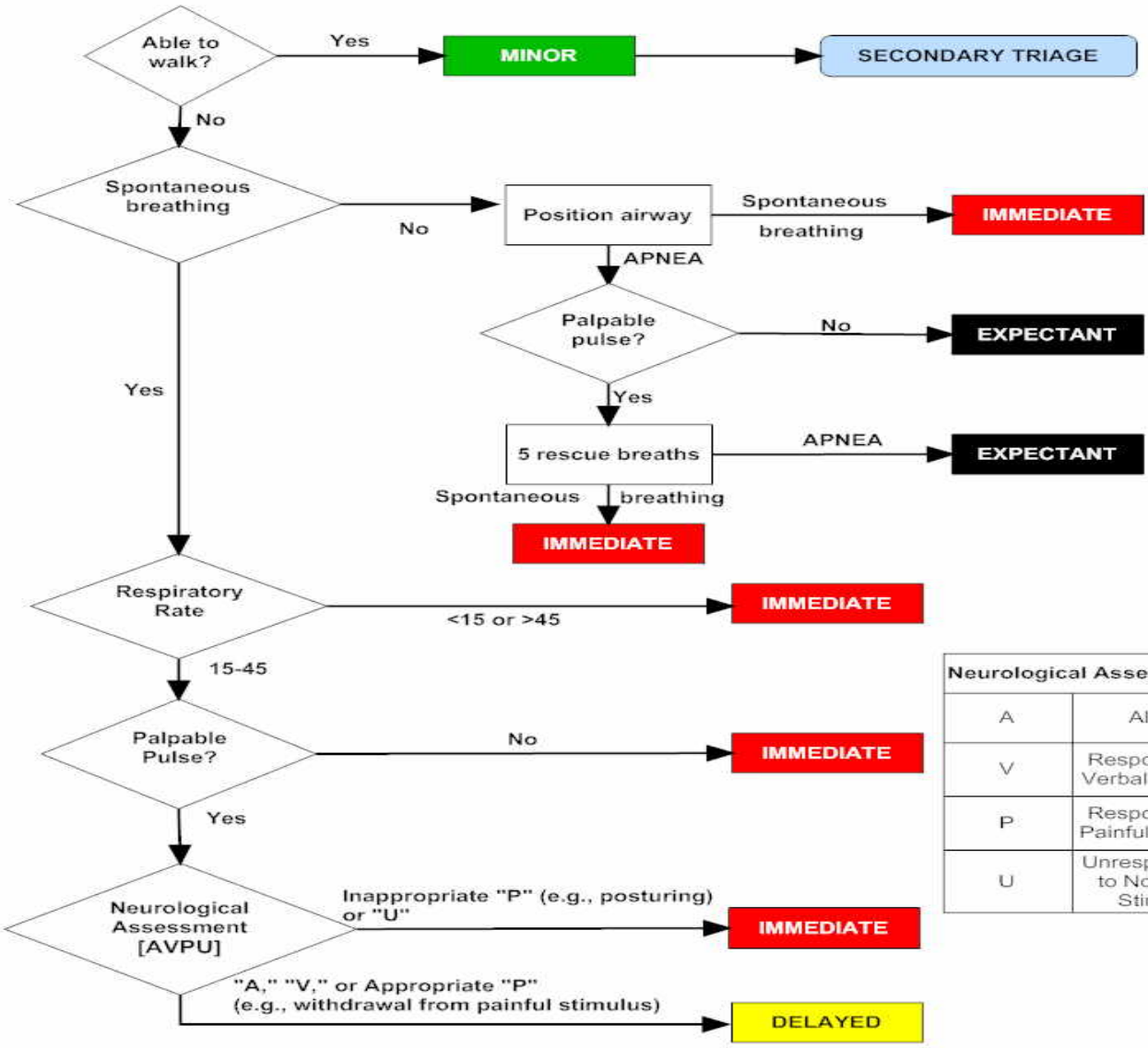
- In most situations, oxygen is administered to maintain an SpO2 reading of $\geq 95\%$
- Pulse rates are good indicators of oxygen administration's effectiveness. Bradycardia, especially in the pediatric patient, indicates severe hypoxic conditions
- Closely monitor COPD patients treated with oxygen; these patients may rapidly become sedated from loss of hypoxic drive.
- Cold oxygen may worsen asthma or create hypothermic conditions in some patients.

MASS CASUALTY INCIDENT TRIAGE

Lowndes County Fire Rescue will utilize the START Triage and JUMPSTART Triage system for categorization of patients during Mass Casualty Incidents.



JumpSTART Pediatric Multiple Casualty Incident Triage



Neurological Assessment	
A	Alert
V	Responds to Verbal Stimuli
P	Responds to Painful Stimuli
U	Unresponsive to Noxious Stimuli

Use JumpSTART if the Patient appears to be a child.

Use an adult system, such as START, if the patient appears to be a young adult.

Triage Categories

EXPECTANT Black Triage Tag Color

- Victim unlikely to survive given severity of injuries, level of available care, or both
- Palliative care and pain relief should be provided

IMMEDIATE Red Triage Tag Color

- Victim can be helped by immediate intervention and transport
- Requires medical attention within minutes for survival (up to 60)
- Includes compromises to patient's Airway, Breathing, Circulation

DELAYED Yellow Triage Tag Color

- Victim's transport can be delayed
- Includes serious and potentially life-threatening injuries, but status not expected to deteriorate significantly over several hours

MINOR Green Triage Tag Color

- Victim with relatively minor injuries
- Status unlikely to deteriorate over days
- May be able to assist in own care: "Walking Wounded"

EQUIPMENT SPECIFIC PROTOCOLS

The following protocols are specific to particular pieces of equipment used in the daily operations of Lowndes County Fire Rescue and South Georgia Medical Center EMS. Usage protocols are formulated based upon manufacturer specifications and parameters established by the standards of care of the Georgia Department of Health and Human Resources.

AED

Place patient on a hard surface away from standing water or conductive (metal) surfaces.

Place AED near the patient and press on/off button to turn on the AED.

The AED voice prompts will begin and guide you through the response steps. (Below:)

Expose the patient's bare chest. If the electrodes will not stick due to excessive hair, press them down firmly and remove in a rapid fashion in an effort to remove excess hair. Discard these pads and replace with a new set. OR shave the hair if a razor is available. If the patient is dirty, wet or diaphoretic, wipe the chest clean and dry.

Tear open the electrode package and connect to the AED (if not already done).

Remove the electrode pads, one at a time, from the backing and apply to patient's bare chest as shown on the illustration on the pad.

Listen to the voice prompts and do not touch the patient unless instructed to do so.

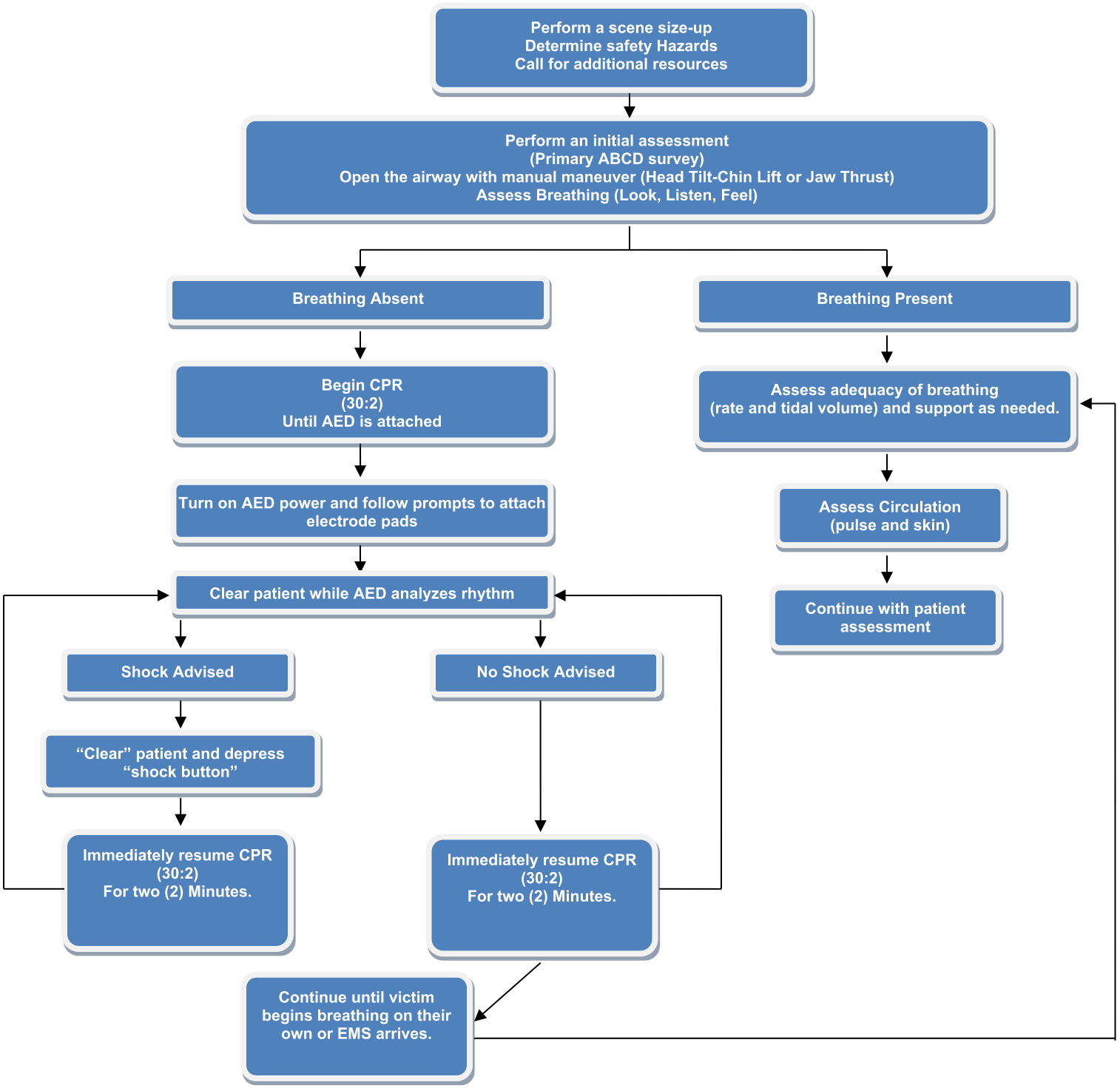
As soon as the AED delivers the shock, begin with BLS (CPR) per accepted AHA standards.

Continue to follow prompts combined with appropriate BLS (CPR) until EMS arrival.

Once EMS arrives, disconnect the pads from the AED but LEAVE PADS ON PATIENT.

Turn the AED off and take it out of service. Notify the Battalion Chief or Department Medical Officer that AED needs to be downloaded. Acquire replacement pads from EMS.

AED FLOW CHART



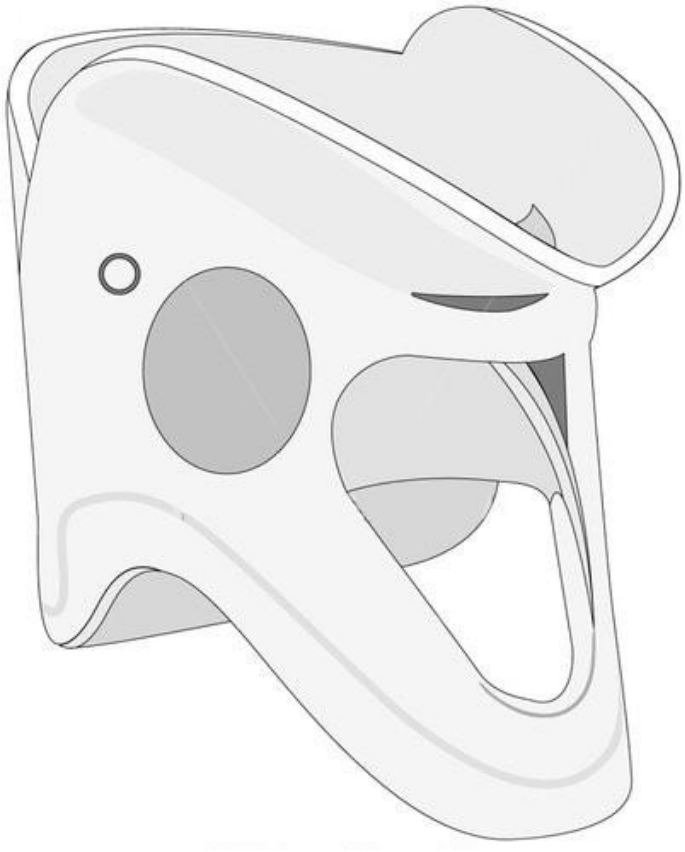
CERVICAL COLLAR

SIZING PROCEDURE

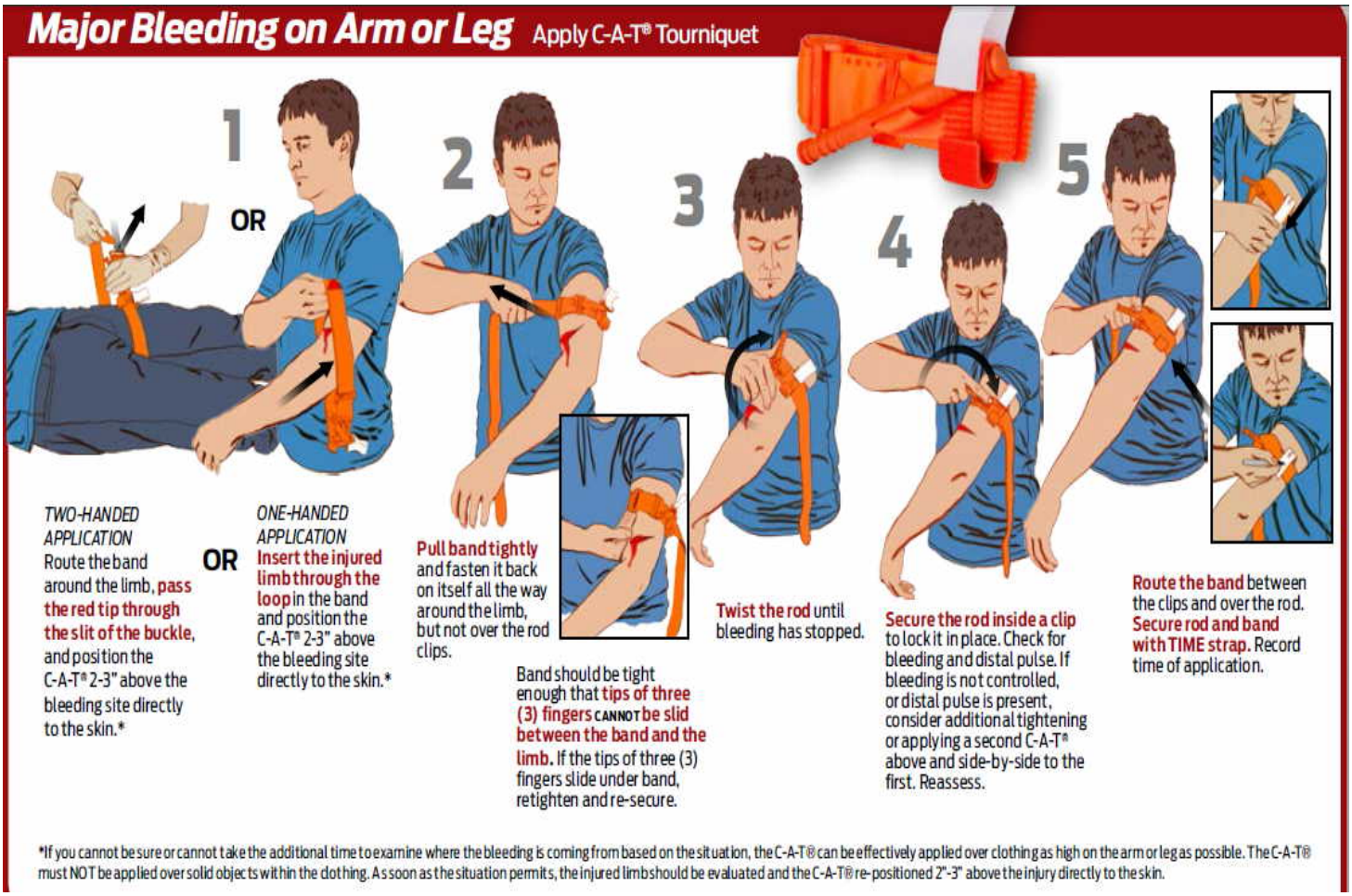
- Bring patient's head to neutral in-line position (facing forward, nose mid-line)
- Maintain in-line stabilization
- Adjust C-Collar to fit snuggly at base of chin and on clavicles.
- Activate locks on collar to set to closest size

APPLICATION PROCEDURE

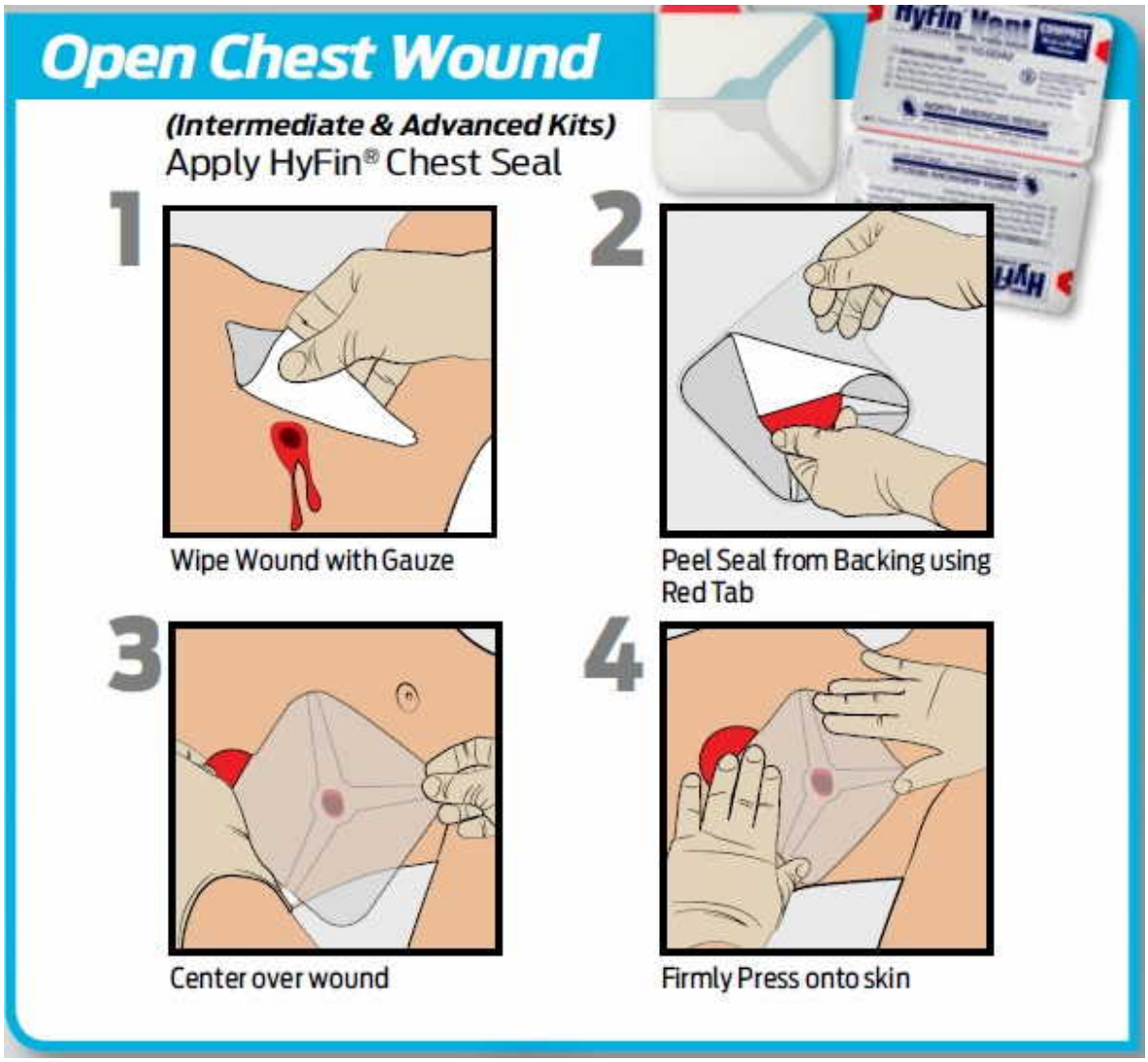
- Slide the Velcro fastener and rear of C-Collar under or behind the right side of the patient's neck far enough to be reached from the left side.
- Position chin piece of collar at base of chin with base of collar resting on clavicular arches and upper chest wall.
- Bring rear of collar from left side around patient's neck to meet the front section of the collar and secure using velcro strap.
- Inspect the collar to make sure the chin is properly positioned
- Adjust collar as needed prior to securing patient to long spine board.



COMBAT APPLICATION TOURNIQUET (CAT)



HYFIN VENT CHEST SEAL



KENDRICK EXTRICATION DEVICE (KED)

Maintain in-line stabilization of c-spine.

Assess distal pulses, motor function and sensation.

Apply appropriately sized C-Collar per protocol.

Position device behind the seated patient where it fits snuggly beneath their armpits.

Apply straps in order:

- Middle (Thorax)
- Bottom (Abdomen)
- Legs – Be sure not to pinch the genitalia.
- Head
- Top (Chest) – Avoid over tightening and restricting breathing.

When securing head, apply a proper amount of padding between the head and back of KED to keep the head in neutral position.

Fold the sides of the headpiece around so they cradle the head. For most patients in a properly fitted KED the sides should completely cover the ears.

Secure the head to the device using the supplied velcro straps, kling or coban.

Turn or lift the patient and device as a unit and lower onto a long spine board. Release the leg straps to allow the patient's legs to lie flat on the board. Secure to the long spine board.

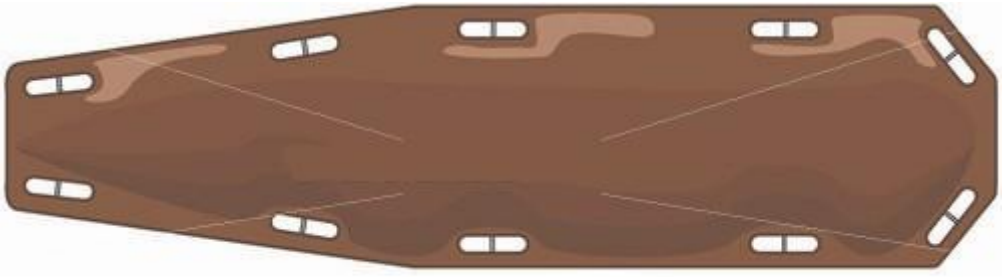
After the patient is secured to the long spine board, the chest straps of the KED may be loosened for patient comfort and/or reassessment.

Reassess distal pulses, motor function and sensation.

LONG SPINE BOARD

APPLICATION PROCEDURE

- Assess and record distal pulses, motor function and sensation
- Place extra rescuers to control thorax, pelvis and legs
- Place backboard beside the patient
- Leave patient's arms at their side, avoid rolling patient onto injured side
- As the person maintaining C-Spine control counts off "One, Two, Three – Roll", carefully roll the patient onto their side in unison.
- Perform a rapid assessment of the patient's back for injures or significant trauma
- Place the backboard snuggly against patient's back
- As the person maintaining C-Spine control counts off "One, Two, Three – Roll", carefully roll the patient and the spine board back to the horizontal position (supine).
- Secure the spine board straps starting with the waist strap, then the legs, then the chest strap last.
- Secure chest straps tight enough to hold the patient but not so tight as to restrict breathing.
- Chest and waist straps may be fastened in an X fashion to aid in securing unresponsive patients.
- Extra padding may be placed beneath knees for patient comfort if no trauma to lower extremities.
- Secure the head to the spine board using foam head blocks and 2 tape across chin and forehead or commercially designed head immobilization device.
- Re-assess and document distal pulses, motor function and sensation.



NASOPHARYNGEAL AIRWAY

Can be used on intoxicated individuals in a semi-conscious state or obtunded patients with an intact gag reflex.

Pre-oxygenate patient if possible

Measure airway from tip of the nose to the earlobe

Lube the airway adjunct with water soluble lubricant

Insert adjunct with bevel toward septum, angling towards the base floor of the nasopharynx

- **Note** – Most nasopharyngeal airways are designed to go in the right nare. If inserting into the left nare, the bevel must face the septum and the airway must be rotated 180 degrees after it has been inserted approximately half its length before completely inserting it.

Reassess the airway by auscultating for lung sounds

OROPHARYNGEAL AIRWAY

Can be used on obtunded patients with spontaneous respirations without an intact gag reflex.

- Pre-oxygenate patient if possible
- Measure airway from corner of mouth to the earlobe
- Insert the airway inverted and rotate 180 degrees into place
- A tongue depressor may be used to assist with insertion of airway.
- Ventilate patient and auscultate for lung sounds

OXYGEN ADMINISTRATION EQUIPMENT

Nasal Cannula

Explain the procedure to the patient

Attach to oxygen source and flush nasal cannula and apply to patient

Non-Rebreather Mask

Explain the procedure to the patient.

Attach to oxygen source and flush tubing and hold one-way valve closed until reservoir is full.

Apply to patient.

Bag-Valve Mask (BVM)

Attach BVM to oxygen source and flush tubing

Extend reservoir and allow to fill with oxygen or allow reservoir bag to fill completely

Apply to patient

Oxygen Flow Rates

Nasal Cannula
1-6 Liters per Minute (LPM)

Non-Rebreather Mask
10-15 Liters per Minute (LPM)

Bag Valve Mask
15 Liters per Minute (LPM)

APPENDICES

The following appended items to the procedural protocols are intended to be used as a guide for assessment purposes.

APGAR CHART

SIGN	O	1	2
Heart Rate	Absent	Below 100	Over 100
Respiration (effort)	Absent	Slow and Irregular	Normal Crying
Muscle Tone	Limp	Some flexion - extremities	Active; good motion in extremities
Irritability	No Response	Crying; some motion	Crying; vigorous
Skin Color	Bluish or paleness	Pink or typical newborn color; hands/feet are blue	Pink or typical newborn color; Entire body

ABNORMAL PEDIATRIC VITAL SIGNS

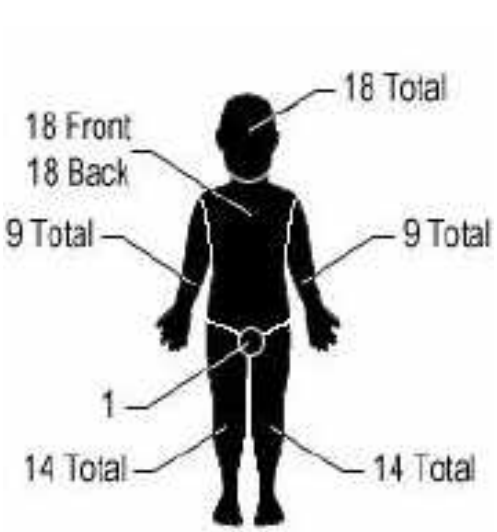
AGE (YEARS)	**RR**	**PULSE**	**B / P** (SYSTOLIC)
< 1 month	< 40 or > 60	< 80 or >160	< 60
1 month - 1 year	< 15 or > 30	< 80 or > 140	< 70
1 year - 10 years	< 12 or > 25	< 60 or > 120	< (70 + 2 x age)
> 10 years	< 10 or > 20	< 50 or > 110	< 90

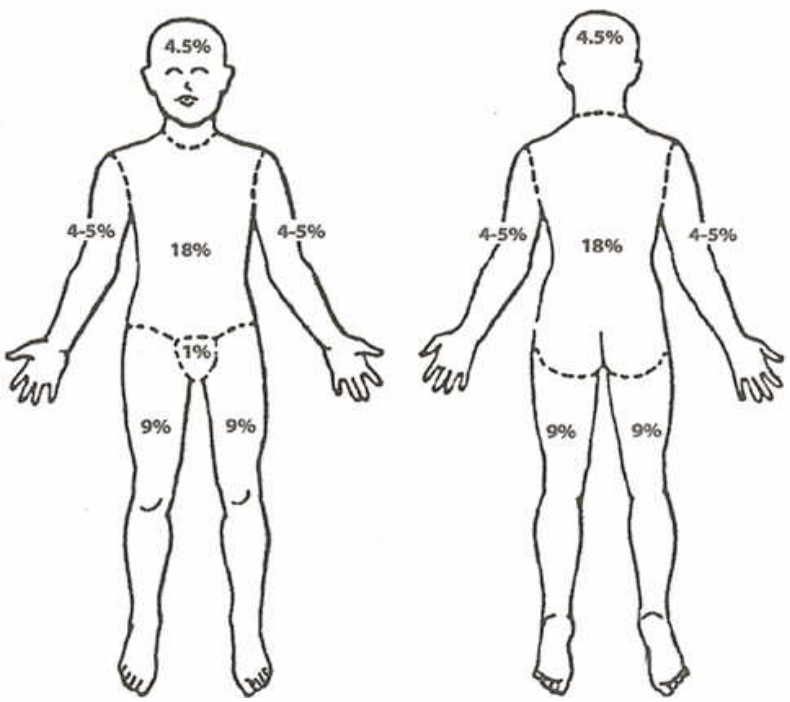
In frightened or uncooperative children, Respiratory Rate and Pulse may be increased to the abnormal ranges.

Correlate clinical findings with vital signs to make the decision if the patient is stable versus unstable.

BURN ASSESSMENTS

Rule of Nines





"1% Rule"

The area of the **patient's** palm represents approximately 1% of their body surface.

BURN CLASSIFICATIONS

- **Superficial** – Burns such as sunburn, usually painful in nature with reddening of skin.

- **Partial Thickness** – Burn in which the dermis is damaged, characterized by intense pain, blisters, pale or reddened skin with moistness and mottling.

- **Full Thickness** – a burn that damages all layers of skin. Characterized by charring of the skin, eschar (hardening leather-like quality of the skin), little to no pain due to nerve damage at site with moderate pain to periphery of burn.

CINCINNATI PREHOSPITAL STROKE SCALE

FACIAL DROOP Have the patient show their teeth or smile

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

ARM DRIFT Have the patient close their eyes and holds both arms out

- Normal – both arms move the same or both arms do not move at all (other findings, such as pronator grip, may be helpful)
- Abnormal – one arm does not move or one arm drifts down compared with the other

SPEECH Have the patient say, "You can't teach an old dog new tricks"

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

ONE-MINUTE CRANIAL NERVE EXAM

Cranial Nerve	The Test
I	Normally not done in the field
II, III	Direct response to light
III, IV, & VI	"H" Test for extraocular movement
V	Clench teeth, test sensory
VII	Show teeth
IX, X	Say "ahh", test gag reflex
XII	Stick tongue out and move around
VIII	Test balance & hearing
XI	Shrug shoulders, turn head against resistance

GLASGOW COMA SCALE

Physical Signs	Response	Points
Eye Opening	Spontaneous	4
	To Voice	3
	To Pain	2
	None	1
Verbal Response	Oriented	5
	Confused	4
	Inappropriate	3
	Incomprehensible	2
	None	1
Motor Response	Spontaneous	6
	Localizes Pain	5
	Withdraws to Pain	4
	Flexion	3
	Extension	2
	None	1

PEDIATRIC GLASGOW COMA SCALE

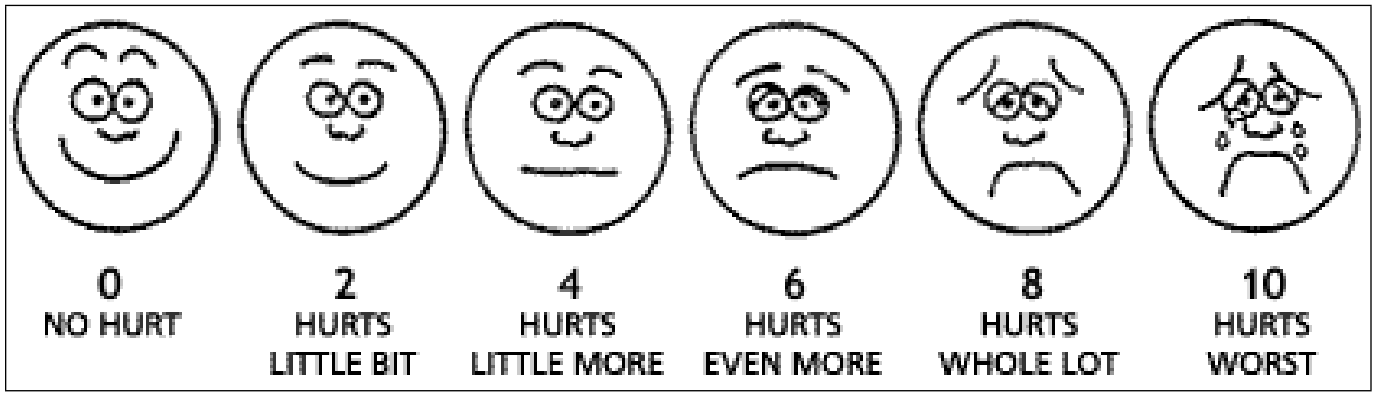
Physical Signs	Infants	Children	Points
Eye	Spontaneous	Spontaneous	4

Opening	To Voice To Pain None	To Voice To Pain None	3 2 1
Verbal Response	Coos and Babbles Irritable Cry Cries to Pain Moans to Pain None	Smiles Cries Consolable Inconsolable None	5 4 3 2 1
Motor Response	Spontaneous Withdraws to Touch Withdraws to Pain Flexion Extension None	Spontaneous Localizes Pain Withdraws to Pain Flexion Extension None	6 5 4 3 2 1

PAIN SCALE

This scale is designed to be used as a tool to subjectively determine pain level.

If you are having pain,
point to the number that describes your pain.



Sin Dolor	**Duele un Poquito**	**Duele un Poquito mas**	**Duele todavia mas**	**Duele mucho**	**El peor dolor**

Infant Pain Scale

0	Restful Sleep
1-2	Quiet, awake, calm face
3-4	Restless, occasional grimace or whimper
5-6	Irritable with intermittent crying and occasional grimace (easily consolable)
7-8	Frequent crying, constant grimace, tense muscles (difficult to console)
9-10	Constant high-pitched cry, thrashing of limbs, constant grimace (unable to console)

RAPID EXTRICATION PROTOCOL

Rapid extrication should be effected for any of the following criteria:

- Unstable patient with immediate life threats and /or compromised airway.
- Apnea or severe respiratory distress requiring assisted ventilations.
- Shock (no radial pulses) or uncontrolled bleeding.
- Altered level of consciousness or unresponsiveness.
- Hazardous or uncontrollable environments.
- Fire or immediate danger of fire.
- Danger of explosion.
- Rapidly rising water or patient still in water.
- Increasing toxic exposure or hazardous atmosphere.

Rapid Extrication Procedure

- One rescuer will maintain manual cervical spine immobilization.
- Perform a rapid primary survey.
- Apply cervical collar (unless danger of explosion, fire or toxic / hazardous environment)
- Slide long spine board beneath patient.
    - If seated, slide board beneath buttocks and rotate legs onto spine board.
    - The patient is then lowered onto the board while maintaining c-spine immobilization.
- Carefully slide the patient until they are completely on the spine board.
- Move patient a safe distance away from the hazard and secure to the backboard per the LONG SPINE BOARD protocol.
- Perform necessary treatment and / or assessment per protocols.

As emergency situations are a fluid environment, rapid extrication procedures may not be capable of being performed if the hazards dictate a more rapid removal of the patient. Life over limb should apply if the situation warrants that the patient will suffer detrimental harm or death if the time is taken even to perform a rapid extrication sequence. In such situations, attempt to maintain stabilization of the patient as best as possible while removing them from the environment or hazardous situation as quickly as possible.

TRAUMA TRIAGE CRITERIA

Adult

Mechanism of injury	Physical Findings
• Death in the same passenger compartment • Fall of more than 20 feet • Vehicle-pedestrian collision • Patient ejected from the vehicle • Vehicle collision > 20 MPH resulting in 12 inches of deformity to the vehicle • Vehicle rollover • Motorcycle crash > 20 MPH with separation of rider from motorcycle • Vehicle vs. bicycle collision > 5 MPH • Extrication time in excess of 20 minutes	• Pulse < 50 or > 120 • Systolic BP less than 90 • Respiration < 10 or > 29 • Glasgow Coma Score < 13 • Penetrating injuries of the trunk, head, neck, chest, abdomen, groin • 2 or more proximal long bone fractures • Open or depressed skull fracture • Flail Chest • Suspected pelvis fracture • Spinal cord injury or limb paralysis • Amputation (except digits) • 2nd / 3rd° Burns > 15% BSA Or facial / airway burns

Pediatric

Mechanism of injury	Physical Findings
• Death in the same passenger compartment • Fall of more than 10 feet • Vehicle-pedestrian collision of "any" speed • Patient ejected from the vehicle • Vehicle collision > 20 MPH resulting in 12 inches of deformity to the vehicle • Vehicle rollover • Motorcycle crash > 20 MPH with separation of rider from motorcyle • Vehicle vs. bicycle collision > 5 MPH	• Abnormal vital signs (refer to page 15) • Glasgow Coma Score < 13 • Penetrating injuries of the trunk, head, neck, chest, abdomen, groin • 2 or more proximal long bone fractures • Burns involving > 15% BSA, Or facial/airway burns (10% < 5 or other injuries involved) • Flail Chest • Trauma to 2 or more body systems • Spinal cord injury or limb paralysis • Amputation (except digits) .

High Risk Patients

If a patient does not meet the above criteria for Major Trauma, but has sustained an injury and has one or more of the following criteria, they are considered a 'High Risk Patient'. Consider transportation to a Trauma Center. Consider contacting Medical Control.

1. Bleeding disorders or patients who are on anticoagulant medications
2. Cardiac disease and/or respiratory disease
3. Insulin dependent diabetes, cirrhosis, or morbid obesity
4. Immunosuppressed patients (HIV disease, transplant patients and patients on chemotherapy treatment)
5. Age > 55

Emergency medical personnel are permitted to perform only those skills listed under their licensure level, and only once they have been trained on those skills, and credentialed to perform those skills by their local EMS Medical Director. Emergency medical personnel are permitted to administer only medications listed under their licensure level, and only once they are trained in the pharmacology of that medication, and credentialed to administer that medication by their local EMS Medical Director.

Key to Provider Levels		
EMT	E	Emergency Medical Technician
EMT-I	I	Emergency Medical Technician-Intermediate/85
AEMT	A	Advanced Emergency Medical Technician
CT	C	Cardiac Technician
PMDC	P	Paramedic

NOTE: If a provider code (the single letter code from the table above) is listed for a particular skill, then that level of EMS provider is permitted to perform that skill. Interpretive guidelines serve to clarify and/or modify the skill listed. If an asterisk (*) appears with the letter code for a specific provider level, then the interpretive guidelines may modify the skill for that provider level.

Airway and Breathing Skills	Levels	Interpretive Guidelines
1. Supplemental oxygen therapy		
a. Oxygen delivery devices	E I A C P	*This would include any type of cannula or mask designed for the delivery of oxygen.*
b. Humidified oxygen	E I A C P	

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Airway and Breathing Skills	Levels	Interpretive Guidelines
2. Basic airway management		
a. Manual maneuvers to open and control the airway	E I A C P	*This would include procedures such as: head-tilt, chin-lift; tongue-jaw lift; jaw thrust; Sellick's maneuver.*
b. Manual maneuvers to remove the airway	E I A C P	
c. Insertion of airway adjuncts intended to go into oropharynx	E I A C P	
d. Insertion of airway adjuncts intended to go into nasopharynx	E I A C P	
3. Ventilation management		
a. Mouth to barrier devices	E I A C P	
b. Bag-valve mask	E I A C P	
c. Manually triggered ventilators	E I A C P	
d. Automatic transport ventilators	E* I* A* C P	*EMTs, EMT-Is and AEMTs are limited to the initiation during resuscitative efforts that only adjust rate and tidal volume.*
e. Chronic-use home ventilators	E I A C P	
4. Suctioning		
a. Upper airway suctioning	E I A C P	
b. Tracheobronchial suctioning	A* C P	*AEMTs are limited to tracheobronchial suctioning of patients with pre-established airways.*
5. Advanced airway management		
a. CPAP/BiPAP administration and management	I A C P	

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5. Advanced airway management		
b. BIAD (blind insertion airway device) insertion	I* A* C P	*This would also permit the removal of a BIAD under medically appropriate circumstances for the specific levels. EMT-Is and AEMTs are limited to the insertion of devices not intended to be placed into trachea.*
c. Endotracheal intubation	C P	*This includes nasal and oral endotracheal intubation. This would also allow the extubation for medically necessary reasons. This includes the use of PEEP and EtCO2/Capnography.*
d. Airway obstruction removal by direct laryngoscopy	C P	
e. Percutaneous cricothyrotomy	P*	*This would include retrograde intubation techniques. Paramedics are not permitted to make a surgical incision of the cricothyroid membrane. Paramedics may perform skin incisions with a surgical blade for the purpose of percutaneous cricothyrotomy.*
f. Gastric decompression	P	
g. Pleural decompression via needle thoracostomy	P	
h. Chest tube monitoring	P	

Assessment Skills	Levels	Interpretive Guidelines
1. Basic assessment skills		
a. Perform simple patient assessments	E I A C P	
b. Perform comprehensive patient assessments	E I A C P	
c. Obtaining vital signs manually	E I A C P	

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2.	Advanced assessment skills		
	a. Obtaining vital signs by electronic devices	E I A C P	*This would include the use of non-invasive blood pressure monitoring devices, as well as pulse oximetry measurement and blood glucose monitoring.*
	b. Blood chemistry analysis	P	

Pharmacological Interventions Skills		Levels	Interpretive Guidelines
1.	Fundamental pharmacological skills		
	a. Use of unit dose commercial pre-filled containers or auto-injectors for the administration of life saving medications	E I A C P	
	b. Assist patients in taking their own prescribed medications as approved by the local EMS Medical Director	E I A C P	
	c. Administration of over-the-counter medications with appropriate medical direction.	E I A C P	*Includes oral glucose for hypoglycemia and aspirin for chest pain of suspected ischemic origin.*
2.	Advanced pharmacological skills: Venipuncture/vascular access		
	a. Obtaining peripheral venous blood specimens	I A C P	*This is either through direct venipuncture or through an existing IV catheter.*
	b. Peripheral IV insertion and maintenance; incudes removal as needed	I A C P	*This includes placement of an INT/saline lock. Peripheral lines include external jugular veins, but does not include placement of umbilical catheters.*
	c. Intraosseus device insertion; includes removal as needed	I A C P	*This includes placement in both adult and pediatric patients. This also includes both manual ad mechanical assisted devices as approved by the local EMS Medical Director.*

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2.	Advanced pharmacological skills: Venipuncture/vascular access		
a.	Crystalloid IV solutions	I* A* C P	*This includes hypotonic, isotonic and hypertonic solutions as approved by the local EMS Director. This also includes combination solutions, such as D5NS. EMT-Is and AEMTs are limited to the initiation of crystalloid solutions that do not have added pharmacological agents.*
b.	Administration of hypertonic dextrose solutions for hypoglycemia	I A C P	*Hypertonic dextrose solutions may be given IV/IO.*
c.	Administration of glucagon for hypoglycemia	A C P	*Glucagon may be administered via IM, SC, IV, IO or intranasal routes as approved by the local EMS Medical Director.*
d.	Administration of SL nitroglycerine to a patient experiencing chest pain of a suspected ischemic origin	A C P	*Includes oral glucose for hypoglycemia and aspirin for chest pain of suspected ischemic origin.*
e.	Parenteral administration of epinephrine for anaphylaxis	E* I* A* C P	*EMTs and EMT-Is may only administer epinephrine via an auto-injector. AEMTs may prepare and administer epinephrine via IM or SC routes.*
f.	Inhaled (nebulized) medications to patients with difficulty breathing or wheezing	E* I* A C P	*Inhaled (nebulized) means atomization of the medication through an oxygen/air delivery device with a medication chamber or through the use of a metered-dose inhaler. EMTs and EMT-I may only administer pre-measured unit doses of nebulized medications.*
g.	Administration of a narcotic antagonist to a patient of suspected narcotic overdose	E* I* A C P	*EMTs and EMT-Is may only administer narcotic antagonists via auto-injector or intranasal routes.*
h.	Administration of nitrous oxide (50% mixture) for pain relief	A C P	

EMT E | EMT-I I | AEMT A | CT C | PMDC P

2.	Advanced pharmacological skills: Venipuncture/vascular access		
	i. Vaccine administration	I* A* C* P	*EMT-Is, AEMTs and CTs may only administer vaccinations during designated events such as mass vaccination clinics or in the event of a declared public health emergency and then only after approved training.*
	j. Paralytic administration	P*	*Administration of paralytics for the purpose of RSI is not permitted unless the EMS agency has met the RSI requirements promulgated by OEMS and has received approval for RSI use from OEMS. Paramedics are authorized to use paralytics to maintain the paralysis of already intubated patients, if approved by the local EMS Medical Director.*
	k. Administration other physician approved medications	C* P*	*CTs are only authorized to give the following: anti-arrhythmics, vagolytic agents, chronotropic agents, alkalizing agents, analgesic agents and vasopressor agents. Paramedics are authorized to give any medication via enteral or parenteral routes, if approved by the local EMS Medical Director.*
	l. Maintain an infusion of blood or blood products	P	

Cardiac /Medical Skills		Levels	Interpretive Guidelines
1.	Fundamental cardiac skills		
	a. Manual external CPR	E I A C P	
	b. Use of an automated external defibrillator	E I A C P	
2.	Advanced cardiac skills		
	a. Use mechanical CPR assist devices	E I A C P	
	b. ECG monitoring and interpretation	E* I* A* C P	*Includes 12-lead ECGs. EMTs, EMT-Is, and AEMTs may only obtain and transmit a 12-lead ECG for suspected STEMI patients, if approved and trained by the local EMS Medical Director. ECG interpretation is limited to CTs and Paramedics.*

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2.	Advanced cardiac skills						
	c. Manual cardiac defibrillation				C*	P	*CTs may only defibrillate a pulseless and apneic patient.*
	d. Emergency cardioversion; includes vagal maneuvers				C	P	
	e. Transcutaneous cardiac pacing				C	P	
3.	Emergency childbirth management						
	a. Assist in the normal delivery of a newborn	E	I	A	C	P	
	b. Assist in the complicated delivery of a newborn	E	I	A	C	P	*This includes external fundal massage for post-partum bleeding, but does not include internal fundal massage.*
4.	Behavioral emergency skills						
	a. Manual and mechanical patient restraints for behavioral emergencies	E	I	A	C	P	*Includes soft disposable and leather restraints, as approved by the local EMS Medical Director.*
	b. Chemical restraints of combative patients					P	

Trauma Care Skills	**Levels**					**Interpretive Guidelines**
1.	Managing injuries, including but not limited to:					
a. Manual cervical stabilization and cervical collar use	E	I	A	C	P	
b. Manual stabilization of orthopedic trauma	E	I	A	C	P	
c. Spinal motion restriction	E	I	A	C	*P*	*Includes use of commercial devices such as KED®.*
d. Splinting	E	I	A	C	P	*Includes traction splint.*
e. MAST/PASG						*Not approved for use in Georgia.*

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2.	Managing other trauma injuries, including but not limited to:						
	a. Fundamental bleeding control	E	I	A	C	P	
	b. Progressive bleeding control	E	I	A	C	P	*In the use of tourniquets and hemostatic agents as approved by the local EMS Medical Director.*
	c. Fundamental eye irrigation	E	I	A	C	P	
	d. Complex eye irrigation with Morgan® lens					P	
	e. Fundamental management of soft tissue injuries	E	I	A	C	P	
	f. Complex management of soft tissue injuries	E	I	A	C	P	
3.	Movement/extrication of patients, including but not limited to:						
	a. Emergency moves endangered patients	E	I	A	C	P	
	b. Rapid extrication of patients	E	I	A	C	P	

EMT E | EMT-I I | AEMT A | CT C | PMDC P