Pike County Fire Department
Operation Manual
November 1, 2016

Standard Operating Guideline #21
Emergency Medical Service
Adopted/Revised: November 1, 2016

The purpose of this guideline is to provide for coordination of fire department activities with emergency medical services.

21.01 An EMS Transport Unit must be present at all working fire incidents and at all drills having live fire or other conditions considered potentially dangerous by the IC or PCFD Officer.

21.02 On any EMS incident, appropriate PPE shall be worn as to ensure Universal Precautions. At a minimum, appropriate PPE should include wearing of gloves by all personnel assisting with patient care.

21.03 Only personnel trained to the level of EMT-Basic, EMT-Intermediate, EMT-Advanced or EMT-Paramedic and licensed by the State of Georgia are to respond to EMS calls on the initial response. The maximum number of personnel to respond is two, excluding PCFD Officers. Additional personnel may respond if called for by personnel on scene. If no certified personnel respond to the first call out, then any fire personnel may respond to make initial patient contact.

21.04 Medical first responder personnel will be dispatched to EMS incidents for the following reasons:
- Response time of the Medical Unit/Ambulance is anticipated to be greater than 10 minutes
- Mutual aid is required due to the lack of an available EMS unit
- The following incident types are received:
    - Motor Vehicle Accidents (MVA) with Injuries
    - Person Injured
    - Suicide Attempt
    - Cardiac Arrest
    - Chest Pain
    - Difficulty Breathing
    - Person Choking
    - Person Unresponsive

21.05 On any EMS incident, all on-scene personnel shall obey the instructions and orders of the responding Ambulance service unless otherwise directed by a PCFD Officer.

21.06 Assist EMS personnel transport to hospital

21.06.01 When PCFD personnel are requested to assist the EMS service transport the patient to the hospital, they shall direct this request to the IC, Fire Chief or Assistant Chief and shall not leave the incident scene without proper authorization. The IC, Fire Chief or Assistant Chief will make proper arrangements for return transportation of the PCFD personnel, ensuring that the personnel are transported back to the county by another member of PCFD using his/her POV or PCFD staff vehicle only. No fire or rescue apparatus will be allowed to leave the county except under direction of a chief officer.

21.06.02 At no time should PCFD drive or operate the Ambulance of the responding service

21.07 Responding Apparatus to EMS/Medical Calls

21.07.01 In compliance with State of Georgia guidelines for medical first response, PCFD personnel shall respond emergency fire apparatus (engines, ladder truck, pumpers, squad, rescue, etc.) to EMS/medical assist calls as appropriate to call.

21.07.02 PCFD medical first responders as outlined in **21.03** will be able to respond directly to the scene with a department issued first responder bag and gloves. All other equipment as outlined in the State of Georgia Medical First Responder license will be maintained on the licensed apparatus.

21.07.03 At no time shall equipment be removed from the licensed apparatus and transported to the incident scene in PCFD personally owned vehicles (POV).

21.08 Medical protocols

21.08.01 All medical first responders will comply with the contracted ambulance service protocols.

21.08.02 **All medical first responders, regardless of level of certification, will follow the approved protocols up to the administration of oxygen.**

21.08.03 All patient refusals are to be obtained by the responding Ambulance service.

21.09 Completion of patient care reports

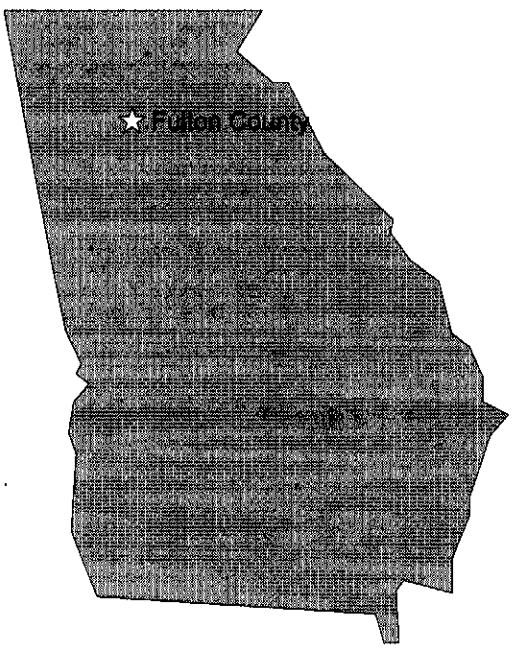
21.09.01 A patient care report (PCR) shall be completed by the **highest level medical first responder** on scene as outlined in **21.03**.

21.09.02 A PCR shall be completed on all patient encounters when PCFD personnel arrive first on scene and establish patient care.

21.09.03 All PCR's must be completed within **24 hours** of the incident.

CLINICAL CARE GUIDELINES
12/12/2014

Fulton County Emergency Medical Services Clinical Care Guidelines



Adopters at time of publication

Grady Emergency Medical Service
City of Atlanta Fire Rescue
City of College Park Fire Department
Emory EMS First Responder
Fulton County Fire Department
City of Johns Creek Fire Department
City of Sandy Springs Fire Department
City of Decatur Fire Department

Fulton County Emergency Medical Services

Clinical Care Guidelines

Introduction

12/12/2014

Clinical Care Guidelines

The Following Clinical Care Guidelines (CCG's) were written to provide the practicing prehospital care provider with a set of guidelines for the purposes of performing conscientious, high-quality patient care. The clinical care guidelines are presented in an algorithmic format that allows for easy reference. It is important that all prehospital care providers operating under these clinical care guidelines recognize and consider them as guidelines that can not account for every possible clinical condition or prehospital situation and do not supersede sound, contemporaneous clinical judgment on the part of the prehospital healthcare provider. When in doubt, the provider should contact On-line Medical Control (OLMC) to clarify confusing presentations or situations.

Organization

The Clinical Care Guidelines are organized into subsections to facilitate easy reference. The majority of the CCG's are based on patient presentation and not on ultimate diagnosis. Certain guidelines are more appropriately created using a diagnosis as the starting point and depart from the presentation-based convention.

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Fulton County Emergency Medical Services

Clinical Care Guidelines

Introduction

12/12/2014

Copyright Notice & Disclaimer

The Fulton County Emergency Medical Service Clinical Care Guidelines (the "Guidelines") are the intellectual property of the Emory Section of Prehospital and Disaster Medicine (the "Section"). The Section hereby gratefully acknowledges the contributions of the founding author of these Guidelines, Dr. Eric Ossmann, who in his role as Medical Director for Grady EMS and Co-Director for the Section, worked tirelessly to support the mission of the emergency medical services system and to improve out-of-hospital care in this community. The Section has applied for copyright with the United States Copyright Office. The Guidelines are the sole and exclusive property of the Section. The Section hereby assures physicians and prehospital healthcare providers that use of the Guidelines by prehospital healthcare providers or physicians in their practices is permitted. Each professional user of the Guidelines is granted a royalty-free, non-exclusive, non-transferable license to use the Guidelines in their daily practice. The Guidelines may not be changed in any way by any user. The Guidelines may be incorporated into additional training materials developed by a user, on the condition that no fee is charged by the user for the Guidelines, or the additional training materials.

The Guidelines have been developed using the best available clinical evidence in concert with a substantial experiential base in prehospital medicine. However, the Section requires that the implementation and use of the Guidelines be conducted and completed in accordance with the professional judgment of an authorized physician and prehospital healthcare providers directed and supervised by them. Each health care professional who decides to use these Guidelines for prehospital emergency medical care does so on the basis of that health care provider's professional judgment with respect to the particular patient that the provider is caring for. The Section disclaims any and all liability for adverse consequences or for damages that may arise out of or be related to the professional use of the Guidelines by others, including, but not limited to, indirect, special, incidental, exemplary, or consequential damages, as further set forth below.

The Section has made a good faith effort to take all reasonable measures to make the Guidelines accurate, up-to-date, and free of material errors in accord with clinical standards accepted at the time of publication. Users of the Guidelines are encouraged to use the contents for improvement of the delivery of prehospital emergency health care. Any practice described in the Guidelines should be applied by health care practitioners in accordance with professional judgment and standards of care used in regard to the unique circumstances that may apply in each situation they encounter. The Section cannot be responsible for any adverse consequences arising from the independent application by individual professionals of the material in the Guidelines to particular circumstances encountered in their practices.

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Clinical Care Guidelines

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Clinical Care Guidelines

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Fulton County Emergency Medical Services

Clinical Care Guideline – A1

Definitions

12/12/2014

For the purposes of consistency, the following abbreviations, definitions and parameters will be utilized throughout the FCEMS Clinical Care Guidelines.

Age Parameters – Utilization of Clinical Care Guidelines

- **Adult** = Age ≥ 15 years.
- **Pediatric** = Age < 15 years
- **Ability to Consent for or Refuse Medical Treatment** = Age ≥ 18 years

Assessment & Vital Signs - ADULT

- **Systolic Blood Pressure** = SBP
- **Diastolic Blood Pressure** = DBP
- **Heart Rate** = HR
- **Respiratory Rate** = RR
- **AVPU Scale**
  - Alert = Interacts appropriately with healthcare provider and environment
  - Verbal = Responds to verbal stimuli
  - Painful = Responds to painful stimuli
  - Unresponsive = Does not respond to verbal or painful stimuli
- **Glasgow Coma Scale** = GCS
  - Eye Opening
    - Spontaneous = 4
    - To Voice = 3
    - To Painful Stimuli = 2
    - None = 1
  - Best Verbal Response
    - Oriented to Person, Place & Time = 5
    - Confused = 4
    - Inappropriate Words = 3
    - Incomprehensible = 2
    - None = 1
  - Best Motor Response
    - Obeys Commands = 6
    - Localizes Painful Stimuli = 5
    - Withdraws from Painful Stimuli = 4
    - Abnormal Flexion Posturing = 3
    - Abnormal Extension Posturing = 2
    - None = 1
- **Hypertension** = SBP ≥ 180 mmHg. Or DBP ≥ 120 mmHg.
- **Hypotension** = SBP ≤ 90 mmHg.
- **Tachycardia** = HR > 100 beats per minute
- **Bradycardia** = HR < 60 beats per minute
- **Hyperventilation** = RR > 20 breaths per minute
- **Hemodynamically Stable** = Patient not hypotensive and tachycardia as defined above
- **Hemodynamically Unstable** = Patient hypotensive and tachycardic as defined above
- **Delusional** = Perceiving sights, sounds or situations that do not exist

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Fulton County Emergency Medical Services

Clinical Care Guideline – A1(2)

Definitions

12/12/2014

Vital Signs Outside of the Normal Range – PEDIATRIC

Age	RR	HR	SPO2
< 3 m	> 50	> 180	< 92%
3 m to 3 y	> 40	> 160	< 92%
3 – 8 y	> 30	> 140	< 92%
> 8 y	> 20	> 100	< 92%

Age ≤ to 12 months = infant
Age < 15 years and > 12 months = child

Assessment & Vital Signs

- **Systolic Blood Pressure** = SBP
- **Diastolic Blood Pressure** = DBP
- **Heart Rate** = HR
- **Respiratory Rate** = RR
- **Glasgow Coma Scale = GCS**
  - **Best eye response: (E)**
    4. Eyes opening spontaneously
    3. Eye opening to speech
    2. Eye opening to pain
    1. No eye opening
  - **Best verbal response: (V)**
    5. Smiles, oriented to sounds, follows objects, interacts.
    4. Cries but consolable, inappropriate interactions.
    3. Inconsistently inconsolable, moaning.
    2. Inconsolable, agitated.
    1. No verbal response.
  - **Best motor response: (M)**
    6. Infant moves spontaneously or purposefully
    5. Infant withdraws from touch
    4. Infant withdraws from pain
    3. Abnormal flexion to pain for an infant (decorticate response)
    2. Extension to pain (decerebrate response)
    1. No motor response

Fulton County Emergency Medical Services

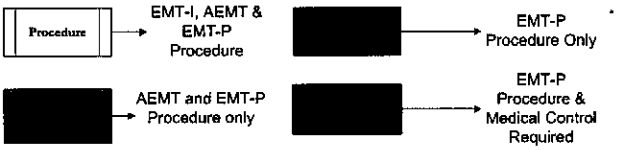
Clinical Care Guideline – A2

Guideline Format & Legend

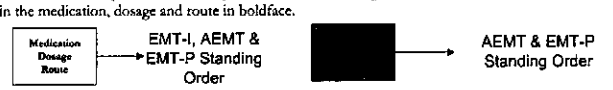
12/12/2014

These clinical care guidelines (CCG's) are arranged in an algorithmic format that maintains certain conventions throughout the document. The majority of the CCG's are symptom & presentation based, but some are maintained in the diagnosis-based format. The guidelines contain text boxes that will provide supporting information where appropriate.

Procedure/Intervention boxes are rectangular boxes with vertical end bars. These boxes indicate that a specific prehospital procedure/intervention may be performed. Procedure/Intervention boxes that are filled blue indicate a procedure that is restricted to paramedic (EMT-P) providers only. Procedure/Intervention boxes that are filled green may be performed by Georgia Advanced EMTs and Paramedics. Procedure/ Intervention boxes filled yellow may be performed by Georgia EMT-I's (EMT-Intermediate – 1985 Curriculum) Georgia AEMTs or EMT-P's. Procedure boxes that have a double thickness line and are filled red indicate the need for on-line medical control (OLMC) consultation.



Medication boxes are square boxes, filled yellow for all levels and green for AEMT and EMT-P, that contain the medication, dosage and route in boldface.



Medication boxes that are filled blue indicate a medication that is restricted to paramedic (EMT-P) providers only. Medication boxes that have a double thickness line, red fill and double horizontal bars require on-line medical control consultation.

Decision boxes are diamond shaped, orange filled and contain a branch point which directs the subsequent patient care guideline.

Continued on Next Page

Fulton County Emergency Medical Services

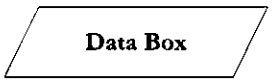
Clinical Care Guideline – A2(2)

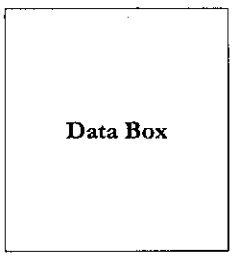
Guideline Format & Legend

12/12/2014

Document boxes are square with a wavy bottom line and filled purple. These boxes indicate that another protocol should be considered.

Data boxes are parallelogram or rectangular shaped boxes. They provide data that needs to be considered or synthesized by the provider to continue with that specific CCG.





Fulton County Emergency Medical Services

Clinical Care Guideline – A3

Provider Scope of Practice

12/12/2014

The Fulton County Emergency Medical Services Clinical Care Guidelines are designed to be used by both Georgia EMT-I (EMT-Intermediate – 1985 Curriculum) Georgia Advanced EMTs (AEMT) and Paramedic (EMT-P) level providers. As delineated in the Guidelines, certain interventions; procedural and therapeutic, are designated for EMT-P level providers only. The FCEMS Clinical Care Guidelines clearly define the provider level of practice required for specific procedural and therapeutic interventions (see *Guideline Format & Legend* – A2).

1) **An EMT-P** is defined as an individual that is certified by the State of Georgia as a Paramedic (EMT-P) and is authorized by the individual service medical director to act in that capacity while on duty.

2) **An AEMT** is an individual that is certified by the State of Georgia as an Advanced Emergency Medical Technician and has training under the new "advanced" curriculum and is authorized by the individual service medical director to act in that capacity. It is assumed that the EMT-I is the minimum level of certification required to use this protocol set.

3) **An EMT-I** is an individual that is certified by the State of Georgia as an Emergency Medical Technician and is authorized by the individual service medical director to act in that capacity. The FCEMS Protocol Set does not address the scope of practice of the Georgia Certified EMT-B. It is assumed that the EMT-I is the minimum level of certification required to use this protocol set.

4) **The Technician** is the provider that attends to the patient in the rear compartment during transport to the hospital. The Technician may be an EMT-I, AEMT or EMT-P. On a transport capable ambulance the decision as to whether a particular patient requires an EMT-I, AEMT or an EMT-P during transportation will be based on the following guidelines, and ultimately be the responsibility of the EMT-P level provider on scene. The Patient Care Report (PCR) will accurately reflect which provider performed specific interventions on scene and during transportation and who specifically functioned in the role of Technician as defined in this paragraph.

The FCEMS Protocol Set addresses interventions and therapeutics at the EMT-I, AMET and EMT-P level of certification. It is expected that individual providers will practice at a level appropriate to their certification. The EMT-P on-scene will make the decision as to the level of service that the patient will require during transportation to the hospital. When an EMT-P elects to drive and allows an EMT-I or AEMT to serve as the Technician; the EMT-P will still be ultimately responsible for all patient care rendered during the transport. The following guidelines will be used to aid the EMT-P in making that decision:

1) The condition of the patient and/or potential for deterioration during transport will primarily dictate the level of certification of the Technician during transport. Simply put, any patient that requires a paramedic level assessment, intervention or therapeutic on scene will also require a EMT-P level technician. Any patient that requires the minimum intervention from an EMT-I or AEMT as deemed appropriate by these guidelines and the Office of EMS and Trauma scope of practices, may be cared for by the EMT-I or higher in transport to the hospital.

) The EMT-I or AEMT may always request that the EMT-P serve as Technician if they feel that the patient requires an EMT-P level of intervention or is at risk for deterioration

Fulton County Emergency Medical Services

Clinical Care Guideline – A4

On-line Medical Control & Communications

12/12/2014

1) It is preferred that on-line medical control consultations and hospital reports be made from the ambulance by radio (on a recorded line) while enroute to the hospital. However, calls may be made from the scene if circumstances dictate.

2) The receiving facility should be contacted when the following situations occur:

   a) Patients considered unstable (abnormal vital signs) or potentially unstable
   b) When required by a specific CCG
   c) When doubt or confusion exists regarding any facet of patient care
   d) Incidents involving multiple casualties (greater than 5 patients)
   e) Disaster Situations
   f) Incidents involving a hazardous materials incident response or when possible exposure to radiation has occurred
   g) All STEMIs with transmission of the 12 lead EKG as per service capabilities, optimally, within 10 minutes of patient contact
   h) All CVAs with time of symptom onset and accucheck.
   i) Any facility that has indicated a desire to receive report for all transports.

3) When an on-line medical control call is not possible due to radio malfunction or other unforeseen complications, these clinical care guidelines shall act as standing orders for therapeutic interventions or for performing procedures by Fulton County Emergency Medical Services Paramedics, AEMTs and EMT-I's.

4) These clinical care guidelines do not limit the activities of the paramedic when in direct communication with the medical control physician. Certain procedures or treatment options may require preliminary consultation with the medical control physician. These particular procedures/interventions are indicated in the individual clinical care guidelines. Should communication problems occur, an exception shall be permitted if potential patient deterioration is eminent. In such cases, the circumstances involved will be documented on the Patient Report.

5) When medical control is utilized, the Medical and Surgical-Trauma communications standard will be strictly adhered to. Each medic has been issued a copy of this document and it should be closely followed when presenting a patient to the medical control physician. This is to facilitate patient reporting so as to guard against unnecessary radio traffic. (See sample formats)

6) Past medical history and medications that are pertinent to the patient's chief complaint should be reported. The emergency physician will obtain all other information when the patient arrives at the hospital.

7) Slang terminology should not be used.

8) Except under certain circumstances, complete reports should last no longer than 45 seconds.

9) The medical control physician should initially identify the unit to which he/she is communicating, then himself or herself. It is not important to verify the physician's name unless doubt exists about whether an MD or RN is taking the report. The physician's name can be obtained after arrival at the hospital.

10) Completed Patient Reports will be documented and submitted per State guidelines.

Fulton County Emergency Medical Services

Clinical Care Guideline – A5

Medical Patient Radio Script

12/12/2014

PARAMEDIC *YOUR NAME.*

ON *UNIT #* **TO** *HOSPITAL*, **COPY?**

REQUESTING A *NURSE / PHYSICIAN* **TO THE RADIO FOR** *REPORT / ORDERS*

ENROUTE WITH A: *AGE , M / F.*

COMPLAINING OF: *CHIEF COMPLAINT.*

HX OF PRESENT ILLNESS: *BRIEF SUMMARY.*

PATIENT HAS A HX OF: *PERTINENT TO CHIEF COMPLAINT.*

CURRENT MEDICATIONS: *LIST AND DOSE IF PERTINENT TO CC.*

PHYSICAL EXAM:

VITALS: *BP, PULSE, RESPIRATIONS.*
GENERAL: *AVPU / DISTRESS.*
SKIN: *WARM / DRY / COOL / CLAMMY.*
LUNGS: *CLEAR / RALES / RONCHI / WHEEZES.*

ECG SHOWS: *STEMI vs. non-STEMI*
RATE, RHYTHM, MORPHOLOGY
and transmitted vs. not transmitted.

TREATMENT: *ALREADY PERFORMED.*

REQUESTING ORDERS FOR: *MEDICATION / PROCEDURE.*

(REPEAT ORDERS BACK TO PHYSICIAN)

ETA IS: *MINUTES.*

Fulton County Emergency Medical Services

Clinical Care Guideline – A6

Trauma Patient Radio Script

12/12/2014

PARAMEDIC *YOUR NAME.*

ON *UNIT #* **TO** *HOSPITAL*, **COPY?**

REQUESTING A *NURSE / PHYSICIAN* **TO THE RADIO FOR** *REPORT / ORDERS*

ENROUTE WITH A: *AGE , M / F.*

INJURED VIA A: *MECHANISM.*

HX OF INJURY: *BRIEF DESCRIPTION OF CIRCUMSTANCES*

PHYSICAL EXAM:

VITALS:	*BP, PULSE, RESPIRATIONS, PULSE OX*
GENERAL:	*GCS / MAE / PUPILS.*
LUNGS:	*CLEAR / RALES / RONCHI / WHEEZES.*
ABDOMEN:	*SOFT / TENDER / RIGID / DISTENDED*
PELVIS:	*STABLE / UNSTABLE.*
EXTREMITIES:	*DEFORMITIES / PULSES.*

TREATMENT: *ALREADY PERFORMED.*

TRIAGE CATEGORY: *PHYSIOLOGIC / ANATOMIC / MECHANISM / MEDIC JUDGMENT*

REQUESTING ORDERS FOR: *MEDICATION / PROCEDURE.*

(REPEAT ORDERS BACK TO PHYSICIAN)

ETA IS: *MINUTES.*

Fulton County Emergency Medical Services

Clinical Care Guideline – A7

On-Scene Physician

12/12/2014

Licensed Georgia Physician On-Scene

1) The following guidelines apply to situations in which prehospital care providers encounter an on-scene physician that has a pre-established relationship with the patient (responding to medical facility) or when a physician bystander wishes to render or direct care subsequent to EMS arrival on scene.

2) Prehospital care providers should introduce themselves and define their level of training and agency affiliation immediately upon scene arrival. They should then request a brief patient report from the on-scene physician.

3) Prehospital care providers will always independently assess the patient upon initial arrival at the scene regardless of on-scene physician presence. In the case of an established physician-patient relationship, it is appropriate and encouraged for the prehospital care providers to discuss the initial patient assessment and treatment plan with the on-scene physician.

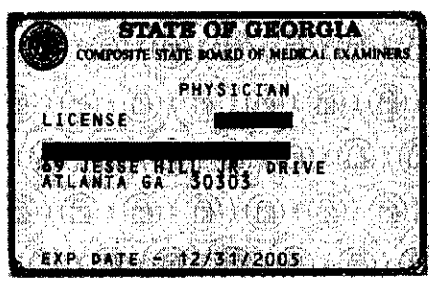
4) Prehospital care providers will manage the patient according to established FCEMS Clinical Care Guidelines.

5) An appropriately licensed Georgia physician can and may assume control of patient treatment. If the physician wishes to assume control of patient management, the following criteria must be satisfied:

   a) The on-scene physician produces a current State of Georgia Medical License (See example below). Or is easily recognized as a licensed physician (Hospital ID, Location of Incident).
   b) The on-scene physician agrees to accompany the patient in the ambulance to the hospital. This stipulation does not apply in a disaster or mass casualty situation where the situation may dictate that the physician remain at the scene of the incident

6) In the event that the on-scene physician wishes to assume control of patient treatment, and the aforementioned conditions are satisfied then the on-scene physician and paramedic will adhere to the following stipulations:

   a) The on-scene physician's Georgia Medical License number and expiration date will be recorded on the patient care report.
   b) The paramedic, AEMT or EMT-I will only carry out procedural or medication orders that are within their scope of practice.
   c) The on-scene physician will sign the patient care report.
   d) If the paramedic, AEMT or EMT-I feels uncomfortable with any aspect of the patient care that is occurring they are to immediately contact his/her EMS service medical director and communicate their concern.


STATE OF GEORGIA
COMPOSITE STATE BOARD OF MEDICAL EXAMINERS
PHYSICIAN
LICENSE [redacted]
[redacted] DRIVE
ATLANTA GA 30303
EXP DATE - 12/31/2005

Fulton County Emergency Medical Services

Clinical Care Guideline – A8

On-Scene Equipment

12/12/2014

Upon arrival at the scene the crew will carry the following equipment to the patient's location prior to initial patient contact. The type of equipment brought to the scene will depend on the nature of the call as determined by dispatch:

Medical Incidents:

1) Designated upon dispatch as Emergent or patient located more than 100 feet and/or 1 story from the transport unit:
   a) Jump kit with airway equipment and oxygen
   b) Portable suction equipment
   c) Cardiac monitor/defibrillator
   d) Medication bag / IV start box
   e) Stretcher
   f) Toughbook (if issued)

2) Designated upon dispatch as Non-Emergent:
   a) Jump kit with airway equipment and oxygen
   b) Medication bag / IV start box'per medic judgement

Trauma Incidents:

1) Designated upon dispatch as Emergent or patient located more than 100 feet and/or 1 story from the transport unit:
   a) Jump kit with airway equipment and oxygen
   b) Immobilization and splinting supplies as indicated by mechanism
   c) Stretcher
   d) Portable suction equipment

2) Designated upon dispatch as Non-Emergent:
   a) Jump kit with airway equipment and oxygen
   b) Immobilization and splinting supplies as indicated by mechanism

Obstetrical Incidents:

1) Designated upon dispatch as Emergent or patient located more than 100 feet and/or 1 story from the transport unit:
   a) Jump kit with airway equipment and oxygen
   b) OB kit
   c) Medication bag / IV start box
   d) Stretcher

2) Designated upon dispatch as Non-Emergent:
   a) Jump kit with airway equipment
   b) OB kit

3) Pediatric Specific equipment if available

Fulton County Emergency Medical Services

Clinical Care Guideline – A9

Scene Evolution

12/12/2014

Patient evolution from the scene to the ambulance is preferentially accomplished with the stretcher or stair chair. However, under certain circumstances it may be appropriate to allow the patient to ambulate from the scene. The following guidelines outline the general contraindications for allowing the patient to walk to the ambulance or into the emergency department.

Patient Complaint Based Contraindications to Ambulation:

- Chest pain
- Dyspnea
- Abdominal pain
- Pregnancy greater than six (6) months
- Pregnancy with complications, regardless of gestational length
- Dizziness or syncope
- Recent loss of consciousness
- Any pain or discomfort on ambulation
- Vaginal bleeding

Patient Assessment Based Contraindications to Ambulation:

- Altered mental status
- Unstable vital signs
- Respiratory distress
- Cardiac dysrhythmias
- Significant blood loss

Mechanism of Injury Based Contraindications to Ambulation:

- Blunt or penetrating trauma to the head, chest or abdomen
- Spinal injury
- Injury to lower extremities
- Other significant injury

Other Relative Contraindications to Ambulation:

- Patient's age
- Patient's general physical condition
- Underlying physical disabilities
- Distance and obstacles.

Fulton County Emergency Medical Services

Clinical Care Guideline – A10

Prehospital Acuity Classification

12/12/2014

Prehospital Acuity Classification (PAC)

1) The PAC System is designed to aid prehospital providers in classifying patients for refusal of care, destination and hospital diversion decisions. Prehospital providers should use these guidelines and their clinical impression to place patients into one of three categories. The categorization boxes contain specific examples of conditions or presentations that typically place a patient in a particular category, but should not be considered an exclusive list that takes into account every patient presentation or prehospital situation:

   a) **Immediate Threat to Life – PAC Level One**
   b) **Time Dependent Emergency – PAC Level Two**
   c) **Potential Emergency / Urgency – PAC Level Three**

2) Patients that have vital signs outside of the normal range, but have no other evidence of a life threatening or time dependent emergency may be categorized as PAC Level 2 or Level 3 based on the clinical judgment of the on-scene provider.

Immediate Threat to Life

- Active airway management required (ETT, NVAD, OP Airway, BVM)
- Severe respiratory distress with SPO_2 < 90%
- Pulseless
- Systolic BP < 90 mmHg
- Acute change in mental status
  - GCS < 14
- New onset CVA
- Chest pain with EKG or history consistent with MI

YES → [redacted]

Time Dependent Emergency

- New onset confusion or disorientation
- Severe pain unrelieved by prehospital intervention
- Patient condition not improving or deteriorating despite prehospital intervention
  - Respiratory distress
  - Allergic reaction
  - Hypoglycemia
  - Chest pain

YES → **PAC Level Two**

Vital Signs Outside of Normal Range

Age	RR	HR	SPO2
< 3 m	> 50	> 180	< 92%
3 m to 3 y	> 40	> 160	< 92%
3 – 8 y	> 30	> 140	< 92%
> 8 y	> 20	> 100	< 92%

With Concerning Clinical Presentation → **PAC Level Two**

Potential Emergency / Urgency

- A threat to life or time dependent emergency is not identified

YES → [redacted]

Fulton County Emergency Medical Services

Clinical Care Guideline – A11

Patient Destination

12/12/2014

The following directives apply to all patients transported by a FCEMS unit during the course of normal 911 operations.

1) The patient will be transported to the hospital of his or her choice providing that the hospital chosen is within a reasonable distance of the patient's location and is capable of meeting the patient's immediate needs.

2) A reasonable distance is defined as follows:

   a) **5 miles or 10 minutes from the point of origination for patients that meet Prehospital Acuity Classification Level One.**
   b) **10 miles or 15 minutes from the point of origination for patients that meet Prehospital Acuity Classification Levels Two or Three.**

3) If a patient requests a destination hospital that is inconsistent with the aforementioned definition of "reasonable distance" the paramedic will inform them of this situation and chose an alternative hospital that is capable of meeting the patient's immediate needs and falls within the area defined by "reasonable distance". If the patient still demands transport to a hospital that falls outside of the "reasonable distance" criteria, supervision should be immediately contacted to resolve the issue.

4) If the paramedic, AEMT, or EMT-I believes that a requested destination hospital is incapable of meeting the patients needs (i.e. critical pediatric patient with parental request to be transported to non-pediatric center), the paramedic will immediately contact on-line medical control at the requested destination hospital to inform them of the situation, and allow them to potentially converse with the patient or caretaker.

5) Trauma patients should be categorized via the *Trauma Destination Criteria* guideline and transported to the closest appropriate trauma center. Pediatric trauma patients should preferentially be transported to the closest appropriate pediatric trauma center. Trauma patients that are at imminent risk for cardiac arrest or have an unmanageable prehospital condition such as an airway obstruction should be taken to the closest emergency room irrespective of classification.

6) Patients with evidence of an ST Elevation MI (STEMI) or a high clinical suspicion for acute myocardial infarction should be taken to the closest STEMI facility as detailed in the *TIME Criteria* (**A13**).

7) Patients with a suspected acute stroke should be taken to the closest appropriate Stroke Center consistent with Patient Choice and Reasonable Distance.

8) Burn patients that meet the criteria for a major burn as defined by FCEMS CCG's (Burn Categorization) will be transported to Grady Memorial Hospital. OLMC should be immediately consulted for a patient that meets criteria for transport to the GMH Burn Center, but requests an alternative hospital.

9) See Pediatric Guidelines for pediatric destination criteria.

Reference the Georgia Rules and Regulations #111-9-2, OCGA 31-11

Fulton County Emergency Medical Services

Clinical Care Guideline – A12

Trauma Destination Criteria

12/12/2014

Level One Centers
Grady Memorial Hospital
Atlanta Medical Center

Level Two Centers
North Fulton Hospital
Gwinnett Medical Center
Kennestone Hospital

Pediatric Trauma Centers
For children under 15, see pediatric guidelines

Level One
Egleston Childrens Hospital

Level Two
Scottish Rite Childrens

- Glasgow Coma Scale < 14
- Systolic BP < 90
- Respiratory < 10 or > 29 (<20 in infant < one year)

Meets physiologic criteria?

YES → **Transport to a Trauma Center. These criteria attempt to identify the most seriously injured patients. They should be transported preferentially to the highest level of care in the defined trauma system.**

NO

- All penetrating injuries to head, neck, torso and extremities proximal to elbow or knee
- Chest wall instability or deformity (e.g. flail chest)
- 2 or more proximal long-bone fractures
- Crushed, degloved, mangled, or pulseless extremity
- Amputation proximal to wrist and ankle
- Pelvic fractures
- Open or depressed skull fracture
- Paralysis

Meets anatomic criteria?

YES → **Transport to a Trauma Center. These criteria attempt to identify the most seriously injured patients. They should be transported preferentially to the highest level of care in the defined trauma system.**

NO

sgow Coma Scale

Eye Opening	
spontaneous	4
to voice	3
to pain	2
none	1
Best Verbal Response	
oriented	5
confused	4
inappropriate words	3
incomprehensible	2
none	1
Best Motor Response	
obeys commands	6
localizes pain	5
withdraws to pain	4
abnormal flexion	3
abnormal extension	2
none	1

- Falls
  - Adults: > 20 ft. (one story is equal to 10 feet)
  - Children: > 10 ft. or 2-3 times the height of the child
- High-risk auto crash
  - Intrusion, including roof: > 12 in. occupant site; > 18 in. any site
  - Ejection (partial or complete) from automobile
  - Death in same passenger compartment
  - Vehicle telemetry data consistent with a high-risk of injury
- Auto vs. pedestrian/bicyclist thrown, run over, or with significant (>20 MPH) impact
- Motorcycle crash > 20 mph

Meets mechanistic criteria?

YES → **Transport to a Trauma Center. Need not be the highest level trauma center.**

NO

- Older Adults
  - Risk of injury/death increases after age 55 years
  - SBP <110 may represent shock after age 65
  - Low impact mechanisms (e.g. ground level falls) may result in severe injury
- Children
  - Should be triaged preferentially to pediatric capable trauma centers
- Anticoagulation and bleeding disorders
  - Patients with head injury are at high risk for rapid deterioration
- Burns
  - Without other trauma mechanism: triage to burn center
  - With trauma mechanism: triage to trauma center
- Pregnancy > 20 weeks
- EMS provider judgment

YES → [redacted]

NO → **Transport to the closest appropriate facility**

Fulton County Emergency Medical Services

Clinical Care Guideline – A13

Timely Intervention for Myocardial Emergencies (T.I.M.E)

12/12/2014

PRE HOSPITAL

1. An acute MI should be suspected when the ECG demonstrates evidence of ST segment elevation of greater then 1 mm in two or more leads or the constellation of history and physical findings makes the diagnosis of an Acute MI (AMI) likely.

2. Recommended on-scene time is 10 minutes.

   "Time Alert Patients" should be transported to the closest STEMI facility or a STEMI facility consistent with the *Reasonable Distance Criteria* (**A11**)

[redacted]

[redacted]

Acute MI Suspected (1)

NO

YES

[redacted]

HOSPITAL

1. After review of the ECG and EMS report the ED physician should activate the internal hospital STEMI Protocol if there is evidence of an ST elevation MI. In cases where the ECG is non-diagnostic the ED physician can elect to evaluate the patient in the ED upon arrival.

   TIME Alert patients with evidence of STEMI will not be subject to hospital diversion.

- **ED Physician notified of inbound "TIME Alert" Patient**
- **Physician takes EMS radio report and reviews transmitted ECG**

Acute MI Suspected (1)

NO → **OLMC guidance as needed**

YES

Initiate internal hospital STEMI Protocol

Fulton County Emergency Medical Services

Clinical Care Guideline – A14

Hospital Diversion

12/12/2014

All patients will be transported primarily to their hospital of choice as outlined in the *Patient Destination* Guideline (A11). On the occasion that a chosen destination hospital is on diversion the following polices will be utilized by FCEMS providers.

1) When the primary destination hospital is on diversion a **PAC-Level One Patient** may be transported to an alternative hospital capable of meeting the patient's needs that is no more than 5 miles or 10 minutes from the origination point of the call. FCEMS providers will make every attempt to honor hospital diversion as long as:

   a) an alternate hospital within a reasonable distance is capable of accepting the patient, and
   b) the patient is agreeable to an alternative destination. **PAC-Level Two Patients** may be transported to an alternative destination hospital capable of meeting the patient's needs that is no more than 10 miles or 15 minutes from the origination point of the call with the aforementioned stipulations.

2) If all hospitals within a *Reasonable Distance* are on diversion, then hospital destination will be selected based on the following criteria in descending order:

   a) Within 5 miles or 10 minutes of call origination for **PAC-Level One Patients**
      Within 10 miles or 15 minutes of call origination for **PAC- Level Two Patients**
   b) Patient Choice

3) The only circumstance under which a **PAC-Level One Patient** is to be transported a distance greater than 5 miles or 10 minutes is when the point of call origination is greater than 5 miles or 10 minutes from a hospital capable of serving the patients needs, or the hospital(s) within 5 miles or 10 minutes is (are) closed to all patients.

4) **PAC-Three Patients** may be transported to the hospital of their choice provided that the selection is consistent with the definition of reasonable distance as defined in the *Patient Destination* Guideline (**A11**). The only exception is when the destination hospital is closed to all patients

5) Trauma patients will be categorized according to *Trauma Destination Criteria* (**A12**) and transported to the closest appropriate Trauma Center. On the occasion that a chosen destination Trauma Center is on diversion the following polices will be utilized by FCEMS providers.

   a) The patient will be transported to an alternative Trauma Center provided it is within 5 miles or 10 minutes from call origination.
   b) If all Trauma Centers within a 5 mile or 10 minute radius from the point of origination are on diversion then the patient will be transported to the closest Trauma Center.
   c) Trauma patients who are at imminent risk for cardiac arrest or have an unmanageable prehospital condition such as an airway obstruction should be taken to the closest hospital ED irrespective of trauma or diversion status.

Fulton County Emergency Medical Services

Clinical Care Guideline – A15

Patient Refusal of Transport

12/12/2014

Patients encountered by FCEMS may refuse treatment or transportation. It is expected that crews will encourage patients who requested 911 services be transported to a hospital Emergency Department for evaluation. When a patient does refuse treatment or transportation FCEMS personnel should observe the following guidelines.

1) FCEMS Transport Agencies will take patients to the hospital of their choice consistent with the FCEMS *Patient Destination* Guideline (**A11**).

2) Under no circumstances will FCEMS providers refuse or encourage refusal of treatment or transport to any patient encountered during regular 911 operations in the FCEMS service area.

3) Patients under the age of 18 and non-emancipated minors may not personally refuse transport to the hospital. They may refuse all treatment that is not deemed life-saving or limb-preserving by the on-scene provider, but must be transported to the hospital unless an appropriate legal guardian with adequate medical decision making capacity is willing to sign a transport refusal form.

4) Any patient or appropriate legal guardian may refuse transport of self or a dependent if they demonstrate adequate medical decision making capacity. If the FCEMS provider has any question about the patient's medical decision making capacity they should obtain on-line medical control consultation. Adequate Medical Decision Making Capacity is defined as follows:

   a) Able to make informed decisions regarding health.
   b) Able to understand the nature and severity of their potential disease process.
   c) Able to understand the risks of refusing care; including death and permanent disability.
   d) Appears lucid and unimpaired by an exogenous substance or disease process as elaborated below:
      i) Alert and oriented to person, place and time
      ii) Not under the obvious effects of alcohol or drugs
      iii) Judgment is not impaired by a medical condition (ie: hypoxia)
   e) Able to understand and sign the transport refusal form
   f) Does not voice homicidal or suicidal tendencies

5) If a patient (or legal guardian) refuses transport of self or of a dependent child or adult the following procedures will be followed:

   a) The FCEMS Patient Care Report will be completed with demographics, vital signs, description of injury or illness, past medical history, medications, treatment rendered and reason for refusal.
   b) Medical control will be contacted to review the refusal if the following conditions exist:
      i) Adult Patients
         (1) Patient is **PAC Level-One or Two** based on provider assessment
         (2) Provider has questions regarding the clinical situation
      ii) Pediatric Patients
         (1) The patient is below the age of two years
         (2) Age greater than two years and meets **PAC Level-One or Two** based on provider assessment
         (3) Provider has questions regarding the clinical situation
   c) The on-duty supervisor will be contacted for questions regarding **PAC-Level Three Patients.**
   d) The Sewrvice Transport Refusal Form will be explained to the patient (guardian) and a signature obtained.

Fulton County Emergency Medical Services

Clinical Care Guideline – A16

Do Not Initiate Resuscitative Efforts

12/12/2014

1. Obvious signs of death include:
   - Decapitation or obvious mortal injury
   - Rigor mortis
   - Dependent lividity
   - Decay or decomposition
   - Submersion in water greater than 6 hours.
   - Incineration

2. Georgia law on Cardiopulmonary Resuscitation (O.C.G.A. §31-39-1 et. seq.) forms the basis for all guidelines regarding prehospital management of Do Not Resuscitate situations.

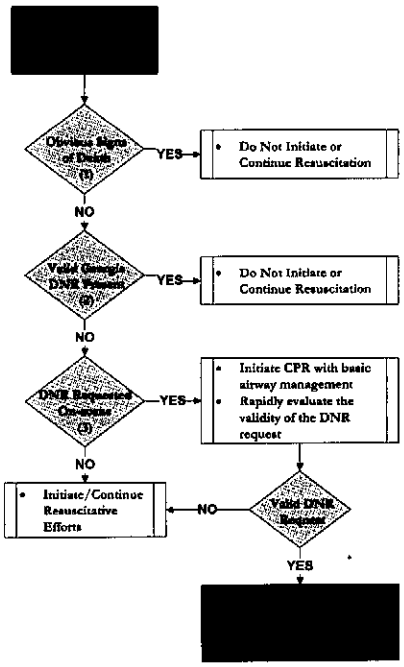
   A valid Georgia DNR is evidenced in writing and contains the following information on a form similar to the one in the law (see sample document):
   - Patient's name
   - Date of form
   - Printed name of attending physician
   - Signature of attending physician

   A patient may also be wearing a bracelet or necklace that is similar to ID bracelets worn in hospitals and must be on an orange background to accompany the written order with the following information in boldface type:
   - Patient's name
   - Authorized person's name and phone number; if applicable
   - Patient's physician's printed name and telephone number
   - Date of order not to resuscitate

3. Prehospital providers may encounter situations where a valid Georgia DNR document is not readily available or a DNR is requested on-scene by a family member or guardian after cardiac arrest has occurred. In those situations the prehospital provider will rapidly assess the validity of the request. A valid request will satisfy both of the following components:

   Patient condition:
   - Has a medical condition which can reasonably be expected to result in the imminent death of the patient
   - Is in a non-cognitive state with no reasonable possibility of regaining cognitive functions or CPR would be medically futile

   An authorized person requests a DNR order:
   - Durable Power of Attorney for Health Care (DPOA-HC) for the patient
   - Spouse; guardian of person; son or daughter 18 years of age or older; parent; brother or sister 18 years of age or older
   - Parent of a minor child



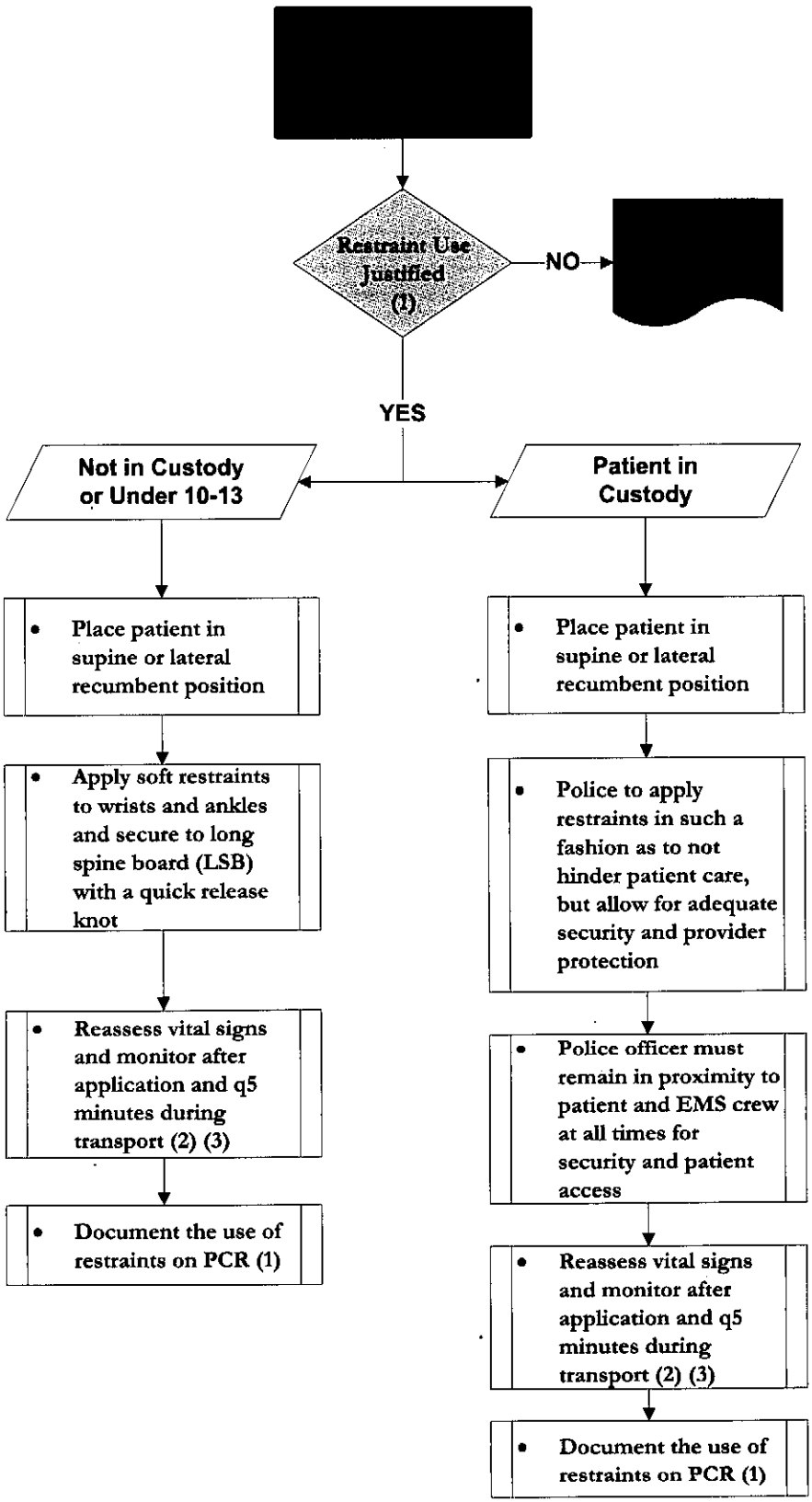
Fulton County Emergency Medical Services

Clinical Care Guideline – A17

Patient Physical Restraint

12/12/2014

1. Prehospital providers must identify and document one of the following patient conditions prior to applying soft restraints or managing a patient with restraints applied by police:
   - Patient unable to follow instructions and at high risk for injury and or dislodging lines/ tubes
   - Patient is a danger to self or others
   - Patient is in police custody
2. Patient restraint will be documented on the PCR and include the justification for restraint use, type and location of restraints used, vital signs q5 minutes during restraint and duration of time restrained.
3. All restrained patients should have 3 lead ECG monitoring and pulse oximetry monitoring if possible.
4. Consider Chemical Restraint if patient is physically restrained



Fulton County Emergency Medical Services

Clinical Care Guideline – A18

Fulton County Medical Examiner & Crime Scenes

12/12/2014

The Fulton County Medical Examiners (FCME) Office is tasked with investigating all deaths within the County. FCEMS providers will assist the medical examiner by insuring that they are notified of all deaths encountered during the course of prehospital operations.

1) The following situations will require that the FCME Office be notified of a prehospital death:
   a) Obvious death and no resuscitation attempted (**A16**)
   b) DNR present and no resuscitation attempted or resuscitation terminated (**A16**)
   c) Termination of resuscitation via the *Prehospital Resuscitation Cessation* Guideline (**M 4**)
   d) No resuscitation attempted or resuscitation terminated secondary to traumatic arrest via the *Traumatic Cardiac Arrest* Guideline (**T 7**)

2) Upon determining that resuscitation will not be attempted or resuscitation efforts will be terminated, FCEMS providers will take the following actions:
   a) Ensure the security of the scene
   b) Notify the EMS supervisor on duty
   c) If not already present, request police response
   d) Have the police officer Notify the FCME investigator on duty at 404-730-4400. If police response is delayed or unavailable, FCEMS providers should primarily notify the FCME investigator on duty
   e) Leave endotracheal tubes, non-visualized airway devices, IV and IO catheters in place
   f) Maintain scene security until PD or the FCME investigator arrive, whichever is first

3) Please be prepared to provide the Fulton County Medical Examiner with the following information:
   a) Name/DOB
   b) Medical history
   c) Medications
   d) Primary physician
   e) Physician giving permission for resuscitation termination
   f) Call times
   g) Any movement/modification of the body

4) When entering a scene where foul play is suspected please pay attention to the following guidelines:
   a) Ensure scene safety, and notify the police if they are not on scene.
   b) Do not touch or move anything unless it is absolutely essential for patient care. If anything is touched or moved, please advise the police.
   c) Limit access to only essential personnel.
   d) Do not handle a suicide note.
   e) Carefully preserve all potential evidence.
   f) Hangings – leave all knots intact, including the knot that the rope is suspended from and the knot making the "noose". Cut the rope in an area between the knots if patient care dictates
   g) If clothing needs to be removed, do not cut through material that has been punctured or perforated as this may disrupt evidence.

5) If child abuse is suspected, see Pediatric protocol 5.18.

Fulton County Emergency Medical Services

Clinical Care Guideline – A19

Emergency Vehicle Operation Mode

12/12/2014

The decision to utilize Red Lights and Sirens (RL&S) should be based on patient condition and the potential for time dependent deterioration. The responding crew will be responsible for safe vehicle operation regardless of the response mode.

1) FCEMS providers should keep in mind that the use of RL&S is associated with an increased risk for traffic crashes and reserve this mode of transport for patients that will benefit from the potential time savings.

2) The response mode to the scene will be determined by dispatch according to the Medical Priority Dispatch System protocols. Emergency response modes are agency specific. The requests for service will be classified as follows:

   a) **Non-Emergency** – RL&S response not indicated
   b) **Emergency** – RL&S response indicated

3) RL&S use for return trips to the hospital shall be determined by the paramedic/EMT providing direct patient care. The decision should be based entirely on patient acuity and be guided by the following parameters. It is the prerogative of the provider(s) providing patient care to alter the vehicle operation mode in response to changes in patient condition, road conditions or traffic patterns:

   a) RL&S <u>Indicated</u> if Traffic & Road Conditions Permit
      i) PAC-Level 1 Patients
      ii) PAC-Level 2 Patients if the provider feels that the potential time savings of RL&S will benefit the patient

   b) RL&S <u>Not</u>-Indicated
      i) PAC-Level 3 Patients
      ii) PAC-Level 1&2 Patients that will derive no obvious clinical benefit from time savings associated with RL&S use

Fulton County Emergency Medical Services

Clinical Care Guidelines

Intervention / Procedure

12/12/2014

I1	Initial Patient Assessment & Management	12/12/2014
I2	Airway Management	12/12/2014
I3	Hemorrhage Control	12/12/2014
I4	Spinal Immobilization	12/12/2014
I5	Trauma Volume Resuscitation	12/12/2014
I6	Mask Continuous Positive Airway Pressure	12/12/2014
I7	Cardioversion	12/12/2014
I8	Transcutaneous Pacing	12/12/2014
I9	Defibrillation	12/12/2014
I10	CardioPulmonary Resuscitation	12/12/2014
I11	Intraosseous Access	12/12/2014
I12	Intravenous Access	12/12/2014

Fulton County Emergency Medical Services

Clinical Care Guideline – I1

Initial Patient Assessment & Management

12/12/2014

[redacted]

Scene Threat Assessment
- Road Hazards
- Hazardous Material
- Fire or Explosion Risk
- Violence Risk
- Body Fluid or Infection
- Environmental
- Structural/Electrical Risk

Evaluate Scene

Unmitigated Scene Hazard — YES → • **Stage Until Hazard is Mitigated**

NO

- **Incident Appropriate Equipment Brought to The Patient**

Primary Survey
- Airway & C-Spine Stabilization
- Breathing (Respiratory Effort)
- Circulation & Hemorrhage Control
- Disability (LOC)
- Expose (When Appropriate)

Immediate Life Threat Identified — YES →
- **Adult CPR**
- **Airway Management**
- **Hemorrhage Control**

NO

Secondary Survey
- History of Present Illness
- AMPLE History
- Vital Signs
- Problem Specific Physical Exam

Basic Prehosptal Interventions
- Patient Privacy
- Environmental Protection
- Intravenous Access
- Oxygen Therapy
- Cardiac Monitor

→ [redacted]

Primary Survey

The primary survey should be completed on all prehospital patients. Immediate threats to life should be addressed before moving down the primary survey list or moving to the secondary survey. Critically ill patients should have all important body areas exposed to evaluate for hidden injury or illness. Providers should make diligent efforts to preserve patient privacy and prevent environmental insult.

History of Present Illness (HPI)

The HPI should define the following:

Primary Complaint

Onset, Location, Intensity, Radiation, Pattern, Relieving Factors & Worsening Factors

Secondary Complaints

Past Episodes

AMPLE History

Allergies
Medications (Detailed List)
Past Medical & Surgical History
Last Meal
Events Prior to Injury Illness

Vital Signs

LOC
Respiratory rate
Heart rate
Blood Pressure
Pulse Oximetry (When Applicable)

Problem Specific Physical Exam

Physical examination should focus in on areas relevant to primary & secondary complaints. A more comprehensive examination will be required in patients with an altered level of consciousness, multi-system illness or multi-system injury.

Fulton County Emergency Medical Services

Clinical Care Guideline – I2

Airway Management

12/12/2014

[redacted]

Airway Monitoring
- Assess Respirations
- Supplemental Oxygen to Keep SaO2 > 95%

YES ← **Patent Airway (1)**

NO

Manual Airway Clearance
- Jaw Thrust
- Head Tilt
- Chin Lift
- Suctioning

NO ← **Spinal Injury Risk** → YES

Spinal Immobilization

Manual Airway Clearance
- Jaw Thrust
- Chin Lift
- Suctioning

Clenched/ Gag Reflex

YES

Insert Nasopharyngeal Airway

NO

Insert Oropharyngeal Airway or Supraglottic Device

Normal Respiratory Effort (2)

NO

Supplemental Ventilation
- BVM at 8-10 Ventilations per Minute
- Oxygen at 15 lpm
- Suction as Needed

YES

Basic Airway Maintenance
- Elevate Head 20°
- Suction as Needed
- Supplemental Oxygen to Keep SaO2 > 95%

[redacted]

[redacted]

ETT Confirmed (3)

YES

[redacted]

NO

Laryngeal Mask Airway
- Insert Size Appropriate LMA
- BVM at 8-10 Ventilations per Minute

Dual Lumen Airway
- Insert Size Appropriate CombiTube™ or King LTS-D™ (preferred Dual Lumen Airway)
- BVM at 8-10 Ventilations per Minute

1. Airway obstruction is caused by decreased neurologic function and/or mechanical obstruction. In a patient with a reduced LOC the tongue can become flaccid and fall backwards occluding the hypopharynx. Secretions, blood and saliva in addition to endogenous and foreign material can also occlude the airway. Clinical evidence of an occluded airway can include: sonorous, noisy or gurgling respirations.
2. Patients with a respiratory rate below 8 and a diminished LOC should have their ventilations assisted via BVM. A respiratory rate above 20 and/or signs of respiratory distress may indicate a need for supplemental ventilation.
3. ETT confirmation requires syringe aspiration, positive ETCO2 color change, auscultation of breath sounds and the absence of epigastic sounds. Patients should be monitored continuously with pulse oximetry and capnography before during and after ETT.
4. Avoid nasopharyngeal airway in midface trauma patients.
5. For patients who are agitated after placement of ETT see M-18, Acute Agitation.
6. When ventilation and oxygenation are not possible due to complete upper airway obstruction:
   - basic – Heimlich maneuver, abdominal thrust
   - advanced - Magill forceps, needle cricothyrotomy or percutaneous cricothyrotomy.

Fulton County Emergency Medical Services

Clinical Care Guideline – I3

Hemorrhage Control

12/12/2014

[redacted]

Stabilize Impaled Object
- Do Not Remove Impaled Object in the Prehospital Environment
- Stabilize Object with Surrounding Gauze Dressings
- Apply Direct Pressure Around the Edges of the Impaled Object to Control Hemorrhage and stabilize impaled object

YES ← **Impaled Object (1)**

NO

Direct Pressure
- Apply Gauze to Wound Site (3)
- Direct and Continuous focal Manual Pressure to Wound Site Until Hemorrhage Stops
- Major Vessel Injury Will Likely Require Direct focal Manual Pressure on the Bleeding Site for the Entirety of Prehospital Transport

Prehospital Compression Dressing
- Pad Bleeding Site with Gauze
- Apply Elastic Bandage Over Gauze
- Compression Dressing Should be Tight Enough to Control On-going Hemorrhage
- Assess Distal Neurovascular Function After Application

YES ← **Hemorrhage Controlled (2)**

NO

Tourniquet Application
- Apply BP Cuff, "Spanish Windlass" or Commercial Tourniquet to Extremity Proximal to Bleeding Site
- Tighten Tourniquet until Bleeding Stops (distal pulse should be absent
- Document Tourniquet Application Time Directly on the Tourniquet
- Monitor Wound Site for On-going Bleeding
- Consider Pain Management
- Transport to Level 1 or 2 Trauma Center
- Consult OLMC if Tourniquet Application Could Exceed **90 Minutes**

[redacted]

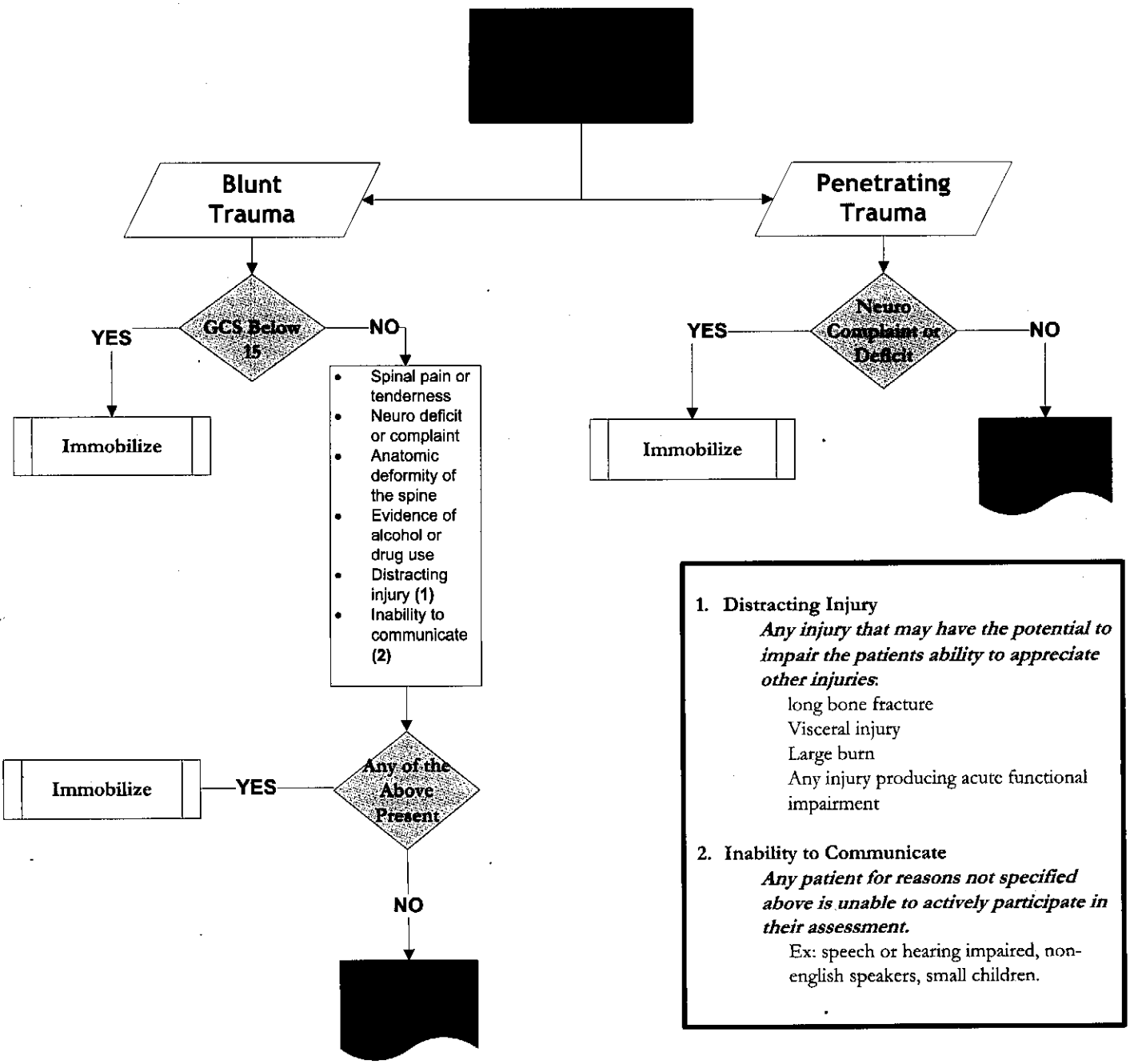
1. The management of the impaled object in the prehospital environment may involve creative patient extrication and stabilization techniques. Because of the risk of significant uncontrolled hemorrhage after removal, every effort should be made to leave the impaled object in place until the patient reaches definitive care.
2. Major extremity vessel injuries will likely require constant manual pressure to control bleeding. If human resources are limited consider moving immediately to tourniquet application in these situations.
3. Consider combat gauze for non-tourniquetable hemorrhage.
4. Morphine or Fentanyl is to be administered IV to patients without history of allergy and SBP > 90 mm/hg.

Fulton County Emergency Medical Services

Clinical Care Guideline – I4

Spinal Immobilization

12/12/2014



1. **Distracting Injury**
   Any injury that may have the potential to impair the patients ability to appreciate other injuries:
   long bone fracture
   Visceral injury
   Large burn
   Any injury producing acute functional impairment

2. **Inability to Communicate**
   Any patient for reasons not specified above is unable to actively participate in their assessment.
   Ex: speech or hearing impaired, non-english speakers, small children.

Fulton County Emergency Medical Services

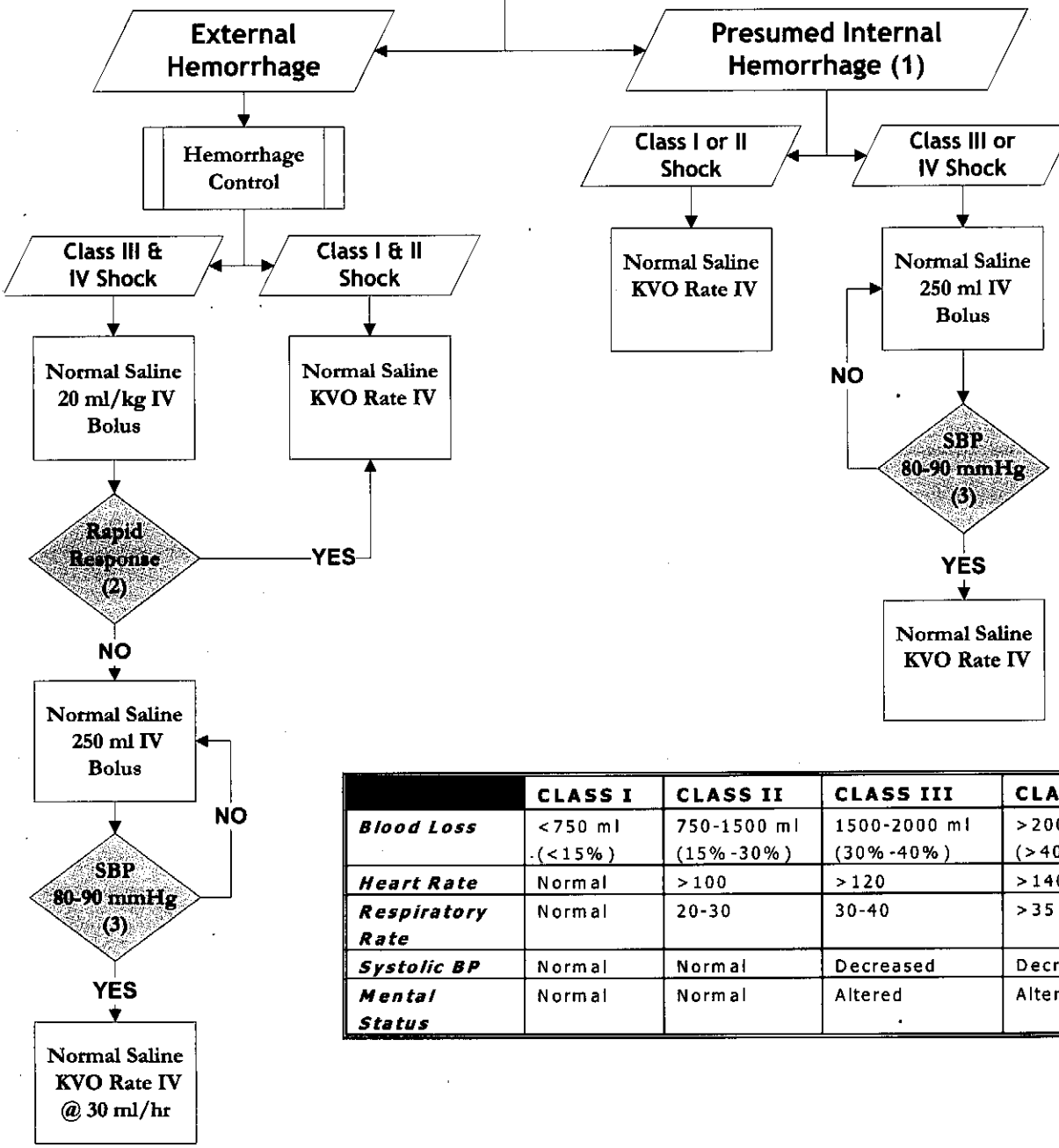
Clinical Care Guideline – I5

Trauma Volume Resuscitation

12/12/2014

[redacted]

1. Presumed internal hemorrhage includes all suspected intrathoracic, intraabdominal and retroperitoneal bleeding secondary to blunt or penetrating trauma.
2. Rapid response is considered a return to normal heart rate, SBP and respiratory rate.
3. Goal directed therapy is focused on maintaining the prehospital SBP between 80-90 mmHg. 250 ml boluses should be used to maintain the SBP in this range.



	CLASS I	CLASS II	CLASS III	CLASS IV
Blood Loss	<750 ml (<15%)	750-1500 ml (15%-30%)	1500-2000 ml (30%-40%)	>2000 ml (>40%)
Heart Rate	Normal	>100	>120	>140
Respiratory Rate	Normal	20-30	30-40	>35
Systolic BP	Normal	Normal	Decreased	Decreased+
Mental Status	Normal	Normal	Altered	Altered

Fulton County Emergency Medical Services

Clinical Care Guideline – I6

Mask Continuous Positive Airway Pressure

12/12/2014

- Respiratory rate > 25 breaths / min
- Pulse oximetry < 94%
- Retractions or accessory muscle use present

Two of the Above Present — NO → [redacted]

YES ↓

- Unable to follow commands
- Apnea
- Vomiting or GI bleed
- Major trauma
- Pneumothorax
- SBP < 90

Any of the Above Present — YES → [redacted]

NO ↓

- **Administer Mask CPAP 5, 7.5, or 10 cm H_20 pressure**
- **Reassess vital signs & Pulse Ox & LOC every 5 minutes**

(1)(2)(3)

Patient Stable or Improving

YES ←
- **Continue CPAP**
- **Reasess vital signs and LOC every 5 minutes**

NO →
- Patient condition deteriorating
- Decreased LOC
- Decreased oxygen saturation

↓ **Discontinue CPAP**

↓ **Airway Management**

1. Mask should fit snugly around mouth and nose without putting excess pressure on the bridge of the nose. 5-10 cm H20 PEEP valve is applied to mask.
2. Complications of CPAP include: facial irritation, abrasion, or even facial necrosis; conjunctivitis due to mask air leak; aspiration; and gastric distention.
3. Positive pressure ventilation complications include: hypotension secondary to increased intra-thoracic pressure and pneumothorax.

Fulton County Emergency Medical Services

Clinical Care Guideline – I7

Cardioversion

12/12/2014

1. Rate related cardiovascular compromise with serious signs and symptoms such as altered mental status, ongoing chest pain, hypotension or other signs of shock.
2. If IV access is not easily established, the EMT-P can elect to place an IO to facilitate medication administration.
3. Diazepam can cause hypoventilation and potentially respiratory arrest. The addition of morphine can increase the likelihood of respiratory depression or arrest. Have equipment and help readily available to support the airway when administering these medications.
4. Pads should not be placed directly over an implanted pacemaker or AICD. Cardioversion should occur in a stepwise (escalating fashion) until the rhythm converts or the patient condition changes. Prehospital cardioversion should be limited to 3 attempts. If the patient becomes pulseless, cardioversion should be abandoned and defibrillation should be implemented.
5. Pads should not be placed directly over an implanted pacemaker or AICD. Patients in polymorphic VT with evidence of hemodynamic instability should be defibrillated in a stepwise (escalating) fashion. Synchronization will not work with polymorphic VT or a significantly irregular rhythm.

[redacted]

[redacted]

[redacted]

Serious Signs & Symptoms Related to Tachycardia (1)

NO

[redacted]

YES

IV/IO Access (2)

[redacted]

Polymorphic VT

Monomorphic VT

Assess Rhythm

Atrial Flutter & SVT

Atrial Fibrillation

Monomorphic V-Tach

Polymorphic V-Tach

[redacted]

[redacted]

[redacted]

[redacted]

Fulton County Emergency Medical Services

Clinical Care Guideline – I8

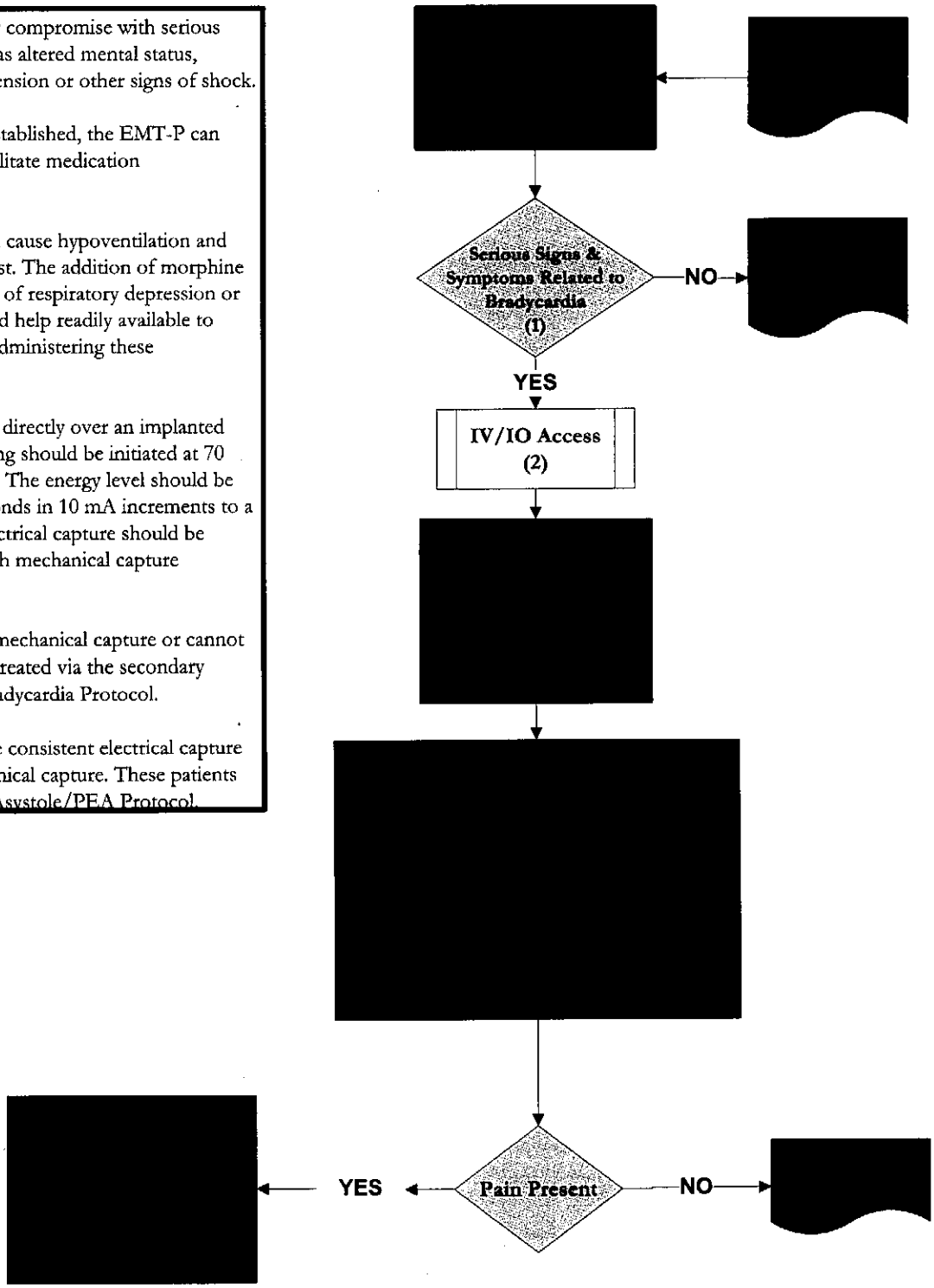
Transcutaneous Pacing

12/12/2014

1. Rate related cardiovascular compromise with serious signs and symptoms such as altered mental status, ongoing chest pain, hypotension or other signs of shock.
2. If IV access is not easily established, the EMT-P can elect to place an IO to facilitate medication administration.
3. Diazepam/Midazolam can cause hypoventilation and potentially respiratory arrest. The addition of morphine can increase the likelihood of respiratory depression or arrest. Have equipment and help readily available to support the airway when administering these medications.
4. Pads should not be placed directly over an implanted pacemaker or AICD. Pacing should be initiated at 70 beats per/min and 20 mA. The energy level should be advanced every 10-15 seconds in 10 mA increments to a maximum of 200 mA. Electrical capture should be immediately correlated with mechanical capture (palpable pulse).

   Patients that do not have mechanical capture or cannot tolerate pacing should be treated via the secondary options outlined in the Bradycardia Protocol.

   Pulseless patients can have consistent electrical capture without coincident mechanical capture. These patients should be treated via the Asystole/PEA Protocol.

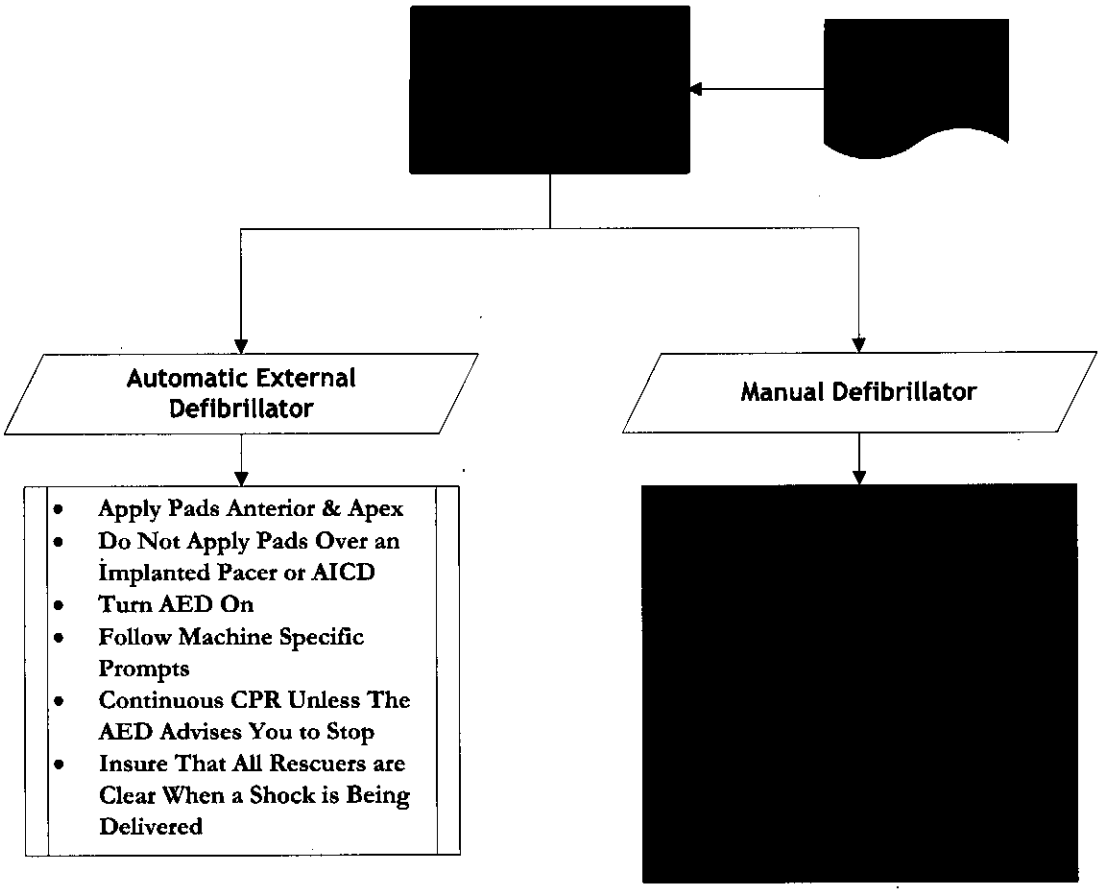


Fulton County Emergency Medical Services

Clinical Care Guideline – I9

Defibrillation

12/12/2014



Fulton County Emergency Medical Services

Clinical Care Guideline – I10

Cardiopulmonary Resuscitation

12/12/2014

[redacted]

[redacted]

Initiate Team Based Resuscitation (1)

The Team Based Approach to Resuscitation **(TBR)** will be initiated upon the arrival of the first professional rescuers. The Team Leader will clearly identify themself and assign roles to the other rescuers present. The Team Leader will be the most senior and advanced prehospital provider present. Upon arrival of the ALS transport ambulance, the role of Team Leader will be assumed by the lead paramedic on the ambulance.

Like the Incident Management System, multiple roles may be performed by the same rescuer if resources are limited. The team should focus on immediate chest compressions after identification of a patient who is pulseless. The primary assessment should be Circulation – Airway – Breathing (i.e. CAB no longer ABCs).

As additional rescuers arrive on scene, the Team Leader will assign them a role as Ventilator, Compressor or Packager. Rescuers may switch roles as the length and dynamics of the resuscitation dictate.

Team Leader

Confirm Pulselessness

- Ensure the following: Compressions of Appropriate Depth and Quality at least 100/min, Airway Maintained and Ventilations Occur at 8-10 breaths/min, Rescuers Switch After 2 Minutes of Compressions
- Check for Carotid Pulse (<10 sec) at Rescuer Switch and When a Change in Clinical Condition Occurs

Defibrillation

[redacted]

[redacted]

Ventilator

Airway Management

- Ventilate at 8-10 breaths/min with BVM and OP Airway giving about one second for each breath
- Non-Visualized Airway (NVA) or ETT after Initial Defibrillation or 2 Minutes of CPR. Non-visualized airway is preferred as it does not interrupt chest compressions.
- After ETT or NVA Placed – Interpose Ventilations with Continuous CPR

Compressor

- Position Hands Over Lower Half of Sternum Between Nipples
- Compress Chest to a minimum of 2 inches
- Then provide compressions at a rate of at least 100/min
- Compression to Ventilation Ratio = 30:2
- Make Every Attempt to Minimize Compression Interruptions
- Pause Briefly to Allow for Ventilations until an Advanced Airway is Placed – Then Provide Continuous Compressions at 100/min
- Switch Rescuers Performing CPR Every 2 Minutes

Packager

IV/IO Access

- Immobilize Patient on LBB to Facilitate Resuscitation and Scene Evolution
- Plan Scene Evolution and Position Rescuers and Equipment Accordingly
- Document and Time Patient Interventions and Collect Pertinent History from Bystanders

In a limited resource situation, intervention priorities are ordered as follow:

- Chest Compressions
- Defibrillation if Appropriate
- Basic Airway Management
- IV/IO Access
- ETT or Non-Visualized Airway Insertion
- Rhythm Appropriate Medications

Fulton County Emergency Medical Services

Clinical Care Guideline – I11

Intraosseous Access

12/12/2014

1. This protocol is to be used in patients greater than 40 kg and exclusively with the EZ-IO AD® Intraosseous Needle and Driver System.

2. Contraindications to IO insertion include fracture of the bone selected for insertion, orthopedic hardware at the site selected for insertion, IO previously placed within the last 24 hours at the site selected for insertion, Excessive tissue at the site selected for insertion resulting in absent landmarks or infection at the site selected for insertion. In the presence of contraindications, alternate, approved sites should be evaluated for use.

3. Approved IO insertion sites include the proximal tibia, distal tibia and proximal humerus. In cardiac arrest, the proximal humerus is the preferred site for IO insertion.

4. EMT-P level providers may administer 30 mg (1.5 ml) of 2% Lidocaine (preservative free) slow IO prior to flushing the catheter with 10 ml of normal saline.

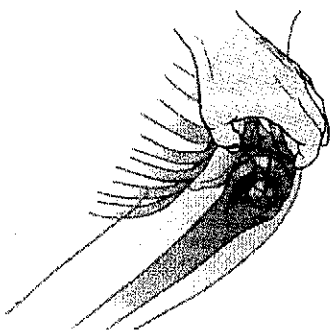
[redacted]

- **Immediate Vascular Access is Required**
- **Two IV Attempts Without Obtaining Venous Access**
- **No visable/palable veins**

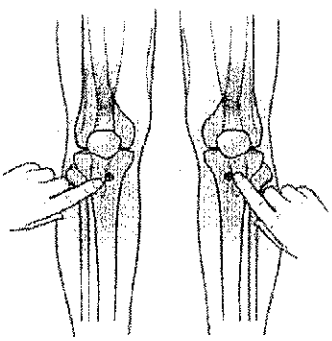
Meets Above Criteria — **NO** → **Intravenous Access**

YES

- **Cardiac Arrest**
- **Major Trauma with GCS ≤ 8 or SBP ≤ 90 mmHg**
- **Burns with BSA>20%**
- **Critically ill patients meeting PAC 1 criteria**



Humerus Insertion Site
Courtesy VidaCare Corporation



Tibia Insertion Site
Courtesy VidaCare Corporation

Meets Above Criteria — **NO** → **Contact On-Line Medical Control Prior to IO Placement**

YES

IO Contraindicated (2) — **YES** → **Intravenous Access**

NO

[redacted]

- **Locate appropriate insertion site (Proximal/Distal Tibia or Proximal Humerus)(3)**
- **Prepare insertion site using aseptic technique**
- **Prepare EZ-IO AD® needle and driver**
- **Stabilize site and insert needle – Remove stylet from catheter**
- **Confirm placement and attach EZ-Connect® tubing**
- **Flush the catheter with 10 ml of normal saline**
- **Initiate IV fluid administration with pressure bag**
- **Dress site, secure tubing and apply armband to patient**
- **Advise ED that catheter must be removed within 24 hours**

Fulton County Emergency Medical Services

Clinical Care Guideline – I12

Intravenous Access

12/12/2014

[redacted]

- **Current Patient Condition Requires Prehospital IV Fluid or Medication Administration**
- **Prehospital Provider Believes That a Prehospital IV is Warranted Because of a High Likelihood for Clinical Deterioration**

Meets Above Criteria (1)

NO

- **Monitor Patient Condition**
- **Reevaluate the Need for IV Access if Condition Changes**

[redacted]

YES

- **Locate appropriate peripheral insertion site (2)**
- **Prepare insertion site using aseptic technique**
- **Apply tourniquet 4 cm proximal to puncture site**
- **Prepare appropriately sized over-the-needle catheter(s) (3)**
- **Stabilize site and insert catheter – Remove needle from catheter**
- **Confirm placement and attach Saline Lock – Release tourniquet**
- **Flush the catheter with 10 ml of normal saline**
- **Secure catheter, dress site and secure tubing**
- **Initiate IV fluid administration or medication if indicated**

Successful Insertion

Yes

[redacted]

NO

- **Cardiac Arrest**
- **Major Trauma with GCS ≤ 8 or SBP ≤ 90 mmHg**

Intraosseous Access

1. Patients that do not require prehospital administration of fluid or IV medications and are not at risk for deterioration in clinical status do not require the prophylactic placement of a saline lock.

2. The primary peripheral IV site should be the hand and forearm. Large bore catheters may be placed in the antecubital space veins, but placement in this location will require that the arm be maintained in an extended position. Secondary access sites include the leg, foot and the external jugular veins. Lower extremity vein cannulation should be avoided in diabetics and patients with evidence of venous stasis.

3. Patients with major trauma or evidence of shock should have at least one and preferably two 16 gauge catheters placed. Adult medical patients should have an 18 to 20 gauge catheter placed if indicated. Patients requiring D50 should have at least a 20 and preferably an 18 gauge catheter placed.

Fulton County Emergency Medical Services

Clinical Care Guidelines

Adult Medical

12/12/2014

M1	Initial Approach to The Unresponsive Patient – Adult BLS	12/12/2014
M2	Pulseless Arrest – Ventricular Fibrillation / Ventricular Tachycardia	12/12/2014
M3	Pulseless Arrest – Asystole / Pulseless Electrical Activity	12/12/2014
M4	Prehospital Resuscitation Cessation	12/12/2014
M5	Wide Complex Tachycardia	12/12/2014
M6	Narrow Complex Tachycardia	12/12/2014
M7	Bradycardia	12/12/2014
M8	Premature Ventricular Contractions	12/12/2014
M9	Hypertension	12/12/2014
M10	Shock / Hypotension	12/12/2014
M11	Respiratory Distress	12/12/2014
M12	Chest Pain	12/12/2014
M13	Hyperkalemia, Suspected	12/12/2014
M14	Pulmonary Edema / Congestive Heart Failure	12/12/2014
M15	Acute Stroke	12/12/2014
M16	Seizure	12/12/2014
M17	Altered Mental Status	12/12/2014
M18	Acute Agitation	12/12/2014
M19	Syncope	12/12/2014
M20	Complaints, Medical	12/12/2014
M21	Hyperglycemia	12/12/2014
M22	Hypoglycemia	12/12/2014
M23	Sickle Cell Disease / Painful Crisis	12/12/2014
M24	General Approach to Drug Overdose / Poisoning	12/12/2014
M25	Sympathomimetic Toxidrome	12/12/2014
M26	Opioid Toxidrome	12/12/2014
M27	Cholinergic Toxidrome	12/12/2014
M28	AntiCholinergic Toxidrome	12/12/2014
M29	Allergic Reaction/Anaphylaxis	12/12/2014
M30	Hypothermia	12/12/2014
M31	Hyperthermia	12/12/2014
M32	Return of Spontaneous Circulation (ROSC)	12/12/2014

Fulton County Emergency Medical Services

Clinical Care Guideline – M1

Initial Approach to the Unresponsive Patient – Adult BLS

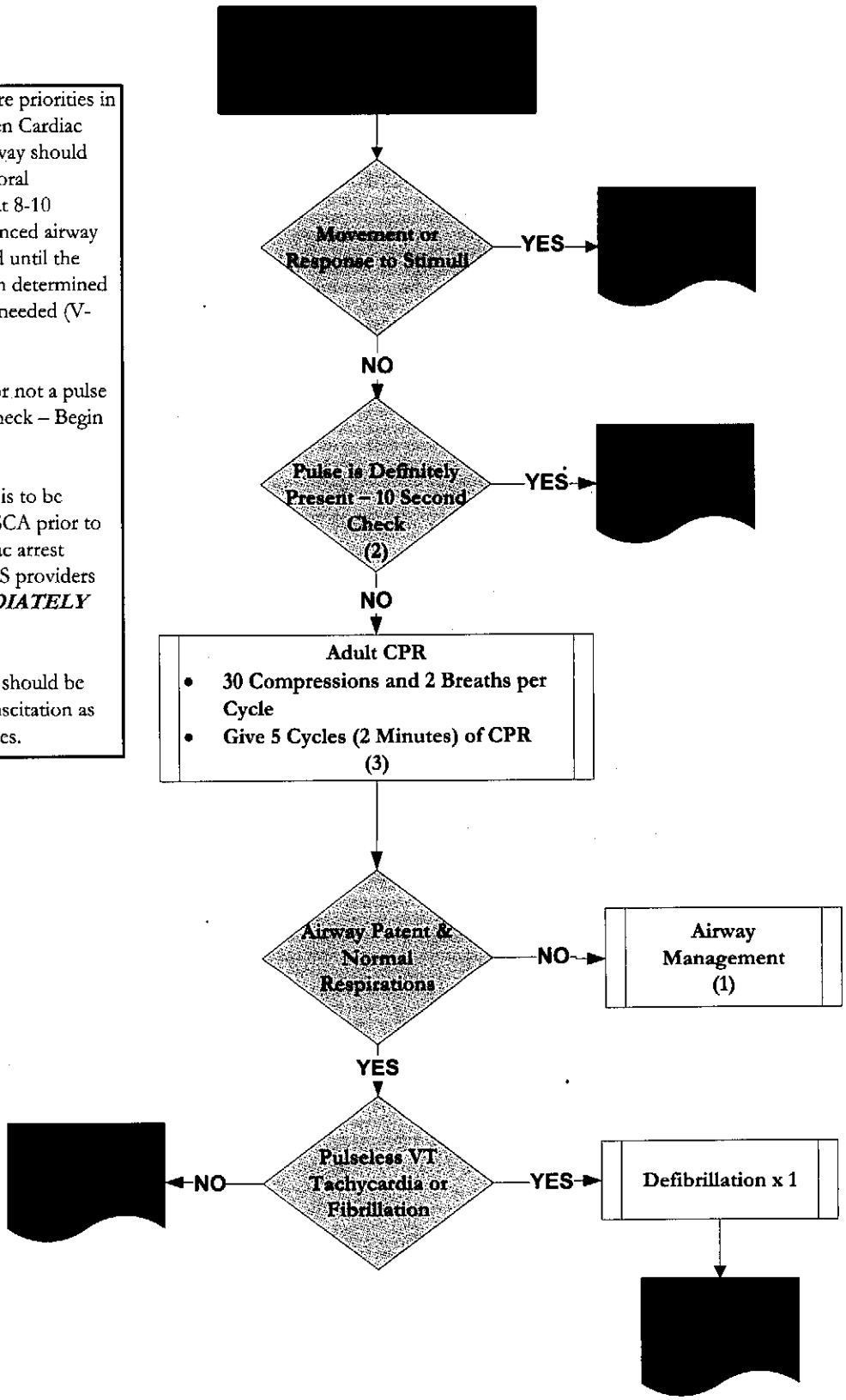
12/12/2014

1. CPR and early defibrillation are priorities in the management of the Sudden Cardiac Arrest (SCA) patient. The airway should initially be managed using an oral pharyngeal airway and BVM at 8-10 ventilations per minute. Advanced airway maneuvers should be deferred until the initial cardiac rhythm has been determined and defibrillation provided if needed (V-Fib / V- Tach).

2. If it is unclear as to whether or not a pulse is present after a 10 second check – Begin CPR immediately.

3. 2 minutes or 5 cycles of CPR is to be provided to all patients with SCA prior to defibrillation unless the cardiac arrest occurs in the presence of EMS providers and a defibrillator is ***IMMEDIATELY*** available.

4. Reasons for unresponsiveness should be addressed after the initial resuscitation as directed by the AHA guidelines.

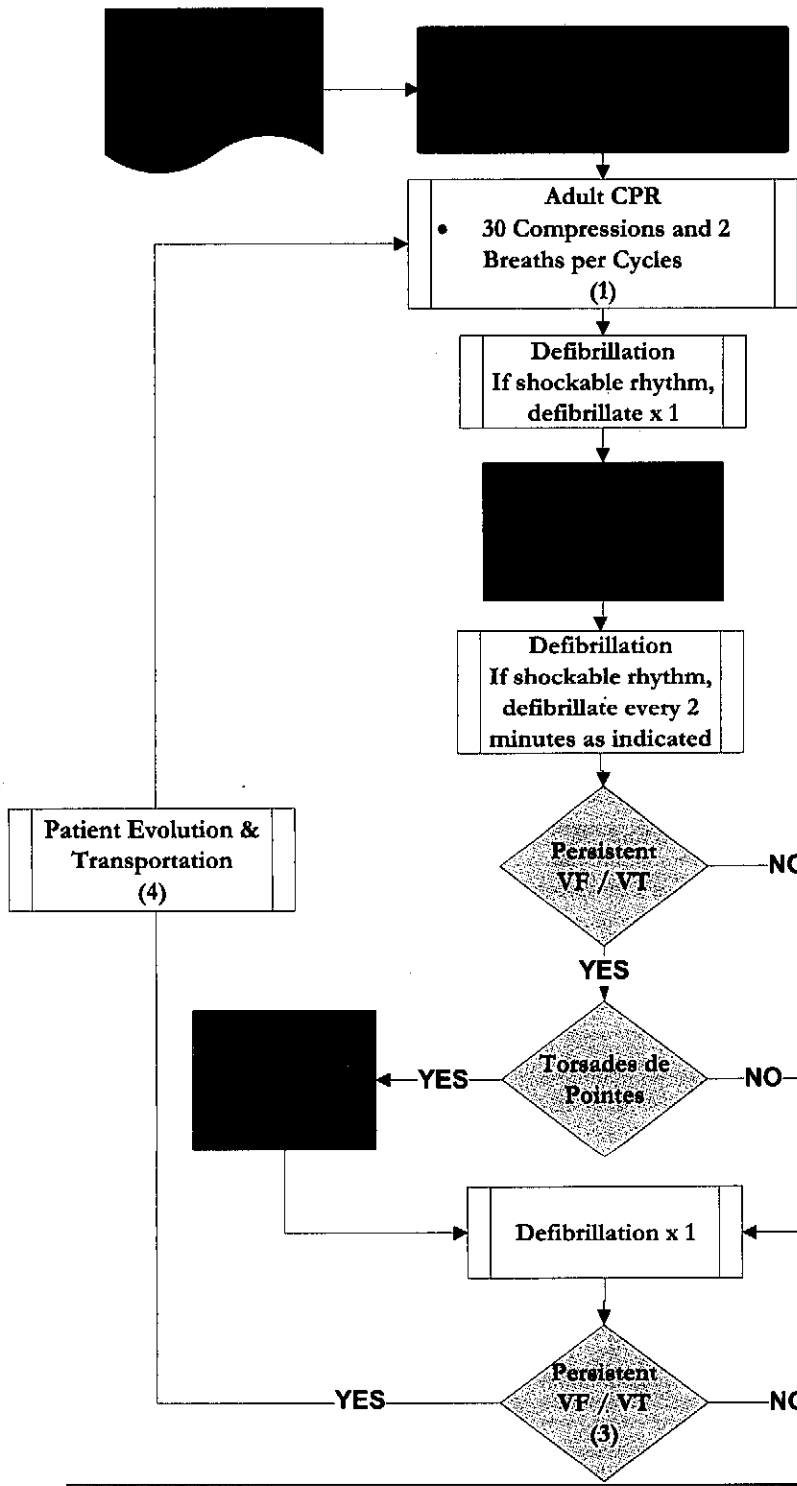


Fulton County Emergency Medical Services

Clinical Care Guideline – M2

Pulseless Arrest – Ventricular Fibrillation / Ventricular Tachycardia

12/12/2014



1. 5 cycles or two minutes of CPR should be started immediately followed by consideration of advanced airway placement when 2 rescuers are present (King LT is the preferred airway). After an advanced airway is placed CPR should be provided in a continuous fashion without pause for ventilations. Rescuers should maximize hands on the chest time and minimize interruptions for procedures or pulse checks.
2. Initial medication doses are indicated in the medication boxes. Repeat and maximum doses are found on the table at the bottom of the page.
3. Patients in persistent VF/VT should continue to be treated via this algorithm in a circular fashion from top to bottom until resolution. Upon conversion from VF/VT the rescuer should move to the most appropriate protocol.
4. Evolution should begin after two algorithm cycles and additional rescuers have arrived.

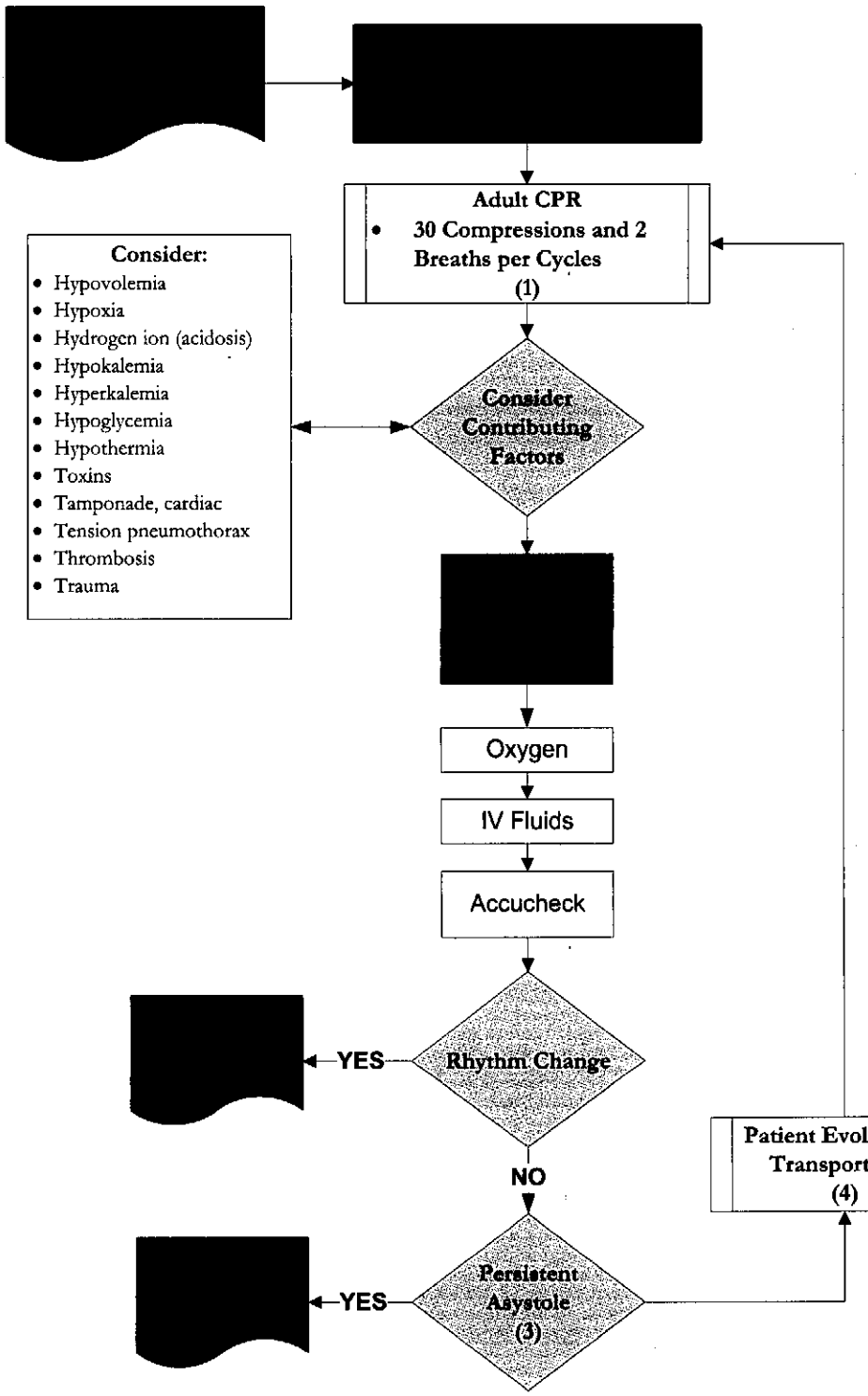
	EPINEPHRINE	LIDOCAINE	AMIODARONE	MAGNESIUM SULFATE
Initial Dose	1 mg IV/IO	1 mg/kg IV/IO	300 mg IV/IO	1 gm IV/IO
Repeat Dose	1 mg IV/IO every 5 minutes while pulseless	0.5 mg/kg IV/IO every 2 minutes until maximum dose	150 mg IV/IO	1 gm IV/IO after 2 minutes
Maximum Dose	Not Applicable	3 doses or 3 mg/kg	450 mg IV/IO	2 gm IV/IO

Fulton County Emergency Medical Services

Clinical Care Guideline – M3

Pulseless Arrest – Asystole / Pulseless Electrical Activity

12/12/2014



1. 5 cycles or two minutes of CPR should be started immediately followed by consideration of advanced airway placement when 2 rescuers are present (King LT is the preferred airway). After an advanced airway is placed CPR should be provided in a continuous fashion without pause for ventilations. Rescuers should maximize hands on the chest time and minimize interruptions for procedures or pulse checks.
2. Initial medication doses are indicated in the medication boxes. Repeat and maximum doses are found on the table at the bottom of the page.
3. Patients in persistent Asystole / PEA should continue to be treated via this algorithm in a circular fashion from top to bottom until resolution. Patients that remain in Asystole despite prehospital resuscitation attempts may be considered for resuscitation termination. Criteria for consideration include:
   - Patient found in Asystole and remained in Asystole.
   - ETT King Airway or Combitube successfully inserted.
   - Patent IV/IO established and 1 liter of IV fluid administered.
   - Two rounds of cardiac medications administered.
   - Patient greater than 18 years of age
   - Patient is not hypothermic.
   - Arrest is not related to trauma
4. Evolution should begin after two algorithm cycles and additional rescuers have arrived.

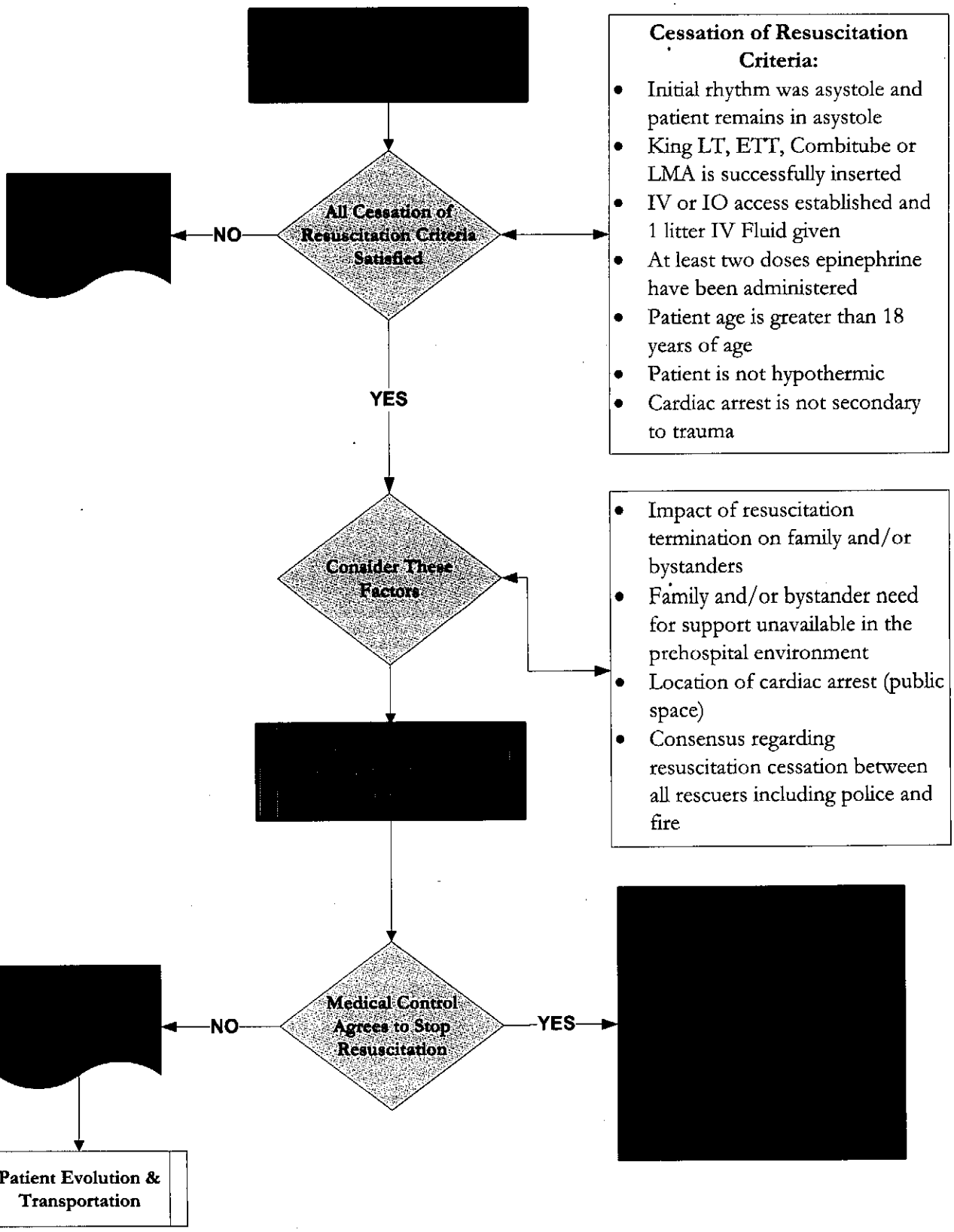
[redacted]	EPINEPHRINE
Initial Dose	1 mg IV/IO
Repeat Dose	1 mg IV/IO every 5 minutes while pulseless
Maximum Dose	Not Applicable

Fulton County Emergency Medical Services

Clinical Care Guideline – M4

Prehospital Resuscitation Cessation

12/12/2014



Cessation of Resuscitation Criteria:

- Initial rhythm was asystole and patient remains in asystole
- King LT, ETT, Combitube or LMA is successfully inserted
- IV or IO access established and 1 litter IV Fluid given
- At least two doses epinephrine have been administered
- Patient age is greater than 18 years of age
- Patient is not hypothermic
- Cardiac arrest is not secondary to trauma

- Impact of resuscitation termination on family and/or bystanders
- Family and/or bystander need for support unavailable in the prehospital environment
- Location of cardiac arrest (public space)
- Consensus regarding resuscitation cessation between all rescuers including police and fire

Fulton County Emergency Medical Services

Clinical Care Guideline – M5

Wide Complex Tachycardia

12/12/2014

1. Rate related cardiovascular compromise with serious signs and symptoms such as altered mental status, ongoing chest pain, hypotension or other signs of shock.

   Go immediately to synchronized cardio version if signs or symptoms of instability develop.

2. Diagnosis & treatment of wide complex tachycardia can be very difficult. Obtain a 12 lead EKG if possible and discuss the options with medical control.

[redacted]

Initial Patient Assessment & Management

3. Use proximal access (antecubital or external jugular vein). Immediately follow adenosine dose with a 20 mL saline flush.

   Lidocaine may be used in place of amiodarone. Use will be determined by the service medical director.

Symptoms: Chest pain, Dyspnea

Signs: Altered Mental Status, Hypotension (SBP < 90mmHg), Pulmonary Congestion, Hypoxia

Unstable, Serious Signs & Symptoms (1)

NO

[redacted]

YES

[redacted]

Regular Rhythm

NO

Consider:
- Polymorphic ventricular tachycardia

(2)

[redacted]

OR

[redacted]

YES

Consider:
- Ventricular tachycardia
- SVT with aberrancy

(2)

[redacted]

[redacted]

NO

Conversion

YES

Consider:
- Polymorphic ventricular tachycardia
- SVT with aberrancy

(2)

[redacted]

OR

[redacted]

[redacted]

[redacted]

[redacted]

Patient Evolution & Transportation

	MAGNESIUM DRIP	AMIODARONE DRIP
0.9% NaCl	100 mL	100 mL
Medication	2 gm Magnesium Sulfate	150 mg Amiodarone
Concentration	**20 mg/mL**	**1.5 mg/mL**

Fulton County Emergency Medical Services

Clinical Care Guideline – M6

Narrow Complex Tachycardia

12/12/2014

1. Rate related cardiovascular compromise with serious signs and symptoms such as altered mental status, ongoing chest pain, hypotension or other signs of shock.

   Go immediately to synchronized cardio version if signs or symptoms of instability develop.

2. Rate related cardiovascular compromise is unusual below 150 bpm. Patients with significant comorbid conditions or impaired cardiac function may exhibit instability at a rate below 150 bpm.
3. Vagal maneuvers include: coughing, bearing down or breath holding. Do not perform carotid sinus massage.
4. Use proximal access (antecubital or external jugular vein). Immediately follow adenosine dose with a 20 mL saline flush.
5. Repeat Cardioversion. Note: For repeat shock, providers should increase the dose in a stepwise fashion.

[redacted]

Initial Patient Assessment & Management

Symptoms: Chest Pain, Difficulty Breathing, Confusion

Signs: Hypotension (SBP<90), Pulmonary Congestion, Decreased Level of Consciousness, Hypoxia

Unstable, Serious Signs & Symptoms (1) — YES → **Rate Above 150 bpm (2)** — YES → [redacted]

NO

Conversion — NO → [redacted]

YES

Atrial Fibrillation Atrial Flutter

Paroxysmal Supraventricular Tachycardia

Consider Other Causes of Signs & Symptoms

[redacted]

Conversion — YES → [redacted]

NO

[redacted]

Conversion — YES → [redacted]

NO

[redacted]

Consider:

- CHF
- MI
- Overdose
- Sepsis
- Dehydration
- Heat Illness
- Hemorrhagic Shock

[redacted]

Patient Evolution & Transportation

Patient Evolution & Transportation

Fulton County Emergency Medical Services

Clinical Care Guideline – M7

Bradycardia

12/12/2014

[redacted]

Initial Patient Assessment & Management

Symptoms: Chest Pain, Shortness of Breath, Decreased Level of Consciousness

Signs: Hypotension (SBP < 90), Pulmonary congestion, CHF, AMI

Unstable, Serious Signs & Symptoms

YES → [redacted]

NO → [redacted]

Type II Second-Degree or Third Degree Block

Yes → [redacted] → [redacted]

NO → Patient Evolution & Transportation

Improved

YES → Patient Evolution & Transportation

NO → [redacted]

Improved

NO → [redacted]

Or → [redacted]

Yes → Patient Evolution & Transportation

1. Pace in demand mode, rate 70 beats per minute, begin at 20 mA, increase by 10 mA every 10 - 15 sec to max of 200 mA, or until mechanical capture. If patient condition allows, always use sedation and pain control when pacing. See Transcutaneous Pacing Protocol.
2. Start Dopamine drip at 5 mcg/kg/min, titrate in 2.5 mcg/kg/min increments to keep SBP >100 mm Hg.
3. Start Epinephrine Drip at 2 mcg/min, titrate in 2 mcg/min increments to keep SBP>100 mm Hg.
4. Consider Glucagon at 3 mg slow IV push over 1 – 2 minutes for symptomatic bradycardia due to beta-blocker overdose with medical control only. Consider antiemetic therapy for emesis side effect.

	EPINEPHRINE DRIP	DOPAMINE DRIP
D5W	250 mL or 500 mL	500 mL
Medication	1 mg or 2 mg Epinephrine	800 mg Dopamine
Concentration	**4 mcg/mL**	**1600 mcg/mL**

Fulton County Emergency Medical Services

Clinical Care Guideline – M8

Premature Ventricular Contractions

12/12/2014

History: Alcohol Use, Diuretic Use, Coronary Artery Disease

Symptoms: Chest Pain, Dyspnea, Anxiety

Findings: Irregular Rhythm, Rales, Hypotension, Altered Mental Status

[redacted]

Initial Patient Assessment & Management

Unifocal < 8 PVC/Min

Unifocal > 8 PVC/Min

Multifocal / Salvos

Symptomatic (1)

YES

Oxygen Nasal Cannula @ 4 L/min (2)

Oxygen Nasal Cannula @ 4 L/min (2)

NO

[redacted]

YES

PVCs Resolved

NO

[redacted]

Patient Evolution & Transportation

1. Most patients with unifocal PVCs will not require treatment. Patients with increasing ectopy or symptoms should receive supplemental oxygen and be monitored for deterioration.
2. Patients that have SaO2 levels below 90% may require a partial rebreather to enhance oxygen delivery.
3. Lidocaine or Amiodrone may be repeated every 5 minutes as needed to a maximum dose of 3 mg/kg. Lidocaine is contraindicated in 2nd and 3rd degree heart blocks.

Fulton County Emergency Medical Services

Clinical Care Guideline – M9

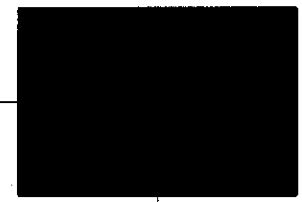
Hypertension

12/12/2014

History: Hypertension, Coronary Artery Disease, Pregnancy, Cocaine or Amphetamine

Symptoms: Headache with Nausea and Vomiting, Chest Pain, Dyspnea

Findings: Cardiac Gallop, Rales



Initial Patient Assessment & Management

New Neurologic Signs or Symptoms

No Neurologic Signs or Symptoms

Pregnant (2) — YES

NO

Chest Pain — YES

NO

Dyspnea — YES

NO

Cocaine Amphetamine Crack — YES

NO

Patient Evolution & Transportation

1. The treatment of hypertension in the prehospital environment in the absence of specific symptoms such as chest pain, CHF or significant dyspnea is generally discouraged.

   Patients with mild symptoms such as headache, visual disturbance or no symptoms should be monitored and transported for further evaluation.

2. Preeclampsia typically presents in the 3rd trimester and may even present up to 4 weeks post-partum.

Fulton County Emergency Medical Services

Clinical Care Guidelines – M10

Shock / Hypotension

12/12/2014

1. Patients with signs and symptoms of pulmonary edema/congestion and who are in shock may benefit from IV fluids.
2. Start Dopamine drip at 5mcg/kg/min. Titrate in 2.5mcg/kg/min increments to keep SBP above 90mmHg.

[redacted]

Initial Patient Assessment & Management

Volume Problem

Pump Problem

Rate Problem

Too Fast

Too Slow

[redacted]

Trauma

YES

[redacted]

NO

Anaphylaxis

YES

[redacted]

NO

Consider:

- Dehydration
- Heat Illness
- GI Bleeding
- Gynecologic Bleeding
- Sepsis

Normal Saline 10 ml/kg IV Bolus

Hypotension Resolved

YES

NO

[redacted]

Congestive Heart Failure, Acute MI, Low Ejection Fraction

Pulmonary Congestion

YES

[redacted]

Hypotension Resolved

NO

[redacted]

NO

[redacted]

Hypotension Resolved

NO

[redacted]

YES

Patient Evolution & Transportation

Fulton County Emergency Medical Services

Clinical Care Guidelines – M11

Respiratory Distress

12/12/2014

Normal: RR = 12-16, SaO2 > 94%.

Mild: RR < 30, SaO2 > 94% on RA, wheezing on expiration, can speak complete sentences, minimal use of accessory muscles.

Moderate: RR 30 - 40, SaO2 91 - 94% on RA, wheezing on expiration, decreased airflow, can speak short sentences, accessory muscle use, normal mental status.

Severe: RR > 40 or < 10, SaO2 <91% on RA, wheezing, little to no airflow, can only speak 1 - 2 words, accessory muscle use, leans forward, anxious, cyanotic.

1. Determine severity of respiratory distress from the above criteria.
2. Albuterol 5.0 mg per nebulization age 45 and below Albuterol 2.5 mg per nebulization age 46 and up. May repeat nebulization treatment x 3. EMTs may only administer premeasured unit doses of nebulized medications.

Cardiac: CHF, MI, Pericarditis

Pulm.: PE, Asthma, COPD Exacerbation, Inhalation Injury, Aspiration, Pneumonia

Other: Neuromuscular Disease, Psychogenic

[redacted]

Respiratory Failure — YES → [redacted]

NO

Initial Patient Assessment & Management

Pulmonary Congestion — YES → [redacted]

3. Magnesium to be given IV, 2gm in 100ml normal saline over 10 minutes. Magnesium is contraindicated in 2nd and 3rd degree heart block, hypotension and renal failure.
4. Atrovent dose: 500 mcg every 20 minutes up to three doses for patients with Asthma (NIH, 2007) and bronchospasm associated with COPD.

NO

Wheezing Rhonchi — YES → Moderate to Severe

Wheezing Rhonchi — NO → Stridor — NO → Consider:

- Pneumonia
- Pneumothorax
- Pulmonary Embolus
- Aspiration
- Effusion
- Neuromuscular Disease

Stridor — YES → Foreign Body — YES → [redacted]

Foreign Body — NO → [redacted] → Patient Evolution & Transportation

Mild → Albuterol 2.5-5mg Nebulized (2) → Atrovent 0.5 mg Nebulized (4) → Patient Evolution & Transportation

Moderate to Severe → Albuterol 2.5-5 mg Nebulized (2) → Atrovent 0.5 mg Nebulized (4) → [redacted] → CPAP (I6)

CPAP (I6) → Improvement — YES → Patient Evolution & Transportation

Improvement — NO → Age Over 40 or Known CAD

Age Over 40 or Known CAD — YES → [redacted]

Age Over 40 or Known CAD — NO → [redacted]

[redacted] → Renal Failure

Renal Failure — NO → [redacted] → Patient Evolution & Transportation

Renal Failure — YES → Patient Evolution & Transportation

Fulton County Emergency Medical Services

Clinical Care Guideline – M12

Chest Pain

12/12/2014

[redacted]

History: Asthma, Emphysema, COPD, Pneumonia, Renal Failure, Upper Respiratory Infection

Symptoms: Cough, Fever, Chills

Findings: Wheezes, Rhonchi, Fever, Chest Wall Tenderness

History: Coronary Artery Disease, Hypertension, Crack / Cocaine Use, Tobacco Abuse, Diabetes Mellitus, Age over 30

Symptoms: Difficulty Breathing, Diaphoresis, Nausea, Palpitations, Anxiety

Findings: Elevated BP, Tachycardia

Initial Patient Assessment & Management

Suspected Pulmonary or Unknown Etiology

Suspected Cardiac Etiology

Aspirin 324mg PO (1)

Pulmonary Congestion — YES → [redacted]

NO

Wheezing Rhonchi — YES → [redacted]

NO

[redacted] ← NO ← **SBP > 100 HR > 60**

YES

[redacted]

[redacted]

[redacted]

[redacted]

Relief — YES → [redacted] → **Patient Evolution & Transportation**

NO

[redacted]

YES

1. Assess for aspirin allergy prior to administration. When administered have patient chew and swallow aspirin.

   Avoid Nitro in any patient on Viagra, Cialis or Levitra. Reassess BP after each administration – hold nitroglycerin if SBP falls below 100mmHg and/ or heart rate below 60.

3. Do not apply Nitroglycerin Ointment if SBP is below 100mmHg and/or heart rate below 60. Remove from chest wall if SBP falls below 90.

4. With inferior MI's, nitroglycerin may drop the SBP precipitously. In this case, it would be preferable to have IV fluid running and treating CP with morphine or Fentanyl. Use nitro with caution in IMI patients.

5. If there is evidence of cocaine use precipitating the patient's chest pain, refer to M-25 sympathomimetic toxidrome (chest pain precipitated by cocaine use may benefit from benzodiazepine therapy)

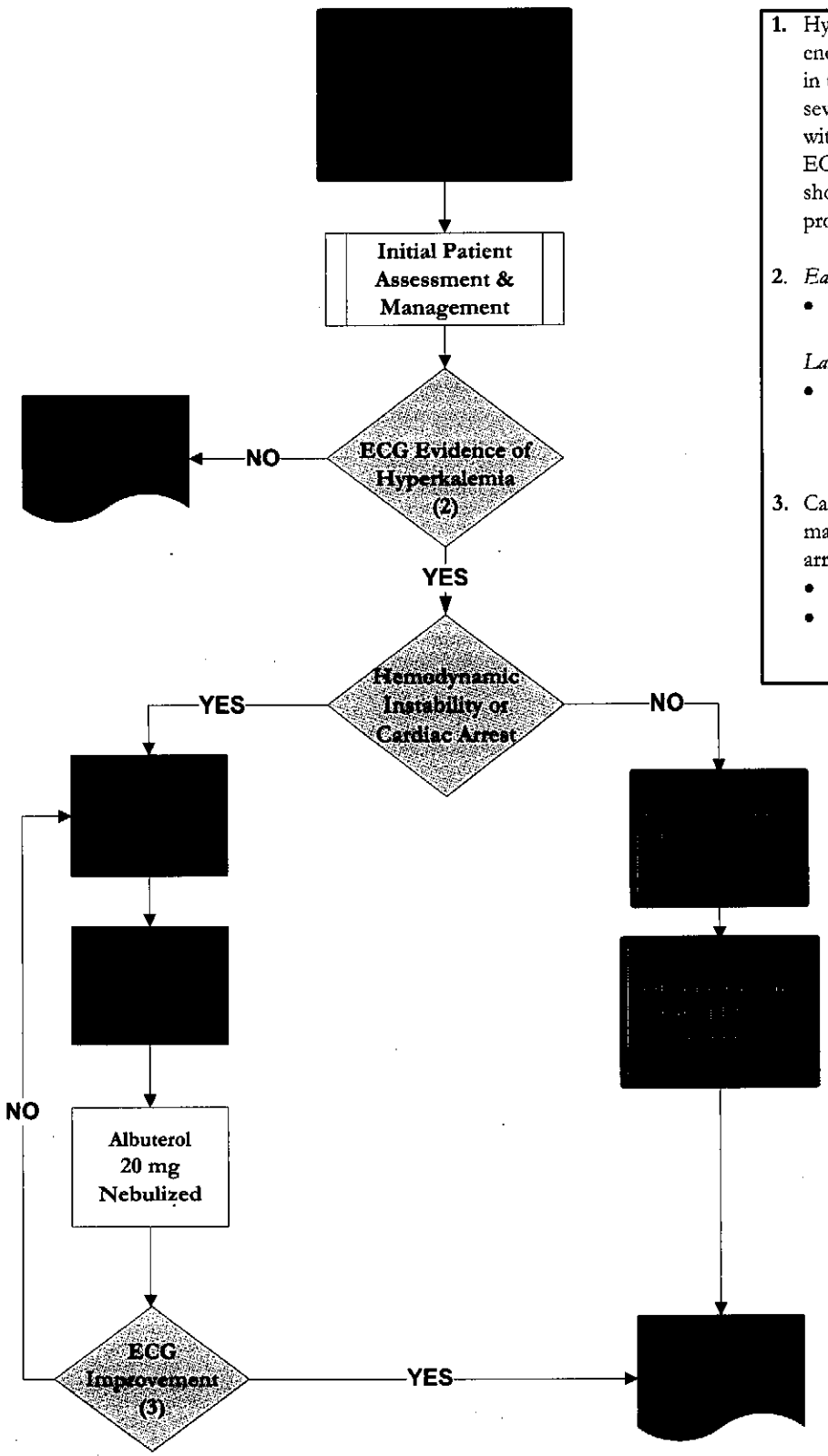
6. Morphine or Fentanyl is to be administered IV to patients without history of allergy and SBP > 90 mm/hg.

Fulton County Emergency Medical Services

Clinical Care Guideline – M13

Hyperkalemia

12/12/2014



1. Hyperkalemia is most commonly encountered in the prehospital environment in the context of chronic renal failure and severe metabolic acidosis (DKA). Patients with the aforementioned conditions and ECG changes consistent with hyperkalemia should be treated presumptively via this protocol.

2. *Early ECG Changes:*
   - Peaked T waves, flattened p waves & increased PR interval; loss of p waves

   Late ECG Changes:
   - Widened QRS complex, deepened S waves, merging of the S and T waves (sinusoidal ECG)

3. Calcium chloride and sodium bicarbonate may be repeated x 1 in the setting of cardiac arrest under the following circumstances:
   - ECG Improvement does not occur
   - ECG initially improves, but then deteriorates

Fulton County Emergency Medical Services

Clinical Care Guideline – M14

Pulmonary Edema / Congestive Heart Failure

12/12/2014

History: CHF, Hypertension, Renal Dialysis, Coronary Artery Disease, Heroin Abuse

Symptoms: Difficulty Breathing, Diaphoresis, Chest Pain, Anxiety, Agitation, Altered Mental Status

Findings: Decreased Oxygen Saturation, Bilateral Rales, Jugular Vein Distension, Cyanosis, Tachycardia, Erect Posture, Pedal edema

[redacted]

Initial Patient Assessment & Management

Chest Pain

YES

Aspirin 324mg PO (1)

SBP Above 90 mmHg

NO

[redacted]

YES

Mask Continuous Positive Airway Pressure (2)

[redacted]

Wheezing Present

YES

[redacted]

NO

Relief

YES

[redacted]

NO

[redacted]

Patient Evolution & Transportation

1. Assess for aspirin allergy prior to administration. When administered have patient chew and swallow aspirin.
2. Mask continuous positive airway pressure is to be considered when significant respiratory distress is present and the patient meets the criteria as defined in the specific protocol for CPAP use (16).
3. **Avoid Nitro in any patient on Viagra, Cialis or Levitra.** Reassess BP after each administration – hold nitroglycerin if SBP falls below 90mmHg.
4. Do not apply Nitroglycerin Ointment if SBP is below 90mmHg. Remove from Chest Wall if SBP falls below 90.