Medical Care Protocols
for BLS Responders
## Gator Emergency Medical Response Unit
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All Medical Care Protocols contained herein have been approved by the Gator Emergency Response Unit (GEMRU) Medical Director. All Protocols are subject to review and modification by the GEMRU Medical Director at any time.

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**DOCUMENT PUBLISHED:** 2/15/2016

Dr. Christine Van Dillen MD, FACEP  
*GEMRU Medical Director*  
*2015-2016 Academic Year*
Foreword

The Gator Emergency Medical Response Unit (GEMRU) program at the University of Florida provides volunteer Basic Life Support (BLS) medical services to individuals on the University of Florida campus. Our goal is to ensure the safety and medical wellbeing of everyone we encounter to the highest standards possible.

The area covered by our services spans the entire main University of Florida campus in Gainesville, along with the University of Florida Police Department’s (UFPD) campus jurisdiction. The Gator Emergency Medical Response Unit provides standby medical services at university-affiliated events, where individuals may approach us for BLS care and first aid. The services we provide shall be equally available for all individuals. In the future, GEMRU plans to evolve into a fully functional BLS non-transport collegiate EMS program capable of being dispatched to medical calls on the University of Florida campus.

The written protocols contained herein, approved by the GEMRU Medical Director, act as Standing Orders and basic care guidelines for GEMRU Responders. A GEMRU Responder is a volunteer Florida-licensed Emergency Medical Technician (EMT-B), or a Florida-licensed Paramedic (EMT-P) volunteering in the capacity of a BLS/EMT-B Responder. Due to the often limited and non-advanced nature of BLS services, GEMRU Responders may require or deem it beneficial to contact an agency that provides Advanced Life Support (ALS) services. The goal of providing this collegiate EMS system on the university campus is to decrease EMS response time to the scene and improve patient outcomes by providing prompt, high-quality care. Not only are GEMRU Responders trained to provide excellent BLS care, they are also trained to notice warning signs that may indicate the need for more advanced backup. If the patient’s condition or the scenario warrants medical care outside or above the BLS scope of practice, Responders will ensure that a Responding ALS Agency is contacted without delay. GEMRU is not altering or replacing the services provided by local EMS agencies, GEMRU only acts to decrease on-scene response times for medical emergencies and assist in requesting ALS assistance, if necessary.

GEMRU does not, nor has the equipment, required to transport patients to a hospital or receiving facility. Therefore, if the situation warrants, GEMRU Responders shall notify the proper dispatching entity to initiate an ALS response. Based on dispatch protocols already established in Alachua County, ALS crews will respond to the scene and act as the transporting agency.

In all aspects of patient care, from arriving at the scene to transferring patient care to ALS and transporting, we aim to create a streamlined process that promotes improved patient outcome by providing rapid medical response. GEMRU reviews all patient contacts for quality assurance to ensure our Responders are performing at the highest level to protect the individuals on the University of Florida campus.

Just as the University of Florida is a premier teaching institution, GEMRU’s mission is also centered around educating and aspiring individuals interested in Emergency Medical Services (EMS). At times, GEMRU Responders may bring students or trainees with certifications along to the scene to shadow and/or assist Responders with the calls we receive. We shall refer to these individuals as ‘GEMRU Assistants’. Individuals currently holding or pursuing an Emergency Medical Responder(EMR)/First Responder certification will assume the Assistant position, will be permitted to perform ride-alongs with GEMRU, and will be given preference in the ride-along selection process. All GEMRU Responders will wear a standard uniform, which sets them apart from other EMS agencies and law enforcement agencies on scene.

We envision that the Gator Emergency Medical Response Unit will remain a staple program at the University of Florida for years to come, as we continue to provide excellent care and BLS services to the Gator Nation. The protocols contained in this document provide the groundwork and instructions needed to ensure that the Gator Emergency Medical Response Unit program, and our volunteer Responders/Assistants, will work flawlessly together with the Public Safety agencies of Gainesville to create a safer environment for professors, students, and visitors alike on the beautiful University of Florida campus.

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As a Gator Emergency Medical Response Unit Responder/Assistant, I understand and agree to the following, with regard to the protocols herein:

- I will adhere to the protocols written in this document to the best of my abilities.

- I will always maintain patient confidentiality according to Health Insurance Portability and Accountability Act (HIPAA) standards, and other federal/state/county/city regulations.

- **I WILL ALWAYS INFORM THE PATIENT THAT ALS IS AVAILABLE TO BE DISPATCHED.**

  - I understand that the patient ALWAYS has a right to request ALS or transport, whether they refuse BLS services or not.

  - I will ALWAYS contact an ALS Agency if I feel it is in the patient’s best interest, or that I suspect ALS may be needed at ANY point in time related to the incident.

  - I fully understand and will uphold the patient’s right to refuse medical service, and the exceptions to that right. If this patient does not have the proper capacity to make decisions, I will involve ALS services to assist the patient. I understand that those patients whom do not have the proper capacity to make decisions do not always make the safest decisions.

  - I will not practice nor implement a skill outside of the scope of practice of the license/certification I possess.

  - I will document all medical care which my team and I provide on the standard GEMRU reporting template.

  - If I am unsure of how to proceed with the medical care of a patient, encounter a situation not specifically outlined in these protocols, or I am unable to follow these protocols for any reason, I will contact a Responding ALS Agency immediately.

  - If I feel that following a written protocol in this document endangers the safety of me or others, OR interferes with the quality of patient care, I agree to let my shift Captain know immediately and not perform any procedure that endangers anyone.

  - If I feel that a protocol should be changed or edited for any reason, I will contact my shift Captain immediately. The shift Captain will then be responsible for relaying the message to the GEMRU Vice President of Operations and/or the Medical Director.

  - If I feel that I am in need of remediation of a skill, or do not feel proficient in a skill, I will contact my shift Captain immediately for training.

  - I understand that the lead Responder on scene is responsible for overseeing the actions of other Responders and any Assistant(s).

  - I will report and document ANY and ALL mistakes that I make, or my team makes, immediately to my shift Captain.

  - I understand that my safety as a Responder/Assistant is of paramount concern, and I will not make choices that put my safety, or the safety of others, in danger.

  - I agree to advocate for my patient’s wellbeing to the fullest extent possible.

  - I agree to let ANY of my concerns be known to my shift Captain or the appropriate entity.

  - I understand that all of my actions must be justified, and that I assume full responsibility for my actions.
Common Terms and Abbreviations:

**ALS** - Advanced Life Support

**BLS** - Basic Life Support, including First Aid

**EMR** - Emergency Medical Responder

**EMS** - Emergency Medical Services

**EMT** - Emergency Medical Technician

**GEMRU** - Gator Emergency Medical Response Unit

**LEA** - Law Enforcement Agency

**MC** - Medical Control

**MCP** - Medical Control Physician

**UF** - University of Florida

**UFPD** - University of Florida Police Department

**Assistant** - An individual (certified or training) as an EMR/First Responder that assists a GEMRU Responder

**Medical Director** - A physician who provides guidance, leadership, oversight, and quality assurance for the Gator Emergency Medical Response Unit.

**On-line** - Having direct means of communication between two entities at all times.

**Responder** - A member of an EMS team/unit that arrives at a scene. GEMRU Responders are volunteer Florida-licensed Emergency Medical Technicians, or Florida licensed Paramedics volunteering in the BLS EMT-B capacity.

**Responding ALS Agency** - An agency that responds to a scene with licensed ALS providers. In nearly every case, the Responding ALS Agency will be either Alachua County Fire Rescue and/or Gainesville Fire Rescue.

**Transport Agency** - The agency that has been called upon to transport the patient to the appropriate destination. In most cases, the Responding ALS Agency will also be the Transport Agency. The distinction is made for procedural reasons.

**General Flow of Patient Care**

1. Called, Dispatched, or Approached
2. GEMRU Arrives On Scene
3. Possible BLS Intervention
4. Notify a Responding ALS Agency, if necessary
5. BLS Intervention Improves Patient Outcome, Responder is Satisfied with Patient Outcome, and/or Patient Denies Need for Further Treatment
6. Transfer of Patient Care to ALS/Transport Agency
Special University of Florida Considerations

Due to the location of UF Health (formerly known as Shands Hospital) within the boundary of the University of Florida campus, this creates a unique scenario when responding to calls within close proximity to the hospital. Therefore, it shall be stated:

Regardless of the proximity of the scene to UF Health (Shands Hospital), the protocols written herein shall be followed. This includes contacting a Responding ALS Agency when the protocols require or when ALS is deemed necessary. Calls coming from within the UF Health facility are not to be directed to GEMRU. Contact your shift Captain immediately if you receive a call to respond to the interior of a UF Health facility.

To put this into perspective for GEMRU Responders, the patient could be 100 yards outside of the hospital, but if ALS is required or necessary per written protocols, the protocols shall still be followed and a Responding ALS Agency/Transport Agency will be contacted. Direct all questions to your shift Captain.

ALSO

If anyone else who is not a physician (nurse, off duty paramedic) attempts to assume command of a scene, you may utilize their assistance as a bystander, but do not allow them to take scene command. Do NOT allow them to perform any skills that may harm or endanger the patient.
EMERGENCY MEDICAL PROTOCOL
BAKER AND MARCHMAN ACTS

Background

The purpose of this protocol is to establish standard guidelines and procedures that will provide a safe working environment for all employees and patients during the treatment and transportation of patients placed under the Baker and Marchman Acts.

These policies aim to create an understanding of the unique challenges posed by patients confined under these Acts and seek to create a guideline for treatment and transportation of these patients with an emphasis on crew, patient, and citizen safety.

In 1971, the Florida Legislature enacted the Florida Mental Health Act, a comprehensive revision of the state’s mental health commitment laws. The law is widely referred to as the "Baker Act" in honor of Maxine Baker, the former state representative who sponsored the Act. Since the Baker Act became effective in 1972, multiple legislative amendments have been enacted to protect individuals’ civil and due process rights.

The Florida Mental Health Act of 1971 (commonly known as the "Baker Act") allows involuntary examination of an individual who presents with:

A. A mental illness (as defined in the Baker Act) AND
B. Who is a harm to self, harm to others, or is at risk for self-neglect (as defined in the Baker Act).

This examination must be performed within 72 hours. Can only be initiated by:

- Judges,
- Law Enforcement Officers,
- Physicians or
- Mental Health professionals

The Marchman Act is a part of the Florida statutes that allows for voluntary or involuntary assessment of anyone who is suspected of being under the influence of drugs or alcohol, and because of this has lost the power of self-control with respect to substance use and is a danger to themselves or others. This act is filed with the court system.

The Florida Mental Health Act, section FSS-394.462(1.) (Transportation) sets out the provision of transportation service of involuntary Baker Act Patients. GEMRU has designated the University of Florida Police Department (UFPD) as one of the transportation providers for Baker Act patients from the University of Florida campus. The Police Department, or any agency delegated by the Police Department, is responsible for transporting to the nearest receiving facility. Thus, this Standard Operating Guideline seeks to provide examples and courses of actions that should be taken for the transportation of these patients to a receiving facility. This same section also states that once at a receiving facility it is unlawful for law enforcement to transport to a medical facility, "County or municipal law enforcement and correctional personnel and equipment shall not be used to transport patients adjudicated incapacitated or found by the court to meet the criteria for involuntary placement pursuant to s. 394.467". This does not eliminate the need for common sense and a practical approach to handling these individuals.
UFPD or a designated Law Enforcement Agency (LEA) will transport all Baker Act and Marchman Act patients to the nearest receiving facility unless an exception listed below is present:

- The patient is undergoing a medical emergency which requires the treatment abilities of an EMS unit.
- The patient has a physical limitation which precludes the transportation by a law enforcement vehicle such as being confined to a stretcher or unable to sit.

The following state statute pertains to those patients not qualifying for Baker or Marchman Act but are not competent to make rational decisions:

401.445 Emergency examination and treatment of incapacitated persons —

1) No recovery shall be allowed in any court in this state against any emergency medical technician, paramedic, or physician as defined in this chapter, any advanced registered nurse practitioner certified under s. 464.012 or any physician assistant licensed under s. 459.022, or any person acting under the direct medical supervision of a physician, in an action brought for examining or treating a patient without his or her informed consent if:
   a) The patient at the time of examination or treatment is intoxicated, under the influence of drugs, or otherwise incapable of providing informed consent as provided in s. 766.103.
   b) The patient at the time of examination or treatment is experiencing an emergency medical condition; and
   c) The patient would reasonably, under all the surrounding circumstances, undergo such examination, treatment, or procedure if he or she were advised by the emergency medical technician, paramedic, physician, advanced registered nurse practitioner, or physician assistant in accordance with s. 766.103.
   d) Examination and treatment provided under this subsection shall be limited to reasonable examination of the patient to determine the medical condition of the patient and treatment reasonably necessary to alleviate the emergency medical condition or to stabilize the patient.

2) In examining and treating a person who is apparently intoxicated, under the influence of drugs, or otherwise incapable of providing informed consent, the emergency medical technician, paramedic, physician, advanced registered nurse practitioner, or physician assistant, or any person acting under the direct medical supervision of a physician, shall proceed wherever possible with the consent of the person. If the person reasonably appears to be incapacitated and refuses his or her consent, the person may be examined, treated, or taken to a hospital or other appropriate treatment resource if he or she is in need of emergency attention, without his or her consent, but unreasonable force shall not be used.

3) This section does not limit medical treatment provided pursuant to court order or treatment provided in accordance with chapter 394 or chapter 397.

For any patient who fits under either of these criteria: suicidal, homicidal, or is intoxicated by drugs or alcohol, these individuals require further ALS evaluation. Notify ALS Agency immediately if the patient attempts to elope the situation. Attempt to verbally de-escalate the situation and follow him or her until the ALS agency is present. Do not put yourself in harm’s way or try to restrain these patients. If these patients present with a concomitant medical issue: chest pain, laceration, head injury etc- refer to that protocol for the medical treatment of these patients.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
DETERMINATION OF DEATH

Background

The EMS team (which consists of local ALS agency along with GEMRU) does not pronounce death; rather, it is determined to exist. The BLS provider has discretion to continue resuscitation efforts despite Termination of Resuscitation criteria if scene safety, location, patient's age, time of arrest, or bystander input compels this decision.

BLS

If a patient is suspected to be deceased or death is determined to exist, contact a Responding ALS Agency immediately. This is not a determination that a GEMRU Responder will make on his or her own, only in conjunction with the ALS agency.

If death is suspected or determined to exist, contact UFPD or LEA immediately.

The EMS team (which consists of local ALS agency along with GEMRU) does not pronounce death; rather, it is determined to exist. Death is determined to be present if all of the following are evident:

- Unresponsive
- Pulseless
- Apneic
- Fixed dilated pupils

Additionally, at least one of the following will be present to determine that death has occurred:

- Lividity, rigor mortis, or generalized cyanosis
- Decapitation, incineration, or destruction of brain or heart
- Decomposition of body tissue

Once it is determined that death has occurred, the EMS team will request/notify Law Enforcement Agency (LEA).

- The body will not be left unattended until LEA is present.
- If this may be a crime scene, nothing in or around the immediate area should be disturbed.

Notes

Other situations:

- Patients who are in a hypothermic environment may respond to prolonged resuscitation measures.
  - Hypothermic patients should be resuscitated until normal body temperature is achieved.
- Patients with electrical injuries, including lightning strikes, may have transient and/or prolonged asystole that is still responsive to resuscitative measures.

When in doubt, resuscitate and request expedited transport.
Do not terminate resuscitation efforts if transport request has been initiated.
The criteria noted herein DO NOT apply in the situation of a mass casualty incident [MCI]. Refer to MCI protocol.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
Background

This protocol will be applied to every intervention with any individual while on duty.

BLS

All patients are to be treated with respect.

An individual becomes a patient when presenting with a chief complaint, evidence of a medical condition or injury, or upon discovery of vital signs outside normal values.

The CAB's (circulation, airway, breathing) will always take priority in patient management. Maneuvers required to secure the airway, ensure adequate gas exchange, and establish adequate tissue perfusion should always supersede specific protocol statements.

Emergency Responders functioning at the BLS level will be expected to conform to GEMRU Medical Care Protocols to the extent that their training, license, and certifications allow.

Patient care is by nature unpredictable and patients may require care derived from multiple protocols, or in the absence of these, on-line medical control. The following protocols are written with this reality in mind. Deviations from protocol will be tolerated only when it is intended to further patient care and approved by the Medical Director. Such deviations must in no way detract from the high level of patient care expected from pre-hospital care providers associated with GEMRU.

The lead Responder of each unit is responsible for the completion of a BLS Patient Care Report upon every patient contact, regardless of treatment administered. Even if a patient refuses care, a report must be completed.

Although it is our policy and desire to be of assistance to law enforcement, requests by law enforcement for collection of blood samples to screen for alcohol or drug levels will be referred to an ALS agency.

GEMRU may cancel their response by any of the following means:

- The requester advises that they no longer need EMS to respond (this will occur ONLY after an assessment has been completed to ensure that the patient has the capacity to make decisions and that no medical problem exists)
- LEA or an ALS/BLS unit (including a fire department) advises there is no patient

Notes

The only recognized reason for cancellation by another Public Safety Agency is for “no patient on the scene”. GEMRU will continue response for a minor injury or for a patient refusing treatment.
Questions or Concerns?

Consultation with the GEMRU Medical Director is required prior to initiation of non-life-threatening therapeutic modalities outside the context of these protocols. The sole exception is life-saving care. Life-saving care is defined as any or all measures which have the purpose of immediate preservation of life and/or the establishment of means by which life might be preserved. If on-line Medical Control is available, the Medical Control Physician(s) shall be defined as the individual or group or individuals designated by the Medical Director for direct on-line consultation. If you are at a point where you feel you require additional medical direction, the 911 system should have already been accessed for further ALS care.

Orders communicated directly from on-line Medical Control to the Responders caring for the patient may supersede established protocol.

If on-line Medical Control exists, complications, problems, or requests for additional orders during treatment will be directed to the on-line consult appointee. Additional questions or problems should be directed to the appropriate individuals/entities after the incident.
EMERGENCY MEDICAL PROTOCOL
PHYSICIAN ON SCENE

Background

A “physician” is, for the purposes of this protocol, defined as a health care practitioner with either an MD or DO degree. A valid license to practice medicine is also required.

Notes

If anyone else who is not a physician (nurse, off duty paramedic) attempts to assume command of a scene, you may utilize their assistance as a bystander, but do not allow them to take scene command. Do NOT allow them to perform any skills that may harm or endanger the patient.

Responders and Assistants are authorized to proceed under the command of a physician on scene only if the physician has produced a valid license to practice medicine. Any dispute will be referred to the GEMRU Medical Director.

Assistance: After determination of qualification, the physician who wishes to assist the Responder in BLS support, but not take physical command, may do so. In this situation, the Responder remains in command and the Physician acts as either an ‘extra set of hands’, as a resource for selected procedures (i.e., applying pressure to a wound), or both.

Command: Physical command may be accepted ONLY if the physician on scene agrees to sign the narrative section at the bottom of the BLS run report, remains on scene until ALS or transporting agency arrives, AND agrees to accompany the patient to the hospital with the transport agency.

Any conflicts will be referred to the Medical Director for resolution.

The physician who offers assistance at a scene call is doing so for reasons of humanity and altruism. A professional and respectful attitude toward the physician-volunteer will be maintained.

Care in the field is much different than care delivered in an office, hospital or operating room. Understand that at any time that you feel that the physician is not acting in the best interest of the patient, contact your shift Captain to help in controlling this situation. In this scenario, verbalize your concern for the patient's best interests and reasons for your concern, follow your protocols, do not perform the actions which you feel are unsafe for the patient, and document your expressed concern.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
QUALITY ASSURANCE PROGRAM

**Purpose:** To establish the review of field incident reports and on scene care to identify and continually measure the quality of emergency medical care being provided to the individuals on the University of Florida campus. It is the intent of these guidelines to meet, and or exceed the requirements of Florida Statute 401 and 64E (section 8), as well as the current protocols developed by the Medical Director.

**Scope:** The guidelines prescribed are applicable to all Responders and Assistants associated with GEMRU, and may not be deviated from without the permission of the current Medical Director.

**General:** Information received through the review of medical field incident reports and on-scene observation of care provided will be used in focused studies and education, benchmarking, and performance outcomes which will improve the overall quality of service provided by the Gator Emergency Medical Response Unit. Every patient care chart will be reviewed. The following categories will be reviewed separately because they have clearly defined time-sensitive/required treatments that we feel require special attention.

**Quality Assurance Categories to Be Reviewed in detail:**
- Cardiac Arrest
- Stroke Alert
- Chest Pain
- Unconscious Patient GCS <8
- Pregnancy/OB
- Patient Refusal of Care
- Preliminary Trauma Alert/Trauma Arrest
- Drowning
- Death Scene
- BLS Airway Techniques
- Assisting in the Administration of Specified Medications (Epinephrine Auto-Injector, Multiple Dose Inhalers)
- Sepsis Alert

**Components of the EMS Quality Management Program:**

Review of the Standard of Care as set forth in Florida Statute and the current protocols in the following areas:
- EMS Report Documentation
- Performance Standards and Skill Evaluation
- Patient Outcome

The above areas will be reviewed for:
- Call Time & Date / Completion Time & Date
- Quality of Care Delivered
- Process Improvement Needs
- System-Wide Remediation Requirements
- Individual Remediation Requirements
The following areas of the EMS Run Report document shall be reviewed as basic criteria for all reports:

- Patient identification on ALL pages
- Biographical and personal data
- Responder identification
- Entry date
- Identification of Chief Complaint in narrative
- Patient history/pertinent information
- Physical examination results
- Documentation of ALL treatment in the flow sheet
- Responding agencies
- Medically appropriate care
- Narrative which documents all pertinent patient care along with any unusual occurrences. This section should indicate exactly what occurred on scene before GEMRU arrival.

**Data Collection:**

BLS Run Reports, either written or electronic, are to be completed by the lead Responder after the transfer of care to ALS providers or the transporting agency. If the report is electronic, all screens requiring data should be completed as soon as possible so that the most accurate information is collected on each patient.

Each Run Report shall be reviewed by the GEMRU Captain on duty assigned to quality assurance (QA) for adherence to protocols and completion of required data. After review by the GEMRU shift Captain, the individual Responder will be notified of any discrepancies, and the report will be returned to the individual Responder for correction.

All report data is used to identify and develop future training needs for GEMRU.

**Patient Care Review Process:**

In order to provide consistent and constant review of our procedures, the following steps shall be followed for each patient who receives care according to the QA review categories:

- EMS report is generated by field personnel for any response by GEMRU where patient contact is made.
- After the report is completed, it is reviewed by the GEMRU Captain on duty for compliance to practice parameters. The goal is to review all EMS reports by the completion of the next volunteer shift.

All reports reflecting a high degree of quality in patient care or which may have questions regarding compliance with current protocols will be flagged for review by the GEMRU Vice President of Operations.

The Vice President of Operations assigned to review these notifications will advise the Captain on duty via secure email of the recognition of excellent care, as well as any non-compliance issue. Secure email services will be provided by a company/organization who meets the standards of HIPAA compliance, and the devices on which this service is used shall be encrypted and password protected.
The GEMRU Medical Director, Vice President of Operations, and Captains will track all trends in service to determine future needs for training and/or changes in the protocols. We aim to run a monthly report to reflect the number of charts reviewed, as well as the percent noted to have minor and major deviations. We also aim to identify the percentage of charts that were given outstanding documentation and exceptional treatment remarks with a positive statement announced to the Responders.

The Captains will notify the Medical Director, GEMRU Training Officer, and Vice President of Operations of trends, need for remedial training, and any issue being removed from the QA process for discipline.

**EMS Review Guidelines:**
The following guidelines shall be used for the review of EMS reports:

**Preliminary Trauma Alert / Cardiac Arrest / Drowning**

**Treatment Parameters:**
- On scene time < 10 minutes or documentation of reason for prolonged scene time
- Protocol adherence
- BLS skills utilized

**Patient Outcome:**
- Restoration of vital signs
- Maintenance of vital signs
- Improvement in vital signs

**Patient Transportation:**
- Appropriate activation of the Emergency Response System for ALS Support and/or Transporting Agency
- If GEMRU arrives on scene prior to ALS support, and the medical emergency or mechanism of injury is suspected to be severe enough to warrant Air Medical Transportation, GEMRU shall immediately notify the responding ALS support and/or Transporting Agency of their concerns. The ultimate decision to request and activate Air Medical Transportation shall be given to Alachua County Fire Rescue and/or Gainesville Fire Rescue.

**Medical Cardiac Arrest / Stroke Alert / Unconscious Patient / STEMI Alert / Sepsis Alert**

**Treatment Parameters:**
- On scene time < 20 minutes or documentation of reason for prolonged scene time
- Protocol adherence
- BLS skills utilized
Patient Outcome:

- Restoration of vital signs
- Maintenance of vital signs
- Improvement in vital signs

Patient Transportation:

- Appropriate activation of the Emergency Response System for ALS Support and/or Transporting Agency
- If GEMRU arrives on scene prior to ALS support, and the medical emergency or mechanism of injury is suspected to be severe enough to warrant Air Medical Transportation, GEMRU shall immediately notify the responding ALS support and/or Transporting Agency of their concerns. The ultimate decision to request and activate Air Medical Transportation shall be given to Alachua County Fire Rescue and/or Gainesville Fire Rescue.

Pregnancy / OB

Treatment Parameters:

- On scene time < 10 minutes or documentation of reason for prolonged scene time
- Protocol adherence
- BLS skills utilized on mother
- BLS skills utilized on newborn

Patient Outcome:

- Restoration of vital signs of mother and/or newborn
- Maintenance of vital signs of mother and/or newborn
- Improvement in vital signs of mother and/or newborn

Patient Transportation:

- Appropriate activation of the Emergency Response System for ALS Support and/or Transporting Agency
- If GEMRU arrives on scene prior to ALS support, and the medical emergency or mechanism of injury is suspected to be severe enough to warrant Air Medical Transportation, GEMRU shall immediately notify the responding ALS support and/or Transporting Agency of their concerns. The ultimate decision to request and activate Air Medical Transportation shall be given to Alachua County Fire Rescue and/or Gainesville Fire Rescue.

Pediatric Patient / Cardiac Arrest

Treatment Parameters:

- On scene time < 20 minutes or documentation of reason for prolonged scene time
- Protocol adherence
- BLS skills utilized (including cardiopulmonary resuscitation [CPR] and BLS airway management)
Patient Outcome:
- Restoration of vital signs
- Maintenance of vital signs
- Improvement in vital signs

Patient Transportation:
- Appropriate activation of the Emergency Response System for ALS Support and/or Transporting Agency
- If GEMRU arrives on scene prior to ALS support, and the medical emergency or mechanism of injury is suspected to be severe enough to warrant Air Medical Transportation, GEMRU shall immediately notify the responding ALS support and/or Transporting Agency of their concerns. The ultimate decision to request and activate Air Medical Transportation shall be given to Alachua County Fire Rescue and/or Gainesville Fire Rescue.

Pediatric Trauma

Treatment Parameters:
- On scene time < 10 minutes or documentation of reason for prolonged scene time
- Protocol adherence
- BLS skills utilized (including pediatric-specific interventions)

Patient Outcome:
- Restoration of vital signs
- Maintenance of vital signs
- Improvement in vital signs

Patient Transportation:
- Appropriate activation of the Emergency Response System for ALS Support and/or Transporting Agency
- If GEMRU arrives on scene prior to ALS support, and the medical emergency or mechanism of injury is suspected to be severe enough to warrant Air Medical Transportation, GEMRU shall immediately notify the responding ALS support and/or Transporting Agency of their concerns. The ultimate decision to request and activate Air Medical Transportation shall be given to Alachua County Fire Rescue and/or Gainesville Fire Rescue.

Death Scenes

Treatment Parameters:
- Determination of Death Parameter adherence
- Documentation of Dearth Parameter met
- Documentation of contact with the shift Captain, Vice President of Operations, AND Medical Director
- Documentation of acceptable DNR form or Order (if applicable)
- Documentation of applicable scene assessment
- Appropriate activation of the Emergency Response System for ALS support and law enforcement
- Documentation of notification of appropriate agencies / law enforcement

**Patient Refusal**

**Treatment Parameters:**

- Protocol adherence
- Patient's chief complaint
- Full description of patient encounter
- Assessment which includes at least one (1) set of vital signs, if patient permits
- Working analysis of patient signs and symptoms, if able to obtain
- Statement of level of consciousness, making a statement regarding lack of intoxication and normal mental status, if patient is a minor parent must have the capacity to refuse (document lack of intoxication and normal mental status)
- Attempts to convince patient to seek treatment, if applicable
- Reason given for refusal documented
- Medical Direction, if needed

**BLS Airway Techniques**

**Oral, Nasal, or Supraglottic Airway (King LT) Insertion**

- Treatment parameters per Standards of Care
- Documentation
- Performed per Standards of Care
- Bilateral breath sounds present
- Oxygen supplementation, if needed
- Colorimetric CO2 detector utilization, if requested to be used by responding ALS for airway assistance
- ETCO2 capnography
- Changes in patient after assessment

**Patient Disposition**

- Patent airway on first attempt
- Patent airway on second attempt
- Patent airway on greater than two (2) attempts
- Patient without successful airway patency and without ability to ventilate with BVM
**Medication Administration and Administration Assistance**

>Note: GEMRU Responders DO NOT have the authority to administer OR assist in the administration of PRESCRIBED medications not outlined in the appendix of the GEMRU Medical Care Protocols. See the Appendix of the GEMRU Medical Care Protocols for medications permitted to be carried, to be assisted with administration, and/or directly administered by GEMRU's licensed BLS personnel.

**Treatment Parameters**

- Per Standard of Care
- Appropriate medication for working analysis of chief complaint and/or signs and symptoms

**Documentation**

- If any contraindications exist PRIOR to administering a medication
- If a medication was administered directly by the Responder, per protocols, OR if a medication was administered by the patient with Responder assistance, per protocols
- Medication delivered
- Dosage and amount
- Delivery route
- Response of patient to medication
- Any reactions or complications

**Patient Disposition**

- Expected, positive response to medication
- Untoward reaction

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**Treatment Review Classifications**

**Exceptional**

- A call that exceeds expectations.

**Acceptable**

- Typical call with no deviation from protocol

**Minor**

- Deviation from protocols without patient compromise
- Patient’s Transfer of Care not documented
- No documentation of ETOH, drugs, or competency on Refusals
Major

- Missing "alert" notifications per protocols
- Improper and/or inappropriate BLS intervention utilized
- ALS intervention utilized by BLS Responder
- Exceeding the scope of practice for the license or certification held by the Responder/Assistant
- Incorrect medication administration technique (direct administration vs assisted administration)
- Incorrect medications or dosage
- Treatment without justification
- Lack of documented treatment that hindered patient care
- Any hindrance to patient care
- Any patient care not in the best interest of the patient
- Failure to obtain waiver without justification

Documentation Deficiency Classifications

Class 1

- Missing signature
- Grammar and spelling errors
- Times missing from treatment section

Class 2

- Not all interventions documented properly
- Incorrect protocol used
- Vitals not documented every 5 minutes or prior to medication administration.

Class 3

- Poorly-written narrative

Class 4

- Incomplete report
Documentation Proficiency Classifications

Good

- Report is complete and has all required information

Outstanding

- All required information
- Narrative is very clear as to this situation
- All required signature
EMERGENCY MEDICAL PROTOCOL
RADIO REPORT

EVEN IF A PATIENT OR BYSTANDER REPORTS THAT THEY HAVE CALLED 911 OR REQUESTED ASSISTANCE, RESPONDERS SHALL FOLLOW PROTOCOL AND REQUEST AN ALS AGENCY AS VERIFICATION THAT THEY HAVE BEEN CONTACTED.

Background

It is understood that direct radio communication with Responding ALS Agencies (ACFR and/or GFR), and/or Receiving Facilities (UF Health) may not be available to GEMRU. Provisions for radio communication are as follows:

If direct radio communication DOES NOT exist with a Responding ALS Agency:
If GEMRU responds to a scene that requires or is expected to require ALS support, Responders shall immediately request a Responding ALS Agency through radio communication with UFPD and give the information required per this protocol. If radio communication with UFPD is not available, Responders shall immediately dial 911 and give the information required per this protocol.

If GEMRU is providing services at a location outside of the UFPD jurisdiction (such as at an off-campus event) and a Responding ALS Agency is required or expected to be utilized, Responders shall immediately dial 911 and give the information required per this protocol (if radio communication has not been provided with an ALS Agency).

If direct radio communication DOES exist with a Responding ALS Agency:
If GEMRU responds to a scene that requires or is expected to require ALS support, Responders shall immediately establish radio communication with the appropriate Responding ALS Agency and give the information required per this protocol.

BLS

If direct radio communication DOES NOT exist with a Responding ALS Agency, request a Responding ALS Agency through radio communication with UFPD OR immediately dial 911 from the nearest phone and report the following information to the dispatcher:

- If using the radio with UFPD, identify yourself as “Medical Response Unit” and give your unit #
- If dialing 911, give your name and identify yourself as a volunteer Emergency Medical Technician or volunteer Paramedic with the Gator Emergency Medical Response Unit at the University of Florida
- DO NOT GIVE INDIVIDUALLY IDENTIFIABLE HEALTH INFORMATION (PROTECTED HEALTH INFORMATION) OVER RADIO COMMUNICATIONS OR THROUGH COMMUNICATION MEANS ABLE TO BE MONITORED BY UNAUTHORIZED PERSONNEL
- State that you are requesting ALS assistance and possible patient transport
- Location/address of the scene (state if scene is unsafe, or if LEA is needed)

Give the following information as medically appropriate:

- Patient name, if asked by a 911 dispatcher (DO NOT GIVE OVER RADIO)
- Patient’s age and gender
- Patient’s chief complaint
- Brief history relevant to the chief complaint/illness, including time of onset, medications used, contraindications, and allergies
- Description of the mechanism of injury for traumatized patients
- Vital signs (as appropriate for circumstances)
- General appearance
- Pertinent physical findings
- Treatment rendered and the response to treatment
- Length of time on-scene
- Information requested by the entity receiving your report
- State if any other agencies have responded to the scene
- In the unlikely event that Air Medical Transport is suspected to be necessary, notify the dispatcher of your concerns regarding Air Medical Transport, and request that the information is forwarded to the Responding ALS Agency for a decision to be determined upon the arrival at the scene
- Note that radio and phone communications may be recorded, and everything you say may be used for future reference, ensure that communication remains secure at all times

If direct radio communication DOES exist with a Responding ALS Agency, immediately establish radio communication with the appropriate Responding ALS Agency and give the following information:

- Identify yourself as “Gator Emergency Medical Response Unit” and give your unit #
- DO NOT GIVE INDIVIDUALLY IDENTIFIABLE HEALTH INFORMATION (PROTECTED HEALTH INFORMATION) OVER RADIO COMMUNICATIONS OR THROUGH COMMUNICATION MEANS ABLE TO BE MONITORED BY UNAUTHORIZED PERSONNEL
- State that you are requesting ALS assistance and possible patient transport (state if scene is unsafe, or if LEA is needed)
- Location/address of the scene

Give the following information as medically appropriate to ALS Responders and involved medical personnel:

- Patient's age and gender
- Patient's chief complaint
- Brief history relevant to the chief complaint/illness, including time of onset, medications used, contraindications, and allergies
- Description of the mechanism of injury for traumatized patients
- Vital signs (as appropriate for circumstances)
- General appearance, including the Glasgow coma scale
- Pertinent physical findings
- Treatment rendered and the response to treatment
- Ask for the estimated time of arrival (ETA) for Responding Units
- Information requested by the entity receiving your report
- State if any other agencies have responded to the scene
- In the unlikely event that Air Medical Transport is suspected to be necessary, report your concerns regarding Air Medical Transport, and request that the information is forwarded to the Responding ALS unit(s) for a decision to be determined upon the arrival at the scene
- Note that radio and phone communications may be recorded, and everything you say may be used for future reference, ensure that communication remains secure at all times

Document all information given to 911 dispatcher and/or Responding ALS Agency
If unable to contact 911 dispatch or a Responding ALS Agency via phone or radio,
- Try a different phone or radio in the surrounding location (land line)
- Route a message through your shift Captain
- Follow protocols, as written

Notes
Any issues in calling in a report should be immediately reported to the shift Captain, Vice President of Operations, AND Medical Director in order to ensure that the issue is addressed.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL  
RAPID EXTRICATION

Background

The purpose of this protocol is to establish a written guideline documenting conditions where physical or environmental conditions exist which preclude the initiation of most, if not all, other medical care guidelines for the well-being of personnel and patients involved. The scope of the guideline is not to list every possible condition where rapid extrication would be required, but rather to set the parameters which could elicit the use of rapid extrication.

The field of emergency services by its very nature is unpredictable and often times places the lives of patients, caregivers, and bystanders in harm's way. Occasionally, there are incidents where the situation and/or conditions are so volatile that it places the well-being of the personnel involved at greater risk if basic medical care is provided. In these situations, the patient may require rapid removal from a scene to a safer location prior to the initiation of care. These occasions are rare, but require definitive action to ensure the safety of all personnel involved.

BLS

If rapid extrication is needed, request a Responding ALS Agency immediately and notify LEA.

Once the decision is made that moving the patient to a safe location prior to the initiation of care improves treatment options or lessens danger to the patient or caregiver than the current location, consider:

- Risk of further injury vs. benefit of moving from a source of danger
- Manage other injuries as possible within limits of patient and provider safety, for example:
  - C-spine
  - Compromised airway
  - Life threatening hemorrhage
  - Extremity injuries
  - Crush injuries
  - Penetrating injuries with large objects

- If it is determined to be necessary, the move to a location where proper medical care can be provided needs to be rapidly initiated and completed

- Upon approach to scene, consider scene safety and whether approach is possible under current conditions
- Initiate basic medical care, if possible
- Establish patent airway, use jaw thrust and bag-valve-mask ventilation if possible
- Administer oxygen as needed to maintain O2 >94%, if possible
- Record and monitor vital signs, if possible
- Verbally calm patient (stay with them until ALS arrival), if possible
Notes
Examples of situations and conditions which may require the use of rapid extrication techniques may include physical situations such as rescue at high angles or elevations, confined-space rescues, entrapment within burning/sinking vehicles, or stadium/arena stands where patient access is limited. Environmental conditions may include fires, floods, civil unrest, animal/insect and extreme weather. These conditions may pose hazards to patient and/or crew safety. In these situations, consider safety, patient position, location, and situation regarding the initiation of medical care.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
REFUSAL OF SERVICE

Background

Management of patients who activate the EMS system (or have the system activated on their behalf by a third party) and then decline or refuse care and/or transport is a difficult problem for Responding Agencies. Using an ordered approach in these situations will help expedite a satisfactory resolution. Although the ultimate decision of Refusal of Service/Care is made by the competent and informed patient or their legal guardian, the assumption should ALWAYS be that the patient will require medical care and a request for transport unless indicated otherwise. GEMRU recognizes the differences between Refusal of BLS Medical Care and Refusal of Transport.

Refusal of BLS Medical Care

Patients over the age of 18, emancipated minors, and the legal guardians of minors, [any competent individual NOT under State or Federal Acts that suspend their ability to make decisions regarding medical care and transport (i.e. Baker Act or Marchman Act)] have the right to refuse receiving BLS Medical Care. In order to confirm that a patient has the capacity to make decisions that are in their best interest, patients must receive an evaluation to ensure that a medical or psychiatric problem is not present which may be inhibiting their ability to make decisions. If there is any question of capacity, contact ALS agency for evaluation/assistance.

Refusal of Transport

Patients over the age of 18, emancipated minors, and the legal guardians of minors [any competent individual NOT under State or Federal Acts that suspend their ability to make decisions regarding medical care and transport (i.e. Baker Act or Marchman Act)] have the right to refuse requests for transport by Responding Agencies. GEMRU does not transport patients; therefore, provisions shall be made regarding Refusal of Transport when a Responding ALS Agency is contacted.

Notes

General considerations

- Assess the patient and the scene
- Obtain and document a history from the patient and/or others in the area
- Obtain and document the patient's vital signs
- Perform the physical examination, paying particular attention to alterations in mental status and vital signs
- Consider any traumatic injuries and/or medical illnesses that may represent a threat to the well-being of the patient
- Assess patient competency for Refusal of Service (see below)
- If patient contact is made, a Patient Care Report (PCR) must be completed
- All episodes, which involve Refusal of Care or assessment of competency, must be documented completely on the run report
- If the EMS system is summoned to by a third party, and either the patient is not found or there is no EMS assistance required, a full report needs to be completed and this patient's disposition should be entered into the database. No patient contact
- The disposition "no patient found" will only be used when no human being is found at the address given
- If an individual has called for lift assistance; then the Responder must complete a full assessment on the individual for any traumatic injuries, alterations in mental status, or other concerns
  - If none are found, a citizen assist report shall be documented
No Refusal of Care will occur in the patient who, after assessment by Responders, is judged to be at risk or suffering from a serious illness or injury without involvement of the Medical Director. If a serious illness or injury is present/suspected, GEMRU Responders shall also request a Responding ALS Agency immediately.

Situations deemed high risk include:
- Patients <1 or >65 years of age
- Trauma Patients
- Intoxicated or Possibly Intoxicated Patients
- Chest Pain
- Abnormal Vital Signs
- Mental Health Concerns
- Status Post-Treatment (seizure, asthma, hypoglycemia; see below)

Efforts to obtain consent from the patient may be discontinued in the following situations:
1. Patient decides to consent.
2. Patient's level of consciousness deteriorates to the point that they are no longer able to refuse care. Care may now proceed under implied consent.
3. Patient continues to refuse and the patient is determined to be capable of making an informed refusal, AND Medical Director consultation was not required (see below).
4. Patient continues to refuse, physical restraint with law enforcement assistance is needed, law enforcement refuses to assist (tape document), and Medical Director approves discontinuation of efforts.
5. Patient has left the scene and efforts to detain the patient would be inappropriate or dangerous.
6. Contact with medical direction has occurred.

Patients will often decide to consent after they hear the consultation with a Medical Director or ALS personnel, despite the previous efforts of field crews. Therefore, take advantage of that fact to help persuade a patient to seek care, as appropriate. You may ask the Medical Director or ALS personnel/dispatcher to speak directly with the patient. This is often helpful in obtaining patient consent. This also records the patient's own voice on the phone/radio system as additional documentation of the system's sincere efforts to have the patient make an informed decision. ALS should be on scene already or shortly after dispatch, and they may also utilize their agency’s Medical Control on behalf of the patient.

Assessment of patient competency:
- For our purposes, a patient with the capacity to refuse is defined as one who is:
  - Over 18 years of age, or is an emancipated minor (a pregnant woman, a woman who has given birth, or a married person of either gender) and;
  - Awake, alert, and fully oriented to time, person, place, and situation and;
  - Has no alterations in vital signs, mental status, or level of consciousness and;
  - Has no signs of acute or chronic injury or illness which may influence the ability to make an informed decision and;
  - Is not exhibiting clinical signs of intoxication by alcohol or drugs, (licit or illicit) and/ or
  - Has no history of mental illness that affects their decision-making ability.
  - Someone who understands risks and benefits, including the ability to voice this understanding back to provider
  - Is not under the influence of friends and family to make their decision
If the patient (or parent or guardian) is judged to have the capacity to refuse BLS Medical Treatment, ALS Medical Treatment from a Responding ALS Agency, and/or transport from a Transporting Agency:

- Emphasize the need for care
- Emphasize the risks of Refusal of Care (including death)
- Emphasize our wish to call a Responding ALS Agency, if needed
- Emphasize our wish to call a Transporting Agency to transport the patient, if needed
- If patient, parent, or guardian declines care, and the EMS personnel do not feel transport by a Transporting Agency to the hospital is required, patient, parent, or guardian must sign the written release form in front of two witnesses.
- The patient, parent, or guardian who is judged to have the capacity to make decisions, declines care, and then refuses to sign the waiver will prompt the EMS crew to reassess the capacity of the individual; if still considered to have this capacity to decline care, a verbal statement MUST be documented on the run report and the verbal waiver form completed. If this occurs, immediately notify your shift Captain, Vice President of Operations, AND GEMRU Medical Director.

If the patient (or parent or guardian) is judged not to have the capacity to refuse BLS Medical Treatment, ALS Medical Treatment from a Responding ALS Agency, and/or transport from a Transporting Agency:

- Explain to the patient (or parent/guardian) the need for BLS Medical Treatment, ALS Medical Treatment, and/or transport; reassure the patient that no harm will result from contacting a Responding ALS Agency or a Transport Agency, but that complications, up to and including death, may result from a delay in treatment;
- If patient, parent, or guardian continues to refuse care, request a Responding ALS Agency and law enforcement personnel to secure patient for treatment and/or transport. GEMRU Responders shall NOT attempt to restrain any patient (including combative patients, or patients who do not have the capacity to refuse Treatment or Transport and still refuse care). Please attempt to follow this patient to be aware of their location when ALS and/or LEO arrives.

Refusal of Treatment/ Transport of minors:

- Where there are historical or physical findings of injury or illness, intoxication, and/or alterations in mental status, level of consciousness, or vital signs, and no parent or guardian is available, GEMRU will contact a Responding ALS Agency and/or Transporting Agency on behalf of the minor.
- Care may be refused by a responsible parent or legal guardian if the parent or guardian making the decision qualifies as having capacity to make decisions as defined above. However, every effort will be made to treat and/or transport minors exhibiting any findings consistent with injury, alteration in mental status, or intoxication.
- If the parents or guardian are not on scene, they may make the refusal over the telephone. Two witnesses will confirm the telephone conversation by signing the waiver form.
- If patient, parent, or guardian refuses care, and EMS personnel feel transport to the hospital is required, GEMRU Responders shall contact a Responding ALS Agency, and their Refusal of Care protocols shall be enacted.
- The patient, parent, or guardian who is judged to have the capacity to refuse, refuses care, and then refuses to sign the waiver will prompt the EMS crew to reassess the capacity of the individual and immediately contact a Responding ALS Agency; they will also let the shift Captain and Vice President of Operations know of this concern.
- If the person in question is still considered to have the capacity to decline care, a verbal statement MUST be documented on the run report and the verbal waiver form completed. It is recommended to contact ALS to help persuade these patients to agree to care and requesting transport.
• Thank patient, parent, or guardian for signing the release. Emphasize that our EMS system WILL RETURN should the patient, parent, or guardian change his or her mind.
• If a minor is having a medical emergency requiring immediate life saving interventions, then care will be rendered based on emergency consent guidelines.

Refusal of Transport After Treatment Given:

If a patient has an altered mental status at any point in time, GEMRU shall contact a Responding ALS Agency immediately and a Refusal of Service will not be granted to these patients by GEMRU until the patient is deemed to be competent and without altered mental status for a reasonable period of time. It is MANDATORY that the BLS Refusal of Service form is signed after ALS arrives and assesses the patient.

Bronchospasm Resolved After Treatment
• Responders shall request a Responding ALS Agency for all patients currently experiencing bronchospasms
• After treatment of bronchospasm and return to an asymptomatic state, some patients will refuse contacting a Transport Agency for transport to the hospital
• The following items should be accounted for and included in the assessment and documentation:
  o The presentation is consistent with a mild exacerbation of asthma
  o No severe dyspnea at onset
  o No pain, sputum, fever or hemoptysis
  o Not initially hypoxic (oxygen saturation < 90%)
  o Significant improvement after a single treatment with the patient’s own MDI
  o Complete resolution of symptoms
  o Vital signs within normal limits after treatment given (BP, pulse, respiratory rate, oxygenation)
  o A family member or caregiver should be available to stay with the patient and assist if a relapse occurs
  o No presence of fever
• Assure the patient understands Transport has been offered and subsequently refused
• Informed the patient to follow up with their physician as soon as possible and/or to re-contact 911 if symptoms re-occur
• These patients must also have the capacity to refuse as listed above

Insulin Induced Hypoglycemia:
• Responders shall request a Responding ALS Agency for all patients currently experiencing insulin induced hypoglycemia
• This protocol applies ONLY to insulin dependent diabetic patients who are refusing hospital transport after the resolution of insulin-induced hypoglycemia by the administration of oral glucose. After treatment of hypoglycemia and return to an asymptomatic state, some patients will refuse transport to the hospital. Oral glucose shall be administered according to the Diabetic Emergencies protocol.
• The following items should be accounted for and included in the assessment and documentation:
  o The patient is on Insulin only AND does not take oral diabetic medications
  o The presentation is consistent with hypoglycemia
  o Rapid improvement, and complete resolution of symptoms, after oral glucose
  o Vital signs within normal limits after glucose given (BP, pulse, respiratory rate, oxygenation, and blood sugar > 70)
  o There is no indication of an intentional overdose or dosing error
• Additional patient safety measures that should be considered:
  o Oral hypoglycemic medications have a longer duration of action, putting the patient at risk for recurrence of hypoglycemia
- A family member or caregiver should be available to stay with the patient and assist if a relapse occurs.
- Assure the patient understands that a request for Transport has been offered and subsequently refused.
- Informed the patient to follow-up with their physician as soon as possible and/or to re-contact 911 if symptoms re-occur.
**GEMRU-Specific Provisions for BLS Refusal of Service**

**FOR PATIENTS >18 YEARS OF AGE, EMANCIPATED MINORS, AND MINORS WITH CONSENTING LEGAL GUARDIANS**

If GEMRU is directly dispatched by UFPD, LEA, or authorized dispatch entity:

- And the LEA or dispatch agency deems there is no patient at the scene:
  - GEMRU will discontinue the response unless patient is identified

If GEMRU arrives at the scene, or the patient approaches GEMRU Responders:

- And the patient refuses BLS Medical Treatment by GEMRU:
  - GEMRU will discontinue service, so long as the patient has been informed of the benefits of continuing service and consequences of discontinuing service, AND
  - The patient is not suspected to have a current or previously altered mental status, AND
  - The patient does not meet any of the critical criteria outlined in the blue box above, AND
  - All GEMRU Responders on scene deem that ALS and request for transport is not required, AND
  - The patient agrees to sign the GEMRU ‘BLS Refusal of Service’ paperwork, AND
  - The patient is not under State or Federal Acts that suspend their ability to make decisions regarding medical care and transport (i.e. Baker Act or Marchman Act)

*Note: If the patient is suspected to have a current or previously altered mental status, or their decision making capacity is suspected to be altered for any reason, GEMRU will immediately request a Responding ALS Agency and assess the patient’s mental competency using the parameters outlined above. BLS Medical Treatment may still be rendered until Transfer of Patient Care to ALS Responders is initiated at the scene. If the patient is judged to be at risk or suffering from a serious illness or injury as described above without an altered mental status, request a Responding ALS Agency immediately.*

- And the patient refuses BLS Medical Treatment by GEMRU, but agrees to ALS Medical Treatment and/or transport by a Responding ALS Agency:
  - GEMRU will discontinue service (so long as the patient has been informed of the benefits of continuing service and consequences of discontinuing service AND the patient is not suspected to be cognitively impaired), AND
  - GEMRU will request a Responding ALS Agency immediately, AND
  - GEMRU will obtain patient signature on completed ‘BLS Refusal of Service’ paperwork

*Note: If the patient is suspected to have a current or previously altered mental status, or their decision making capacity is suspected to be altered for any reason, GEMRU will immediately request a Responding ALS Agency and assess the patient’s mental competency using the parameters outlined above. BLS Medical Treatment may still be rendered until Transfer of Patient Care to ALS Responders is initiated at the scene. If the patient is judged to be at risk or suffering from a serious illness or injury as described above without an altered mental status, request a Responding ALS Agency immediately.*
And the patient consents to BLS Medical Treatment by GEMRU, but refuses ALS Medical Treatment when all of the responding GEMRU Responders deems ALS Medical Treatment IS NOT necessary:

- GEMRU will discontinue service (so long as the patient has been informed of the benefits of continuing service and consequences of discontinuing service AND the patient is not suspected to be cognitively impaired), AND
- Ensure that reasons for ALS refusal by the patient and reasons for Responders to discontinue care have been thoroughly documented on the Patient Care Report

Note: If the patient is suspected to have a current or previously altered mental status, or their decision making capacity is suspected to be altered for any reason, GEMRU will immediately request a Responding ALS Agency and assess the patient’s mental competency using the parameters outlined above. BLS Medical Treatment may still be rendered until Transfer of Patient Care to ALS Responders is initiated at the scene. If the patient is judged to be at risk or suffering from a serious illness or injury as described above without an altered mental status, request a Responding ALS Agency immediately.

And the patient consents to BLS Medical Treatment by GEMRU, but refuses ALS Medical Treatment when any of the responding GEMRU Responders deems ALS Medical Treatment IS necessary and in the best interest of the patient:

- GEMRU will temporarily discontinue service (so long as the patient has been informed of the benefits of continuing service and consequences of discontinuing service AND the patient is not suspected to be cognitively impaired), AND
- GEMRU will contact a Responding ALS Agency immediately on behalf of the patient

Note: If the patient is suspected to have a current or previously altered mental status, or their decision making capacity is suspected to be altered for any reason, GEMRU will immediately request a Responding ALS Agency and assess the patient’s mental competency using the parameters outlined above. BLS Medical Treatment may still be rendered until Transfer of Patient Care to ALS Responders is initiated at the scene. If the patient is judged to be at risk or suffering from a serious illness or injury as described above without an altered mental status, request a Responding ALS Agency immediately.

Notes
- Just having a drink does not make you intoxicated
- Intoxication: slurred speech, inability to walk or talk (when in doubt, contact ALS)
- Significant mechanism: fall from 10 feet or greater, MVC >35mph, assault with LOC, bicycle accident with LOC, concern with intimate partner violence
- Hypotension, hypoglycemia, fever, hypercarbia and hypoxia can all cause altered mental status

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
SUSPECTED OR CONFIRMED SEXUAL VIOLENCE

Background

Sexual assault, battery, and/or abuse is an unfortunate, yet common, occurrence on college campuses. There are special considerations for treating and approaching a suspected or confirmed victim of sexual violence, including the manner in which you communicate, treat, and interact with the patient. In most cases, identifying a victim of suspected sexual violence will elicit the response of a law enforcement agency and an investigation that EMS responders may become witnesses in. Be prepared to cooperate with law enforcement on the scene, and if approached later.

BLS

Request a Responding ALS Agency AND a law enforcement agency immediately if sexual violence is suspected or confirmed.

- Request a Responding ALS Agency and a law enforcement agency
- Sexual violence patients may often be emotionally distraught and possibly combative, ensure the scene is safe before entering (enter only after LEA)
- Allow LEA to control these incidents and ensure ALS agency response, only intervene for medical care outside of sexual assault concerns (trauma, airway, etc)
- If the patient is a female, make every effort to provide a female Responder for communication purposes, or whoever the patient is comfortable interacting with
- If the patient is a male, make every effort to provide a male Responder for communication purposes, or whoever the patient is comfortable interacting with
- Persuade and encourage the patient NOT to cleanse himself or herself if sexual contact has been made, as evidence may need to be collected by LEA (includes no food or drinks, if oral assault may have occurred)
- Providing care to the patient should be non-judgmental and reassuring to the patient
  - Any interviews should be brief and injury-focused
  - Details of the assault other than the injuries sustained are not pertinent for the pre-hospital record
- If clothes do need to be removed, use a pair of trauma shears and cut AROUND any areas that may be used for evidence. Request the help of a law enforcement officer to identify key areas of clothing and areas on the patient's body that may need to be preserved. Any clothing should be placed in paper bags by LEA.
- Do not let preservation of evidence hinder life-preserving care
- If the patient is too distraught to communicate or is unwilling to communicate, attempt to gain information regarding injury from an individual close to the patient that may know if injuries were sustained
- Notify the Responding ALS Agency of all pertinent details in a Transfer of Patient Care hand-off report
- Ensure that possible evidence is not left behind at the scene before transport
- Ensure the proper agencies have been notified

Do the following if medically necessary:

- Initiate basic medical care
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation, as needed
- Use oral or nasal pharyngeal airway adjuncts, as needed
• Use suction to clear airway, as needed
• Assess lung sounds
• Assess for edema
• Administer oxygen as needed to maintain O2 >94%.
• Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
• Record and monitor vital signs
• Obtain a SAMPLE history, if possible
  • Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
• Define pain response using OPQRST, if possible:
  • Onset, Provocation, Quality, Radiation, Severity, Time
• Do not delay requests for transport to obtain the above information

Notes
• Precise documentation is of paramount importance
• Use caution when writing your documentation
  • USE DIRECT QUOTES WHENEVER POSSIBLE
  • Do not assume details or paraphrase. If the patient says that this has been a “sexual assault”, then quote “sexual assault” in your documentation.
  • Refer to the individual as a ‘patient’.
  • Refrain from explaining the details surrounding the scenario unless medically pertinent
  • It may be beneficial to use a body map diagram to mark areas of injury or concern noted upon assessment.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
SUSPECTED OR CONFIRMED CHILD/ELDER ABUSE

Background

Suspected child or elder abuse is a serious situation that needs to be recognized and reported for the safety of the patient. Know the subtle findings which may alert you that abuse may be the cause of the injury or illness. Remember abuse not only includes physical and sexual abuse, but also neglect and emotional abuse as well.

BLS

Request a Responding ALS Agency AND a law enforcement agency immediately if child/elder abuse is suspected or confirmed. Make sure you pass this concern off in report to the ALS agency.

- Initiate basic medical care and perform a patient assessment
- Establish patent airway, use jaw thrust and bag-valve-mask ventilation as needed
- Administer oxygen as needed to maintain O2 >94%
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident, if there are two different stories between the patient and the caregiver note both stories and allow a qualified medical professional to decipher the truth
- Define pain response using OPQRST:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Whenever child or elder abuse is suspected, assess the scene closely
- Do not make accusatory, confrontation, angry, or threatening statements to any parties present
- Do not delay transport to obtain the above information

Notes

- Record all appropriate information on the Patient Care Report. Make sure these are facts that are without opinion or judgment. If stories change from one witness to another, document both stories as they are told. Inferences can be made later.
- Any non-transported patient for whom you have concerns about the possible abuse will be reported to the appropriate local or state agency (Children and Family Services, LEA). The shift Captain will also be notified.
- Upon Transfer of Patient Care, a verbal report summarizing your findings should be given to the responsible medical personnel. Complete any appropriate paperwork in compliance with organizational and administrative procedures.
- ABUSE REGISTRY 1-800-962-2873; any concerns a GEMRU Responder has should be reported first hand, this is much more helpful to Children and Family Services.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
UNIVERSAL PRECAUTIONS

Background

Bodily substance isolation (BSI) is a primary responsibility of all medical staff. All blood and bodily fluids will be considered infectious. Appropriate Personal Protective Equipment (PPE) will be worn when treating patients where blood and/or OPIM (Other Potentially Infectious Materials) are evident or suspected. Appropriate respiratory protection will be used if it is documented or suspected that the patient may have infectious tuberculosis or any other respiratory-spread infection. Abide by your Blood Borne Pathogen (BBP) training that you have received, and report any exposures according to the instructions in this protocol.

Notes

General Practices:
- In the event that BLS Responders come into contact with sharps, sharps will be disposed of in appropriate sharps container(s).
- Sharps will not be recapped.
- Hands will be cleaned, preferably with soap and water after patient contact or contact with OPIM; however, waterless hand cleaners may be used until soap and water are available.
- Contaminated equipment will be cleaned and then disinfected.
- PPE should be used to cover any areas on an employee's person that could provide a route for contamination.

Universal Precautions Categories:
- Mechanical Devices:
  - Sharps containers and biomedical waste red bags
  - Sharps Safety Devices
- Personal Protective Equipment (PPE)
  - Gloves, Gowns, Eyewear, Fluid Shields, N95 Respirators
- Housekeeping:
  - Cleaning and disinfecting products
  - Waterless hand cleaner
EXPOSURES TO BLOOD OR OTHER POTENTIALLY INFECTIOUS MATERIALS (OPIM)

An exposure is any percutaneous injury involving a potentially contaminated sharp, splash of blood, or OPIM to the eyes, mouth, or mouth, or blood/OPIM contacting broken skin.

A list of OPIM acknowledged by UF Environmental Health & Safety:

<table>
<thead>
<tr>
<th>YES</th>
<th>NO (unless visibly contaminated with blood)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebrospinal fluid</td>
<td>Tears</td>
</tr>
<tr>
<td>Synovial fluid</td>
<td>Feces</td>
</tr>
<tr>
<td>Peritoneal fluid</td>
<td>Urine</td>
</tr>
<tr>
<td>Pericardial fluid</td>
<td>Saliva</td>
</tr>
<tr>
<td>Pleural fluid</td>
<td>Nasal secretions</td>
</tr>
<tr>
<td>Semen/Vaginal secretions</td>
<td>Sputum</td>
</tr>
<tr>
<td>Breast milk</td>
<td>Sweat</td>
</tr>
<tr>
<td>Amniotic fluid</td>
<td>Vomit</td>
</tr>
<tr>
<td>Saliva from dental procedures</td>
<td></td>
</tr>
<tr>
<td>Unfixed human tissue or organs (other than intact skin)</td>
<td></td>
</tr>
<tr>
<td>Cell or tissue cultures that may contain BBP agents</td>
<td></td>
</tr>
<tr>
<td>Blood/tissues from animals infected with BBP agents</td>
<td></td>
</tr>
</tbody>
</table>

If you sustain a needlestick or an exposure to blood, bodily fluids, or OPIM, please do the following:

1. Wash wound with soap & water for 5 minutes; flush mucous membranes for 15 minutes with water
2. Notify your shift Captain immediately and do not respond to any other dispatches until cleared by medical professionals to do so
3. SEEK IMMEDIATE MEDICAL ATTENTION (1-2 hrs max)
   - Call the 24/7 UF Needlestick Hotline: 1-866-477-6824
   - Inform the hotline that you are a University of Florida student volunteer for the Gator Emergency Medical Response Unit under the department(s) of which you signed your Liability Waiver
   - Explain in detail what happened, and answer the questions they ask
   - They will transfer you to a medical professional who will instruct you on how to proceed with the situation
   - If you are unable to contact the hotline or receive medical guidance using the hotline, immediately visit the nearest Emergency Department
4. Notify the Vice President of Operations and Medical Director immediately
5. Allow medical to follow-up with appropriate testing & required written opinion
6. Liability will be discussed in a timely manner after your medical situation is addressed, your safety and wellbeing is the most important aspect of the exposure
CONTAMINATIONS / CONTAGIOUS DISEASES / INFECTIOUS OR HARMFUL AGENTS

ALL DISPATCHERS WHO DISPATCH GEMRU RESPONDERS ARE RESPONSIBLE FOR NOTIFYING GEMRU RESPONDERS IF CONTAMINATION, CONTAGIOUS DISEASE, OR OTHER INFECTIOUS/HARMFUL AGENTS ARE SUSPECTED TO BE PRESENT AT THE SCENE BASED ON THEIR AGENCY’S PROCEDURAL SCREENING MEASURES.

If there is any concern to GEMRU Responders of patient contamination or high risk of disease exposure (droplet, respiratory, etc), Responders shall contact ALS immediately and wait at a safe distance close to the scene until ALS arrives to avoid exposure. Please also notify your shift Captain, Vice President of Operations, and GEMRU Medical Director immediately if you encounter this scenario. If GEMRU Responders do not have the necessary PPE to respond to a patient with a suspected disease exposure or contamination, they will not enter the scene (even if the patient is experiencing a life-threatening emergency). Your safety is paramount. NOTIFY ALS OF ANY CONCERNS OF CONTAMINATION OR CONTAGIOUS DISEASE BEFORE ALS ARRIVES. The 911 dispatcher/ALS dispatcher/ALS Responders will be responsible for contacting the appropriate agencies with the required PPE and/or equipment. Do not treat the patient unless you have the proper PPE.

If you have already entered a scene of a patient who is now suspected to be contaminated or have a contagious disease, DO NOT LEAVE THE SCENE- STAY WHERE YOU ARE- DO NOT GET CLOSER TO THE PATIENT (even if the patient is experiencing a life-threatening emergency). Your safety is paramount. If you have any form of PPE with you, utilize it immediately without leaving the scene or increasing the risk of contamination to you or others. Call for ALS and notify ALS that a GEMRU Responder has come into contact with a patient that may possibly be contaminated or have a contagious disease of concern. Do not treat the patient unless you have the proper PPE.

FLU VACCINES

In addition to the mandatory immunizations indicated on the University of Florida Mandatory Immunization Health History Form, the Medical Director has mandated that all GEMRU Responders receive the yearly influenza vaccine at the beginning of the current flu season by a date set by the Medical Director. Special considerations and exemptions may be made by the Medical Director for individuals with documented medical contraindications for influenza vaccination, or religious/personal objection. Notify the Medical Director immediately if you are unable to receive the flu vaccine, as you may not respond to dispatches on the UF campus without vaccination coverage or approved exemption. This does not apply to medical standby services at events.

Proof of flu vaccination is mandatory. You are required to carry proof of your influenza vaccination or signed exemption on you at all times while responding to calls in the form of a sticker provided by the UF Student Healthcare Center denoting current vaccination status. The flu vaccine is meant to protect both you and those you care for from transmission of the influenza virus. For some patients and immunocompromised individuals, influenza can cause serious illness or death. We require vaccination of our dispatched responders on campus as a precaution against transmission of this potentially harmful virus.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
UTILIZATION OF AIR MEDICAL SERVICES

Background

Air Medical Services offer both rapid transports of patients who require time urgent care to specialty hospitals (eg. Trauma Centers, Stroke Centers, STEMI centers), and can also allow for expanded patient care options due to an expanded skill set, equipment, and formulary. Appropriate utilization of Air Medical Services can improve patient care; however, inappropriate utilization of Air Medical Services can delay time-sensitive care.

Notes

- Due to the close proximity of UF Health (Shands Hospital) to the University of Florida campus where GEMRU operates, considering Air Medical Services for GEMRU patients will be highly unlikely, unless the patient has specialty medical needs unable to be treated at UF Health or if there is a Mass Casualty Incident that overwhelms the local emergency medical response and hospital systems. Therefore, GEMRU responders shall be cognizant of the benefits versus consequences of considering Air Medical Services.

- If GEMRU arrives on scene prior to ALS support, and the medical emergency or mechanism of injury is suspected to be severe enough to warrant Air Medical Services, GEMRU shall immediately contact a Responding ALS Agency and/or Transporting Agency and express their consideration. The ultimate decision to request and activate Air Medical Transportation shall be given to Alachua County Fire Rescue and/or Gainesville Fire Rescue.

- Air Medical Services can offer access to care to patients in remote locations where geography and terrain may make ground evacuation impractical.

- Air Medical Services can be considered to transport patients in a multi-casualty incident when local resources are involved in on-scene care.

- Air Medical Services can be considered for utilization if ground transport would leave the county without an available ambulance to respond to emergencies.

- The first several responding units or LEA should be utilized for securing the Landing Zone (LZ) once patient care is assumed by a Responding ALS Agency.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
BASIC MEDICAL CARE PROTOCOL
AIRWAY MANAGEMENT

Background

Management of a patient's airway is paramount to life support.

BLS

If airway is compromised or at risk of becoming compromised, contact a Responding ALS Agency immediately.

- Request a Responding ALS Agency immediately
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Assisted Ventilations:

Adult patients with a respiratory rate less than 12 or greater than 28 breaths per minute and/or exhibiting signs of hypoxemia may require assisted ventilations. This shall include use of any of the following methods:

- Utilizing Bag Valve Mask (BVM) and basic airway maneuvers, with supplemental oxygen.
  - Deliver enough volume to make the chest rise. If necessary use two people to get a good seal.
- Mouth-to-mouth, mouth-to-nose, mouth-to-stoma (an option when adjuncts are not available).
  - If any of these methods are employed an incident report MUST be filled out because of the exposure.
- Pediatric patients with signs of hypoxemia and/or respiratory distress (including bradycardia, abnormal breath sounds, increased work of breathing, nasal flaring, retractions, stridor, or abnormal positioning) should have ventilations assisted with a mask that covers both mouth and nose, but not eyes. This can be accomplished utilizing:
  - Pediatric Bag Valve Mask (BVM) and reservoir with supplemental Oxygen at 10-25 LPM.
  - Mouth-to-mouth, mouth-to-nose, mouth-to-stoma (at provider option when adjuncts are not available) If any of these methods are employed an incident report MUST be filled out because of the exposure. Contact your shift Captain immediately.
Notes

We would like to promote simple BLS interventions in airway support to prevent further harm while the Responding ALS Agency is en route. We want to ensure that our focus is constant maintenance of oxygenation and ventilation.

Questions or Concerns?

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
BASIC MEDICAL CARE PROTOCOL
BASIC MEDICAL CARE

Background

The phrase "Basic Medical Care" is used throughout the entire protocol as the first direction in patient care. This phrase will encompass all of the following, and includes all of the BLS care protocols that are appropriate to the patient.

Scene size up:
- Utilize Personal Protective Equipment
- Assess the scene for hazards
- Park unit in a safe place
- Protect yourself and crew members
- Assess for the number of patients
- Assess the need for additional resources
- Assess the general condition of the patient(s)
- Establish responsiveness

BLS

Assessment:
- Establish patent airway, open airway if necessary protecting cervical spine when indicated
- Administer oxygen as needed to maintain O2 >94%.
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Control bleeding when indicated
- Assess for edema
- Record blood glucose level if any weakness, altered mental status, or history of diabetes
- Assess lung sounds, if suspected to be abnormal
- Nothing by mouth, unless patient is a known diabetic with hypoglycemia and is able to self-administer Oral Glucose paste or a glucose-containing beverage
- Obtain a full history and perform a thorough physical exam
- Consider contacting a Responding ALS Agency and/or Transport Agency, if deemed necessary by any of the GEMRU Responders. Typically this decision should be made within 2 minutes of initial patient contact from a general patient impression about 5 feet away from the patient. If the patient’s condition deteriorates, please expedite contacting ALS and expedite care.
- Do not delay requests for transport to obtain the above information
Notes
Minimize on-scene time when possible.
Frequently reassess patient, including documenting vital signs every 5 minutes in critical patients.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
BASIC MEDICAL CARE PROTOCOL
CONTROL OF EXTERNAL BLEEDING

Background

Active bleeding is life-threatening. This is a pre-hospital intervention that saves lives. If a patient is actively bleeding, this must be identified and controlled with high priority.

BLS

Request a Responding ALS Agency if blood loss is excessive and/or any of the GEMRU Responders suspects that the blood volume loss is significant enough to warrant treatment other than a bandage that stops the external bleeding within a reasonable amount of time and without significant blood loss.

Request a Responding ALS Agency if external bleeding cannot be reasonably controlled using BLS skills.

- Consider requesting a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:
Whenever the phrase “control external bleeding” is used throughout these protocols, the following elements must be considered:

- Application of direct pressure with a sterile dressing (GEMRU understands that pressure focused specifically on the bleeding site will better control bleeding)
- Elevation of the injured part above the level of the heart
- Application of a pressure dressing if methods above fail
- Application of pressure to proper arterial pressure point
- IF ALL METHODS ABOVE FAIL, YOU MAY PROCEED TO TOURNIQUET APPLICATION (due to the relatively short average ALS response times to the UF campus, tourniquet application by a GEMRU Responder is expected to be rare, with the exception of MCI- carefully consider tourniquet application and justify your reason for using a tourniquet in the Patient Care Report)
• Application of a tourniquet
  o Should be applied early when there is SEVERE arterial bleeding present.
  o Contact Responding ALS Agency immediately
  o Always note time of tourniquet placement and alert the Responding ALS Agency or Transport Agency of time of placement upon Transfer of Patient Care

Notes
Studies show a considerable increase in survival rate when tourniquets are applied prior to the onset of shock. Tourniquets should only be considered after failure of pressure and elevation to control bleeding.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
BASIC MEDICAL CARE PROTOCOL
INITIATION OF CARDIOPULMONARY RESUSCITATION

Background

High-quality non interrupted cardiopulmonary resuscitation (CPR) and early defibrillation offer the best chance of survival and neurologic recovery following cardiac arrest. Focus on maintaining continuous compressions above all other interventions.

BLS

If CPR is needed, request a Responding ALS Agency immediately and begin CPR without delay. Focus on compressions, do not interrupt compression for other interventions.

- Request a Responding ALS Agency
- Initiate basic medical care and perform a patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Administer oxygen as needed to maintain O2 >94%
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

All patients found in cardiopulmonary arrest by EMS personnel will receive CPR. CPR will be initiated using the American Heart Association standards for adults, children, or infants (see Cardiac Arrest Management Protocol).

- Exceptions:
  - A patient who has in his or her possession, or at the bedside, a completed, legal, yellow State of Florida Do Not Resuscitate Order (HRS Form 1896).
  - If there is any question about the validity of the DNR document, the Responder shall continue the request for a Responding ALS Agency. Until there is a clear understanding as to the validity of the order, CPR will be performed. If there is a family member there who requests resuscitation, CPR will be performed.
  - Any patient who presents as obviously dead (See Determination of Death Protocol)

- Cardiopulmonary resuscitation may be halted when:
  - Effective spontaneous ventilation and circulation have been restored as per the most recently published AHA ECC guidelines
  - Resuscitation efforts have been transferred to persons of no less skill than the initial providers
  - The rescuer is exhausted and physically unable to continue resuscitation
  - All criteria has been met per Determination of Death protocol
Notes
Gather details (SAMPLE and/or OPQRST) that preceded the cardiac arrest from witnesses/bystanders/family. Maintain situational awareness regarding scene safety and distraught bystanders.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
BASIC MEDICAL CARE PROTOCOL  
MASS CASUALTY INCIDENT AND TRIAGE SYSTEM

Background

A Mass Casualty incident or “MCI” is defined as any event that overwhelms the resources of the EMS system.

Examples of MCIs include (but are not limited to):
- Motor vehicle collisions (MVCs) with an amount of victims that overwhelms the resources of the EMS system (both BLS and ALS responders)
- Plane crashes, train and bus collisions, earthquakes, tornadoes, Acts of God
- Terrorist events (explosions, weapons of mass destruction, biological warfare)
- Mass shootings, injuries, or killings

BLS

Assist ALS providers in triage, treatment, and movement of patients as outlined in the ALS Triage Guidelines below.

If GEMRU Responders arrive on scene before ALS support arrives, GEMRU shall contact a Responding ALS Agency immediately AND the appropriate LEA, and notify that the situation may qualify as a mass casualty incident.

If a Responding ALS Agency to an MCI requests the assistance of GEMRU, GEMRU Responders and Assistants may assist with tasks within the scope of practice of their licenses and certifications.

GEMRU Responders are permitted to assist ALS personnel with the MCI according to the Responding ALS Agency's BLS protocols, so long as they do not exceed the scope of practice of BLS licensed providers.

Standard ALS Triage Guidelines are as follows, which BLS providers may assist with:
- Scene safety is of utmost importance. Be sure to consider all aspects of scene safety before entering the scene.
- The need for an organized and orderly approach to an MCI cannot be over-stressed.
- In such an event, an incident command system should be implemented and strictly followed. Once incident command is established, identify your point of contact and your role in this incident.
- Triage of patients at the scene of an MCI should be accomplished using the START/JUMPSTART triage system as listed below:

Patients’ injury/illness severity will be identified as one of the following four categories:
- Black/Dead/Expectant - not transported
- Red/Immediate - Requires immediate transportation and intervention
- Yellow/Delayed - Requires transportation and intervention, but this can be delayed for several hours
- Green/Minor - Ambulatory "walking wounded" with minor injuries
- Coordination of patients with area hospitals must be accomplished through the incident command system.
The steps of the START triage systems are as follows:

STEP ONE: Loudly ask anyone within the sound of your voice to move to a designated area if they are able. This will automatically help you sort out the walking wounded and these patients should be tagged **green/minor**.

STEP TWO: In an orderly fashion, move to each patient checking for the status of Airway, Breathing, Circulation and Mental status and tag them using the following rules

- **BREATHING:**
  - Yes, if respirations less than 30, then check circulation.
  - Yes, if respirations greater than 30 = triage **Red/Immediate**.
  - No, open and clear airway- if breathing begins = triage **Red/Immediate**
  - No, after clearing airway the patient is not breathing = triage **Black/Dead/Expectant**

- **CIRCULATION:** (Check pulse)
  - Control bleeding
  - Weak pulse = triage **RED/Immediate**
  - Strong Pulse = go to mental status check or check capillary refill time (CRT)
  - CRT: If less than 2 seconds go to mental status check
  - CRT: If greater than 2 seconds=triage **Red/Immediate**

- **MENTAL STATUS:** (Commands “open your eyes, squeeze my hand, etc.)
  - Patient follows commands = triage **Yellow/Delayed**
  - Fails to follow simple commands = triage **Red/Immediate**

**Notes**

It is difficult for healthcare professionals to change their mindset from saving all patients at any cost, to **saving the most lives possible** in an event where resources are limited. With such limited resources in a mass casualty event, healthcare professionals must use this triage process and make decisions on which patients to transport as a priority. Triage and then reassessment with repeat triage frequently leads to the most appropriate decisions.

**Questions or Concerns?**

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
BASIC MEDICAL CARE PROTOCOL
OXYGEN THERAPY

Background

Oxygen should be administered to patients who:
- Display signs and symptoms of hypoxia
- Present in hypotensive states
- Have suffered major trauma
- Present as acutely ill
- Are suspected of carbon monoxide inhalation (regardless of SaO2 reading)
- Are pregnant patient with reason for fetal hypoxia
- Any patient who you suspect may become hypoxic due to mechanism of injury or nature of illness regardless of oxygen saturation level
- If patient is able to maintain SaO2 greater than 94% you may elect not to administer. Exposing patients to excessive oxygen causes the creation of free radicals and tissue damage.

Methods of administration include:
- Nasal cannula
- Non-rebreather
- BVM (Bag Valve Mask)
- King Tube
- Blow-by (only used in infants who are easily agitated)

BLS

If patient is unable to maintain a constant O2 >94% (including individuals with a reported average baseline O2 of <94%), contact a Responding ALS Agency immediately.

Any patient who requires oxygen therapy or is in respiratory distress, contact a Responding ALS Agency immediately.

- Request a Responding ALS Agency
- Initiate basic medical care and perform a patient assessment
- Decide appropriate method of administration as well as amount delivered.
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Administer oxygen as needed to maintain O2 >94%
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information
Notes
See Airway Management protocol

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
CARDIOVASCULAR PROTOCOL
CARDIAC ARREST MANAGEMENT

Background

Cardiac arrest occurs when the heart stops perfusing the body. This leads to lack of blood flow to the brain, and within minutes, this can lead to brain death. In order to give the patient the best chance of a good neurological outcome, compressions must start immediately and continue nonstop. Continuous high-quality CPR is essential, as well as rapidly requesting a Responding ALS Agency.

BLS

If CPR is needed, request a Responding ALS Agency immediately and begin CPR without delay.

Have a bystander or another GEMRU Responder/Assistant not actively involved in resuscitation retrieve the nearest AED.

- Request a Responding ALS Agency
- **Confirm pulselessness via carotid or femoral pulses (for less than 10 seconds)**
- Initiate CPR and retrieve the AED
- Initiate basic medical care
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess for edema
- Assess for cyanosis and signs of decreased oxygenation and perfusion
- Administer oxygen as needed to maintain O2 >94%

**Obtain blood glucose**

- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

CPR

- Compressions at a rate of 100-120/min.
  - **Avoid interruption**
  - Minimize delays between delivery of shock(s) and restarting CPR.
  - Ratio of 30:2 (15:2 for infants and children with 2 rescuers) [compression to ventilation ratio]
  - Compressions and breaths should not be interrupted for any reason
  - Chest compressions are then delivered continuously at 100/min for 2 minutes intervals.
• Ventilations are provided once every 6-8 seconds if an advanced airway is in place
  o Avoid excessive ventilations
  o Ventilate with enough volume to make the chest rise
  o Rescuers should switch roles (ventilator and compressor) every two minutes/5 cycles to minimize
    compressor fatigue and deterioration of quality of compressions
• Apply AED pads as soon as possible to identify a shockable rhythm, then follow the instructions given by the
  AED, and the guidelines within this protocol
• If the AED recommends shocking the patient, Responders shall ensure there are no contraindications to
  delivering the shock before the shock is administered (such as standing water surrounding the patient,
  individuals surrounding and contacting the patient that may create a conductive pathway, nitroglycerin
  paste/patch, piercings that could possibly be conductive, nearby oxygen supply)
• Once the AED has shocked and it is safe to touch the patient, begin CPR again without delay
• If the AED advises NO shock, continue CPR without delay
• Attempt to obtain information from family and/or by-standers that is pertinent to events leading up to the
  arrest
• Notify the Responding ALS Agency whether the arrest was witnessed or unwitnessed

**Pediatrics**: Early in the treatment/resuscitation of pediatric patients, initiate oxygenation/ventilation with BVM and an
airway adjunct at an age-appropriate rate (avoid hyperventilation) due to association with respiratory arrest as an
etiology of cardiac arrest in this population.

**Airway management**:
• Oral, nasopharyngeal, or King LT supraglottic airways should be used to maintain a patent airway with BVM
• ETCO2 capnography is required on every patient with a King LT in place
• ETCO2 provides a reliable means of confirming proper tube placement and assuring adequate CPR

**Termination of Resuscitation**
GEMRU Responders shall continue resuscitative efforts for as long as reasonably possible until the Responding ALS
Agency arrives on scene.

**Notes**
**Work flow of the cardiac arrest**:
• A team leader should assign roles to each member of the rescue team in order to make sure everyone
  knows what tasks they are responsible for completing. This will include assuring the appropriate timing for
  compressor exchange and simultaneous rhythm evaluation by an AED, if available.
• If sufficient team members available, team roles can organize tasks. These roles include an airway
  manager, compressor, and team leader.
• Attempt to retrieve SAMPLE and OPQRST information from bystanders.

**Questions or Concerns?**
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
CARDIOVASCULAR PROTOCOL
CHEST PAIN: NON-CARDIAC

Background

As discussed in the previous protocols, chest pain has many different possible causes. This protocol was created to help care for patients whose chest pain does not seem to be cardiac in origin. It is not within the scope of GEMRU Responders to diagnose whether the chest pain is cardiac or non-cardiac. When in doubt, assume the chest pain is from a cardiac cause.

BLS

If any patient has chest pain (regardless of origin of pain), contact a Responding ALS Agency immediately.

- Request a Responding ALS Agency
- Initiate basic medical care and perform a patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible:
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Complete a thorough assessment of the patient
- If the assessment indicates that the chest pain might be cardiac in origin, refer to the Chest Pain: Suspected Cardiac protocol
- If chest pain is still considered non-cardiac in origin:
  - Focused physical exam for chest injury
  - Ascertain if movement, drinking fluids, eating, deep inspiration, or other changes pain
  - Continually re-evaluate for cardiac or respiratory distress
- If patient develops shortness of breath, go to Respiratory Distress protocol
- Administer oxygen if saturation is less than 94%
- If patient status deteriorates to the point of cardiac arrest, Refer to Cardiac Arrest Management protocol

Questions or Concerns?

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
CARDIOVASCULAR PROTOCOL
CHEST PAIN: SUSPECTED CARDIAC

Background

Chest pain is a concerning complaint which can be caused by anxiety, gastric reflux, musculoskeletal pain, pulmonary embolism, aortic dissection, pneumonia, or acute myocardial infarction. This spectrum of benign-to-fatal etiologies makes appropriate treatment for these patients difficult.

BLS

If any patient has chest pain (regardless of origin of pain), request a Responding ALS Agency immediately.

- Request a Responding ALS Agency
- Initiate basic medical care and perform a patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Administer supplemental oxygen if the patient is dyspneic, hypoxemic, or has obvious signs of heart failure. Providers should titrate therapy, based on pulse oximeter readings greater than or equal to 94%, as per Oxygen Therapy protocol.

- **Administer 4 (81mg) chewable baby Aspirin** (total 324 mg).
  - If patient is not allergic and has not consumed aspirin in the past 6 hours, AND
  - The patient is not at risk of severe bleeding, AND
  - Patient has no traces of blood in vomitus or stool, AND
  - Patient has vitals within normal range (hypertension is okay)

Note: Patients on Coumadin, Plavix, or daily aspirin will still benefit from aspirin during a cardiac event.

THE MEDICAL DIRECTOR HAS NOT AUTHORIZED GEMRU RESPONDERS TO ASSIST WITH OR ADMINISTER ANY FORM OF NITROGLYCERIN.

If patient status deteriorates to the point of cardiac arrest, Refer to Cardiac Arrest Management protocol.
Notes
If the patient has a history of diabetes, consider symptoms other than chest pain as angina equivalents and evaluate for acute coronary syndrome with this protocol.
Excessive oxygen therapy leads to free radicals which cause tissue damage - do not use oxygen unless necessary.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
BACKGROUND

Congestive Heart Failure (CHF) is due to malfunction of the heart's pumping action. The heart is unable to provide pumping action sufficient enough to meet the body's needs. This leads to pulmonary edema and respiratory distress.

BLS

If any patient has signs or symptoms of CHF and/or pulmonary edema contact a Responding ALS Agency immediately.

- Request a Responding ALS Agency
- Initiate basic medical care
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

TREATMENT:

THE MEDICAL DIRECTOR HAS NOT AUTHORIZED GEMRU RESPONDERS TO ASSIST WITH OR ADMINISTER ANY FORM OF NITROGLYCERIN.

- If wheezing is present, contact a Responding ALS Agency immediately
  Responders may assist in the administration of a patient’s metered-dose inhaler (MDI) as prescribed
- If hypotensive:
  - Refer to Shock protocol
- In cases of severe respiratory distress, be prepared to establish a BLS airway in the event that the patient’s airway becomes compromised while the Responding ALS Agency is en route
- The CHF/pulmonary edema patient may want to sit upright- sit the patient upright at 30-45 degrees
- If patient status deteriorates to the point of cardiac arrest, Refer to Cardiac Arrest Management protocol

QUESTIONS OR CONCERNS?

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
CARDIOVASCULAR PROTOCOL
DYSRHYTHMIAS: BRADYCARDIA

Background

Bradycardia is defined by HR < 60 BPM. This can be present in healthy individuals, for example: well-trained athletes. The following actions are indicated only when serious signs and symptoms are present, OR the patient presents with unexplained bradycardia when the patient's average baseline HR before the incident is reported to be >60.

If any patient has systemic signs or symptoms of bradycardia, OR the patient presents with unexplained bradycardia when the patient's average baseline HR before the incident is reported to be >60, contact a Responding ALS Agency immediately.

- Request a Responding ALS Agency, if above criteria is met regarding baseline HR or signs/symptoms
- Initiate basic medical care
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%. 
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

If patient status deteriorates to the point of cardiac arrest, Refer to Cardiac Arrest Management protocol

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
Background

This protocol applies to the management of all patients who have a left ventricular assist device (LVAD) implanted. A ventricular assist device is a mechanical pump used to support heart function and blood flow in individuals who have weakened hearts. The device takes blood from the lower chamber of the heart and helps pump it to the body and vital organs, just as a healthy heart would. These patients have a device attached to the outside of their body and typically have family members whom are very knowledgeable about their device and their care.

BLS

If any patient has an LVAD and is experiencing medical problems of any type, contact a Responding ALS Agency immediately.

- Request a Responding ALS Agency
- Initiate basic medical care
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Listen to heart sounds to see if device is functioning. If it is a continuous flow device, you will hear a humming/whirling sound.

- Assess the device for any alarms. Look on the controller (usually found at the patient's waist) to see which device it is. Locate the colored sticker on the system controller and match this color to the EMS guide.
  - Intervene appropriately based on the type of alarm, device, and EMS guide

- Record blood glucose level if there is any weakness, altered mental status, or history of diabetes.
  - If abnormal refer to Diabetic Emergencies protocol

- Transport patient in position of comfort, if not in shock.
If patient is unconscious, unresponsive to stimuli, and pulseless - listen to the patient’s chest. If you hear the whirring sound of the LVAD, **DO NOT PERFORM CPR**. The LVAD device has been surgically placed into the left ventricle and CPR could dislodge this device, causing death. If you cannot hear the device then CPR should be performed per Cardiac Arrest Management protocol.

Request expedited ALS response to the scene and request expedited transport per the Responding Agency’s LVAD protocols

**Notes**

- In a majority of LVAD patients, a pulse will not be palpable. This occurs because the LVAD unloads the ventricle in a continuous fashion and therefore the aortic valve may not open with each contraction.
- A manual blood pressure may not be obtainable, but with an automated cuff, you may obtain a blood pressure reading with a narrow pulse pressure.
- Assess the mean arterial pressure, if possible. In LVAD patients, the normal range for mean arterial pressure is **greater than 60 mmHg and less than 90 mmHg**.
- Pulse oximetry may not be accurate due to the continuous flow nature of the LVAD.
- Above all else please, remember that these patients (along with their families) have been well trained in the care of themselves and their devices. Listen to them. Call the number on the device for the LVAD coordinator on call. Patients always carry a “backup bag”, containing 2 extra fully charged batteries, and a second controller. Please make sure to always bring this emergency backup equipment with them to the hospital.
- Bring a significant other or caretaker (if possible) to act as an expert on the device, especially if the patient is unconscious or has an altered mental status.

**Questions or Concerns?**
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
CARDIOVASCULAR PROTOCOL
DYSRHYTHMIAS: TACHYCARDIC WITH A PULSE

Background

There are several different categories of tachycardic dysrhythmias; however, rhythm identification is an ALS skill and requires a 12 lead ECG analysis. There are criteria to use when deciding how to treat patients with a tachydysrhythmia, but electrical activity through the heart is dynamic, and can change throughout your care of the patient. Pay close attention and continuously monitor these patients.

Although BLS Responders are not permitted to identify dysrhythmias using a 12 lead ECG, BLS Responders may utilize this protocol if the patient is assessed to be tachycardic (HR >150) AND has a pulse. These patient may be extremely unstable; therefore, keep a constant hand on their pulse to confirm that it remains present. If the pulse is lost, start CPR and attach an AED- see Cardiac Arrest protocol.

BLS

If any patient has symptomatic tachycardia, OR the patient presents with a heart rate >150, contact a Responding ALS Agency immediately.

If a patient takes medication to control heart rate or contractility and the patient is experiencing a medical emergency, request a Responding ALS Agency immediately.

- Request a Responding ALS Agency
- Initiate basic medical care
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information
Possible causes of sinus tachycardia:
- Fever
- Shock
- Hypovolemia (vomiting/diarrhea)
- Hypoxia
- Abnormal Electrolytes
- Drug Ingestions
- Pneumothorax
- Cardiac Tamponade

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
ABDOMINAL PAIN

Background

Abdominal pain has a wide variety of causes ranging from relatively benign to imminently life-threatening.

BLS

Request a Responding ALS Agency immediately if the patient has the complaint of abdominal pain and systemic signs or symptoms that may indicate internal hemorrhage or ischemia (such as significant changes in vital signs). Refer to Gastrointestinal Bleeding protocol.

Ask the patient if they would like to request a Responding ALS Agency and/or Transport.

- Consider requesting a Responding ALS Agency
- Initiate basic medical care
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information
- Transport patient in position of comfort if not in shock.

Treatment:

Abdominal pain emergencies are likely to lead to death through hypovolemic shock (either blood or fluid loss)

- This may also lead to electrolyte imbalances that can cause dysrhythmias
- If patient presents in shock, refer to Shock protocol
- Assess for orthostatic blood pressure changes, if possible
- Assess for recent surgeries or operations that may have caused internal hemorrhage

Assess the patient closely for possible cardiac etiology

- Many cardiac patients may present with abdominal pain during an acute myocardial infarction
- Pay close attention to women, diabetics, and the elderly- they may present with atypical cardiac symptoms
If the origin of pain does not appear to be cardiac or severe in nature, still offer to call a Responding ALS Agency. If the patient refuses BLS care and it is deemed that no immediate emergency exists, the patient can sign the BLS Refusal of Care paperwork. Strongly encourage the patient to follow up with their primary care provider or seek medical consultation if the problem reoccurs. Ensure that the patient knows they can seek GEMRU assistance again at any time.

Notes
Be aware that treatment of pain can alter a patient's mental status, decrease pain, decrease blood pressure, and may lead to a false sense of patient stability in the emergency department. Please make sure any individuals assuming a Transfer of Patient Care are aware of the patient's pain, including level of severity.

Life threatening problems that may present with abdominal pain include:
- Acute Myocardial Infarction (AMI)
- Perforated abdominal organs, including ruptured appendicitis
- Gastrointestinal bleeding- ask about blood/melena in stool or emesis
- Diabetic Ketoacidosis (DKA)- check blood glucose
- Dissecting Abdominal Aortic Aneurysm (AAA)
- Ectopic pregnancy (ask about menstrual history)
- Certain toxic ingestions (including mushrooms and poisons)
- Intra-abdominal infection and sepsis

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
Background

Allergic reactions can range in severity from a simple rash to severe respiratory compromise and hypotension.

BLS

Request a Responding ALS Agency immediately if the patient has signs or symptoms of a simple allergic reaction (urticaria/hives) or anaphylaxis. Symptoms may include but are not limited to: wheezing, swelling, or hypotension after encountering a triggering agent.

Request a Responding ALS Agency immediately is the patient is at risk of relapsing with signs or symptoms of a simple allergic reaction or an anaphylactic reaction.

- Request a Responding ALS Agency
- Initiate basic medical care
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Always assess lung sounds before and after intervention
- Assess for edema
- Administer oxygen as needed to maintain \( \text{O}_2 > 94\% \).
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information
- Transport patient in position of comfort if not in shock

Treatment:
- BLS Responders may assist in the administration of a patient's personal epinephrine auto-injector (EpiPen) as prescribed, if the patient is NOT SEVERELY HYPERTENSIVE
- BLS Responders may also assist in the administration of a patient's personal metered-dose inhalers (MDIs) as prescribed, if wheezing is present
- BLS Responders may not administer albuterol or Atrovent, only assist with a patient's prescribed MDI
Notes
Antihistamines and corticosteroids are second line agents for the treatment of anaphylactic shock. Antihistamines should be administered after the airway is secured and hypotension is resolved. Epinephrine is relatively contraindicated in patients with known coronary artery disease, angina, or previous MI except in life-threatening circumstances.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
ALTERED MENTAL STATUS AND
SYNCOPE / NEAR-SYNCOPE

Background

Many of the conditions causing altered mental status have potential to cause significant morbidity and mortality. It is essential that care be started in the field prior to definitive care. Syncope or pre-syncope can be caused by a simple vasovagal response or a cardiac event. Typically, syncope involves cardiac dysfunction, vascular dysfunction, or cerebral dysfunction.

BLS

Request a Responding ALS Agency immediately if the patient has an altered mental status at any time which is different than their confirmed baseline mental status.

Request a Responding ALS Agency immediately if a patient has a syncopal/near-syncopal episode.

If an altered mental status is suspected to be caused by abnormal glucose levels, refer to the Diabetic Emergency protocol.

- Request a Responding ALS Agency
- Initiate basic medical care
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Always assess lung sounds before and after intervention
- Assess for edema
- Obtain blood glucose (if blood glucose < 80 mg/dL, refer to Diabetic Emergencies protocol)
- Administer oxygen as needed to maintain O₂ >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Transport patient in position of comfort, if not in shock
- Maintain spinal immobilization precautions if history of trauma is unknown
- Strongly consider opioid narcotic overdose
  o Indicators include low rate of respirations, pinpoint pupils, history of opiate use/abuse, etc.
  o Be prepared for a combative patient if reversal of opiate abuse (e.g. heroin addict) - request LEA
  o Be prepared for acute narcotic withdrawal syndrome if patient opiate dependent (as this may precipitate seizures or delirium)
- Assess patient for seizure history and medications.
- Assess patient for possible stroke symptoms and alert as appropriate.
- Assess patient for possible sepsis symptoms and alert as appropriate.

Notes
Glucose administration takes 10-20 minutes to increase blood sugar.

Causes of syncope include cardiac causes, hypoglycemia, anemia, hypovolemia, intracranial hemorrhage (e.g. subarachnoid hemorrhage), aortic dissection, pulmonary embolism, intra-abdominal hemorrhage (e.g. ruptured ectopic pregnancy), seizure, vasovagal, and orthostatic hypotension.

Causes of altered mental status ("AEIOUTIPS") include alcohol, encephalopathies (hepatic or hypertensive), insulin (DKA), opiates, uremia (renal failure), trauma, toxins, tumors, thyrotoxicosis, infections, psychiatric, seizures, sepsis, and stroke. Identifying information from bystanders, family, and/or friends can be helpful information for further care of the patient.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
APPARENT LIFE-THREATENING EVENT

Background

An Apparent Life-Threatening Event (ALTE) is any episode in which an infant or young child has an appearance that concerns observers that the child may be dying or at risk of death. The patient typically displays apnea, choking, changes in color (cyanosis or pallor), or changes in muscle tone (typically limp). Incidence peaks at 10-12 weeks old. Premature infants and children less than 1 year old are considered high-risk.

There are many causes of ALTEs, including airway obstruction, cardiac abnormalities, hypoglycemia, sepsis, meningitis, respiratory tract infection, seizure, metabolic syndromes, and trauma (including non-accidental). Patients may have no further symptoms but still remain at high risk for sudden death, including death from Sudden Infant Death Syndrome (SIDS). It is important to stress the need for full ED evaluation, even in children who appear medically stable, and be ready to provide supportive care and contact a Responding ALS Agency, as needed.

BLS

Request a Responding ALS Agency immediately if an ALTE episode is suspected.

- Request a Responding ALS Agency
- Initiate basic medical care
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Always assess lung sounds before and after intervention
- Assess for edema
- Obtain blood glucose (if blood glucose < 80 mg/dL, refer to Diabetic Emergencies protocol)
- Administer oxygen as needed to maintain O2 >94%
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information
- See Pediatric normal vitals and neonatal appendices for further management

Notes

Frequently reassess patients as they remain at risk for apnea, aspiration, seizure, and sepsis.

ALTE patients are at high risk for morbidity and mortality, even if they appear stable after initial EMS contact. If parents or caregivers refuse emergency transport, explain that the child remains at high risk of deterioration of their condition and needs further evaluation. If they still refuse, request a Responding ALS Agency to advocate for the wellbeing of the patient, and LEA if necessary.

Questions or Concerns?

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
Background

Described as a patient with signs and symptoms of acute respiratory distress from bronchospasm or obstructive airway disease. Determine severity of dyspnea, moderate vs. severe shortness of breath:

- **Moderate**: inability to speak full sentences, increased work of breathing (nasal flaring, retractions, abdominal breathing)
- **Severe**: confusion, cyanosis, severe agitation, inadequate respiratory effort

Additional signs and symptoms may include:

- Wheezing may be present unless patient is unable to move adequate air to generate wheezing (silent chest)
- May have signs of respiratory infection (fever, nasal congestion, cough, sore throat)
- May have acute onset after inhaling irritant

BLS

**Request a Responding ALS Agency immediately if a patient has signs or symptoms of asthma/COPD/bronchospasms.**

**Request a Responding ALS Agency if the patient is at risk of relapsing with signs or symptoms of asthma/COPD/bronchospasm.**

- Request a Responding ALS Agency
- Initiate basic medical care
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
  - Head elevation/semi-fowler position
  - Elevation of the LSB if immobilized
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Always assess lung sounds before and after intervention
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information
Treatment:
Bradycardia is due to hypoxia until proven otherwise
Accessory muscle use, nasal flaring, combativeness, or lethargy can be additional presentations for children in respiratory distress
Consider the need for assisted ventilations, BLS airway adjunct, or airway assistance via King LT

Severity of Case

Moderate
- Responders may assist in the administration of a patient's prescribed MDI

Severe
- If bronchospasm worsens despite treatment, respiratory failure may be imminent. These patients may be candidates for assisted ventilations or airway adjuncts.

Notes
Aggressive use of bronchodilators is generally the most important therapy for asthma and COPD exacerbation.
COPD patients NOT in respiratory distress should be given oxygen to maintain O2 saturation >90%.
Be aware of the silent chest as severe bronchospasm may present with absent air entry and no evidence of wheezing. If this occurs, the patient may require epinephrine or assisted ventilations.
Wheezing could be an early sign of acute pulmonary edema. If you suspect the patient is short of breath due to this cause, consult Pulmonary Edema protocol.
If patients are short of breath due to an inhaled or toxic agent, consult Poisoning protocol (1-800-222-1222)
A patient with severe shortness of breath, tachypnea and normal or high CO2 levels must be monitored for impending respiratory failure.

Kid's Korner

<table>
<thead>
<tr>
<th>Normal respiratory rates for pediatrics:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 yr Infant                           30-60</td>
</tr>
<tr>
<td>1-3 yrs Toddler                       20-40</td>
</tr>
<tr>
<td>4-5 yrs Preschool                     20-30</td>
</tr>
<tr>
<td>6-12 yrs School age                   20-30</td>
</tr>
<tr>
<td>13-18 yrs Adolescent                  12-20</td>
</tr>
</tbody>
</table>

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
CARBON MONOXIDE AND CYANIDE INTOXICATION

Background

Inhaled combustion byproducts can cause symptoms as mild as a headache and nausea or as severe as complete cardiovascular and central nervous system collapse. Suspect carbon monoxide (CO) and cyanide (CN) toxicity in patients with smoke exposure in enclosed spaces.

BLS

Request a Responding ALS Agency immediately if patient has or is suspected to have carbon monoxide or cyanide toxicity.

Contact Poison Control: 1-800-222-1222

- Request a Responding ALS Agency
- Approach the scene carefully, assess if scene is safe to enter (carbon monoxide is odorless)
- Contact LEA and/or hazardous materials experts to address scene safety, as necessary
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Always assess lung sounds before and after intervention
- Assess for edema
- Administer 100% O2 by non-rebreather or BVM regardless of oxygen saturation
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Administer 100% O2 by non-rebreather or BVM regardless of oxygen saturation
- Note that carbon monoxide and cyanide poisoning may be present even if patient has 100% blood oxygen saturation
- Minimize patient motion
- Ensure that the responding ALS agency is aware of your concerns

If unconscious, refer to Altered Mental Status protocol.

Carbon monoxide poisoning:

- Suspect CO poisoning if multiple people have similar symptoms when in the presence of combustion in an enclosed area (e.g. in a trailer with a fuel space heater).
Symptoms of mild CO poisoning include headache, nausea, flushing, and dyspnea.

Half-life of CO is drastically shortened by administration of high-concentration oxygen.

If severe poisoning, notify and request rapid transport by the Transporting Agency, as the patient may need transport to a facility with hyperbaric oxygen availability.

Cyanide poisoning:

- Suspect CN poisoning if cardiovascular instability (hypotension) or severe altered mental status after exposure to smoke in an enclosed space (e.g. house fire).
- Contact Poison Control for further instruction while the Responding ALS Agency is en route.

Notes

Multiple family members and household pets with acting lethargic or inappropriate can be a valuable clue to carbon monoxide poisoning.

Questions or Concerns?

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
Background

The brain is lost quickly without adequate blood flow. Optimal patient outcomes depend on duration of patient symptoms and requesting expeditious ALS transport.

BLS

Request a Responding ALS Agency immediately if patient has or is suspected to have had a CVA or altered mental status.

- Request a Responding ALS Agency immediately to expedite transport
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- **Check blood glucose** (If hypoglycemic: Refer to Diabetic Emergencies protocol)
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Check if the patient is hypoglycemic. Stroke signs/symptoms can mimic signs/symptoms of hypoglycemia. Refer to the Diabetic Emergency protocol if patient's blood glucose is out of the normal range.
- Ascertain time patient was last seen normal, e.g. from patient, significant other, bystanders, etc.
- Keep head of stretcher 30-45 degrees
- Give nothing by mouth. Patient must remain NPO.
- Request rapid transport

Assess the patient for CVA/stroke using the following assessment guidelines:
**Complete Stroke Assessment:**

**CINCINNATI STROKE ASSESSMENT**

- **Facial Droop:** Have patient show teeth or smile
  - Normal: Both sides of face move equally
  - Abnormal: One side of face does not move as well

- **Arm Drift:** Patient closes eyes and holds arms outright for 10 seconds
  - Normal: Both arms move the same or both arms do not move at all
  - Abnormal: One arm does not move or one arm drifts down compared with other

- **Abnormal Speech:** Have the patient say the words: “You can't teach an old dog new tricks”
  - Normal: Patient uses correct words with no slurring
  - Abnormal: Patient slurs words, uses the wrong words, or is unable to speak

**Complete Stroke Alert Checklist. If all of the following criteria are met, immediately notify the Responding ALS Agency/Transport Agency that the patient has met Stroke Alert criteria:**

- The patient has no evidence of trauma
- The stroke symptoms are new and onset less than or equal to 8 hours (this is inclusive of patients who awoke with symptoms as long as they still fall within 8hr window from last time seen normal)
- Initial glucose is greater than 50 mg/dL
- Patient currently has an abnormal stroke assessment as listed above

For hypotension (systolic BP <90 mmHg), refer to Shock protocol

If seizure activity, refer to Seizure protocol

Hypoglycemia: Refer to Diabetic Emergencies protocol

**Notes**

- Obtain a history from the family or witnesses as to onset of symptoms. Be specific.
- Obtain name and contact number of witnesses if they do not accompany the patient to the hospital.
- Transient ischemic attacks (TIA) have shorter duration symptoms (<24 hours, and often less than 1 hour) but often go on to have full CVAs. Strongly advise patients with transient symptoms to come to the hospital for further evaluation; they are at an increased risk for a large stroke within 24-48 hours.
- **Do not treat elevated blood pressure** before ALS arrives, as this may be a compensatory mechanism for maintaining cerebral perfusion pressure.
- **Even if the patient has word-finding difficulty or dizziness (may be only symptom in a posterior circulation occlusion), this should clue you into concerns for a CVA**

**Questions or Concerns?**

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
DIABETIC EMERGENCIES

Background

Low glucose (hypoglycemia) is a medical emergency and may cause anxiety, irritability, confusion, altered mental status, weakness, neurologic symptoms, or unconsciousness. High glucose (hyperglycemia) may cause severe dehydration and acidosis, and may be accompanied by increased thirst or urination, fatigue, rapid breathing, or abdominal pain. Both hypoglycemia and hyperglycemia lead to organ damage and eventually death.

BLS

Request a Responding ALS Agency immediately if a patient is suspected to currently or previously exhibit the signs or symptoms of a Diabetic Emergency OR altered mental status.

Request a Responding ALS Agency immediately if a patient has a blood sugar outside of the normal range of 70-110 mg/dL (or their average reported normal range).

- Consider requesting a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Check blood glucose and refer to the instructions below if abnormal
  - Administer oxygen as needed to maintain O2 >94%.
  - Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
  - Record and monitor vital signs
  - Obtain a SAMPLE history, if possible
    - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
  - Define pain response using OPQRST, if possible:
    - Onset, Provocation, Quality, Radiation, Severity, Time
  - Do not delay requests for transport to obtain the above information

Treatment:

Consider and check for stroke using the Cincinnati Stroke Assessment in the Cerebrovascular Accident protocol, as some signs/symptoms of hypoglycemia may mimic signs/symptoms of stroke. Do this before administering glucose or rendering the treatment options below.

If measured BGL is below 70 mg/dL (or their average reported baseline), AND patient is alert /can swallow:

- Encourage patient to eat sugary food, drink juice with sugar, or eat 1 tube of glucose paste
- If the patient is unconscious or cannot swallow, do not put anything in their mouth, secure the airway, and wait for ALS to arrive
If patient’s measured BGL is higher than 110 mg/dL (or their average reported baseline):

- The Responder may encourage the patient to self-administer insulin prescribed to the patient (if available), according to the prescriber’s instructions
- Provide supportive treatment until ALS arrives
- The Responder may NOT directly administer insulin to a patient
- If the patient is unconscious or cannot swallow, do not put anything in their mouth, secure the airway, and wait for ALS to arrive

Notes

- If a diabetic patient presents with nausea, diaphoresis, pallor, or unspecified pain, consider that this may be an angina equivalent and treat based on Chest Pain: Suspected Cardiac protocol.
- Oral hypoglycemic medications can have longer half-lives than insulin, so blood glucose of patients on oral meds may drop even after initial blood glucose correction.
- Provide supportive treatment until ALS arrives.
- If patient admits to usage of oral diabetic medications (metformin, Glucophage, glyburide, glipizide, glimpiride/Amaryl, pioglitazone, rosiglitazone) and they still refuse transport, notify the ALS Responders to further attempt to change their decision. It is highly recommended that Responding ALS agencies transport these patients to a hospital for evaluation for concern that hypoglycemia will reoccur. This can be promoted by the ALS agency.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
DYSBARISM-DIVING ACCIDENTS

Background

Dysbarism refers to diseases caused by the physiologic effects of diving and ascending from underwater depths, or climbing at high altitude. Decompression sickness, caused by ascending from deep underwater dives too rapidly, is a common medical emergency in the state of Florida.

Signs and symptoms of dysbarism-diving accidents include (but are not limited to):

Eyes or face - Hemorrhage and numbness
Ears - Pain, hearing loss, tinnitus, bloody discharge, and vertigo
Nose or sinuses - Pressure or pain associated with sinus locations, bloody nasal discharge, and numbness
Mouth - Dental pain
Neck - Edema, crackling, and hoarseness
Pulmonary - Dyspnea, hemoptysis, and chest pain
Gastrointestinal - Bloating, cramps, and pain
Musculoskeletal - Aching
Skin - Rash or marks
Neurologic - Seizure, unconsciousness, confusion, headache, visual disturbance, paresis, and paresthesia

BLS

Request a Responding ALS Agency immediately if patient is suspected to currently or previously exhibit the signs or symptoms of a dysbarism-diving accident.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information
Treatment:
● Administer 100% oxygen by non-rebreather mask.
● Obtain C-spine control if mechanism of injury suggests C-spine injury or if patient is unresponsive
● Prepare patient for transport by ALS/Transport Agency by placing the patient in the **left lateral position**
● Keep patient warm
● Monitor for possible or developing tension pneumothorax
  ● Positive pressure ventilation (BVM) may worsen a pneumothorax.
● Request rapid transport

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
GASTROINTESTINAL BLEEDING

Background

Acute gastrointestinal bleeding is a common and potentially life-threatening source of bleeding that frequently requires hospitalization, and may require blood transfusion. Patients with severe GI bleeding can present in shock, and repeated hematemesis may pose a threat to airway safety.

BLS

Request a Responding ALS Agency immediately if patient is suspected to currently or previously exhibit the signs or symptoms of gastrointestinal bleeding (hypotension, bloated, bruising, shortness of breath, pain related to ischemia in abdomen, possibility of hemorrhage post-surgery, trauma, or injury).

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Airway management
  - Monitor airway for emesis, and presence blood in emesis
- Monitor for hypotension
  - Refer to Shock protocol
- Request rapid transport

Notes:

Black stool, black or coffee ground emesis along with red or maroon liquid found in vomit or stool is concerning for GI bleed. These patients become unstable very quickly and transport should be expedited.

Questions or Concerns?

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
HEAT ILLNESS

Background

Heat illness is common to the tropical state of Florida. It presents on a continuum from heat cramps and heat exhaustion, where sweating is maintained as a defense against ambient heat, to heat stroke, a medical emergency that presents with increased core temperature, inability to sweat, and often altered mental status.

BLS

Request a Responding ALS Agency immediately if patient exhibits signs or symptoms of heat illness.

- Consider requesting a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Check blood glucose
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Airway management
- Evacuate patient from heat environment (unless patient has been placed in an ice bath by UF associated physical trainers)
- Remove outer layers of clothing, yet maintaining privacy
- Cool patient with water (evaporative cooling is ideal)
- Determine if patient suffers from fever, heat cramps, heat exhaustion, or heat stroke.

If fever:

- May sponge patient with room temperature water

If heat cramps or heat exhaustion (normal mental status; skin ambient temperature, diaphoretic):

- Remove outer layers of clothing, yet maintaining privacy
- May cool patient with water
If heat stroke (altered mental status; skin hot and dry, elevated core temperature)
  ● Remove outer layers of clothing, yet maintain privacy
  ● Cool patient with water and/or cold packs to axilla and/or groin
  ● Check blood sugar levels and to treat refer to Diabetic Emergency protocol
  ● Monitor patient closely
  ● Request rapid transport

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
HYPERTENSION

Background

Hypertension affects 1 in 4 Americans and can lead to heart attack, stroke, renal failure, and vascular diseases. It may present on a spectrum from asymptomatic elevations in blood pressure, to an acute hypertensive crisis with symptoms including chest pain, shortness of breath, headache, or confusion.

A hypertensive crisis is a medical emergency. Elevated pressures will eventually need to be treated; however, rapidly decreasing blood pressure can lead to brain ischemia.

In patients suspected of having a stroke (CVA) or stroke-like symptoms, the blood pressure should NOT be treated before ALS arrival, as cerebral auto-regulation may be impaired.

BLS

Due to the few BLS pre-hospital interventions available to treat or manage hypertension, and the rapid manner in which BP can fluctuate:

Request a Responding ALS Agency immediately if patient is found to have unexplained hypertension upon assessment.

If a patient is hypertensive due to missing/mismanagement of a dose of prescribed medication, request a Responding ALS Agency immediately.

Request a Responding ALS Agency immediately if a patient reports experiencing symptomatic hypertension, or if blood pressure is found to be greater than the patient’s reported average baseline blood pressure.

If the patient’s reported average baseline blood pressure is by nature hypertensive or the patient takes medication for blood pressure and is experiencing a medical emergency, request a Responding ALS Agency immediately.

- Consider requesting a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
Define pain response using OPQRST, if possible:
  • Onset, Provocation, Quality, Radiation, Severity, Time
  • Do not delay requests for transport to obtain the above information

Treatment:

  • Check BP every 5 minutes, before and after any interventions, ensure that cuff size is appropriate for patient's arm diameter

Assess and document severity of hypertension:

  • Asymptomatic:
    o Monitor for blood pressure and symptomatic changes
    o Request transport
  
  • Mildly symptomatic (headache, dizziness) OR asymptomatic with diastolic BP > 120 mmHg
    o Request rapid transport
  
  • Severely symptomatic and/or hypertensive emergency (chest pain, dyspnea, pulmonary edema, mental status change, etc.) and patient's condition not improving with the above recommendations:
    o Request rapid transport

  • Observe closely for progression of symptoms. If noted, continue with protocol.

Notes

  • If cocaine ingestion suspected, beta blockers (for example Labetalol) are contraindicated.
  • Encourage patient to take their own anti-hypertensive medications if they have not been taken, if the patient is alert and verbal

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
HYPOTENSION / SHOCK

Background

Shock occurs when there is insufficient blood perfusion to vital organs. Sustained hypotension leads to end organ damage and death. A systolic blood pressure <90 mmHg often heralds a shock state. Close evaluation and aggressive resuscitation are necessary to prevent further progression.

Keep in mind that the average systolic blood pressure for different patients can vary from 90mmhg - 210mmhg, therefore <90mmhg is not the cut off number for all patients, look for other signs and symptoms as noted below.

BLS

Due to the few BLS pre-hospital interventions available to treat or manage hypotension and shock, and the rapid manner in which BP can fluctuate:

Request a Responding ALS Agency immediately for ALL patients with signs or symptoms of shock, or a patient who is at significant risk for developing shock.

Request a Responding ALS Agency for ALL patients with a systolic blood pressure <90mmHg.

Request a Responding ALS Agency immediately if patient is found to have unexplained hypotension upon assessment.

If a patient is hypotensive due to missing/mismanagement of a dose of prescribed medication, request a Responding ALS Agency immediately.

If the patient’s reported average baseline blood pressure is by nature hypotensive or the patient takes medication for blood pressure and is experiencing a medical emergency, request a Responding ALS Agency immediately.

- Consider requesting a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information
Treatment:
- Determine the etiology of the presenting shock
- Continually reassess
  - Check BP every 5 minutes, before and after any interventions
  - Ask patient to lie flat on the ground until ALS agency arrives, elevate the legs 8-12 inches above the level of the heart

Specific shock considerations:
- Anaphylaxis
  - Refer to Anaphylaxis protocol
- Hypovolemia (eg. trauma, ruptured aorta, ectopic pregnancy, etc.)
  - If bleeding is controlled or hypovolemia is from other fluid loss (i.e. vomiting, diarrhea):
    - Request a Responding ALS Agency
    - Encourage oral fluid intake in alert and oriented patients while ALS is en route (if the patient is not vomiting and there is not concern for intra-abdominal surgical emergency)
  - If hypovolemic from uncontrolled bleeding:
    - Request a Responding ALS Agency
    - Stop bleeding with pressure, elevation, and/or tourniquet, if achievable
- Septic (sepsis)
  - Refer to Sepsis protocol
- Cardiogenic (CHF)
  - Refer to CHF protocol
  - Position patient upright, if tolerated
  - Manage airway and support ventilations if needed; consider BLS airway management, if needed
- Neurogenic (spinal cord injury)
  - Secure airway while maintaining cervical spine immobilization
  - Administer 100% oxygen irrespective of saturation level
  - Keep patient warm

Notes
Please carefully evaluate these patients, continually reassess and request rapid transport without delay.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
HYPOTHERMIA

Background

Hypothermia is more common in northern states, but may be seen in Florida in colder months. Patients at risk in our region include: occupational or swimming exposures that decrease body temperature, as well as in homeless or intoxicated patients.

BLS

Request Responding ALS Agency immediately if patient is experiencing signs or symptoms of hypothermia or frostbite.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Evacuate patient from cold environment
- Warm patient area
- Remove wet or cold clothing; wrap patient in blankets
- Handle the patient very gently as the hypothermic heart is irritable and ventricular arrhythmias may result from rough treatment.
- If hypothermia injury is local (frostbite):
  - Handle injured part gently; leave uncovered.
  - Warm the area of injury, as above
  - Do not allow the injured part to thaw if chance exists for the part to refreeze before arrival at a definitive care facility.
Notes
Severe bradycardia and low peripheral temperature may give appearance of death, so careful patient assessment is paramount.
Termination of Resuscitation does not apply to this subset of patients. They will need to have core temperatures elevate to normal levels and confirmed in the hospital setting.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
NAUSEA AND VOMITING

Background

Nausea and vomiting are nonspecific symptoms in a broad range of medical conditions. Some patients, particularly diabetics, the elderly, and women, may present with nausea or vomiting instead of chest pain in acute MI.

BLS

Request a Responding ALS Agency immediately if a patient is experiencing unexplained severe nausea and vomiting or if there is possible blood in the vomitus.

Request a Responding ALS Agency immediately if a patient is experiencing suspected symptoms of hypovolemia due to excess fluid loss (such as altered level of consciousness, dizziness, tachycardia, hypotension).

Inform the patient that a Responding ALS Agency/Transport Agency is available upon request.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Assess blood glucose level
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Provide emesis bag or basin to patient
- If the patient decides against ALS response and/or request for transport, Responders shall encourage patient to call 911 again if signs/symptoms continue, and to follow up with their primary healthcare provider when possible if symptoms continue for an extended period of time
Life threatening problems that may present with nausea and vomiting include:

- Acute Myocardial Infarction (AMI)
- G.I. bleeding (ask about blood in stool or emesis)
- Diabetic Ketoacidosis (DKA)
- Ruptured Appendicitis
- Certain toxic ingestions (including mushrooms and poisons)

Special assessment considerations:

- **Assess the patient closely for possible cardiac etiology**, as many patients may present with sudden nausea and vomiting during an acute M.I. Pay close attention to diabetics and the elderly, who are more likely to present with nonspecific symptoms such as nausea and vomiting rather than chest pain.
- Assess for orthostatic blood pressure changes.
- Nausea and vomiting can lead to death through hypovolemic shock (either blood or fluid loss), especially in infants and the elderly. This may also lead to electrolyte imbalances that can cause dysrhythmias.

If patient presents in Shock refer to Shock protocol.

- Patient should have nothing to eat or drink

**Questions or Concerns?**

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
OVERDOSE AND POISON INGESTION

Background

Determine agent, time and amount of ingestion, circumstances of the event, and document all details of the event. Collect and retain for transport any pill bottles, containers, or other identifying material(s) which could help to identify the offending substance. Several ingestions may have antidotes or effective countermeasures.

BLS

Request a Responding ALS Agency immediately if overdose/poison ingestion is suspected or confirmed, regardless of the offending substance. NOTE: The patient may be symptomatic or asymptomatic.

Contact Poison Control if overdose/poison ingestion is suspected or confirmed: 1-800-222-1222

- Request a Responding ALS Agency, contact Poison Control
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O₂ >94%.
- Obtain a glucose level, if < 80 mg/dL, see Diabetic Emergency protocol
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- If patient has a decreased level of consciousness, perform a blood glucose check
  - If abnormal level, refer to Diabetic Emergencies protocol
- Provide emesis bag or basin to patient if nausea or vomiting
Special poison and overdose considerations:

- **Cholinergic poisoning** (organophosphate or carbamate insecticides)
  - Ensure scene safety before entering scene. Toxicity to crew may result from inhalation or topical exposure. Any patient with dermal exposure **MUST** be adequately decontaminated according to the Responding ALS Agency/Transport Agency’s protocols. Crew should wear protective clothing including masks, gloves, and eye protection.
  - Initiate Hazmat alert if indicated
  - Remove all patients clothing and contain run-off toxic chemicals when flushing
  - Use supplemental O2
- **Acetaminophen**
  - If patient has a known toxic acetaminophen level or ingestion of potential toxic dose (calculated greater than 140 mg/kg or 7.5 gm), request rapid transport immediately
- **Cyanide** (symptomatic)
  - Refer to cyanide toxicity protocol
  - Request rapid transport
- **Methanol, Ethylene Glycol**
  - Request rapid transport
- **Benzodiazepines**
  - Support airway and request transport.
- **Carbon Monoxide**
  - Refer to Carbon Monoxide protocol
  - Remove patient from the contamination source
  - Supplemental 100% oxygen; document time started
  - For smoke inhalation patients, consider cyanide poisoning

- If any of the following conditions occur, refer to the appropriate protocols:
  - Dysrhythmias
  - Altered mental status
  - Seizures

- Request transport immediately

- Several ingestions may have antidotes or effective countermeasures. Request a Responding ALS Agency if you have any questions and concerns.

Special poison and overdose considerations:

- **Tricyclic antidepressants** (Examples: Amitriptyline, amoxapine, desipramine, doxepin)
  - Cardiotoxicity may manifest as tachycardia or hypotension

- **Cholinergic poisoning** (organophosphate or carbamate insecticides)
  - BLS considerations as above
  - Symptoms may be severe (blurred vision, nausea, vomiting, diarrhea, salivation, lacrimation, bradycardia, diaphoresis, wheezing, fasciculations, confusion, and seizures, etc)

- **Acetaminophen**
  - BLS considerations as above

- **Digoxin**
  - May be symptomatic
• Cyanide
  o May be symptomatic
  o Refer to Cyanide Toxicity protocol
  o BLS considerations as above

• Antipsychotics/Acute dystonic reaction (examples: haloperidol, prolixin, thorazine, prochlorazine/compazine, promethazine/Phenergan)
  o Presents with muscles (typically of the mouth and face) contracting uncontrollably.

• Calcium Channel Blockers (examples: amlodipine/norvasc, nifedipine/procardia/adalat, felodipine/pendil/renewil, verapamil/calan, isradipine/dynacirc/, diltiazem/cardizem, nicardipine/cardene)
  o Toxicity may manifest as bradycardia, hypotension, bronchospasm, and/or altered mental status

• Beta Blockers (examples: propanolol, atenolol/tenormin, metoprolol/lopressor, nadolol/corgard, timolol/blocadren, labetalol/trandate, esmolol/brevibloc)
  o Toxicity may manifest as bradycardia, hypotension, bronchospasm, and/or altered mental status

• Benzodiazepines
  o BLS considerations as above
  o Perform BLS airway management if necessary
  o Consider possibility of multiple medications overdose

• Cocaine
  o Toxicity may manifest as tachycardia, hypertension, agitation, and mental status changes

• Carbon Monoxide
  o Refer to Carbon Monoxide protocol
  o BLS considerations as above

• Opiates
  o Toxicity may manifest as altered mental status, pinpoint pupils, slow respirations, and hypotension

Notes
You may come across a patient who is unconscious and there is concern for overdose but the substance is unknown. This patient warrants a request for expeditious transport. There is concern with any overdose patient that there could be suicidal ideations, therefore, all of these patients should be transported and - if necessary - law enforcement involved. These patients are NOT allowed to refuse transport due to our concerns about their intentions and capacity to refuse. Therefore you will need to try and verbally de-escalate any agitation or movement. If the patient puts you in harm’s way (safety first) follow them to ensure that you understand their location, but do not let them walk away prior to ALS evaluation.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
  • Repeat any of the above Standing Orders if necessary and not contraindicated
EMERGENCY MEDICAL PROTOCOL
PSYCHIATRIC DISTURBANCES/EXCITED DELIRIUM

Background

A psychiatric disturbance is defined by an individual who is presenting with acute mental distress or disability not associated with a medical condition. In the field this may be difficult to determine, always consider a multitude of causes in your evaluation and treat accordingly.

Excited delirium is defined by any of the following: agitation, anxiety, hallucination, disorientation, violent and bizarre behavior, insensitivity to pain, elevated body temperature and super human strength. Excited delirium arises commonly in male subjects with a history of mental illness, drug abuse (particularly stimulants), alcohol withdrawal and/or head injury.

Left untreated, patients can progress to excited delirium resulting in death from cardiac/respiratory arrest, sometimes associated with the use of physical restraints or Tasers.

BLS

Request a Responding ALS Agency AND a law enforcement agency immediately if a patient is suspected to have a psychiatric disturbance, excited delirium, and/or if a patient is combative, confrontational, or if the Responder’s safety feels threatened in any way.

Request a Responding ALS Agency AND a law enforcement agency immediately if a patient may present a significant danger to him/herself, bystanders, to yourself, or your Assistants.

If a scene is unsafe to enter, wait at a safe distance until LEA arrives, controls the situation, and the LEA notifies Responders that the scene has been secured.

If a scene becomes unsafe due to a patient becoming combative, confrontational, or threatening and Responders are already on scene, Responders will temporarily cease treatment and retreat to a safe distance until LEA arrives and notifies Responders that the scene has been secured. DO NOT attempt to restrain a combative, confrontational, or threatening patient or bystander.

Safety for both the EMS crew and the patient are of paramount concern. Take no actions that may endanger EMS personnel or the patient.

- Request a Responding ALS Agency and LEA
- Initiate basic medical care and perform patient assessment when scene is safe to enter
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Obtain a glucose level, if < 80 mg/dL, see Diabetic Emergency protocol
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:
- If possible, establish collegial rapport with patient
- Avoid escalating the situation
- Remove all loose objects or potential weapons from the patient care area
  - It would be prudent to secure any personal equipment (scissors, etc.) at a distance from the patient
- Determine if patient is awake and alert, if possibility of traumatic injury exists, or if underlying medical problems (e.g., hypoglycemia, hypoxia, drug or alcohol intoxication) might cause patient's behavioral difficulties. Refer to appropriate protocol.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
RESPIRATORY DISTRESS

Background

Shortness of Breath or difficulty breathing from a medical etiology which can present with, but not be limited to: Hypoxia, Tachycardia, Increased work of breathing, Lethargy/anxiety/combativeness and Cyanosis.

Conditions which produce SOB from bronchoconstriction that may respond to bronchodilators: COPD, Asthma, Allergic reaction, Respiratory infections (pneumonia, acute bronchitis, etc.)

Conditions which may not respond to bronchodilators: pulmonary edema, bronchiolitis, or aspirated foreign body.

If patient is in respiratory distress/failure due to one of the following, go to the appropriate protocol: Pulmonary edema, Allergic reaction, Trauma, Asthma/COPD/Bronchospasm, or Pediatric respiratory distress/failure

BLS

Request a Responding ALS Agency immediately if a patient experiences respiratory distress at any time.

Request a Responding ALS Agency immediately if a patient is experiencing respiratory failure.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment when scene is safe to enter
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
  - Head elevation/semi-fowler position
  - Elevation of the LSB if immobilized
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Allow patient to sit in position of comfort
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information
Treatment:
- Determine site of respiratory impairment
- Assess the need for respiratory medications per appropriate protocol and administer as soon as needed.
- If bronchospasm worsens despite treatment, respiratory failure may be imminent. These patients may be candidates for assisted ventilations, BLS airway adjuncts, or airway assistance via King LT.

Notes
In respiratory failure, patients can have bilaterally dilated pupils from hypoxia

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.

**Kids’ Korner**

1. Bradycardia is due to hypoxia until proven otherwise
2. If a child is in tripod position with excessive drooling, this may be epiglottitis and a transport request must be made immediately
   - Do not lay the patient flat and do not agitate the patient
   - Do not attempt to visualize the airway
   - Parents may be allowed to hold the patient
3. Blow-by oxygen may be the best intervention for children until ALS arrives
4. Accessory muscle use, nasal flaring, or combativeness or lethargy can be additional presentations for children in respiratory distress
5. In case of respiratory failure, BVM can be just as effective as an ALS airway.

<table>
<thead>
<tr>
<th>Normal respiratory rates for pediatrics:</th>
</tr>
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<tbody>
<tr>
<td>&lt; 1 yr</td>
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<tr>
<td>1 - 3 yrs</td>
</tr>
<tr>
<td>4 - 5 yrs</td>
</tr>
<tr>
<td>6 - 12 yrs</td>
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<tr>
<td>13 - 18 yrs</td>
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EMERGENCY MEDICAL PROTOCOL
SEIZURES

Background

Seizures have many underlying causes which can be difficult to ascertain in the field. The prime concern with these patients is airway protection and cessation of the seizures to prevent further neurological damage. History is extremely helpful in deciding disposition in the emergency department, so on-scene information is very important.

BLS

Request a Responding ALS Agency immediately if a patient has a seizure, just finished having a seizure, or states that they had an aura related to a possibly impending seizure.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment when scene is safe to enter
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway, may need to turn the patient on his or her side in addition
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Obtain blood glucose level
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident, last menstrual period (concern for pregnancy)
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Gently protect patient from hurting him/herself
  - Be prepared to support a decreased respiratory status
- If seizure occurs in the setting of poisoning, overdose, or eclampsia, refer to the appropriate protocol for additional management

Notes

It is important to know how many times a patient seized, time between seizures, and if they had a normal mental status between. Please document and report verbally when transfer of patient care occurs.

Questions or Concerns?

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
SEPSIS RECOGNITION

Background

Systemic Inflammatory Response Syndrome, (SIRS) refers to the inflammation that is the body's response to a nonspecific insult, consisting of a complex cascade of events. SIRS can be caused by ischemia, inflammation, infection, trauma or a combination of insults. Sepsis is the systemic response to infection with presence of SIRS, with a documented or presumed infection. Many studies have shown early recognition and treatment of SIRS improves patient outcome. Our goal is to recognize these patients and alert the Responding ALS Agency of our concern.

BLS

Request a Responding ALS Agency immediately if a patient is suspected to have sepsis or be in septic shock.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Record blood glucose level if any weakness, altered mental status, or history of diabetes - if abnormal result, refer to Hypoglycemia protocol
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident, recent surgery, recent hospital stay, history of fever, history of immunosuppression, history of infection
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:
- Place patient in position of comfort if not in shock.

- Evaluate for SIRS criteria. SIRS is defined as 2 or more of the following criteria:
  - Temperature of less than or equal to 36 degrees Celsius (96.8 degrees Fahrenheit) or greater than or equal to 38 degrees Celsius (100.4 degrees Fahrenheit)
  - Heart rate of greater than or equal to 90 bpm
  - Respiratory Rate of greater than or equal to 24 or PaCO2 of 32mmHg or less
  - White blood cell count of greater than 12000 or less than 4000 or greater than 10% band
If 2 SIRS criteria, a possible source of infection is identified and one of the following signs of end organ damage are present, the patient has progressed to severe sepsis and GEMRU Responders shall notify the Responding ALS Agency that the patient has met GEMRU Sepsis Alert criteria, and this should be taken into consideration when ALS arrives on scene.

Signs of acute end organ damage
- Neurological (AMS, coma, agitation, lethargy, stupor)
- Respiratory (Hypoxia, bilateral diffuse infiltrates)
- Cardiac (poor capillary refill, ekg changes, pulmonary edema)
- Hepatobiliary (elevated LFTs, elevated lactate, DIC)
- Renal (decreased urination, increase in creatinine)
- The presence of hypotension with systolic blood pressure < 90 mmHg
- In addition, if a Responder has concerns that this patient has progressed to severe sepsis, but does not meet the above criteria, a Sepsis Alert can be called based on his or her discretion.
- Request rapid transport

Notes
Consider at risk patients. These include:
- Patients with chronic illnesses: history of dialysis, chemotherapy
- Residing in a long term care facilities
- Current or recent infections
- Current or recent medications (especially antibiotics)
- History of recent surgical procedure
- Patients with indwelling hardware

Also take into consideration that patients who are on calcium channel blockers or beta blockers cannot mount a tachycardic response, so these patients will exhibit a normal heart rate after progressing into sepsis.

Patients who are on hemodialysis may not mount a febrile response.

White blood cell counts, liver function tests, or creatinine function, are not typically available in the field, but if a level is available from a skilled nursing facility or hospital, and is reported by the patient to Responders, this additional factor can be used.

Contraindications for Tylenol include liver problems and allergic history
Contraindications for ibuprofen include age less than 6 months, kidney problems or allergy history

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
SNAKE BITE

Background

There are many different types of snakes here in Florida; some are venomous and some are not. Venom delivery by the snake in an attack is voluntary, even in a venomous snake. There have been reports that 25% of pit viper and 50% of coral snake bites are dry bites, meaning no venom was released into the wound. It is very difficult to tell clinically if venom has been injected, therefore all bites should be treated as though venom was injected. These patients should be continually assessed and transported.

BLS

Request a Responding ALS Agency immediately if a patient is bitten by a snake, regardless if the snake is suspected or confirmed to be venomous.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain $O_2 > 94\%$
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Immobilize area of bite and minimize all movement
- Outline edema / erythema / ecchymosis with a pen and note the time
- Transport patient in position of comfort
- Monitor vital signs
  - Treat dysrhythmias (Bradycardia or Tachycardia) per protocol
  - Assess degree of envenomation, type of snake, and advise the Responding ALS Agency
- Follow hypotension/anaphylaxis protocol as needed
- Consider suggesting air transport to the Responding ALS Agency as appropriate when significant delays with ground transport exist, or the appropriate facility may be a great distance away from the scene.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
EMERGENCY MEDICAL PROTOCOL
TASER REMOVAL

Background

For patients that have been controlled by law enforcement using a Taser Device. All patients should be evaluated for underlying medical, substance abuse and/or psychiatric emergencies. All patients shall either be transported or a waiver obtained. If a patient exhibits abnormal vital signs refusal is not an option, because these patients are high risk for excited delirium.

BLS

GEMRU RESPONDERS SHALL NOT REMOVE TASER PROBES

If a Taser device is discharged, ensure that the scene is safe before entering AND that a LEA on scene has notified Responders that the scene is secure. DO NOT enter a scene that has not been secured.

If a patient receives a shock from a Taser device AND THE PROBES HAVE NOT BEEN REMOVED WHEN GEMRU ARRIVES ON SCENE, request a Responding ALS Agency immediately, as they will assist in the removal of probes and have the ability to assess adverse cardiac effects.

If a patient receives a shock from a Taser device AND THE PROBES HAVE BEEN REMOVED BY TRAINED PERSONNEL WHEN GEMRU ARRIVES ON SCENE, the individual who removed the probes is responsible for contacting an ALS agency, if necessary according to their protocols. If the probes were removed by an untrained individual or have become dislodged, request a Responding ALS Agency immediately.

Refusal of Service is not an option because these patients are at high risk for excited delirium. Provide supportive care until ALS arrives on scene.

- Request a Responding ALS Agency and/or LEA
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Obtain a glucose level, if < 80 mg/dL, see Diabetic Emergency protocol
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information
Treatment:
- Place patient in position of comfort unless contraindicated
- Most sworn Law Enforcement personnel have been trained to remove Taser probes. Probes that have penetrated a "sensitive area" such as the head, neck, spinal column and groin or breast tissue in a female will not be removed by LEO and will require a request for a Responding ALS Agency and a transport request.
  - Provide supportive care until ALS arrives on scene
- Do not delay requests for a Responding ALS Agency and transport if one or more of the following exist:
  - Unconscious patient
  - Evidence of progressing excited delirium (see Psychiatric disturbances / Excited Delirium protocol)
  - Persistent abnormal vital signs
  - History/Physical findings consistent with amphetamine/hallucinogenic drug use
  - Altered level of consciousness, aggressive or violent behavior
  - Evidence of hyperthermia

Notes
Patients that have required forceful action to be subdued are at high risk for excited delirium, and these patients have an association with sudden cardiac arrest and death.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
TRIUMA PROTOCOL
BURNS

Background

Burn injuries occur in 6 different patterns: contact burns, scalds, fire, chemical, electrical, and radiation burns. Because skin tissue is lost as a protectant, patients with burns are susceptible to severe heat and fluid losses to the environment.

BLS

Request a Responding ALS Agency immediately if 1st degree burns cover a significant amount of body surface area, or the burns create adverse signs or symptoms.

Request a Responding ALS Agency immediately if a patient sustains 2nd, 3rd, or 4th degree burns.

- Consider Requesting a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Remove all clothing from patient and expose all burned areas, yet maintaining privacy
- If burning agent still in contact with skin, remove gently after cooling with sterile water or normal saline
- If gasoline is present, decontamination is needed prior to entering ED, so alert ALS in report that patient will need decontamination on arrival if unable to perform prior to arrival
- If burning agent is chemical, brush away loose, dry agent and irrigate burned area with copious amounts (or more liters) of Normal Saline or sterile water
- For radiation burn, decontamination is paramount. In all cases avoid recontamination or cross contamination. Remember time, distance, shielding, and quantity of exposure. Treat burns like normal thermal burns.
- Maintain temperature control by keeping patient warm and wrapped in blankets.
- Assess type, depth, and extent of burn.
● Dress burns:
  o Use dry non-sterile sheets or bandages regardless of extent of burn, if available
  o Document area involved on chart using "Rule of Nines."
  o The patient's palm is a good measure of 1% TBSA
  o First degree burns do not count in TBSA count

● Maintain temperature control:
  o Keep patient warm
  o Wrap in blankets as needed
  o DO NOT ALLOW PATIENT TO BECOME HYPOTHERMIC

● If an explosion is involved, follow Trauma protocol and contact appropriate Agencies

● ALS must transport if:
  o Partial thickness burn involving > 20% BSA
  o Full thickness burn involving > 5% BSA
  o Burns of the hands, face, feet, or perineum
  o Burns associated with inhalation injuries
  o Burns associated with multiple trauma
  o Electrical injuries

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
TRAUMA PROTOCOL
EYE EMERGENCIES

Background

Eye injuries require prompt eye protection, and if exposed to a chemical agent, they will need emergent decontamination.

BLS

Request a Responding ALS Agency immediately if eye emergency signs or symptoms are present.

Request a Responding ALS Agency immediately if there is penetrating, blunt, or chemical trauma to the eye OR area immediately surrounding the eye.

- Consider Requesting a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Avoid any pressure on the affected globe
- Avoid bright lights
- If patient has known diagnosis of central retinal artery occlusion, administer 100% oxygen by non-rebreather

Assess the nature of eye emergency - blunt vs. penetrating, chemical, glaucoma (by history), or others

- Briefly check visual fields and visual acuity
- Elevate the patient’s head at approximately 60 degrees if no contraindications
- Trivial injuries to eyelids may hide significant injury to the globe
Penetrating Trauma:
- Avoid any pressure on the affected globe
- Carefully secure penetrating objects
- If possible, cover the affected eye with a metal eye shield
- **Patch both eyes to prevent conjugate movement**
- Explain to the patient why it is necessary to patch both eyes.
- If possible, let the patient remain supine

Blunt Trauma:
- If no contraindications, elevate head of bed
- Avoid bright lights (dim lights around patient if possible; allow patient to wear sunglasses, keep eyes closed, etc.)
- Note the ability or loss of ability to move the eyes in any particular direction.

Chemical trauma:
- Begin irrigation with sterile water immediately if the chemical was alkali or acidic agent, or if symptoms persist.
- Dim surrounding lights for patient comfort, if possible.

If patient is reported to have a diagnosed central retinal artery occlusion:
- (This presents as acute painless persistent loss of vision ranging from seeing fingers to only seeing light. Many may describe a prior episode of amaurosis fugax = which is vision loss described as a curtain falling over visual field lasting seconds to minutes then vision returning to normal)
- Administer 100% **OXYGEN** via NRBM.
- Place patient in supine position.
- Request rapid transport.

**Questions or Concerns?**
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
TRAUMA PROTOCOL
GENERAL TRAUMA

Background

EARLY TRANSPORT of the critical trauma patient offers the best chance of survival. Field time should NOT be prolonged in order to perform procedures not absolutely critical to the well-being of the patient.

BLS

Request a Responding ALS Agency immediately if there is general trauma that affects or poses a risk of affecting the airway, breathing, or systemic circulation of the patient.

Request and notify a Responding ALS Agency immediately if the patient meets GEMRU preliminary trauma alert criteria. SEE THE ATTACHED CHART FOR GEMRU PRELIMINARY TRAUMA ALERT CRITERIA AND INSTRUCTIONS ON HOW TO ALERT THE ALS DISPATCHERS OF YOUR FINDINGS. YOU WILL NOT FORMALLY CALL A 'TRAUMA ALERT'. THIS WILL BE THE RESPONSIBILITY OF THE RESPONDING ALS AGENCY OR TRANSPORTING AGENCY.

Request a Responding ALS Agency if the GEMRU Responder suspects that ALS treatment may be necessary.

- Consider Requesting a Responding ALS Agency
- Initiate BLS medical care and perform patient assessment/trauma assessment
- Establish patent airway, use jaw thrust and 100% oxygen by bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds, if unilateral – alert ALS agency
- Assess for edema
- Administer oxygen as needed to maintain O2 >95%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Undress patient completely and cover with blankets to prevent hypothermia, yet maintaining privacy.
- Splint suspected fracture sites in most appropriate fashion after checking pulses, motor function and sensation. After splinting, recheck pulse, motor function, and sensation.
● If pregnant, prepare for transport in left lateral decubitus position. If unable to place mother in recovery position, you may manually displace the uterus to the left to relieve pressure on the vena cava.

● If bleeding of an extremity is profuse despite elevation and direct pressure, place blood pressure cuff just proximal to amputation site and inflate to just above systolic pressure. Maintain cuff pressure during Transfer of Care. Do not place cuff over joints. Consider applying a Tourniquet prior to shock and notify Responding ALS Agency. (All of these attempts must have failed prior to moving to tourniquet placement)

● If the patient has a complete amputation, the amputated part should be moistened with sterile water, placed in a watertight container, and the container submerged in cool water. Do not place the amputated part directly on ice.

● All Trauma patients should be evaluated using the state trauma scorecard methodology

**AIRWAY**

- Assess airway patency
  - If intact, administer **oxygen** by most appropriate method
- If patency in question:
  - If patient exhibits increased respiratory compromise perform jaw thrust maneuver to open the airway making sure to maintain cervical spine position and immobilization.
  - Reassess the respiratory effort:
    - If **adequate**, ensure SaO2 > 95%
    - If unsuccessful, consider placement of a nasal trumpet or oral airway to maintain airway patency. (avoid nasal trumpet if there is facial trauma) The individual controlling cervical immobilization must maintain the jaw thrust maneuver until airway is placed.
- Assist ventilation with 100% **oxygen** via bag-valve-mask as needed

**BREATHING**

- Assess respiratory exchange
- If adequacy of ventilation is in question:
  - Support ventilation at a rate of 12-14 breaths/minute with 100% oxygen via Bag Valve Mask
- Assess for signs of chest trauma
  - **Open chest wound** - cover with a gloved hand, place 4x4 Vaseline gauze dressing over wound, and **tape on three sides only**.
  - Flail chest - Support chest wall with chest wall by taping or manual support.
- Oxygen via BVM

**CIRCULATION**

- Assess circulatory status (pulse, skin temperature, capillary refill, blood pressure as indicated)
- The goal is to support a systolic blood pressure of 80-90 mmHg.
- If circulatory status is in question, refer to shock protocol

**DISABILITY**

- Assess neurologic status using AVPU: Alert, responds to Voice, responds to Pain, or Unresponsive.
- If unresponsive:
  - Immobilize patient with backboard and cervical collar as indicated
  - Patient should be immobilized as soon as possible; however, immobilization should not take priority over assessment and management of the ABCs.
- If patient exhibits decreased level of consciousness, follow altered level of consciousness protocol
• **SPINAL IMMOBILIZATION**
  
  o Determining the need for spinal immobilization requires a careful assessment of the mechanism of injury, the patient's complaints, overall condition and the patient's ability to recognize and convey the presence of spinal injury symptoms.
  
  o Spinal immobilization should always be applied when any concern exists to possibility of spinal trauma.
  
  o Document symptoms such as spinal tenderness, neurological deficits or complaints, paralysis, weakness or anatomical deformities. If present, patient should be immobilized.
  
  o Any patient who has an altered mental status (GCS < 15, significant intoxication, dementia) who is a victim of blunt trauma as listed below should be immobilized.
    
    ▪ Any mechanism that produces a violent impact to head, neck, torso, or pelvis
    ▪ Incidents with sudden acceleration or deceleration
    ▪ Falls, especially in the elderly
    ▪ Ejection
    ▪ Shallow water diving or drowning accidents
    ▪ High-voltage electrical injuries
  
  o For patients who cannot tolerate supine position due to clinical condition:
    
    ▪ Apply all elements of spinal immobilization that the patient will tolerate
    ▪ Maintain spinal alignment as best as can be achieved
    ▪ Clearly document the clinical condition that interfered with full immobilization.
  
  o For patients who refuse spinal immobilization:
    
    ▪ Advise the patient of the indication for immobilization and the risks of refusing the intervention
    ▪ If the patient allows, apply the cervical collar even if backboard is refused
    ▪ Maintain spinal alignment as best as can be achieved
    ▪ Clearly document refusal of immobilization, prior to allowing refusal ensure that you feel he or she has the capacity to make decisions
  
  o "Clearing” the spine shall not take place in the pre-hospital setting.

**EXPOSURE**

- Undress patient completely to facilitate a thorough, focused survey.
- Cover with blankets to prevent loss of body heat and preserve modesty.
- To facilitate rapid transport; the patient may be evacuated to a more appropriate place for a focused survey.

**EXTREMITIES**

- Splint suspected fracture sites in most appropriate fashion after checking pulses, motor function, and sensation.
- If the patient is critically injured, utilization of the long spine board as a total body splint is a time and resource efficient procedure.
- Femur fractures (closed mid and distal) may be immobilized with traction splints.
- Fractures may be immobilized with air splints, ladder splints, or board splints in order to immobilize the joint above and below the injured area.
- Place cold pack on suspected fracture sites if time and resources allow.
- If distal vascular deficits noted, reduce fracture in anatomical alignment and splint in most appropriate fashion.
- Recheck pulse, motor function, and sensation after reduction and immobilization.
- If partial amputation:
    
    ▪ Place in a dressing moistened with normal saline and splint in line with associated extremity.
    ▪ Avoid torsion or traction of severed part.

- If complete amputation:
Apply direct pressure to bleeding sites.
- Elevate above the level of the heart if you are able.
- If bleeding profuse despite elevation and direct pressure, place blood pressure cuff just proximal to amputation site and inflate to just above systolic pressure. Maintain cuff pressure during Transfer of Care. Do not place cuff over joints. (please ensure all of these attempts are made prior to placement of a tourniquet)
- Consider applying a tourniquet prior to shock and notify Responding ALS Agency.
- Wrap amputated part in a dressing moistened with sterile water.
- Secure in watertight container and place container in cool water.
- Transport amputated part with patient when Transfer of Patient Care takes place.
- Placing the amputate part on ice or a similar environment may further damage the tissue and prevents its use.

**PREGNANT TRAUMA VICTIM**
- The most common cause of fetal mortality is maternal mortality.
- **Treatment of the mother ALWAYS comes first.**
- Assess patient for uterine contractions, vaginal bleeding, and amniotic rupture.
- Place patient in left lateral recovery position to decrease pressure on the mother's vena cava and increase blood return to her heart.
- Support backboard with pillows placed under the right side of the board in the immobilized patient.
- If any pregnant female >20 weeks gestation has been involved in an MVC >35mph, rollover, ejection, a steering wheel deformity is present or patient was involved in a trauma with significant mechanism with a high index of suspicion: this patient shall be preliminary trauma alerted and the Responding ALS Agency shall be notified immediately that GEMRU preliminary trauma alert criteria has been met.

**REASSESSMENT**
- Reassess any of the above critical injuries identified and perform necessary interventions during the focused survey. Treatment of life threatening injuries identified during the initial survey take priority over a complete subsequent survey.
- Notify the Responding ALS Agency regarding critical patients or those patients meeting GEMRU preliminary trauma alert criteria.
- Report revised trauma score and mechanism of injury.

**Notes**
All trauma patients should be evaluated using the state trauma scorecard methodology.
Use air transport as appropriate with significant delays with ground transport exist.
In pregnant females, even a low mechanism of trauma can lead to placental abruption.

**Questions or Concerns?**
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
### ADULT TRAUMA ALERT CRITERIA:

**Gator Emergency Medical Response Unit**

A score of 2 or greater for **ADULT (> 15 y.o.)** according to trauma scorecard methodology below:

<table>
<thead>
<tr>
<th>1 point</th>
<th>2 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airway</td>
<td></td>
</tr>
<tr>
<td>• Sustained RR &lt; 50</td>
<td>• Active assistance (not just oxygen)</td>
</tr>
<tr>
<td>• Sustained RR &gt; 120</td>
<td>• Lack of radial pulse with sustained HR &gt; 120, or • BP &lt; 90</td>
</tr>
<tr>
<td>Circulation</td>
<td></td>
</tr>
<tr>
<td>• BMM = 5</td>
<td>• BMM of 6, or • Paralysis, or • Suspected spinal cord injury, or • Loss of sensation</td>
</tr>
<tr>
<td>Best Motor Response</td>
<td></td>
</tr>
<tr>
<td>• Tissue loss (degloving injuries, major flap avulsions &gt; 5 inches)</td>
<td>• Amputation proximal to the wrist or ankle, or • 2nd or 3rd degree burns &gt; 15% TBSA, or • Any high voltage electrical or lightning injury, or • Penetrating injury to head, neck or torso (excluding superficial wounds in which the depth of the wound can be easily determined)</td>
</tr>
<tr>
<td>Causative</td>
<td></td>
</tr>
<tr>
<td>• Simple fracture site due to VWA, or • Single fracture site due to a fall &gt; 10 feet</td>
<td>• Multiple fracture sites</td>
</tr>
<tr>
<td>Long Bone Fracture</td>
<td></td>
</tr>
<tr>
<td>• Age</td>
<td></td>
</tr>
<tr>
<td>• Ejection from vehicle (excluding any motorcycle, mapped ATV, bicycle or open truck bed, or Deformed steering wheel (driver)</td>
<td></td>
</tr>
<tr>
<td>Mechanism of Injury</td>
<td></td>
</tr>
<tr>
<td>• A GCS score less than or equal to 12 (excluding those whose baseline is 12 or less)</td>
<td>[SEE SCALE BELOW]</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>• A neck laceration with swelling, sustained bleeding, escape of air from wound or stridor</td>
<td></td>
</tr>
<tr>
<td>• Any other neck laceration: Transport to the nearest trauma center, but do not trauma alert</td>
<td></td>
</tr>
<tr>
<td>EMT PROVIDER HIGH INDEX OF SUSPICION</td>
<td></td>
</tr>
<tr>
<td>GLASGOW COMA SCALE</td>
<td></td>
</tr>
<tr>
<td>Opens Eyes</td>
<td>Spontaneously…………………4</td>
</tr>
<tr>
<td>To voice</td>
<td>……………………3</td>
</tr>
<tr>
<td>To pain</td>
<td>……………………2</td>
</tr>
<tr>
<td>No response</td>
<td>……………………1</td>
</tr>
<tr>
<td>Best</td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>……………………5</td>
</tr>
<tr>
<td>Confused</td>
<td>……………………4</td>
</tr>
<tr>
<td>Incomprehensible words</td>
<td>……………………2</td>
</tr>
<tr>
<td>No response</td>
<td>……………………1</td>
</tr>
<tr>
<td>Verbal Response</td>
<td></td>
</tr>
<tr>
<td>Best Motor Response</td>
<td></td>
</tr>
<tr>
<td>Obey command</td>
<td>……………………6</td>
</tr>
<tr>
<td>Localizes to pain</td>
<td>……………………5</td>
</tr>
<tr>
<td>Withdraws to pain</td>
<td>……………………4</td>
</tr>
<tr>
<td>Flexion (pain) [flexed]</td>
<td>……………………3</td>
</tr>
<tr>
<td>Extension (pain) [extended]</td>
<td>……………………2</td>
</tr>
<tr>
<td>No response</td>
<td>……………………1</td>
</tr>
</tbody>
</table>

**IF A PATIENT MEETS THE GEMRU CRITERIA FOR AN ADULT TRAUMA ALERT, DO THE FOLLOWING:**

**REQUEST EXPEDITED ALS ASSISTANCE IMMEDIATELY**

Tell the dispatcher: “This patient meets Gator Emergency Medical Response Unit’s preliminary adult trauma alert criteria. Please notify the ALS crew immediately to expect an adult trauma alert patient.”

Give the following information to dispatchers and ALS as medically appropriate:

- Approximate age
- Nature and mechanism of injury
- Body area involved
- GCS
- Airway and ventilation status, oxygen saturation, if known
- Hemodynamic status (characteristics of peripheral pulses, e.g. weak, strong, or vital signs unavailable)

### PEDIATRIC TRAUMA ALERT CRITERIA:

**Gator Emergency Medical Response Unit**

A score of 2 or greater for **CHILD (<15 y.o.)** according to trauma scorecard methodology below:

<table>
<thead>
<tr>
<th>1 point</th>
<th>2 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airway</td>
<td></td>
</tr>
<tr>
<td>• Normal, or • O2</td>
<td>• Assisted (includes measures such as manual jaw thrust, continuous auscultation or other adjuncts), or • Intubated</td>
</tr>
<tr>
<td>Circulation</td>
<td></td>
</tr>
<tr>
<td>• Awake, alert and oriented for age</td>
<td>• Altered mental status, or • Coma, or • Paralysis, or • Suspected spinal cord injury (sensory or motor findings of weakness, decreased strength or sensation), or • Loss of sensation</td>
</tr>
<tr>
<td>Best Motor Response</td>
<td></td>
</tr>
<tr>
<td>• Good peripheral pulses, or</td>
<td>• The carotid or femoral pulse is palpable but neither the radial nor pedal pulses are palpable, or • SBP &lt; 90</td>
</tr>
<tr>
<td>Causative</td>
<td></td>
</tr>
<tr>
<td>• No visible injury, or • Convulsion, abrasion, minor laceration</td>
<td>• Major tissue disruption (major degloving injuries, major flap avulsion, or major soft tissue disruption), or • Amputation (proximal to the wrist or ankle), or • 2nd or 3rd degree burns &gt; 10% TBSA, or • Any high voltage electrical or lightning injury, or • Penetrating injury to head, neck, or torso</td>
</tr>
<tr>
<td>Motor</td>
<td></td>
</tr>
<tr>
<td>• A neck laceration with swelling, sustained bleeding, escape of air from wound or stridor</td>
<td></td>
</tr>
<tr>
<td>• Any other neck laceration: Transport to the nearest pediatric trauma center, but do not trauma alert</td>
<td></td>
</tr>
<tr>
<td>EMT PROVIDER HIGH INDEX OF SUSPICION</td>
<td></td>
</tr>
<tr>
<td>PEDIATRIC COMA SCALE (&lt;2yrs)</td>
<td></td>
</tr>
<tr>
<td>Opens Eyes</td>
<td>Spontaneously…………………4</td>
</tr>
<tr>
<td>To speech</td>
<td>……………………3</td>
</tr>
<tr>
<td>To pain</td>
<td>……………………2</td>
</tr>
<tr>
<td>No response</td>
<td>……………………1</td>
</tr>
<tr>
<td>Best</td>
<td></td>
</tr>
<tr>
<td>Cries, babbles</td>
<td>……………………5</td>
</tr>
<tr>
<td>Consolable</td>
<td>……………………4</td>
</tr>
<tr>
<td>Cries to pain</td>
<td>……………………3</td>
</tr>
<tr>
<td>Moans to pain</td>
<td>……………………2</td>
</tr>
<tr>
<td>No response</td>
<td>……………………1</td>
</tr>
<tr>
<td>Verbal Response</td>
<td></td>
</tr>
<tr>
<td>Best Motor Response</td>
<td></td>
</tr>
<tr>
<td>Normal spontaneous</td>
<td>……………………6</td>
</tr>
<tr>
<td>Withdraws to touch</td>
<td>……………………5</td>
</tr>
<tr>
<td>Withdraws to pain</td>
<td>……………………4</td>
</tr>
<tr>
<td>Abnormal extension</td>
<td>……………………3</td>
</tr>
<tr>
<td>Abnormal extension</td>
<td>……………………2</td>
</tr>
<tr>
<td>No response</td>
<td>……………………1</td>
</tr>
</tbody>
</table>

**IF A PATIENT MEETS THE GEMRU CRITERIA FOR A PEDIATRIC TRAUMA ALERT, DO THE FOLLOWING:**

**REQUEST EXPEDITED ALS ASSISTANCE IMMEDIATELY**

Tell the dispatcher: “This patient meets Gator Emergency Medical Response Unit’s preliminary pediatric trauma alert criteria. Please notify the ALS crew immediately to expect a pediatric trauma alert patient.”

Give the following information to dispatchers and ALS as medically appropriate:

- Approximate age
- Nature and mechanism of injury
- Body area involved
- GCS
- Airway and ventilation status, oxygen saturation, if known
- Hemodynamic status (characteristics of peripheral pulses, e.g. weak, strong, or vital signs unavailable)
OB/GYN PROTOCOL
ECLAMPSIA

Background

Pre-eclampsia typically presents before eclampsia. Assess the patient to determine which protocol to follow.

Pre-eclampsia is characterized by third trimester pregnancy with BP >140/90 mmHg, proteinuria, and peripheral edema. It may progress to eclampsia. This progression is defined by occurrence of seizures. GO TO THE PRE-ECLAMPSIA PROTOCOL IF THE PATIENT DOES NOT HAVE SEIZURES.

Eclampsia is defined as pre-eclampsia (third trimester pregnancy with BP >140/90 mmHg, proteinuria, and peripheral edema) with seizures. Follow this protocol:

BLS

Request a Responding ALS Agency immediately if the patient is experiencing signs or symptoms of pre-eclampsia or eclampsia.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Obtain a glucose level, if < 80 mg/dL, see Diabetic Emergency protocol
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Prepare patient for transport by tilting patient right side up 10-15 degrees
- Request rapid transport
- Take seizure precautions and attempt to prevent maternal injury

Questions or Concerns?

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
OB/GYN PROTOCOL
EMERGENCY DELIVERY

BLS

Request a Responding ALS Agency immediately if the patient experiences any signs or symptoms of labor OR if impending delivery is expected.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Use suction as needed to clear airway
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Attempt to convince the patient not to push until ALS arrives on scene
- Assist ALS with patient positioning after ALS arrival on scene

If delivery commences and the Responding ALS Agency has not arrived on scene yet:

- Delivery technique and considerations:
  - Prep mother and delivery area with drapes
  - As the infant's head delivers, use the palm of your hand to gently apply pressure to his/her head preventing a rapid, uncontrolled delivery
  - Support the infant's head as it emerges from the vagina
  - Allow the head to rotate to one side
  - Aspirate mouth and then nose with bulb syringe
  - Wipe any mucus from the infant's face with gauze
  - After delivery of the head, examine the neck for a looped umbilical cord
  - If found, gently remove it by slipping it over the head of the infant
  - If wrapped tightly, clamp the cord in two places
  - Using scissors cut between the clamps
  - Begin to deliver the infant's shoulder
  - Position your hands on either side of the infant's head
- Exert gentle downward pressure as you deliver the anterior shoulder, then guide the head upwards and deliver the posterior shoulder
- Be careful to securely grasp the infant, as he/she will be slippery
- Keep the baby at a level below or equal to the mother until the umbilical cord is clamped
- Clamp the cord in two locations (minimum of 6-8 inches from baby)
- Position the clamps one-inch apart
- Cut cord with scalpel or scissors
  - Remember not to cut the cord too close to the infant. It can always be made shorter later

- **After the delivery:**
  - **Check vital signs of mother**
    - Keep the mother and infant warm
    - Evaluate infant
    - Obtain Apgar score at 1 and 5 minute marks

- **Placenta delivery:**
  - The placenta will deliver spontaneously usually within 15 minutes of the infant. Do not force the placenta to deliver
  - Signs of separation include: gush of blood from the vagina, lengthening of the umbilical cord, uterine fundus rising upward in the patient's abdomen, or uterus becoming firmer
  - Massaging the uterus and/or allowing baby to nurse may facilitate uterine contractions and delivery of the placenta
  - Massage uterine fundus as soon as it shows signs of relaxing
  - Check the patient's vaginal and perineal area for excessive bleeding
  - If patient becomes hypotensive, refer to shock protocol

- **Meconium (fetal fecal material) aspiration:**
  - When there is thick meconium staining of the amniotic fluid, the infant's mouth then nose should be suctioned with a meconium aspirator until secretions are cleared or appear thin and watery
  - Suctioning should be performed after the head emerges but prior to the delivery of the body

- **If infant requires resuscitation, refer to NEONATAL RESUSCITATION PROTOCOL**
  - Indications for neonatal resuscitation include: meconium staining, lack of spontaneous breathing, pulse rate less than 100 BPM after birth despite oxygen and stimulation

**Notes**

**Delivery should only occur if imminent.**

- **Document the following with a delivery:**
  - Presentation
  - Date and time of birth of baby and placenta
  - Gender of infant
  - Position of cord at delivery
  - Appearance of amniotic fluid (brown, green, clear)
  - Complications

**Special emergency delivery considerations:**
  - **History should evaluate for:**
    - Time when contractions began
    - Has "water broken" or gush of fluid from vagina
- Obstetrical History
  - Number of previous deliveries
  - Complications in previous pregnancies, abnormal presentation, multiple pregnancy, hemorrhage
  - Known complications in this pregnancy
  - Due Date, Date of last period (i.e. is this a premature delivery?)
  - Has there been meconium staining of amniotic fluid?

- Physical Examination:
  - Determine that delivery is imminent by assessing for the following signs:
    - Bulging perineum
    - Crowning (top of baby's head visible)
    - Contractions less than 2 minutes apart and reported as strong by mother

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
OB/GYN PROTOCOL
NEONATAL RESUSCITATION

Background
Deliver the infant in method consistent with Emergency Delivery protocol.

BLS

Request a Responding ALS Agency immediately if a mother delivers a newborn or is in labor.

Request a Responding ALS Agency immediately if a newborn requires resuscitation.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Suction mouth and nose of infant with bulb syringe or appropriate suction device
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:
- Warm and dry infant
- Apply tactile stimulus to feet and back of infant to stimulate a vigorous respiratory effort
- Assess APGAR
- In the infant with thick, particulate meconium:
  - Suctioning should be performed upon delivery of the head, PRIOR TO delivery of the body.
  - The infant may then be ventilated with positive pressure as indicated.
  - Failure to clear the trachea before assisted or spontaneous ventilation will disseminate meconium through airways, severely impairing chances for survival.
- If respiratory effort is adequate:
  - Place infant in slight Shock position
  - Turn head of infant to side
● If respiratory effort inadequate:
  o Manage airway and support ventilations
  o Assess heart rate and respiratory status frequently
  o If spontaneous respirations return, continue to provide 100% oxygen to patient via facemask
  o If infant remains apneic or bradycardic, continue with protocol

● If brachial pulse less than 60 bpm:
  o Assist ventilations with 100% oxygen via BVM
  o Perform chest compressions at 120/min
  o Follow infant BLS protocols

● If heart rate climbs greater than 60 bpm:
  o Cease compressions, maintain ventilation, and continue to administer 100% oxygen via BVM
  o If no change in heart rate, continue with protocol

● If heart rate remains less than 60 bpm:
  o Continue CPR
  o Check BGL.

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
OB/GYN PROTOCOL
PRE-ECLAMPSIA

Background
Pre-eclampsia is characterized by third trimester pregnancy with BP >140/90 mmHg, proteinuria, and peripheral edema. It may progress to eclampsia. This progression is defined by occurrence of seizures. If the patient begins having seizures, refer to the ECLAMPSIA PROTOCOL.

BLS
Request a Responding ALS Agency immediately if signs or symptoms of pre-eclampsia are noted.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Suction mouth and nose of infant with bulb syringe or appropriate suction device
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:
- Prepare patient for transport by tilting patient right side up 10-15 degrees
  NOTE: BLOOD PRESSURE LESS THAN 150/100 IN SEVERE PRE-ECLAMPSIA MAY COMPROMISE FETOPLACENTAL BLOOD FLOW
- If seizures occur, refer to ECLAMPSIA protocol

Notes
Special pre-eclampsia considerations:
- Mild hypertension (diastolic BP < 100 mmHg) usually causes no symptoms
- Severe Hypertension (diastolic BP > 110 mmHg) may cause:
  - Headache
  - Visual disturbance
  - Upper abdominal pain
  - Jaundice
  - Bruises
  - Pulmonary edema

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
OB/GYN PROTOCOL
PROLAPSED UMBILICAL CORD

Background

Delivery in the field is a high stress scenario and should be avoided if possible.

BLS

Request a Responding ALS Agency immediately if a patient has a prolapsed umbilical cord.

Request a Responding ALS Agency immediately if a mother delivers a newborn or is in labor.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Suction mouth and nose of infant with bulb syringe or appropriate suction device
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Prepare patient for transport by placing on left lateral side with knees flexed, and with patient tilted right side up 10-15 degrees
- Request rapid transport
- If hypotensive, refer to Hypotension protocol
- Monitor Fetal Heart Rate abdominally (if possible) and indicate time accurately
- Instruct mother to pant, and not to push during contractions
- Insert sterile gloved hand into vagina and elevate the presenting fetal part to prevent cord compression. Leave hand in place and avoid touching cord.
- Cover exposed cord with sterile saline gauze
- If crowning noted, prepare to assist with vaginal delivery

Notes

For other emergent delivery concerns and neonatal resuscitation please refer to those protocols. If there is a concern for imminent delivery, a vaginal exam is appropriate; otherwise, this exam is not appropriate.

Questions or Concerns?

Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
OB/GYN PROTOCOL
SUSPECTED ECTOPIC PREGNANCY

Background

Ectopic pregnancy should be a consideration in any woman of child-bearing age presenting with abdominal pain, pelvic pain, hypotension, or syncope.

BLS

Request a Responding ALS Agency immediately if a patient has a suspected ectopic pregnancy.

Request a Responding ALS Agency immediately if a mother delivers a newborn or is in labor.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Suction mouth and nose of infant with bulb syringe or appropriate suction device
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Continuously monitor patient
- Keep accurate count of used perineal pads
- Save any clots or tissue expelled for examination, and transport with patient when Transfer of Patient care is initiated
- If signs of shock are noted, refer to hypotension protocol

Notes

Special considerations in suspected ectopic pregnancy:

- **Warning signs of an undiagnosed ectopic pregnancy**
  - Previous recent visits to the ED or healthcare provider's office with menstrual irregularity and/or mild abdominal pain with no diagnosis being made.
  - May complain of abdominal pain and/or vaginal bleeding.
  - Patient may or may not be aware of pregnancy
• **Warning signs of a ruptured ectopic pregnancy**
  o Increased abdominal or pelvic pain
  o Dizziness, fainting
  o Pain radiating to the shoulder from pelvic area

• **Physical examination findings may include:**
  o Abdominal bruising, distention, tenderness, guarding, rebound tenderness, rigidity, bowel sounds, distension, and presence of a pulsating mass
  o Emesis: obtain history on the amount and type -- ingested food, bloody, bilious, feculent (looks and smells like stool)
  o Ruptured ectopic pregnancy:
    • May present as a pale, diaphoretic, distressed woman with a weak, fast pulse
    • May have orthostatic hypotension

**Questions or Concerns?**
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
Background

Vaginal bleeding could be anything from a benign menses to a life threatening bleed. Different possible causes include: ectopic pregnancy, spontaneous abortion, placental abruption, dysfunctional uterine bleeding, traumatic vaginal laceration, bloody show prior to delivery, or the initial presentation of placenta previa. All of these patients should be closely monitored and evaluated in the emergency department with further diagnostic testing.

BLS

Request a Responding ALS Agency immediately if there is any abnormal or unexpected vaginal bleeding.

- Request a Responding ALS Agency
- Initiate basic medical care and perform patient assessment
- Establish patent airway using BLS skills, use jaw thrust and bag-valve-mask ventilation as needed
- Use oral or nasal pharyngeal airway adjuncts as needed
- Suction mouth and nose of infant with bulb syringe or appropriate suction device
- Assess lung sounds
- Assess for edema
- Administer oxygen as needed to maintain O2 >94%.
- Apply cervical collar and maintain spinal immobilization if any concern exists regarding spinal trauma
- Record and monitor vital signs
- Obtain a SAMPLE history, if possible
  - Signs and Symptoms, Allergies, Medicines, Pertinent history, Last meal, Events leading up to incident
- Define pain response using OPQRST, if possible:
  - Onset, Provocation, Quality, Radiation, Severity, Time
- Do not delay requests for transport to obtain the above information

Treatment:

- Additionally, ascertain patient history for date of Last Menstrual Period (LMP)
- Prepare patient to be transported by tilting patient right side up 10-15 degrees
- Attempt to obtain fetal heart tones if pregnancy is estimated greater than 10 weeks
- If hypotensive
  - See hypotension protocol
- If in active labor
  - See Emergency Delivery protocol
- Keep accurate count of used perineal pads
- Save any clots or tissue expelled for examination, and transport with patient when Transfer of Patient care is initiated
- **DO NOT** allow anyone to perform vaginal or rectal examination on the patient. Vaginal bleeding may markedly increase and hypovolemia may result.
- Request rapid transport
Notes
Two saturated pads are equivalent to one pint (~250 mL) of blood loss

Questions or Concerns?
Request a Responding ALS Agency immediately if you are unsure of how to proceed with a call.
PROCEDURAL PROTOCOL
DEFIBRILLATION

Background

Defibrillation involves the delivery of non-synchronized direct electric current to the myocardium of a patient exhibiting ventricular fibrillation or ventricular tachycardia without palpable pulses. The depolarization of the entire myocardium may result in a pacemaker cell regaining control of electrical activity and producing adequate cardiac output.

PROCEDURE

● When using an AED, defibrillation should be provided in accordance with the device prompts.
● Pad placement should conform to manufacturer’s standards, refer to package for specific instructions.
● Generally, pads should be placed:
  o Anterior/posterior (typically for infants or small children when only adult AED pads are available)
  o OR Right upper chest/left lower lateral chest
● Make sure to “clear” any personnel prior to delivering energy.
● Patients with automatic implantable cardioverter-defibrillators will need external defibrillation if the device is ineffective.
● If defibrillation is needed on a patient with a permanent implanted pacemaker, the defibrillator pads or electrodes should be placed at least 1 inch away from the pulse generator of the pacemaker.
● Ensure that the patient and device is not sitting in water
PROCEDURAL PROTOCOL
KING LT

Background

King LT tubes are designed for rapid, blind insertion into the airway. When in place, hole in the side of the tube is positioned over the glottic opening into the trachea. When the device's balloon is inflated the areas above and below the glottis opening are occluded, thus forming an air seal and blocking aspiration of stomach contents. The device is easier and faster than endotracheal intubation though it may not provide as strong of seal against aspiration. Aspiration risk can be minimized through use of NG tube suction via the device's side port (see below).

Placement of a King LT airway is indicated in patients who are not guarding their airway (e.g. no gag reflex) and for whom no other airway has been established. They can be placed as an initial airway if difficult airway is suspected (e.g. anterior airway, small oral aperture, etc.). King LT placement is relatively fast and uncomplicated, and thus may minimize desaturations during airway placement.

Contraindications include gag reflex, facial trauma with deformity, inhalation burns and toxic ingestions, and expanding neck mass/hematoma.

PROCEDURE:

- Prepare, position and preoxygenate the patient with 100% O2
- Choose the tube size and syringe for balloon inflation
  - Peds 12-25 kg (Broslow yellow, white, or blue): King Size 2, 25-35 mL
  - Peds 25-35 kg (Broslow orange or green): King Size 2.5, 30-40 mL
  - Large peds or small adult (4-5 feet tall): King Size 3, 45-60 mL
  - Adult (5-6 feet tall): King Size 4, 60-80 mL
  - Adult (>6 feet tall): King Size 5, 70-90 mL
- Check the cuffs for proper inflation and deflation
- Apply chin lift and introduce device to corner of the mouth
- Advance tip between tongue and soft palate rotating tube medially
- Without excessive force, advance tube until the base of the connector aligns with teeth or gums
- Inflate the cuff to manufacturer's recommendations until a seal is obtained
- Connect the tube to BVM, ventilate. You may have to slowly withdraw the tube until ventilation becomes easy and free flowing
- Attach ETCO2 capnography
- If necessary, adjust the cuff inflation pressure to maximize seal
- Re-verify tube placement after every move

Notes

King LT can be considered as an initial airway prior to attempts at endotracheal intubation.
Do NOT use excessive force with placement, if difficult simply use BVM to ventilate and oxygenate the patient.
PROCEDURAL PROTOCOL
OXYGEN MONITORING AND ADMINISTRATION

Background

While it is not necessary to reach 100% blood oxygen saturation, blood oxygen should generally be maintained at greater than 94%. Indications include:

- Shortness of breath or respiratory distress
- Chest pain
- Shock
- Suspected or known trauma, especially head trauma
- Suspected seizure, stroke, or acute change in level of consciousness
- Pregnant patients who may have suspected fetal hypoxia
- Inhalation injury/toxicity, especially suspected CO poisoning
- Patients who normally receive oxygen as part of their usual medical care
- Any patient who you suspect may become hypoxic due to mechanism of injury or nature of illness regardless of SaO2

If patient is able to maintain SaO2 greater than 94% you may elect not to administer oxygen as long as the patient is not suspected of having carbon monoxide exposure, a pneumothorax, or as prescribed for their usual medical care. Patients who are suspected of having a CVA or present with chest pain should only receive oxygen if room air SaO2 is < 94% unless they present with reason to require higher concentrations. If O2 is required, provide the lowest concentration to maintain 94%. Hyperoxia (100%) can be detrimental to patients. Refrain from allowing SaO2 to remain at this level when the patient is receiving supplemental oxygen.

PROCEDURE:

- Choose method of administration by need and tolerance:
  - Patients who require O2 therapy but do not require high concentrations can be treated with a nasal cannula (1-6 lpm).
  - Patients who require high concentration oxygen per specific protocol should receive O2 via non-rebreather (12-15 lpm) mask unless assisted ventilations are required.
  - Adult patients who require higher concentrations of O2 but cannot tolerate a non-rebreather mask can be treated with either blow-by O2 via non-rebreather mask (15 lpm) or nasal cannula (4-10 lpm).
  - If assisted ventilations are required, the patient should receive O2 via bag valve mask (15 lpm) at a respiratory rate per appropriate protocol.
  - Pediatric patients who cannot tolerate the oxygen mask or nasal cannula can receive blow-by oxygen via oxygen extension tubing.

- Patients who normally receive oxygen as part of their usual medical care should be kept on their prescribed rate, unless they present with reason to require higher concentrations.

- Patients who have been exposed to carbon monoxide (CO; e.g. smoke or automobile exhaust exposure in an enclosed space, malfunctioning heaters, etc) should always receive 100% oxygen. In this case measured oxygen saturation may be unreliable and the high-concentration oxygen will help displace CO from hemoglobin. Oxygen may be administered via non-rebreather mask or BVM.

Notes

Some patients with chronic hypoxia (e.g. COPD patients) may tolerate lower oxygen saturation at baseline due to increased blood hemoglobin concentration. Oxygen should still be administered.
APPENDICES
APGAR SCORING

Background

The APGAR score provides a measure of the well being of the newly delivered infant. It is composed of the parameters of appearance, pulse, irritability (grimace), muscle tone (activity), and respirations. The scores may be from 0 to 10; higher scores are more indicative of neonatal wellbeing. APGAR scores should be determined both one and five minutes after delivery; the five minute score is most significant.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>0 points</th>
<th>1 point</th>
<th>2 points</th>
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<tbody>
<tr>
<td>Heart Rate</td>
<td>0</td>
<td>&lt;100</td>
<td>&gt;100</td>
</tr>
<tr>
<td>Respirations</td>
<td>absent</td>
<td>slow, irregular</td>
<td>good, crying</td>
</tr>
<tr>
<td>Irritability to slap</td>
<td>0</td>
<td>grimace</td>
<td>cry</td>
</tr>
<tr>
<td>Muscle Tone</td>
<td>Flaccid</td>
<td>some reflex</td>
<td>active motion</td>
</tr>
<tr>
<td>Color</td>
<td>Blue/pale</td>
<td>body pink</td>
<td>all pink</td>
</tr>
</tbody>
</table>

Total score = sum of each parameter score.

A helpful mnemonic is “APGAR”:
- Appearance (Color)
- Pulse
- Grimace (Grimace or cry to slap)
- Activity (Muscle tone)
- Respirations
# APPENDICES
## APPROVED ABBREVIATIONS FOR DOCUMENTATION

### A
- **Abd**: Abdomen
- **APAP**: Acetaminophen
- **ABC**: Airway, Breathing, circulation
- **ACLS**: Advanced Cardiac Life Support
- **Adm**: Admission
- **ALS**: Advanced Life Support
- **A&O**: Alert and Oriented
- **AMA**: Against Medical Advice
- **ASA**: Aspirin
- **ATLS**: Advanced Trauma Life Support
- **@**: At

### B
- **BBB**: Bundle Branch Block
- **BLS**: Basic Life Support
- **BGL**: Blood glucose level
- **BP**: Blood pressure
- **BM**: Bowel movement
- **BS**: Breath sounds
- **BVM**: Bag-valve mask

### C
- **C**: Centigrade
- **Ca**: Cancer
- **Ca++**: Calcium
- **CP**: Chest pain
- **C/O**: Complains of
- **CHF**: Congestive Heart Failure
- **CAB**: Coronary artery bypass
- **CAD**: Coronary artery disease
- **CABG**: Coronary Artery Bypass Graft
- **Cath**: Catheter, catheterization
- **CBC**: Complete blood count
- **cc**: Cubic centimeter
- **CC**: Chief Complaint
- **CCU**: Coronary care unit
- **CHF**: Congestive heart failure
- **CHI**: Closed head injury
- **Circ**: Circulation
- **Cm**: Centimeter
- **CMS**: Circulation, movement, sensation
- **CNS**: Central nervous system
- **CO2**: Carbon dioxide
- **COPD**: Chronic obstructive lung disease pulmonary disease
- **C-spine**: Cervical spine

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133
<table>
<thead>
<tr>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>C-section</td>
<td>Cesarean section</td>
</tr>
<tr>
<td>CSF</td>
<td>Cerebrospinal fluid</td>
</tr>
<tr>
<td>CSM</td>
<td>Carotid sinus massage</td>
</tr>
<tr>
<td>CVA</td>
<td>Cerebral vascular accident</td>
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<tr>
<td>CVP</td>
<td>Central venous pressure</td>
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<td>CPR</td>
<td>Cardiopulmonary resuscitation</td>
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<td>DM</td>
<td>Diabetes</td>
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<tr>
<td>DC/dc</td>
<td>discontinue</td>
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<tr>
<td>D &amp; C</td>
<td>Dilation and curettage</td>
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<tr>
<td>Detox</td>
<td>detoxification</td>
</tr>
<tr>
<td>DOA</td>
<td>Dead on arrival at hospital</td>
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<tr>
<td>DOE</td>
<td>Dyspnea on exertion</td>
</tr>
<tr>
<td>DOS</td>
<td>Dead on scene</td>
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<tr>
<td>DT</td>
<td>Delirium Tremens</td>
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<td>Dx</td>
<td>diagnosis</td>
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<td>ED</td>
<td>Emergency Department</td>
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<tr>
<td>ECG/EKG</td>
<td>Electrocardiogram</td>
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<tr>
<td>EENT/ENT</td>
<td>eye, ear, nose throat</td>
</tr>
<tr>
<td>EOM</td>
<td>Extraocular movement</td>
</tr>
<tr>
<td>ETT</td>
<td>Endotracheal tube</td>
</tr>
<tr>
<td>ETA</td>
<td>Estimated time of arrival</td>
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<td>ETOH</td>
<td>Alcohol</td>
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<td>F</td>
<td>Fahrenheit</td>
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<tr>
<td>FHR</td>
<td>Fetal Heart Rate</td>
</tr>
<tr>
<td>FB</td>
<td>Foreign body</td>
</tr>
<tr>
<td>FD</td>
<td>Fire Department</td>
</tr>
<tr>
<td>FI</td>
<td>Fluid</td>
</tr>
<tr>
<td>Fx</td>
<td>Fracture</td>
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<tbody>
<tr>
<td>GB</td>
<td>Gallbladder</td>
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<tr>
<td>GC</td>
<td>Gonococcus or gonorrhea</td>
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<tr>
<td>GCS</td>
<td>Glasgow Coma Scale</td>
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<td>Grain</td>
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<td>Gunshot wound</td>
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<td>Gtt(s)</td>
<td>Drops</td>
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<tr>
<td>GU</td>
<td>Genitourinary</td>
</tr>
<tr>
<td>GYN</td>
<td>Gynecology</td>
</tr>
</tbody>
</table>
H
- Hr: Hour
- HA: Headache
- HB: Heart block
- Hct: Hematocrit
- HEENT: Head, ears, eyes, nose and throat
- Hg: Mercury
- Hgb/Hb: Hemoglobin
- H&P: History and physical exam
- HR: Heart rate
- Ht: Height
- Hx: History

I
- ICU: Intensive Care Unit
- IO: Intraosseus
- I&D: Incision and drainage
- IM: Intramuscular
- Inf: Inferior
- IV: Intravenous
- IVF: Intravenous fluids
- IVP: Intravenous push

J
- J: Joules
- JVD: Jugular-venous distention

K
- K+: Potassium
- KO: Knocked out
- KVO: Keep vein open

L
- L: Liter
- Lac: Laceration
- Lat: Lateral
- LB: Large bore
- Lb: Pound
- LBBB: Left bundle branch block
- Lg: Large
- Liq: Liquid
- LLL: Left lower lobe
- LMP: Last menstrual period
- LLQ: Left lower quadrant
- LOC: Loss of consciousness
- L-spine: Lumbar spine
- Lt: Left
- LUL: Left Upper Lobe
<table>
<thead>
<tr>
<th>M</th>
<th>MAE</th>
<th>Moves all extremities</th>
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<tbody>
<tr>
<td></td>
<td>mcg</td>
<td>Microgram</td>
</tr>
<tr>
<td></td>
<td>MCL</td>
<td>Midclavicular line</td>
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<td></td>
<td>mEq</td>
<td>Milliequivalent</td>
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<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>Mg/mgm</td>
<td>Milligram</td>
</tr>
<tr>
<td></td>
<td>MI</td>
<td>Myocardial infarction</td>
</tr>
<tr>
<td></td>
<td>Misc.</td>
<td>Miscellaneous</td>
</tr>
<tr>
<td></td>
<td>mL</td>
<td>Milliliter</td>
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<tr>
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<td>mm</td>
<td>Millimeter</td>
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<tr>
<td></td>
<td>MS</td>
<td>Multiple sclerosis</td>
</tr>
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<td></td>
<td>MVA</td>
<td>Motor vehicle accident</td>
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<td></td>
<td>MVC</td>
<td>Motor vehicle collision</td>
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<td></td>
<td>NaHCO3</td>
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<td></td>
<td>NSR</td>
<td>Normal sinus rhythm</td>
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<td></td>
<td>NPO</td>
<td>Nothing by mouth</td>
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<td></td>
<td>NRB</td>
<td>Non-rebreathing face mask</td>
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<tr>
<td></td>
<td>NS</td>
<td>Normal Saline</td>
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<tr>
<td></td>
<td>NSR</td>
<td>Normal sinus rhythm</td>
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<td></td>
<td>NV</td>
<td>Nausea and Vomiting</td>
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<td></td>
<td>NVD</td>
<td>Nausea, vomiting, diarrhea</td>
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<td>Nursing home</td>
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<td>OR</td>
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<td></td>
<td>Os</td>
<td>Left eye</td>
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<tr>
<td></td>
<td>Od</td>
<td>Right eye</td>
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<tr>
<td></td>
<td>Oz</td>
<td>Ounce</td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>PAC</td>
<td>Premature atrial contraction</td>
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<tr>
<td></td>
<td>Para</td>
<td>Number of pregnancies</td>
</tr>
<tr>
<td></td>
<td>PAT</td>
<td>Paroxysmal atrial tachycardia</td>
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<tr>
<td></td>
<td>Path</td>
<td>Pathology</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Term</td>
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<td>--------------</td>
<td>-------------------------------</td>
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</tr>
<tr>
<td>PD</td>
<td>Police department</td>
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<tr>
<td>PE</td>
<td>Physical exam</td>
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<tr>
<td>Peds</td>
<td>Pediatrics</td>
<td></td>
</tr>
<tr>
<td>Per</td>
<td>By or through</td>
<td></td>
</tr>
<tr>
<td>PERL</td>
<td>Pupils equal and react to light</td>
<td></td>
</tr>
<tr>
<td>PERLA</td>
<td>Pupils equal, and react to light and accommodation</td>
<td></td>
</tr>
<tr>
<td>PID</td>
<td>Pelvic inflammatory disease</td>
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<tr>
<td>PMS</td>
<td>Pulse, motor, sensation</td>
<td></td>
</tr>
<tr>
<td>PND</td>
<td>Paroxysmal nocturnal dyspnea</td>
<td></td>
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<tr>
<td>PO</td>
<td>By mouth</td>
<td></td>
</tr>
<tr>
<td>Pos</td>
<td>Positive</td>
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<tr>
<td>Post</td>
<td>Posterior</td>
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<tr>
<td>PRN</td>
<td>As Needed</td>
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<td>Paroxysmal supraventricular tachycardia</td>
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<td>Patient</td>
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<tr>
<td>PTA</td>
<td>Prior to arrival</td>
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<tr>
<td>PVC</td>
<td>Premature ventricular contractions</td>
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</tr>
<tr>
<td>QA</td>
<td>Quality assurance</td>
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</tr>
<tr>
<td>RBBB</td>
<td>Right bundle branch block</td>
<td></td>
</tr>
<tr>
<td>RBC</td>
<td>Red blood cell</td>
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</tr>
<tr>
<td>Resp</td>
<td>Respiration</td>
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</tr>
<tr>
<td>RHD</td>
<td>Rheumatic heart disease</td>
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</tr>
<tr>
<td>RLQ</td>
<td>Right lower quadrant</td>
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</tr>
<tr>
<td>RO</td>
<td>Rule out</td>
<td></td>
</tr>
<tr>
<td>ROM</td>
<td>Range of motion</td>
<td></td>
</tr>
<tr>
<td>ROS</td>
<td>Review of systems</td>
<td></td>
</tr>
<tr>
<td>RSR</td>
<td>Regular sinus rhythm</td>
<td></td>
</tr>
<tr>
<td>RUQ</td>
<td>Right upper quadrant</td>
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<tr>
<td>Rx</td>
<td>Prescribed Medications</td>
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<tr>
<td>SL</td>
<td>Sublingual</td>
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<tr>
<td>SOB</td>
<td>Shortness of breath</td>
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<tr>
<td>Sol</td>
<td>Solution</td>
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<tr>
<td>Sm</td>
<td>Small</td>
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<tr>
<td>Stat</td>
<td>At once</td>
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<td>SC</td>
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<td>STD</td>
<td>Sexually transmitted Disease</td>
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<td>Superior</td>
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<tr>
<td>Sx</td>
<td>Sign/symptom</td>
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<tr>
<td>SVT</td>
<td>Supraventricular tachycardia</td>
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</tbody>
</table>
T
TB  Tuberculosis
Tbsp  Tablespoon
Temp  Temperature
TIA  Transient ischemic attack
Tid  Three times a day
TKO  To keep open
TM  Tympanic membrane
Tol  Tolerated
TRA  To run at
Tsp  Teaspoon
Tx  Treatment

U
UOA  Upon our Arrival
UA  Urinalysis
Unk  Unknown
URI  Upper-respiratory infection
Uro  Urology
UTI  Urinary tract infection

V
Vag  Vaginal
VD  Venereal disease
VF  Ventricular fibrillation
Via  By way of
Vol  Volume
VS  Vital signs
VT  Ventricular tachycardia

W
WBC  White blood cells
WNL  Within normal limits
WPW  Wolfe Parkinson White syndrome
Wt  Weight
WO  Wide open

X

Y
YO  Year old
Yr  Years
APPENDICES
USEFUL INFORMATION FOR ASSISTING ALS RESPONDERS

12 LEAD EKG

BLS Responders MAY NOT interpret a 12 lead EKG

Background

Indications for performing a 12 lead EKG include: chest pain/thoracic back pain, epigastric pain of unknown etiology, AMS, sudden onset of SOB, diaphoresis, or syncope, CHF, symptomatic diabetics, symptomatic dialysis patients, and any overdose patient. Paramedic discretion may allow for a 12 lead EKG on any patient.

GENERAL ALS PROCEDURE

Technique:
- A 12 lead EKG is composed of electrodes RA, RL, LA, LL, and V1-V6. These are placed as follows:
  - RA - Between the right shoulder and the elbow
  - RL - Above the right ankle and below the torso
  - LA - Between the left shoulder and the elbow
  - LL - Above the left ankle and below the torso
  - V1 - 4th intercostal space right of the sternum
  - V2 - 4th Intercostal space left of the sternum
  - V3 - Between V2 and V4
  - V4 - 5th Intercostal space at the midclavicular line
  - V5 - Anterior axillary line, same level as V4
  - V6 - Midaxillary line, same level as V4 and V5

- Print 2 copies of each 12 lead EKG (1 for EMS report, 1 for hospital)

GENERAL ALS NOTES:

The goal is for ALS to obtain an EKG for all patients presenting with chest pain or an angina equivalent (as listed above) within 5 minutes of ALS arrival on scene. ALS should notify receiving facility with any significant findings ASAP in report (i.e., issuing a STEMI alert to the nearest appropriate hospital). ALS should not delay critical patient care to obtain 12 lead ECG.
APPENDICES
USEFUL INFORMATION FOR ASSISTING ALS RESPONDERS

CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)

Contact a Responding ALS Agency immediately if GEMRU Responders encounter a patient on a CPAP machine, or a patient having concerns about the use of a CPAP machine.

GEMRU BLS Responders MAY NOT place a CPAP machine on a patient or program the CPAP.

Background

Continuous Positive Airway Pressure (CPAP) is a respiratory treatment that uses continuous air pressure and flow to assist breathing and keep the airways open. The CPAP device should be applied to patients who are in moderate to severe distress and exhibiting inadequate oxygenation or ventilation is suspected. This could be a result of pulmonary edema, pneumonia, COPD, etc.

GENERAL ALS PROCEDURE
- Explain the procedure to the patient
- Ensure adequate oxygen supply to ventilation device
- Place the patient on continuous pulse oximetry, continuous EtCO2 and cardiac monitoring
- Place the delivery device over the mouth and nose
- Secure the mask with provided straps or other devices
- Use 5.0 cm H2O of PEEP (pressure may be titrated up to 15 cm H2O as needed)
- Check for air leaks
- Monitor and document the patient’s respiratory response to treatment
- Monitor vital signs at least every five minutes. CPAP can cause BP to drop
- Continue to coach patient to keep mask in place and readjust as needed
- Remove device and consider advanced airway management if respiratory status deteriorates

CONTRAINDICATIONS
- Any alteration in mental status is a contraindication for use of CPAP
- Active vomiting
- Inability to fit mask onto patient (small adults or children)

GENERAL ALS NOTES
- An in-line bronchodilator nebulizer may be placed in the CPAP circuit if needed
- Don’t remove the CPAP device until hospital therapy is ready to be placed on the patient
- Most patients will improve in 10 minutes. If there is no improvement within this time, consider increasing pressure and preparing for drug-facilitated airway management.
- Watch patient for gastric distention (often presents as vomiting in conscious patients)
GEMRU BLS Responders are permitted to carry and directly administer aspirin, if no contraindications exist.

Pharmacologic Effects

1. Acts as an antipyretic, anti-inflammatory agent and inhibitor of prostaglandin production
2. A secondary effect is reduction of platelet adherence, aggregation and clot formation

Indications

Use for patients with chest pain and a high probability of acute coronary syndrome. May be omitted if the patient has taken aspirin within 6 hours prior to your arrival.

Contraindications

Hypersensitivity or allergy to aspirin
Patients at risk for severe bleeding
Blood in emesis
Blood in stool

Cautions

1. Patients with asthma or other forms of reactive airway disease
2. Patients on anticoagulants such as Coumadin
3. Patients with history of gastrointestinal bleeding

Dosage and Administration

The dose is 81-324 mg

Adverse Effects

May induce a reactive airway attack or gastrointestinal bleeding in susceptible individuals
Epinephrine (Adrenaline)

GEMRU BLS Responders are permitted to assist a patient in the administration of an epinephrine ‘pen’ (EpiPen) prescribed to the patient, if no contraindications exist.

Pharmacologic Effects

Alpha and beta adrenergic effects:

a. Increases force of myocardial contraction
b. Increases pulse rate and systolic blood pressure
c. Increases conduction velocity through the A-V node
d. Increases irritability of ventricles
e. Dilates bronchi
f. Vasoconstricts

Indications

1. Anaphylaxis/Severe allergic reactions

Contraindications (in non-life threatening conditions)

1. Coronary insufficiency
2. Dysrhythmias
3. Narrow angle glaucoma
4. Severe hypertension

Cautions

1. Hypertension
2. Hyperthyroidism
3. Elderly patients
4. Diabetes Mellitus
5. Heart disease
6. Tricyclic antidepressant overdose
7. PVD

Adverse Effects

1. Hypertension
2. Supraventricular tachycardia
3. Ventricular Dysrhythmias:
   a. Ventricular premature contractions
   b. Ventricular tachycardia
   c. Ventricular fibrillation
Follow the instructions below:

Instructions:

1. Pull off the safety cap from the pen.
2. Make a fist around the syringe so the orange tip is pointing down.
3. Hold orange tip near outer thigh, swing and press firmly against the outer thigh until you hear it click. Hold it in the thigh for 10 seconds. It can be given through clothing if necessary.
4. Remove EpiPen from the thigh and massage the injection site for 10 seconds. The orange needle cover will now cover the used needle.
5. Place the EpiPen in an approved sharps container
APPENDICES
PEDIATRIC VITAL SIGNS & BLOOD GLUCOSE LEVELS

Normal Pediatric Vital Signs

<table>
<thead>
<tr>
<th>Age</th>
<th>Weight (Kg)</th>
<th>Pulse</th>
<th>Respirations</th>
<th>B/P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborn</td>
<td>3</td>
<td>140</td>
<td>40</td>
<td>80/50</td>
</tr>
<tr>
<td>6 months</td>
<td>6</td>
<td>140</td>
<td>30</td>
<td>90/60</td>
</tr>
<tr>
<td>1 year</td>
<td>10</td>
<td>120</td>
<td>25</td>
<td>90/60</td>
</tr>
<tr>
<td>5 years</td>
<td>20</td>
<td>100</td>
<td>20</td>
<td>100/60</td>
</tr>
<tr>
<td>10 years</td>
<td>30</td>
<td>85</td>
<td>15</td>
<td>110/70</td>
</tr>
<tr>
<td>15 years*</td>
<td>50</td>
<td>80</td>
<td>14</td>
<td>120/80</td>
</tr>
</tbody>
</table>

* (Adult values are applicable from age 15 on)

Pediatric Blood Sugar Values

- 0-2 years: 40-60 gm/dl
- 2-8 years: 60-80 gm/dl
A **Ventricular Assist Device**, or **VAD**, is a mechanical device used to substantially support circulation in a patient with significant cardiac ventricular dysfunction. VADs may be placed for short term use of several weeks, such as in patients recovering from myocardial infarction or heart surgery. VADs may also be placed for long term use of months to remainder of life, such as in patients awaiting a heart transplant or suffering particularly severe congestive heart failure. A VAD is **not** an artificial heart, which completely supports circulation in a patient whose heart has been removed.

VADs can assist either the right (RVAD) or left (LVAD) ventricle, or both at once (BiVAD). The choice of device depends on underlying heart disease and pulmonary arterial resistance. LVADs are more commonly used, but when pulmonary arterial resistance is high, right ventricular assist becomes necessary.

The **Heartmate II** (2nd generation VAD) uses a continuous flow pumping action to produce forward circulation. The **Levacor VAD** (4th generation VAD) uses magnetic levitation technology to suspend the pump’s rotor so that it does not make contact with the pump housing during operation. Second and fourth generation VADs are more simple in mechanism of flow, resulting in smaller VAD size and greater reliability. As with the second generation VAD a **patient utilizing a fourth generation VAD may not have a palpable pulse even though they are alive**. In other words, lack of a pulse does not equal death in these patients.
Ventricular Assist Device/Total Artificial Heart (TAH) - EMS Management (Cont.)

Cardiac Arrest Care in Patients with a VAD:

- Perform chest compressions only after all other ACLS algorithms have been applied.
- Perform standard cardiac arrest resuscitation with the following exceptions/considerations:
  - Cardioversion or Defibrillation with Heart Mate II or Levacor VAD.
- **DO NOT** remove power to VAD prior to cardioverting or defibrillating.

Non-Cardiac Arrest Care in Patients with a VAD:

Emergencies in a patient with a VAD can arise due to:

- Problems directly related to the VAD:
  - Power Failure. (Heart Mate II or Levacor VAD)
  - Suspected mechanical malfunctions characterized by frequent alarms emitting from the system controller, an increase or decrease in flow rates. (Heart Mate II or Levacor VAD)
  - Unusual noises (such as grinding or screeching). (Heart Mate II)
- Focus on switching out the system controller. (see directions below)
- Illness/Injury not related to the VAD - treat per applicable protocol.
- With continuous flow devices, like the HeartMate II, because there is no pulse, it will be difficult to get a blood pressure. When unable to get a blood pressure, use alternative ways to assess the adequacy of perfusion, such as pale vs. pink, dry vs. diaphoretic, and alert vs. confused.

Power Failure of a VAD - EMS Assessment & Care:

- A patient experiencing a power failure with their VAD system will present with signs and symptoms of circulatory collapse (dyspnea, hypoxemia, hypotension, dysrhythmias, altered mental status).
- Focus on restoring power to the VAD by switching batteries in the battery pack, connecting to an AC power source, or switching out the system controller.
When the Pump Has Stopped

- Check the connections between the controller and the pump and the power source and fix any loose connections.
- If the pump does not restart and the patient is connected to batteries replace the current batteries with a new, fully-charged pair.
- If pump does not restart, change controllers.

Alarms: Emergency Procedures

Yellow or Red Battery Alarm:
1. Need to change batteries.

Red Heart Flashing Alarm:
1. This may indicate the pump has stopped or there is not enough blood flow going through the pump.
2. Check patient, check connections and power source.
3. Listen with a stethoscope to see if pump is running:
   a. If pump off, change out the controller.
   b. If pump on, assess patient for hypovolemia or arrhythmia and treat according to protocol.
Changing Batteries

1. Warning: At least one power lead must be connected to a power source at all times.
2. **DO NOT** remove both batteries at the same time or the pump will stop.
3. Obtain two charged batteries from patient’s black bag.
4. Check the charge of the battery by pressing the battery gauge button on the end and top of the battery.

5. Remove only one battery from the clip by pressing the tab on the battery clip to release the battery.
6. Controller will start beeping and flashing green lights.
7. Replace with new fully charged battery by lining up the arrows on the battery and the clip and pressing until you hear a “click.”
8. Repeat previous steps with the second battery and battery clip. Remove only one battery from the clip by pressing the tab on the battery clip to release the battery.
9. Controller will start beeping and flashing green lights.
10. Replace with new fully charged battery by lining up the arrows on the battery and the clip and pressing until you hear a “click.”
11. Repeat previous steps with the second battery and battery clip.
1. Place the replacement Controller within easy reach, along with the batteries/battery clips or PBU cable. **NOTE:** The spare controller is usually found in the patient's black bag.

2. Make sure patient is sitting or lying down since the pump will momentarily stop during this procedure.

3. Rotate the perc lock on the **replacement** Controller in the direction of the “unlocked” icon until the perc lock clicks into the fully – unlocked position.

4. Repeat Step 2 for the **original** Controller until the perc lock clicks into the fully – unlocked position.

5. Disconnect the perc lead from the **original** Controller by pressing the metal release tab on the connector socket. **The pump will stop and an alarm will sound.**

6. Connect the perc lead to the new, **replacement** Controller:
   a. Line up the mark on the perc lead connector with the mark on the metal tab on the new Controller.
   b. Fully insert the connector into the socket of the new Controller and turn the perc lock to the “locked” position.

7. Connect the new **replacement** Controller to power source (i.e., batteries or PBU cable). **The pump should restart.**

8. After the pump restarts, rotate the perc lock on the new **replacement** Controller in the direction of the “locked” icon until the perc lock clicks into the fully – locked position.

9. Disconnect power from the **original** Controller to stop the alarm.
When the Pump Has Stopped

- Check the connections between the controller and the pump and the power source and fix any loose connections.
- If the pump does not restart and the patient is connected to battery replace the current battery with a new, fully-charged battery.
- If pump does not restart, change controllers.

Alarms: Emergency Procedures

1. **Yellow Battery Alarm**: Need to change the battery.

2. **Red Change Controller Alarm**: This may indicate the pump has stopped. Check patient, check connections and power source, listen with a stethoscope to see if pump is running. If pump off, change out the controller. If pump on, call LVAD support for assistance.

3. **Telephone Alarm**: One of more of the Levacor parameters is abnormal. Plug into base unit if possible.

4. **Pump Disconnected Alarm**: Check connections. If connections okay and pump off, change out pump cable extension.
TROUBLESHOOTING: Levacor

Changing Batteries

1. The wearable, rechargeable batteries provide power to the external controller and allow the patient to be ambulatory.

2. The battery is typically carried in a Carry Bag with the controller and weighs about a pound.

3. The battery has 5 green lights to indicate the state of its charge. Each light represents 20% of battery charge. A push button on the battery panel will illuminate the lights.

4. One light will turn to yellow and an alarm will sound when the battery has 20% of less time remaining.

5. One battery should give up to 5 hours worth of power.

6. To change out the battery for the L4G, rotate the perc lock on the battery in the direction of the “unlocked” icon until the perc lock clicks into the fully – unlocked position.

7. Disconnect the current battery from the controller by gently turning the knob to disconnect the battery.

8. The internal battery inside the controller will power the pump while disconnected from the battery.

9. Replace with new fully charged battery by lining up the connector with the controller, gently inserting the knob, and pushing gently until you hear a “click”. The battery should lock into place.
TROUBLESHOOTING: Levacor

Changing Controllers

1. Locate the backup system controller in the patient’s LVAD black bag.
2. Make sure patient is sitting or lying down since the pump will momentarily stop during this procedure.
3. Disconnect the pump from the current controller by unscrewing the red to red cable.

4. Reconnect the pump to the back - up controller by matching up the arrows and screwing the red cable to the red receptacle.

5. Connect the controller to a power source (i.e. battery)

6. The pump will restart as soon as it is connected to power.
Basic Operations

1. Pump is connected to 2 drivelines (air lines) that are attached to the driver, which runs the pump
2. Do not kink the drivelines.
3. The electrical conduction system of the heart has been removed so a heart rhythm cannot be viewed on the ECG.
4. Batteries last approximately 2 hours for a set.
5. Plug the driver into an outlet as often as possible for power.
Changing to the Back-Up Driver

1. **With the Wire Cutter Tool, cut the Wire Tie under the metal release button of the CPC Connector that secures the **red** TAH Cannula to the **red** Freedom Driveline. **DO NOT DISCONNECT THE CANNULA FROM THE DRIVELINE YET.**

2. **With the Wire Cutter Tool, cut the Wire Tie under the metal release button of the CPC Connector that secures the **blue** TAH Cannula to the **blue** Freedom Driveline. **DO NOT DISCONNECT THE CANNULA FROM THE DRIVELINE YET.**

3. **Disconnect the **red** Cannula from the **red** Driveline of the primary Freedom Driver.

4. **Press and hold down the metal release button.**

5. **Pull the **red** Cannula away from the **red** Driveline **Immediately** insert the **red** Cannula into the new **red** Driveline from the backup Freedom Driver until you hear a click.**

6. **Simultaneously disconnect the **blue** Cannula from the **blue** Driveline of the primary Freedom Driver:**

7. **Press and hold down the metal release button.**

8. **Pull the **blue** Cannula away from the **blue** Driveline.**

9. **Immediately insert the **blue** Cannula into the new **blue** Driveline from the backup Freedom Driver until you hear a click.**

When the Pump Has Stopped: **Immediately switch to the back-up driver.**
Total Artificial Heart

Special Notes:

1. External chest compressions cannot be performed on a patient with a Total Artificial Heart. Changing to the back-up driver is essential to maintaining circulation. There’s no “hand-pump” to operate the Total Artificial Heart manually.

2. If the pump stops a red fault alarm along with a continuous audio tone will sound.

3. All device settings are preset and cannot be changed in the field.

4. Since the electrical conduction system of the heart has been removed the underlying ECG rhythm will show asystole. The patient with a Total Artificial Heart should not be defibrillated.

5. If the driver pump is connected and functioning properly, the patient will have a pulse.

6. A measurable blood pressure is obtainable using a manual or automated blood pressure device.

7. Incorporate device into assessment.

8. General Supportive Care and initiate treatment per applicable protocol.

9. Listen just below the heart to hear if the device is running and assess for a palpable pulse.

10. If there is no palpable pulse detected, consider the following:

   - The device is not running: Troubleshoot the device and treat per protocol.
   - The device is running, but the patient is still unconscious or unstable:
     - Neurological evaluation: Possible Stroke
     - Expose the patient:
       - Be cautious with trauma shears; don’t cut a driveline or cable exiting the patient's body that might be hidden under an article of clothing;
       - Assess the dressings over the driveline exit site (found in the abdominal area) for signs of infection.