Tampa Fire Rescue

Medical Protocols

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Tampa Fire Rescue
Medical Protocol

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Introduction

This document describes the methods by which Tampa Fire Rescue will provide the highest quality pre-hospital care available. We have incorporated evidence based guidelines with historically proven practices to produce this protocol. While it is impossible to address every possible variation of traumatic injury or disease process, the policies, protocols and procedures do provide a foundation for treating the vast majority of patients we encounter. Certainly, our education, experience and clinical judgment will assist us as we provide the highest quality patient care available. Additionally, on-line medical control is Strongly encouraged for those patients that do not fall within the scope of this document or those that present with a complicated clinical picture.

Foundations of Practice

Definition of a Patient

A patient is an individual requesting or potentially needing medical evaluation or treatment. The patient- provider relationship is established via telephone, radio, or personal contact. It is the providers responsibility to ensure all potential patients, regardless of the size of the incident, are offered an opportunity for evaluation, treatment, and transport. All personnel shall follow the guidelines and procedures for documenting patient encounters as set forth by this protocol and Tampa Fire Rescue's Rules and Regulations.

Rights of a Patient

Once we have begun collecting information regarding a patient encounter, it is important for us to take every precaution to protect patient confidentiality. While we have HIPAA issues to consider, we also have an ethical obligation to protect a patient's confidential information. This applies not only to sharing the written information but also requires us to monitor our speech as to not inadvertently share patient information in conversation.

Competent patients retain the right to accept or refuse medical care, even if the consequences of the refusal of care may potentially be harmful for the patient. In the event a patient attempts to refuse medical care, it is important to recall that we should:

- be courteous
- offer transport without some (or all) of the recommended therapies / treatments if that's what the patient will allow (document discussion that lead to the elected course of treatment(s)

- clearly advise the patient of the possible complications of their decision
- clearly advise the patient to call back if they subsequently desire treatment and transport
- accurately document all components of the patient encounter
- consider calls to on-line medical control for cases of concerning refusals

Special Considerations Regarding Consent

Minors

- In general, patients under the age of 18 may not consent to medical treatment or transport. The following groups may consent for the treatment of a minor;
  - Mother or Father
  - A Legal Guardian
  - An individual standing in *loco parentis.* A person stands in *loco parentis* when he or she takes on the responsibilities of a parent for a child (e.g. a stepparent may stand in (*loco parentis*).
  - The leader of a group of children in possession of written permission from the parent authorizing emergency medical treatment (e.g. school field trip).
- In the following circumstances no consent is required prior to initiating treatment:
  - The parent, guardian, or person standing in loco parentis cannot be reached and the minor needs to receive medical attention.
  - The identity of the child is unknown and a delay in providing treatment would endanger the life of the child.
  - The effort to contact the child's parent or guardian or a person standing in *loco parentis* would result in a delay that would seriously worsen the condition of the child.
- In Florida, under the following circumstances, a minor may consent to treatment without the knowledge of the parent:
  - Pregnancy
  - Treatment for sexually transmitted diseases
  - Alcohol or drug abuse
  - Emotional disturbance

Life -threatening situations without the ability to communicate

- A patient of any age who is unable to communicate because of injury, accident, illness, or unconsciousness AND who is suffering from what appears to be a life-threatening injury or illness treated on the principle of implied consent.

- The principle of implied consent presumes that if the individual with the illness or injury were conscious and had the ability to communicate, he or she would consent to emergency treatment.
- In these situations, patients may be transported without their consent. Law enforcement, physical restraint and / or chemical restraint may be required.

Potentially life-threatening situations

Patients in this category fall into one of two groups: the alert patient who has a concerning presentation and refuses treatment and / or transport (e.g. the patient with chest pain and ECG changes) or the patient who may be intoxicated but does not have what reasonably appears to be a life-threatening injury (e.g., the patient who has consumed alcohol and has a small laceration).
In these situations the following steps should be taken.

- Determine the patient's ability to understand the risks and benefits of refusing treatment (aka "capacity"). This is more than simply being "Alert and oriented x4". Document the results.
- Determine what factor(s) is / are influencing the patient to refuse medical care. Resolve the ones in your own power (e.g. if the patient does not want an IV, offer the transport without one) Document the conversation and result.
- Attempt to communicate with the patients spouse / significant other or other family members if available.
- If the patient continues to refuse, clearly explain the risks of refusal and have the patient repeat the risks back to you. Consider the intervention of on-line medical control. Document the outcome.
- In a courteous manner, assure the patient they can call back for treatment and / or transport at any time.

Guidelines for the use of these protocols

The medical protocols, along with on-line medical command, authorize specific treatments for the prehospital patient. Determination of which protocol to use in any situation is at the prehospital providers discretion, but the individual protocols should not be modified without specific discretion from on-line medical command.

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TAMPA FIRE RESCUE MEDICAL PROTOCOL				
GENERAL PROTOCOL	REVISION DATE 01-2018	Code of Medical Ethics	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Policy

Personnel employed by Tampa Fire Rescue shall have the fundamental responsibility to conserve life, alleviate suffering, promote health, to do no harm, and to encourage the quality and equal availability of emergency medical care.

Procedure

- Provide services based on human need, with respect for human dignity, unrestricted by consideration of nationality, race, creed, color, status, or ability to pay.
- Respect and hold in confidence all information of a confidential nature obtained in the course of professional work unless required by law to divulge such information.
- Maintain professional competence and demonstrate concern for competence of other EMTs and Paramedics employed by Tampa Fire Rescue.
- Work harmoniously with and sustain confidence in other emergency services associates, nurses and physicians, as well as other members of the Emergency Services health care team.
- Refuse to participate in unethical behavior and procedures and assume the responsibility to expose unethical conduct of others to the appropriate authority in a proper and professional manner.

Notification of Medical or Procedural Errors

All errors of “omission” or “commission”, in addition to incidents dealing with medication or procedural errors should be reported to the Rescue Office.
The following procedure should be followed.

Medical Error

If known at the time of transfer at the hospital that a medical error has occurred, the crew should advise the hospital and healthcare team attending the patient. The Officer in Charge (OIC) shall document the type of medication error in the Electronic Patient Care Report or (ePCR). The OIC shall notify the Rescue Office of the incident and shall provide supplemental documentation from all personnel involved. The supplemental documentation should expand upon the circumstances of the event, the type of medication involved, and the route of administration.

Procedural Error

If known at the time of transfer at the hospital that a procedural error has occurred, the crew should advise the hospital and healthcare team attending the patient. The OIC shall document the type of procedural error in the (ePCR). The OIC shall notify the Rescue Office of the incident and shall provide supplemental documentation from all personnel involved. The supplemental documentation should expand upon the circumstances of the event, and the type of equipment involved in the incident.

Errors recognized after departing the Healthcare Facility should be communicated by the OIC (Officer in Charge) to the Rescue Office. An attempt to notify the receiving facility should be made and documented.

Tampa Fire Rescue
Medical Protocol

ADMINISTRATIVE

PROTOCOL

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Air Transportation	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

Air transport should be utilized whenever patient care can be improved by decreasing transport time or giving advanced care not available from TFR or mutual aid, but available from aero-medical transport services.

Purpose

The purpose of this policy is to:

- improve patient care in the pre-hospital setting.
- allow for expedient transport in serious, mass casualty settings.
- provide life-saving treatment such as blood transfusion.

Procedure

☐ Air transport should be considered if any of the following criteria apply**:**

- high priority patient with > **20 minute** transport time.
- multiple casualty incident with red or yellow triage tag patients.
- multi-trauma or medical patient requiring life-saving treatment not available in the typical pre-hospital environment (i.e., blood transfusion, invasive procedure, operative intervention).

☐ If a need for air transport is anticipated, but not yet confirmed, an aero- medical transport service can be placed on standby.

☐ If the scene conditions or patient situation improves after activation of the aero-medical transport service and air transport is determined to be unnecessary, paramedic or administrative personnel may cancel the request for air transport.

☐ Minimal information which should be provided to the aero-medical transport service includes:

- number of patients.
- age of patients.
- sex of patients.
- mechanism of injury or complaint (MVA, fall, etc).

  - ➢ If the patient has been exposed to hazardous materials, information on type of exposure and type of decontamination procedures utilized must be relayed to the flight crew.
  - ➢ No hazardous materials patient will be transported by air unless they are decontaminated first. The final discretion will be up to the flight crew.

Background:

This protocol is intended to give direction and guidance in patient care decisions that are applicable to the wide range of patient types seen by Tampa Fire Rescue.

As always, it is very important that this information is combined with an appropriate patient care survey to ensure correct care and, transfer decisions are in the best interest of the patient. Pre-hospital emergency care is simply a series of decisions about treatment and transport. Your assessment findings will determine the patient care you provide and the urgency in which you provide it. The patient assessment process includes the following components:

- A size - up of the scene to identify safety threats.
- Identify initial threats to the patient's life, and treat them.
- Perform a physical exam, looking for signs of illness and injury.
- Obtain vital signs to determine how your patient is tolerating the problem.
- Gather history that may help explain the physical findings and abnormal vital signs, if present.
- Prepare the patient for transport and continuously assess for changes in his or her condition.

Average Vitals by Age

	Age 3	**Age 5**	**Age 12**	**Adult**
Pulse	110	100	75	70
Systolic BP	100	100	110	120
Diastolic BP	65	65	70	75
Respirations	25	20+	20-	15
Weight	27	36	66	> 110

*Adapted and averaged from McDonald and Avery, *Dentistry for the Child and Adolescent*, 7th Ed., and Pediatric Vital Signs, www.imedicine.com.

Normal values for respiratory rates in children*

Age	**Respiratory rate**
Birth-6 weeks	45-60/min
6 weeks-2 years	40/min
2-6 years	30/min
6-10 years	25/min
Over 10 years	20/min

Acceptable heart rates in children*

Age	**Awake**	**Exercise / Fever**
Newborn	100-180	<220
1 week-3 mo	100-220	<220
3 mo-2 yrs	80-150	<200
2-10 yrs	70-110	<200
>10 years	55-90	<200

Normal vital signs by age*

Age	**Wt**	**SBP**	**DBP**
Newborn	1	40-60	20-36
Newborn	2-3	50-70	30-45
1 month	4	64-96	30-62
6 months	7	60-118	50-70
1 year	10	66-126	41-91
2-3 years	12-14	74-124	39-89
4-5 years	16-18	79-119	45-85
6-8 yrs	20-26	80-124	45-85
10-12 yrs	32-42	85-135	55-88
>14	>50	90-140	60-90
Adult	70	90-140	60-90

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	ALS – BLS Determination	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

PROTOCOLS TO BE USED WHEN SUMMONING BLS FROM THE SCENE

ABDOMINAL PAIN

ALS:	BLS:
• Male ≥ 30; female ≥ 45 (*cardiac until proven otherwise*). • Female age 12-50 who has fainted or has systolic BP <90 (ectopic) • Not alert (*not at normal baseline*) • VS not normal for age and size	• Normal VS; baseline mental status • No pain, any age group • Abdominal pain present- does not fall within age or symptom categories mentioned under ALS.

ALLERGIES: HIVES - MEDICATION REACTIONS - STINGS

ALS:	BLS:
• Difficulty breathing or swallowing • Condition worsening • Not alert (*not at normal baseline*) • VS not normal for age and size • Known history of anaphylaxis	• Normal VS; baseline mental status • No difficulty breathing or swallowing • Lungs clear to auscultation • Rash, hives or itching may be present

ANIMAL BITES - ATTACKS

ALS:	BLS:
• Peripheral bites with serious hemorrhage • Severe central bites (*see trauma alert criteria)* • Large carnivores, zoo or exotic animals • Any snake bites • Not alert; abnormal VS	• Normal VS; baseline mental status • Superficial or minor bites • Spider or insect bites, no other symptoms

ASSAULT - RAPE

ALS:	BLS:
• Possibly dangerous injuries • Uncontrolled hemorrhage • Abnormal breathing • Not alert; abnormal VS	• Normal VS; baseline mental status • Not dangerous injuries

BACK PAIN (NON-TRAUMATIC)

ALS:	BLS:
• Fainting, age ≥50 (*rule out aortic aneurism*) • Not alert • Abnormal VS	• Normal VS; baseline mental status

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	ALS – BLS Determination	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

BREATHING PROBLEMS

ALS:	BLS:
• Abnormal ventilation or respiratory effort. • Patient on home apnea monitor.	• Baseline normal ventilation and respiratory effort. • Normal VS; baseline mental status

BURNS - EXPLOSION

ALS:	BLS:
• Large burns (> 15% is a Trauma Alert) • Explosions; chemical burns (Hazmat) • Difficulty breathing • Not alert (*not at baseline*) • Burns on face involving nose or mouth	• Normal VS; baseline mental status • Small burns < 15% • Sunburn or minor burns

CARBON MONOXIDE – INHALATION - HAZMAT

ALS:	BLS:
• Hazmat incident • Difficulty breathing • Not alert (*baseline*) • Abnormal VS	• Normal VS; baseline mental status • Breathing normally • No chemical exposure (Hazmat)

CARDIAC - RESPIRATORY ARREST

ALS:	BLS:
• Cardiac/respiratory arrest is ALS.	• NONE

CHEST PAIN

ALS:	BLS:
• Abnormal breathing • Suspected cocaine use • Cardiac history (*CAD, past MI, hypertension)*) • Not alert • Sweaty or changing color • Age $\geq$ 30	• Normal VS; baseline mental status • Normal breathing, age < 30 • Regular pulse

CHOKING

ALS:	BLS:
• Symptomatic • Abnormal breathing • Not alert; abnormal VS	• Normal VS; baseline mental status • Not currently choking, can talk or cry *(appropriate for age)* • Breathing normally

CONVULSIONS - SEIZURES

ALS:	BLS:
***CONSIDER CARDIAC ARREST IN PATIENTS ≥ 30 YEARS OF AGE *** • Pregnancy • Trauma • Diabetic • Cardiac history *(CAD, MI, hypertension))* • Continuous or multiple seizures • Abnormal breathing • No seizure history • Age ≤ 3	• Normal VS; baseline mental status • Breathing normally • History of epilepsy, with single, short seizure.

DIABETIC PROBLEMS

ALS:	BLS:
• Unconscious; mental status not baseline • Glucose less than 60 • Abnormal breathing *(slow or rapid)* • High blood sugar with other ALS priority symptoms.	• Normal VS; conscious and alert (*baseline)* • Breathing normally • High blood sugar - no associated symptoms

DROWNING (NEAR DROWNING) - DIVING ACCIDENT

ALS:	BLS:
• Abnormal breathing • Not alert • Suspected neck injury • Diving or SCUBA accident	• Normal VS; baseline mental status • Normal breathing • Normal vital signs • Meets no trauma alert criteria

ELECTROCUTION - LIGHTNING

ALS:	BLS:
• ALL electrocution injuries are ALS	• NONE

EYE PROBLEMS - EYE INJURIES

ALS:	BLS:
• Severe eye injuries • Not alert • Hazmat	• Minor eye injuries (*abrasion, welding, small foreign body, contact lens problem, allergy, infection)* • No associated injuries/exposures

FALLS/TRAUMATIC BACK INJURIES

ALS:	BLS:
• Dangerous associated injury • Abnormal breathing • No pain or movement below injury • Numbness or tingling sensations • Not alert; abnormal VS for age • Age ≤ 3	• Normal VS; baseline mental status • No dangerous associated injuries • Normal breathing • Meets no trauma alert criteria

HEADACHE

ALS:	BLS:
• Not alert • Recent head injury *(<48 hours)* • Stroke symptoms *(Refer to FAST-ED Scale)* • Sudden onset of severe pain *("worst headache of my life")* • History of cerebral aneurism	• Normal VS; baseline mental status • Headache with no other symptoms • Describes headache as "typical", like previous headaches • Negative on Fast-ED Scale

HEART PROBLEMS

ALS:	BLS:
• Abnormal VS • Chest tightness, pressure, constricting band, crushing discomfort *(may radiate to arms, jaw, neck, or back)* • Nausea, sweating • Not alert • Cardiac history, although alone, is not criteria in an asymptomatic adult patient. *(CAD, MI, hypertension)* • Patient on home EKG monitor. • Recent cocaine use *(within 1 week)* • Firing of implanted defibrillator	• Normal VS; baseline mental status • Asymptomatic patient with cardiac history

HEAT - COLD EXPOSURE

ALS:	BLS:
• Cardiac history *(CAD, MI, hypertension))* • Not alert • Change in skin color; ▪ heat stroke: red, dry skin with decreased mental status ▪ frostbite: pale, grey, numb "bloodless" skin ▪ hypothermia: pale, cyanosis with decreased mental status	• Normal VS & baseline mental status • No other symptoms

HEMORRHAGE - LACERATIONS

ALS:	BLS:
• Blood thinners or bleeding disorder • Uncontrolled bleeding from armpit, groin, neck, rectum, vomiting blood • Arterial bleeding from abdomen, upper arm, chest, face, upper leg • Hypotension, weak, thready pulse • Difficulty breathing, shallow breathing • Traumatic bloody urine • Vaginal hemorrhage - bright red blood • Not alert • Pallor	• Normal VS; baseline mental status • Minor bleeding from non- dangerous area. • Non-traumatic bloody urine • Vaginal bleeding, minimal blood loss *(See also Pregnancy/Childbirth/Miscarriage)*

INDUSTRIAL - MACHINERY ACCIDENTS

ALS:	BLS:
• Amputation; candidate for re-implantation *(Transport to TGH)* • Other ALS priority symptoms	• Normal VS; baseline mental status • Minor injury • No ALS priority medical symptoms

OVERDOSE - INGESTION - POISONING

ALS:	BLS:
• Not alert; unable to speak • Abnormal breathing • Tricyclic or other anti-depression medication overdose • Cocaine • Acid or lye • Violent *(Rule out hypoxia, occult cerebral bleed, overdose, head trauma, etc.)* • Age $\leq$ 3	• Normal VS; baseline mental status • No other ALS priority symptoms • Violent, not due to hypoxia, occult head injury, acute cerebral bleed. *When in doubt, call Poison Control at 1-800-222-1222 for specific advice concerning type of overdose/ingestion/exposure.*

PREGNANCY – CHILDBIRTH - MISCARRIAGE

ALS:	BLS:
• 2nd trimester bleeding or miscarriage • Baby born; in distress: premature, meconium present, APGAR ≤ 7 • 3rd trimester bleeding • Breech or abnormal presentation • High-risk or known complications.	• Normal VS; baseline mental status • 1st trimester bleeding or miscarriage • Illness during pregnancy without ALS priority symptoms • Baby born; no distress: full term, 5 minute APGAR > 7.

PSYCHIATRIC - SUICIDE ATTEMPT

ALS:	BLS:
• Abnormal mental status *(not alert)* • Blood sugar less than 60 • Violent, with suspicion of overdose or other medical cause • Hanging, strangulation, or suffocation • Suspicion of overdose • Suspicion of alcohol or drug withdrawal syndrome (DTs)	• Normal VS; baseline mental status • No other ALS priority symptoms • Violent, with normal VS, no evidence for medical cause.

STAB - GUNSHOT WOUND

ALS:	BLS:
• Not alert • Central wounds (*Trauma Alert)* • Wounds with uncontrolled hemorrhage • Abnormal breathing • Hypotension	• Normal VS; baseline mental status • Peripheral wound, no ALS priority symptoms

STROKE - CVA

ALS:	BLS:
• Weakness or paralysis, numbness, speech or movement problems *(refer to the FAST-ED Scale)* • Not alert - not baseline • Abnormal breathing • Symptoms not baseline	• "Stroke is NEVER BLS. Even if it is outside of the window for more invasive therapy or thrombolytics. • Old strokes often re-stroke in the same area because of baseline disease in that area. • Be very conservative with these – many have been missed because they were not looked for. This delays care, is detrimental to the patient".

TRAFFIC ACCIDENTS

ALS:	BLS:
• Age $\leq$ 3 • Bleeding disorders *(i.e. Hemophilia)* • Meets trauma alert criteria • Not alert • Abnormal breathing *(see also Traumatic Injuries below)*	• Normal VS; baseline mental status • Minor injuries *(ankle, arm, collar bone, elbow, finger foot, hand, hip, knee, lower leg, shoulder, toe, wrist)* • Neck or back pain, no other ALS priority symptoms *(see also Traumatic Injuries below)*

TRAUMATIC INJURIES, SPECIFIC

ALS:	BLS:
• Abnormal ABCs • Not alert • Significant mechanism, injury to possibly dangerous area • Suspected spinal cord injury • Trauma alert criteria	• Normal VS; baseline mental status • Injury to non-dangerous area • Minor abrasions, lacerations to any area with no ALS priority symptoms or criteria

UNCONSCIOUS - FAINTING (NON-TRAUMATIC)

ALS:	BLS:
• Abnormal VS • Multiple recent fainting episodes • Females with abdominal pain age 12-50 • Abnormal breathing • Cardiac history *(CAD, MI, hypertension))* • Not alert	• Normal VS; baseline mental status • Single fainting episode, now awake and alert with normal VS • Near fainting episode, now awake and alert with normal VS

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Annual Protocol Review	ISSUE DATE 07-2016	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Purpose

To update Tampa Fire Rescue Medical Protocol annually

Policy

Tampa Fire Rescue will update the Medical Protocol annually.

- Review Medical Protocol and make necessary changes to stay current with evolving changes including treatment, procedures and medications.
- Administrative Directive will be added to TFR medical protocol thru out the year.
- Administrative Directive will supercede the current medical protocol.
- Administrative Directive will be incorporated into the Medical Protocol each year at time of revision.
- Medical Director will review and approve medical protocol annually.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 6/2014	Bariatric Patient Transport	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Policy

To provide guidelines for the transportation of bariatric patients. Rescue 20 will provide bariatric transport services to surrounding agencies, upon request. They will also provide bariatric, inter-facility transport services, if the originating facility is within Hillsborough County. For critical care patients, this will involve consultation with the OIC of Rescue 3.

Purpose

To provide specialized transportation for patients whose needs exceed normal resources of Tampa Fire Rescue.

Definitions

Bariatric patient: a patient who weighs more than 500 lbs. or whose girth exceeds the width of a normal stretcher.

Resources

Rescue 20 will serve a dual role as a bariatric transport unit and is equipped with:

- an electric / hydraulic stretcher that is capable of lifting 700 lbs. and has a carrying capacity of 1000 lbs. in the full down position.
  - The stretcher has a Large Body Surface (LBS) attachment that extends its width to 35 inches.
- an aluminum ramp and winch system to assist with loading bariatric patients.

Procedure

- ☐ 911 calls for service to bariatric patients will be triaged through normal dispatch protocols.
- ☐ When a TFR unit arrives on scene, the OIC will make the determination that bariatric services are required. Consideration should be given to the time required to respond and set up the equipment. A critical patient may be better served utilizing other means of transport such as calling for additional manpower and using the bariatric transfer tarp to move the patient to the floor of a closer, available TFR transport vehicle.
- ☐ In cases where there is a known bariatric patient (prior visits, caller information, etc.), Rescue 20 may be dispatched along with the normal response.
- ☐ In all cases, a minimum of one Engine and / or Truck Company will be dispatched with Rescue 20 to assist with set up and loading.
- ☐ Hospital personnel should be utilized to assist with unloading the patient at the receiving facility. This information will need to be communicated to the receiving facility.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	Bystanders	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

Bystanders are to be treated with courtesy and may be utilized for assistance when necessary, but should not be allowed to interfere with patient care.

Purpose

To establish a guideline by which EMS personnel interact with and utilize assistance from bystanders at scenes.

Procedure

- ☐ Bystanders should be treated with courtesy at all times.
- ☐ At no time should bystanders be allowed to interfere with patient care.
- ☐ Bystanders may be utilized for assistance if necessary, but this practice should be kept to a minimum and should not imperil the bystander(s) in any way.
- ☐ Bystanders who assist in patient care activities should be provided with situation appropriate personal protective equipment.
- ☐ Bystanders who represent themselves as physicians are addressed in the Physician on Scene policy.
- ☐ Bystanders who interfere with appropriate patient care, and cannot be controlled verbally by EMS, will be subject to removal from the scene by law enforcement.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	Child / Adult Abuse Management and Reporting	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

EMS providers are required to immediately report any abuse, or suspected abuse, of a child or elder, to the Florida Department of Children and Family Services. Failure to do so is punishable, by law, as a civil violation.

Purpose

To function as advocates for patients at risk.

Procedure

☐ Possible indicators of abuse include:

- an injured child under two years of age, especially hot water burns and fractures.
- facial, mouth or genital injuries.
- multi-planar injuries (front and back, right and left) especially when not over a bony prominence.
- injuries of different age (new and old).
- poor nutrition, poor care.
- delay in seeking treatment.
- vague, inconsistent, or changing history.
- the comatose child, the child in shock, or the child in cardiac arrest.
- an abandoned elder or child, unable to care for themselves.

☐ Pre-hospital management of abuse or suspected abuse

- Protect the child / elder. Call the police if necessary.
- Do not question or accuse the caretaker.
- Treat the injuries according to standard protocol.
- Convey your impressions to the hospital staff.
- Write a detailed, descriptive narrative in the electronic patient care report (ePCR). This report will likely become a legal document. Do NOT make a diagnosis of abuse. Simply describe your findings in the report, in detail.
- Make a report. Call the HRS Abuse Hotline (**1- 800- 96ABUSE**), 24 hours a day. You will be protected by law from civil liability for making such a report.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN. PROTOCOL	REVISION DATE 09/05/17	**Controlled Substance Order Policy MDAFB R53**	ISSUE DATE	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

In accordance with FAC 64J-1.021, all Tampa Fire Rescue personnel will handle controlled substances in the following manner.

☐ Only Florida State Certified Paramedics will be allowed to administer controlled substances.

☐ The controlled substances will be stored in a locked drug compartment attached to the ALS vehicle, or other secured location, and are to be accessed only by personnel specifically mentioned in this document.

☐ The OIC of an ALS unit will be responsible for the controlled substances during their tour of duty.

- The OIC will physically have control of the drug box key.
- Under no circumstances will the key be left in view of the general public or where they have access.

☐ The controlled substance logbook is a bound book with consecutively numbered pages that will be kept locked in the box with the controlled substances.

- The book consists of daily inventory and usage information.
- Entries in the logbook are to be completed by the OIC.

Purpose:
Provide guidance for the replenishment of medications that are kept under lock and key on the contracted Rescue Unit at MDAFB R53.

Note: Controlled substances are Fentanyl, Morphine, Lorazepam, Midazolam, Ketamine and Etomidate.

Each controlled substance will be issued a **blue inventory form** (Completed by a representative from MDAFB) issued by the pharmacy. This blue pharmacy form is to remain with the medications and the Tampa Fire Rescue Controlled Substance Log at all times.

Procedure:

1. Once a controlled medication is used by the ambulance crew, the medication will be replaced. This is a one for one replacement program.
2. The shift that used the medication will be responsible for replacing the medication.
3. The airman assigned to the ambulance crew will be responsible for ordering the medication in CHCS.

ProcedureCont.:

4. The medication will take 24 hours to fill by the pharmacy.
4. On the following duty day, the Lieutenant/Acting Lieutenant will bring the TFR controlled substance log and blue pharmacy inventory form to the pharmacy.
5. Please report to window #1 and ask the technician if you can move to the next closed window. This is to not slow the operation of the pharmacy.
6. TFR personnel will complete the TFR controlled substance logbook; a member of the air crew will complete the blue pharmacy inventory form.
7. The pharmacy tech will sign the TFR controlled substance log under the supplier column, when the medication is issued.

PREFACE

- ⇨ Failure to comply with this policy is in direct violation of Florida Administrative Code (FAC): Chapter 64J-1.021, U.S. Department of Justice, and the Drug Enforcement Administration and will be cause for discipline.
- ⇨ Unauthorized use or abuse of any controlled substance will be subject to disciplinary action.
- ⇨ Disciplinary action will be determined by current City of Tampa Policy, i.e., Personnel Manual B 33.2 and TFR Rules and Regulations; Volume 2, Sections 102.00, 102.01, 102.03 and 102.04 or State of Florida Statutes and Administrative Code 64J-1.021.
- ⇨ The Medical Director shall have the final authority in the use of, and accountability for, controlled substances.

Policy

In accordance with FAC 64J-1.021, all Tampa Fire Rescue personnel will handle controlled substances in the following manner.

☐ Only Florida State Certified Paramedics will be allowed to administer controlled substances.

☐ The controlled substances will be stored in a locked drug compartment attached to the ALS vehicle, or other secured location, and are to be accessed only by personnel specifically mentioned in this document.

☐ The OIC of an ALS unit will be responsible for the controlled substances during their tour of duty.

- The OIC will physically have control of the drug box key.
- Under no circumstances will the key be left in view of the general public or where they have access.

☐ The controlled substance logbook is a bound book with consecutively numbered pages that will be kept locked in the box with the controlled substances.

- The book consists of daily inventory and usage information.
- Entries in the logbook are to be completed by the OIC.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	A/D REVISION DATE 7-2016	Controlled Substance Protocol	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Definitions

Controlled substances include any drugs or items designated by the medical director. This may include:

- I.V. medication.
- I.V. fluids.
- all sharps and their containers.

For the purposes of this protocol, Officer in Charge will refer to:

- Lieutenant or Acting Lieutenant on an ALS transport unit.
- Captain or Acting Captain on an ALS Engine or Truck company.
- Division Chief 1.
- Assigned Paramedic in the absence of a Lieutenant or Acting Lieutenant.

For the purposes of this protocol, ALS unit will refer to:

- an ALS transport unit.
- an ALS non-transport unit.

Inventory

The controlled substance inventory on ALS units shall consist of the following medications.

- (3) Midazolam
- (3) Diazepam
- (3) Fentanyl
- (3) Lorazapam
- (3) Ketamine
- (3) Etomidate

At the beginning of each shift, the OIC will inventory the storage compartment, removing any controlled substance that has reached its expiration date, is deteriorated or damaged

Chain of Control

☐ At shift change, or anytime that the on duty OIC is relieved of duty, the on-coming and off- going OIC must both conduct a visual inventory and then sign the controlled substances log in the appropriate spaces. The inventory shall verify that:

- the expected medications are in inventory.
- the correct amount of medication is in inventory.
- the expiration dates are current / not expired.
- the condition of the packaging is undamaged and secure.

☐ Any undocumented discrepancy will be handled in the following manner.

- Verbally report the discrepancy to the on-duty District Chief immediately.
- The off- going OIC will generate a DA-52, explaining the circumstances of the discrepancy, prior to going off shift.
- As soon as possible, the District Chief will conduct an investigation to include a review of the controlled substance logbook and any other documentation relating to the incident.
- If any discrepancy can not be readily explained and rectified, law enforcement must be notified to conduct a full investigation.

☐ Each time the responsibility for the controlled substances / keys changes, the appropriate documentation must be completed in the controlled substance logbook.

☐ There will be instances when a face-to-face shift change between the off-going and on-coming OIC cannot occur. In this event, the following rules apply.

- The off-going OIC and the on-coming paramedic, who now becomes the OIC, must both conduct a visual inventory and then sign the controlled substances log in the appropriate spaces.
- When the on-coming OIC reports for duty, the paramedic will sign the controlled substances and keys, over to this person.

☐ There will be instances when there may be no OIC, or even a paramedic to take responsibility of the controlled substance and keys. In this event, the following rules apply.

- The off-going OIC and the Station Captain, who now becomes the OIC, must both conduct a visual inventory and then sign the controlled substances log in the appropriate spaces.
- The Station Captain will maintain responsibility for the controlled substances / keys until the on-coming OIC arrives.
- The keys and controlled substance logbook will then be signed over to the on-coming OIC.

☐ In the event an ALS unit goes out of service for more than 2 hours, with no personnel assigned, the following rules apply.

- The keys, controlled substances, and the logbook will be signed over to the District Chief.
- The keys, controlled substances and logbook will immediately be transported to Station #1.

- The District Chief will transfer responsibility of the keys, controlled substances and the logbook to Division Chief 1.
- When the ALS unit goes back into service they will proceed to Station #1, where Division Chief 1 will then transfer responsibility for the keys, controlled substances and the logbook back to the ALS unit.

Use of Controlled Substances

Each time a controlled substance is administered to a patient, the following rules apply.

☐ The OIC will make proper entries in the controlled substance logbook.

☐ The PCR will reflect:

- the name of controlled substance administered.
- the time it was administered.
- the amount administered.
- the method used to dispose of any remaining medication that was not administered.

Methods of Proper Disposal

Whenever a controlled substance is opened and readied to administer at an emergency scene, but is not used, or all of the available medication in the ampoule was not administered:

☐ the remaining controlled substance will be turned over to, and signed for, by the treating physician at the receiving facility, or;

☐ Properly disposed in an approved disposal container or per receiving facility policy, witnessed by a Florida certified paramedic.

- The witness must be a TFR sworn personnel who signs the controlled substance logbook.
- The receiving facility RN will be a last resort witness for disposal of controlled substance and only if the RN witnessed the preparation of the controlled substance or the controlled substance is confined in the original manufactured dispensing unit.
- The method of disposal will be documented in the PCR.
- Document the amount used and the amount disposed, which must equal the total amount of the medication that was originally available in the ampoule.

Deteriorated, Damaged or Opened Packaging

If the packaging is opened or comes open from handling, is deteriorated or damaged, the following procedure will be strictly adhered to.

- Controlled Substances with compromised packaging, or seals, are to be evaluated, wasted, witnessed and replaced at Central Supply.
- All actions will be recorded in the Controlled Substance Logbook.

Replacement

☐ Outdated, deteriorated or damaged controlled substances will be taken to Central Supply for proper disposal and replacement, as stated above.

☐ When a controlled substance is used, the following replacement procedure will apply.

- When used during weekdays (Monday – Friday, 0730 to 1500).
  - ➢ The ALS crew that administered the medication will go to Central Supply for replacement.
- When used after 1500 hours, weekends, and / or city holidays.
  - ➢ The ALS crew that administered the medication will go to Station # 1 and get the replacement from Division Chief 1. He will then be responsible for replacing his/her inventory, as soon as possible, from Central Supply.
- When used after 2200 hours and there is at least one ampoule of the medication in inventory.
  - ➢ The information will be passed to the next duty shift, at which time the on-coming shift will make the replacement as soon as possible.
- When used after 2200 hours, and the inventory of a medication has been completely depleted, regardless of the time.
  - ➢ Proceed to Station #1 and get the replacement from Division Chief 1.

☐ When replacing a controlled substance you must have the controlled substance logbook with you so that the appropriate documentation can be completed by the parties involved.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	Crime Scene Management	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

The primary responsibility of EMS is patient care; however, TFR should take all possible precautions to preserve evidence.

Purpose

To establish guidelines by which EMS personnel may provide patient care in the setting of a potential or known crime scene. This includes ALS and BLS providers.

Procedure

- ☐ The primary EMS responsibility is to provide medical help to a patient or patients. The secondary responsibility is to preserve evidence.
- ☐ The entire scene (including roadway, driveway, parking lot, and outside areas) may contain evidence, which may be contaminated or destroyed by TFR.
- ☐ EMS care should be administered by the minimum number of personnel able to adequately provide it. All personnel should enter and exit by one route, taking care not to touch or move anything not directly necessary for patient care.
- ☐ Weapons should not be touched or moved by EMS personnel. If a weapon presents a real threat to EMS, have law enforcement secure it as evidence.
- ☐ The clothing and personal effects of the patient are evidence. If clothing must be removed from the patient to provide care, EMS should use care to cut around holes or tears in the clothing and not through them.
- ☐ EMS personnel are not detectives. Searches for medication, history, or other mechanism indicators should be left to law enforcement personnel.
- ☐ There should be no cleanup of the scene prior to an okay from law enforcement. Used dressings, packaging, and other EMS trash should be left in place until after other evidence has been processed by law enforcement.
- ☐ The PCR should reflect the name(s) of all EMS personnel who have physical contact with the scene, including student/observers and riders.
- ☐ The PCR should contain only factual information obtained by EMS, regarding the patient and the patient's relationship to the scene. The PCR should describe the patient's injuries and not the apparent cause of those injuries.
- ☐ The PCR will become part of the legal record.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	Determination of Death Management of the Deceased Patient	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

Under most circumstances patients found, by Tampa Fire Rescue, without life signs, will be resuscitated. Resuscitation efforts are to be withheld only if the patient is obviously dead or a valid Florida Do Not Resuscitate Order (DNRO) form (see separate policy) is present.

Purpose

To provide a policy for implementation of resuscitation of a patient without life signs, as well as one for the withholding or cessation of resuscitation of a patient that has sustained a terminal event.

Procedure

All patients found in cardiopulmonary arrest by TFR personnel will receive CPR, with the exception of:

☐ the patient who has an injury not compatible with life, such as:
- decapitation.
- a transected thorax.
- burned beyond recognition.
- massive penetrating injury to the head or chest, with obvious organ destruction.

☐ the patient with all of the following:
- apnea
- no palpable pulse
- no blood pressure
- unresponsive
- <u>not</u> hypothermic
- an extended downtime, presenting with asystole in 2 or more EKG leads, PROVIDED that one of the following are present:
  - rigor mortis
  - decomposition of body tissues
  - dependent lividity

☐ The patient who is being attended by a physician, licensed in the State of Florida, who is willing to issue a DNR order and document his relationship to the patient and the rationale for the order, on the PCR, providing his identity can be verified.

☐ The patient who has valid DNRO (yellow form).

- The identity of the patient must be verified using the patient's drivers license, other photo identification, or from a witness in the presence of the patient.

Guidelines following cessation of resuscitation efforts

☐ Do not remove IV lines or tubes from unsuccessful resuscitation attempts unless indicated by transport decision*.

☐ Notify TFR Signal Division of the death to ensure appropriate law enforcement response.

☐ If law enforcement suspects a crime scene, the disposition of the deceased is their responsibility and TFR should withdraw from the scene without further contamination of evidence.

☐ If death is due to apparent traumatic causes or no patient physician is known then contact Tampa Police Department to ensure the Medical Examiner is informed regarding the death certificate and the destination of the deceased.

☐ If the family requests a funeral home, coordinate the arrangements with law enforcement.

☐ If there is no funeral home, coordinate transport by the Medical Examiner’s transport contractor with law enforcement through TFR Signal Division.

☐ If the deceased subject’s destination is other than the county morgue, any IV line(s) or tube(s) placed by EMS should be removed prior to transport.*

☐ Document the situation, the time resuscitation efforts were discontinued, name of physician or Medical Examiner contacted, the agency providing transport of the deceased subject, and the destination, on the PCR.

☐ Contact TFR Signal Division, who will in turn notify the Hillsborough County Medical Examiner’s Office.

☐ If requested, a completed ePCR will be faxed to the Hillsborough County Medical Examiner's Office, either by Division Chief 1 or by the Rescue Office.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	Determination of Hospital Destination	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Purpose

To assist TFR personnel in the determination of hospital transport destination based on the medical needs of the patient.

Policy

TFR personnel are prohibited from attempting to influence a patient's hospital choice, or to assume that a hospital cannot offer its usual range of services, and preferentially divert patients to personally selected facilities. A competent patient has the right to refuse the most appropriate hospital. The only exception would be in the case of Trauma Alert.

Procedure

In order to make a decision on which emergency facility is the most appropriate for the patient to be transported, an evaluation of the patients' medical needs should be completed.

Non life- threatening

If not life-threatening, the patient should be transported to the hospital of his / her choice.

- If the patient is unable to make such a judgment (minors, etc.), transport him / her to the hospital chosen by an appropriate party acting on behalf of the patient (parent, et al).

- If the patient expresses no choice and no other appropriate party is available or has reason to act on behalf of the patient, transport him / her to the closest appropriate facility.

Potentially life-threatening

If potentially life-threatening, the patient should be transported to the closest appropriate facility.

- If the closest appropriate facility conflicts with the choice of either the patient or the parties acting on behalf of the patient, contact the on-line medical control physician and request orders to transport the patient to the closest appropriate facility.

- Do not delay patient transport to the closest appropriate facility while waiting for a physician order to change destinations.

Hospital bypass agreements

☐ Bypass agreements will be honored provided that:

- TFR dispatch is aware of the bypass situation and notifies the transporting unit PRIOR to its departure from the scene, or;
- the patient and patient's family are made aware of the bypass situation and the patient's family physician has not communicated his / her intent to meet the patient at the hospital on bypass, or;
- the family physician can be contacted by the OIC and on-line medical control to inform him / her of the by pass situation.
- the patient's condition will tolerate bypassing the nearest facility.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	Do Not Resuscitate Order	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

Any patient presenting a completed Florida ***Do Not Resuscitate Order*** (DNRO) Form to any Tampa Fire Rescue responder shall have the form honored and CPR and ALS therapy withheld in the event of cardiac arrest.

Purpose

The purpose of this policy is to honor the terminal wishes of the patient and to prevent the initiation of unwanted resuscitation.

Procedure

☐ When confronted with a patient or situation involving DNRO, the following conditions must be present in order to honor the DNRO Form and withhold CPR and ALS therapy.

- Original Florida DNRO form, or a good quality copy reproduced on **yellow paper**.
- Effective date and expiration date, filled out and current.
- Form signed by family physician.
- Patient in cardiac arrest.

☐ A valid DNRO Form may be overridden at the request of:

- the patient.
- the court appointed guardian of the patient.
- an on-scene physician.
- a surrogate
- a proxy
- anyone with durable power of attorney

☐ A Living Will or other legal document, which identifies the patient's desire to withhold CPR or ALS therapy, may also be honored. This should be done, when possible, in conjunction with consultation with the patient's family and / or personal physician.

☐ Any incomplete DNR forms or alternatives (such as an electronic DNR form) should be discussed with OLMC (on-line medical control) to determine validity.

Important!
In order to be legally valid this form MUST be printed on yellow paper prior to being completed. EMS and medical personnel are only required to honor the form if it is printed on yellow paper.

This box will not show up when the form is printed.

FLORIDA DEPARTMENT OF HEALTH

State of Florida
DO NOT RESUSCITATE ORDER

(please use ink)

Patient's Full Legal Name: _____ Date: _____
(Print or Type Name)

PATIENT'S STATEMENT

Based upon informed consent, I, the undersigned, hereby direct that CPR be withheld or withdrawn.
(If not signed by patient, check applicable box):

- ❑ Surrogate
- ❑ Court appointed guardian
- ❑ Proxy (both as defined in Chapter 765, F.S.)
- ❑ Durable power of attorney (pursuant to Chapter 709, F.S.)

_____
(Applicable Signature) (Print or Type Name)

PHYSICIAN'S STATEMENT

I, the undersigned, a physician licensed pursuant to Chapter 458 or 459, F.S., am the physician of the patient named above. I hereby direct the withholding or withdrawing of cardiopulmonary resuscitation (artificial ventilation, cardiac compression, endotracheal intubation and defibrillation) from the patient in the event of the patient's cardiac or respiratory arrest.

_____
(Signature of Physician) (Date) Telephone Number (Emergency)

_____
(Print or Type Name) (Physician's Medical License Number)

DH Form 1896, Revised December 2002

PHYSICIAN'S STATEMENT

I, the undersigned, a physician licensed pursuant to Chapter 458 or 459, F.S., am the physician of the patient named above.
I hereby direct the withholding or withdrawing of cardiopulmonary resuscitation (artificial ventilation, cardiac compression, endotracheal intubation and defibrillation) from the patient in the event of the patient's cardiac or respiratory arrest.

_____
(Signature of Physician) (Date) Telephone Number (Emergency)

_____
(Print or Type Name) (Physician's Medical License Number)

HEALTH **State of Florida**
DO NOT RESUSCITATE ORDER

_____
Patient's Full Legal Name (Print or Type) (Date)

PATIENT'S STATEMENT
Based upon informed consent, I, the undersigned, hereby direct that CPR be withheld or withdrawn. **(If not signed by patient, check applicable box):**

- ❑ Surrogate
- ❑ Proxy (both as defined in Chapter 765, F.S.)
- ❑ Court appointed guardian
- ❑ Durable power of attorney (pursuant to Chapter 709, F.S.)

_____

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	ECD / Taser® Policy	ISSUE DATE 9-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

Policy

This advisory serves to provide information, as well as outline issues pertaining to the management of individuals who have been subdued by law enforcement, using an electronic control device (ECD, Taser®).

Purpose

To prevent unnecessary injury to TFR personnel or patients in law enforcement custody.

Background

Since 1996 electronic control devices have found their way onto the belts of officers around the country. ECD's incapacitate subjects by electro-muscular disruption (EMD), an uncontrollable contraction of muscular tissue, which can be likened to a full body "charley horse". The device utilizes AA batteries and is powered by only 5 watts. The secret to its efficiency is what TASER® calls a "shaped pulse." One of the reasons that the Taser® X26, utilized by TPD, is so successful is the way the charge is delivered. It allows for 19 pulses during the first two seconds and 15 pulses per second for the next three. When used, the device discharges a wire, approx. 21 ft in length that contains an "arrow-like" barbed probe at the distal end. It is capable of penetrating the person's clothing and skin, embedding itself up to ¼ inch, allowing a 5-second, incapacitating electric shock to be administered.

Scene Safety Considerations

- ☐ Before touching any patient who has been subdued using an ECD, ensure the LEO has disconnected the wires from the hand held unit.
- ☐ If TFR is on scene prior to use of an ECD, remember that the individual that is being subdued will most likely lose the ability to remain upright and therefore may incur additional injuries due to falling.
- ☐ Consider the underlying cause(s) that necessitated the use of the taser. If the patient is being transported, there should be a minimum of two persons in the patient compartment of the TFR transport vehicle. Personnel should also consider restraints as well as securing a LEO to accompany the patient to the hospital.

Procedure

- ☐ TFR will not routinely respond or transport following a taser incident, or for routine probe removal.
- ☐ TPD will be responsible for removing taser probes, with the exception of those embedded in the face, groin or female breast.
- ☐ Persons who have been tasered and who have an apparent emergency medical condition will be evaluated, treated and transported by TFR, if needed.
- ☐ There are no indications that long-term injuries are caused from ECD application.
- ☐ A person's mental status and vital signs should not be altered by exposure to an ECD.
- ☐ An individual who is running from a LEO, or positioned above ground level, will no doubt sustain injuries directly related to falling. If an ECD is utilized to subdue them, they will be afforded no fall protection due to the muscle disruption that occurs from application of an ECD.

Patient Assessment Considerations

- ☐ Approach the police officer and patient with care.
- ☐ Determine that TFR assistance is required, based on the patient's presentation.
- ☐ The TFR OIC will ensure that a complete evaluation of the patient is performed.
- ☐ Obtain information from the LEO regarding the patient's condition at the time of their arrival, with emphasis on events during and after the application of the ECD.
- ☐ If a patient in TPD custody does not require transportation, thoroughly document any assessment completed by TFR, the location of the embedded probes and any recommendations given to TPD, on the ePCR.
- ☐ If treatment and / or transportation is indicated, but the patient refuses, they should be advised to seek medical attention immediately if they experience any abnormal signs or symptoms.
- ☐ Exceptions to the right of refusal are significant compromise secondary to drug and / or alcohol intoxication, altered mental status or incarceration by law enforcement.

Probe Removal

In the event that TFR personnel must remove taser probes from a patients groin or female breast, the following procedure applies:

- ☐ Use appropriate PPE.
- ☐ Identify the location of the probe on the patient's body.
- ☐ Assess the injury site to determine the extent of injury.
- ☐ Cut the wires and secure with tape as needed.
- ☐ Place one hand on the area where the probe is embedded and stabilize the skin surrounding the puncture site.
- ☐ Place your other hand firmly around the probe.
- ☐ In one fluid motion pull the probe straight out (you have to pull harder than you think).
- ☐ Repeat the procedure with the second probe.
- ☐ The removed probes will be disposed of by TPD. They are considered evidence as well as a biohazard. They have sharps containers for appropriate disposal.
- ☐ Cleanse the puncture site and bandage as appropriate.
- ☐ Probes to the EYE**,** NECK, or SPINE should be evaluated at the most appropriate medical facility, per TFR transport guidelines.

Agitated Delirium

Agitated Delirium was first documented in 1849 and was known as "Excited Delirium". At this time, Agitated Delirium is not recognized as a legitimate medical diagnosis by the AMA, but is thought to be a symptom of an "adrenalin overdose". It presents with a very agitated patient who appears to be in a psychotic state. Mentally the patient is unable to process any rational thought or focus their attention on any one thing. Physically the organs within the patient are functioning at such an excited rate that they begin to shut down. These two factors occurring at the same time cause a person to act erratically

enough that they become a danger to themselves and to the public. This is typically where law enforcement becomes involved.

High body temperature is commonly seen in conjunction with the agitation. The condition usually deteriorates to the point that the violent, vocal patient suddenly becomes quiet and docile. Known as “instant tranquility”, it should be considered an ominous, pre-terminal event, usually followed immediately by respiratory and then cardiac arrest.

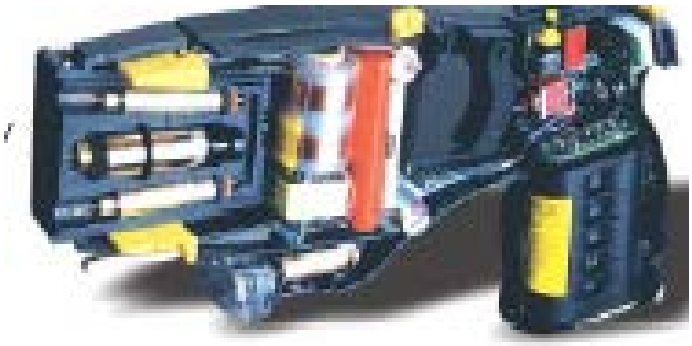
Elevated body temperature should be managed as a heat emergency and respiratory and circulatory status should be carefully monitored. Panic attack, hyperthermia, diabetes, head injury, delirium tremens (DT’s), and hyperthyroidism present with similar symptoms and should also be considered.

Summary

There is no evidence that serious injury or death has been directly related to the application of ECD. Overwhelmingly, persons exposed to the ECD develop complications as a result of predisposing problems such as agitated delirium and drug overdose. TFR personnel should take the time to carefully assess the situation as well as the patient history and presentation. Clear and concise documentation describing all TFR assessment and actions must be documented including the name of the law enforcement officer and agency.

Additional Notes of Interest

- ⊕ The barb is a #8 fish hook by McGill and Wright fishing manufacturing in Colorado.
- ⊕ The barbs will penetrate no more than a ¼ inch into the skin.
- ⊕ The electrical current, not the barb, can penetrate up to 2 inches of clothing, including leather.
- ⊕ The barb does not have to touch the skin; it will make electrical contact within 2 ¼ inches.
- ⊕ Usually the wound cauterizes, controlling any bleeding.
- ⊕ With respect to recovery time, speech and mentation return should be immediate.
- ⊕ The return of normal muscle use varies by individual, generally several seconds to a few minutes.
- ⊕ T-Wave output is 50,000 volts. Peak output is 1.76 joules per pulse; at 15 pulses per second, 26 watt-output: .162 amps.



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09-11-15	Emergency Response "Upgrade" for Basic Life Support (Ambulances)	ISSUE DATE 9-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

Policy

This directive establishes the parameters in which Tampa Fire Rescue will "upgrade" a Basic Life Support Units (BLS) established response mode, e.g. "emergency vs non-emergency". The use of "lights and siren" (L&S) by the BLS unit during an emergency response to the scene will be based on standardized TFR protocols that take into account situational and patient medical difficulty, as defined by patient history and assessments. Such urgency when initiating an emergency response for a BLS unit, in a relative non-emergency situation, creates its own danger; one we are trying to reduce. Once a BLS unit has been dispatched, "upgrading" the unit to an emergency response by the OIC will be based on the parameters defined below.

Purpose

Tampa Fire Rescue dispatches all BLS units non-emergency, to reduce the potential for motor vehicle crashes and pedestrian accidents.

Procedure

Response guidelines

"Bravo" and "Charlie" incidents

- The goal of the various BLS companies is to arrive within 30 minutes from receipt of the call.

"Alpha" incidents

- BLS units have approximately 45 minutes to respond.
- There will be times that "A" level incidents are dispatched but there are no BLS Units available. In these cases a TFR Engine or Truck will respond non -emergency. The OIC shall ensure that a full Patient evaluation is performed prior to requesting the appropriate transport unit.
- If at that time it is determined that a BLS is required, but still not available, a TFR transport unit will be dispatched non -emergency.
- If during the period that the TFR transport unit is responding to the alarm, a BLS unit becomes available, the OIC will have the option to utilize the TFR transport unit already responding or cancel them and use the newly available BLS.
- The OIC should opt for the closer of the two units.

Upgrade guidelines

□ The OIC **will not** be permitted to upgrade the BLS unit for the sole purpose of compensating for a lengthy response time.

□ The OIC will document a clearly defining reason for the upgraded response, in the PCR. After a full assessment and evaluation of the patient is complete, the OIC can upgrade the response of the BLS unit in the following situations:

- Environmental Issues
  - ➢ Patient exposed to extreme heat or cold conditions that could lead to an unfavorable outcome.
  - ➢ Patient or crew exposed to extreme weather conditions such as heavy rain or lightning

- Motor vehicle accident with roadway hazard
  - ➢ Vehicle in a vulnerable traffic position, causing potential danger for the patient or crew.

□ In cases where the TFR non-transport vehicle has been on scene for 30 minutes or longer the OIC has the option to request a TFR transport vehicle.

□ In the following situations, a TFR transport unit should be utilized.

- The patient is a minor child without a parent on scene.
- The patient is an elderly individual without a caregiver or companion on-scene.
- The patient is in a common / public area (i.e. mall, office building, school) unable to be moved to an area of privacy.

□ In all cases, the OIC has the latitude to call for a TFR transport unit if it is the best option for the patient and situation.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	EMS Transport and Patient Hospital Preference	ISSUE DATE 12-2011	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

Policy

This directive establishes the parameters in which Tampa Fire Rescue will respond to patient requests in which the patient asks to be transported to their hospital preference.

Purpose

The purpose of this directive is to reduce the opportunities of customer service issues and complaints, by transporting patients to the hospital of their choice, within the confines of Hillsborough County. All transport decisions will be based on standardized TFR protocols that take into account situational and patient medical difficulty as defined by patient history and assessments.

Procedure

In situations where transport is required, we must not overlook the fact that medically competent patients have the right to refuse care or go to a less acceptable institution, despite the first-responders opinion.

Patients can even refuse a transfusion, knowing that not having it will result in their death. As providers, we must make sure that the patient's decision is an informed one, but absent some legal authority, patients have an absolute right to make decisions that you might believe to be contrary to their best interests.

As health care providers, unless by legal authority (or having some special authority by statute, like the authority to make an involuntary mental health commitment) patients can request the hospital of their choice. As long as their choice does not violate state statutes which state that "Trauma" patients ONLY go to trauma centers, and "Stroke" patients ONLY go to stroke centers, and "Cardiac" patients should be encouraged to go to definitive care centers.

Tampa Fire Rescue's obligation is to educate and to try to persuade, but at the end of the day, the patient with legal decision-making capacity gets to make the call. We protect ourselves by documenting our efforts to make sure that the patient's decision was informed.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	EMS Transport Resources Cancellation of ALS and BLS Units	ISSUE DATE 12-2011	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

Policy:

This directive establishes the parameters in which Tampa Fire Rescue (TFR) will cancel the response of an Advanced Life Support (ALS) and/or Basic Life Support (BLS) Units.

Purpose:

The purpose of this directive is to reduce the errant utilization of EMS transport units irrespective of the level of the capabilities it provides, i.e., (BLS or ALS unit). This directive will prevent duplicity of resources assigned to a single incident, providing increased availability elsewhere as required by Tampa Fire Rescue. All transport decisions will be based on standardized TFR protocols that take into account situational and patient medical difficulty as defined by patient history and assessments.

<u>This will not affect multiple patient scenes in which ALS and BLS level transport is required.</u>

Procedure:

In situations when multiple medical units are dispatched to an alarm (BLS and TFR), once on scene, if any TFR non-transport unit requests an ALS unit for transport, the response of the BLS unit will be discontinued automatically. Conversely, when a non-transport unit is on scene and requests a BLS unit the response of the ALS transport will be discontinued.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 01-2018	Expired Drug Policy	ISSUE DATE 5-2013	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

Policy

It is the policy of Tampa Fire Rescue to change out expired medications at the end of the month of expiration for those medications with dates listed with month and year only, i.e., 11/10.

Medications with expiration dates listing month, day and year, will be considered expired on the date listed and will be changed out on or before the date listed, i.e., 11/1/10.

Any deteriorated (discolored or cloudy) medications will be pulled immediately upon discovery, and replaced

The shift designated to prepare medical supply orders will be responsible for checking expiration dates and ordering appropriately to ensure an adequate supply to replace those expiring.

Controlled Substance, RSI Medication Storage Policy

The following medications will be locked, and maintained under refrigeration at approximately 45°. If refrigeration is not available, follow expiration guidelines as listed below:

Lorazepam (Ativan)
Replace 90 days from date of issue, if not refrigerated. If the replacement date falls on a weekend or a holiday, wait until the next weekday to replace.

Fentanyl (Sublimaze)
Refrigerated or un-refrigerated, utilize the expiration date on the medication.

Succinylcholine
Replace 30 days from date of issue if not refrigerated.

Rocuronium
Refrigerated, until the expiration date on the medication. Replace 60 days from the date of issue or removal from refrigeration.

Midazolam (Versed)
Refrigerated or un-refrigerated, utilize the expiration date on the medication.

Etomidate (Amidate)
Refrigerated or un-refrigerated, utilize the expiration date on the medication.

Ketamine
Refrigerated or un-refrigerated, utilize the expiration date on the medication.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 01-2018	Transport Fractional Mileage Requirements	ISSUE DATE 12-10	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

For all transports with dates of service on or after January 1, 2011 , the Center for Medicare and Medicaid Services, (CMS) requires rescue transport services to report mileage to the nearest tenth of a mile. This new requirement applies to all claims with loaded mileage up to 100 loaded miles. For example, if a patient is transported by ambulance for 10.1 miles, you should report 10.1 miles on the patient care report instead of rounding up. Crews need to ensure they are accounting for the exact appropriate mileage with every transport.

At the time of transport personnel typically are unaware of what insurance coverage, if any, the patient has in force. As a result, fractional mileage must be reported on all transports. Failure to document the mileage appropriately will result in non - reimbursement for the transport.

III. TRANSPORT DESTINATION PROCEDURES

A. Determination of most appropriate facility

1. Each EMS provider shall transport or cause to be transported every trauma alert patient to the state-defined chronological/developmental age-appropriate treatment facility. An adult will be taken to a trauma center; a child to a pediatric trauma center. The senior care giver at the scene will determine the trauma center destination in accordance with existing terms and conditions specified in the state-approved Hillsborough County Trauma Agency Plan.**(*see addendum*)** Whenever possible, family members meeting trauma alert criteria at the same scene will be transported to the same trauma center.

   a. There are two trauma/pediatric trauma centers in Hillsborough County: Tampa General Healthcare (Level I) and St. Joseph's Hospital (Level II)

   b. Depending on the location of the incident, traffic considerations or weather conditions, the senior care giver may decide at times that it would be faster to transport an adult trauma alert from certain scenes in eastern Hillsborough County to Lakeland Regional Medical Center (LRMC, a Level II trauma center) in adjacent Polk County than to a Hillsborough County trauma/pediatric trauma center.

      It should be noted that LRMC does not have special resources enumerated in part 2 below. A trauma patient for whom such care is anticipated should be transported to the appropriate Hillsborough County trauma center.

2. The transport destination specified in the Trauma Plan's trauma center receiving zone scheme shall be overridden only under specific circumstances to redirect patients with certain traumatic injuries to the trauma center which has specialized capabilities to handle those conditions.

   The HCTA recognizes the following three circumstances under which an alternative trauma center transport destination shall be chosen if the patient meets particular criteria:

   a. Age-specific trauma alert burn criteria: either a 2° or 3° burn involving a body surface area of 15% or greater for adults, or 10% or greater for children, and/or a circumferential burn, and/or any high voltage electrical

Hillsborough County Trauma Agency
Uniform Trauma Transport Protocol

Change 13, 2016

Any deviation from the Hillsborough County's Uniform Trauma Transport Protocol will be documented and justified on the patient care record.

Hillsborough County
Florida

System Participants:

Aeromed
American Medical Response
Americare
Bayflite
Hillsborough County Fire Rescue
Lifenet
Plant City Fire Rescue
Sun City Center Emergency Squad
Tampa Fire Rescue
Temple Terrace Fire Department
TransCare

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IA. DISPATCH PROCEDURES - GROUND

A. In Hillsborough County, there are four ground advance life support emergency medical service providers: Tampa Fire Rescue (TFR), Hillsborough County Fire Rescue (HCFR), Temple Terrace Fire Department (TTFD) and Plant City Fire Rescue (PCFR). Requests for emergency services are dispatched through an enhanced 9-1-1 system. The enhancements allow the location and telephone number of the caller to be instantaneously displayed on the 9-1-1 call taker's computer screen at one of seven primary Public Safety Answering Points (PSAPs). The caller's location (or cell site for cellular calls) determines which emergency answering point receives that particular request for emergency assistance. If the normally designated PSAP for that locale is busy, the call is automatically routed to an alternate answering point. Staffing for the primary PSAPs is provided by either law enforcement agencies (City of Tampa, the County, and three special jurisdictions) or shared between police and fire department entities in two municipalities (Temple Terrace and Plant City).

The primary PSAPs and their area of responsibility are:

1. Tampa Police Department (TPD): all of the city of Tampa
2. Hillsborough County Sheriff's Office (HCSO): all of unincorporated Hillsborough County
3. Temple Terrace Police Department (TTPD): all of Temple Terrace
4. Plant City Police Department (PCPD): all of Plant City
5. Tampa International Airport Police Department (TIA PD): all of TIA
6. University of South Florida Police Department (USF PD): all of USF area
7. MacDill Air Force Base Alarm Center: all of MacDill AFB

B. The 9-1-1 call taker relies on the address information provided by the caller as primary dispatch information, using the screen display only as secondary or backup information. The public safety call taker may also require a call back number. Generally, wireless phone calls provide the 9-1-1 system with the caller’s phone number and longitude, latitude coordinates, but the call taker still obtains location and call back numbers from all cellular callers.

C. A special needs registry is maintained in conjunction with Verizon to identify locations where callers might be unable to speak over the phone. Each PSAP is equipped with telecommunications devices for the deaf (TDDs). Every PSAP can also refer callers to AT&T's language line if in-house interpreters are not available.

D. Once the 9-1-1 call taker determines the nature of the call is medical, the request for emergency assistance can be then transferred to the appropriate secondary PSAP for ambulance, fire, highway emergency, or poisoning information by pressing one button.

E. Hillsborough County Emergency Dispatch Center (HCEDC), TFR, TTPD, PCPD, and MacDill AFB Alarm Center, have received specialized training in emergency medical dispatch.

1. Unincorporated Hillsborough County
   Calls requesting emergency medical assistance are first routed through the primary PSAP at HCSO and transferred to the secondary PSAP at HCEDC if call is medical in nature.
2. City of Tampa
   Calls requesting emergency medical assistance originating in the City of Tampa, TIA and USF, are first routed through the primary PSAP of the respective jurisdiction (TPD, TIA PD, or USF PD) and transferred to the secondary PSAP at TFR if call is medical in nature.
3. Temple Terrace and Plant City
   Requests for emergency medical assistance originating in these jurisdictions are dispatched within their respective PSAPs.
4. MacDill Air Force Base
   Requests for emergency medical assistance originating from MacDill AFB are initially answered at the MacDill Alarm Center and transferred to the secondary PSAP at TFR as indicated.
5. All Florida state road emergencies
   Florida Highway Patrol (FHP) is a primary PSAP for *FHP cellular phone calls only. Both HCSO and TPD can refer calls in their jurisdiction that jointly falls on FHP's territory.
6. Poison information for entire region
   If the request for emergency medical assistance is poison-related in nature, the emergency medical dispatchers at the secondary PSAPs, HCEDC and TFR, will transfer the call to the Florida Poison Information Center.

F. General public requests for emergency medical assistance:

The emergency medical dispatcher is responsible for providing prearrival medical instructions where appropriate, and obtaining the following information when answering all incoming phone lines, regardless of origin:

1. Nature of the emergency
2. Number of patients
3. Other specific information according to emergency medical dispatch (EMD) protocols to include the extent and severity of reported injuries
4. Verify address where assistance is needed
5. Verify nearest cross street to address, particularly when address is showing non-unique status
6. Verify call-back phone number (Obtain cellular call-back phone number wherever applicable)
7. Scene hazards

G. On-scene (trained) personnel requests for advanced life support (ALS) emergency medical assistance:

At times on duty personnel trained in BLS procedures (e.g., private ambulance and fire suppression personnel) may encounter a situation requiring ALS services. Such on duty personnel will contact their respective dispatch centers via their dispatch radio system and provide:

1. Numerical address or intersection where ALS assistance is needed.
2. Closest cross street
3. Number of patients
4. Scene hazards
5. Advise Trauma Alert for appropriate trauma center or pediatric trauma center
6. For a Trauma Alert, the personnel will also provide the following information:
   a. Approximate age of patient
   b. Sex of patient
   c. Mechanism of injury and part of body affected

H. If possible, law enforcement personnel will follow secondary emergency notification of dispatch (Medical Miranda) procedures in providing the following information:

1. Chief complaint and incident type?
2. Approximate age?
3. Conscious: Yes/No....or alert?
4. Breathing: Yes/No...or difficulty?
5. Illness case (age 35 or over):…Is there chest pain?
6. Accident or injury case:…Is there severe bleeding (spurting)?
7. Response mode:…Do you need a lights and sirens response?

I. In Hillsborough County, all emergency medical dispatch PSAPs have adopted the nationally recognized Medical Priority Dispatch System into their standard operating procedure to decide the appropriate level of response (personnel, equipment and vehicles) to send to a scene. While emergency medical dispatch caller interrogation algorithms are uniform across agencies, deployment practices necessarily vary because of differences in population distribution and emergency medical resources in the Hillsborough County trauma system.

J. There are a finite number of possible deployment response patterns: ALS with or without lights and sirens, with or without an engine, and/or BLS (choice of four BLS ambulance services - American Medical Response, Americare, Sun City Center Emergency Squad, and TransCare). The recommended deployment for a potential trauma alert is an ALS transport vehicle plus additional first responder vehicles such as engine companies.

K. Temple Terrace, Plant City, Hillsborough County and MacDill Air Force Base operate separate emergency medical services response systems. The emergency medical dispatcher of each will be responsible for:

1. Dispatching all calls within his respective jurisdiction in priority sequence.

2. Promptly acknowledging all radio transmissions, and maintaining appropriate response coverage.

3. Tracking current unit status to ensure proper unit selection by the Computer Aided Dispatch (CAD) system. The closest available unit should be responded to a call for assistance. The CAD system will be the initial source of information for determining that closest unit. An available unit not in station may be considered for deployment. Examples of such circumstances can include:

   a. A unit "on the air" close to the call will be responded over a unit that is in its substation.
   b. A unit at a hospital or on a scene where transport is not anticipated will be considered for dispatch over a unit that is not yet activated.
   c. The emergency medical dispatcher will refer to the jurisdiction's dispatch procedure for zoning, if appropriate.

L. Additional emergency response agencies will be used when necessary. All dispatch centers have access to emergency resources through radio communications if available, or by telephone if necessary, to request assistance. On-scene personnel must identify the emergency resources needed. These services include but are not limited to the following:

1. Hazardous materials exposure teams (HAZMAT): City of Tampa and Hillsborough County Fire Rescue
2. Structural collapse and technical rescue specialists: Tampa Bay Task Force Urban Search and Rescue (USAR) through the City of Tampa and Hillsborough County Fire Rescue
3. Water rescue teams: Florida Marine Patrol and U.S. Coast Guard
4. Utility emergency teams: Tampa Electric and Peoples Gas Company
5. Law enforcement agencies: the Police Departments of the Cities of Tampa, Temple Terrace, Plant City, Tampa Airport, University of South Florida Hillsborough County Sheriff's Office, and Florida Highway Patrol.

M. For the efficient day-to-day operation of the Hillsborough County trauma system, formal and informal mutual aid agreements exist among the emergency medical transport services within Hillsborough County and between specific outlying counties to supplement equipment and personnel on an ad hoc basis. Depending on the severity and extent of an incident, a graduated approach for additional assistance is followed when local emergency medical response needs exceed the capacity of the requested ALS ground emergency medical transport service.

An incident, or combination of incidents, is considered a mass casualty event when fifteen (15) or more victims, each with unstable vital signs, require emergency advanced life support, or when a large number of lesser injured victims with unstable vital signs or injuries require examination/treatment.

In response to such events, Hillsborough's Emergency Management would implement their Mass Casualty Operations Procedures to mobilize the extraordinary resources necessary, and to coordinate the activities that would have overloaded the normal trauma system.

IB. DISPATCH PROCEDURES - AIR

A. There are three air ambulance services available to Hillsborough County: Aeromed, operated by Tampa General Hospital, Bayflite, and LifeNet, the latter two of which are operated by Air Methods Corporation. Any recognized public safety responder on-scene can request a standby or launch of a helicopter to transport a potential trauma alert. Authorized individuals include but are not limited to employees of public agencies such as police and highway patrol, fire departments, ambulance services, safety officials of commercial and industrial enterprises, to include the Division of Forestry or State Park Rangers. This type of scene request may either be relayed through the emergency medical dispatcher (secondary PSAP) or through that agency's own dispatch center (primary PSAP) to the air medical communication specialist.

B. An initial air medical request is typically made by an EMT/paramedic or fire department personnel on the scene and relayed through the emergency medical dispatcher to the air medical communication specialist. The assignment of the air medical agency is made by the emergency medical dispatcher according to the trauma center receiving zone scheme as specified in the Trauma Plan and Appendix C at the end of this document.

1. If the above designated service is unavailable, the other Hillsborough County air medical service will be called.
2. An aircraft and its crew will go on standby status in response to an out-of-county request until otherwise notified.

C. The emergency medical dispatcher will relay the field's request for a helicopter emergency scene response to the air medical communication specialist. The emergency medical dispatcher may also place a helicopter on standby or launch at his/her initiative if the nature of the incident and severity is known, or strongly suggested, after an initial call.

For either situation, the emergency medical dispatcher will notify all responding field units of the action taken, provide a helicopter ETA to the scene, and dispatch appropriately (additional engine for LZ). The emergency medical dispatcher will be as specific as possible when contacting the air medical communication specialist by providing the following information:

1. Location of incident to include numerical address cross-streets, map location (box/grid) and if possible, GPS coordinates

2. Name and unit ID# of agency requesting air medical assistance, other field units and/or additional helicopters that may be responding or on deck
3. Radio frequency, contact unit name and ID# of the landing zone (LZ) commander
4. If possible, nature of the accident, mechanism, extent, and severity of injury of patients to be flown
5. When encountering multiple patients which require helicopter transport, the air medical communications center shall be notified of the number of patients to be flown.
6. If possible, the patient's approximate age and weight, and any additional patient status information
7. All pertinent information about the scene, possible hazards and characteristics of the immediate environment
8. The need for blood, if appropriate (the air medical communication specialist may initiate the suggestion)

D. Once the flight crew makes radio contact with scene personnel, landing zone information takes precedence over patient information during prearrival ground-to-air communications. The following information should be provided to the flight crew while en route:

1. Type of LZ (parking lot, intersection, ball field)
2. Location of the proposed LZ, including nearby landmarks
3. Marking of the LZ
4. Location of hazards around the LZ
5. Wind direction and pertinent weather information (e.g., fog, rain)
6. Presence of hazardous materials in the area, if any
7. Radio silence will be maintained on final approach and takeoff of the helicopter

E. The Medical Sector shall be available on the LZ channel to monitor the progress and arrival of the responding aircraft(s). When time allows and on request of the medical crew, a brief medical report shall be provided while en route, including the following information:

1. Patient age
2. Patient's weight
3. Mechanism of injury
4. Trauma alert status with criteria for trauma alert
5. Pertinent primary impressions i.e.: CHI, chest injury, etc
6. Airway status and abnormal vital signs
7. Needs on arrival i.e.: blood, RSI/ETT, or other required interventions

F. The security of the air medical and ground crews, the patient, and bystanders are of paramount importance in the execution of any helicopter mission. The personnel responsible for LZ setup and communications shall have received prior training in helicopter safety.

1. The fire department or law enforcement personnel routinely lays out the LZ for the air medical unit.
2. The LZ commander of the agency will establish and maintain contact with the flight crew through the emergency medical dispatcher to keep a continuous communication connection between the scene and the helicopter.

G. The air medical communication specialist must be aware of the operational status of its flight program at all times. If an air medical unit is out of service for repair or maintenance procedures, that individual is responsible for notifying the dispatchers of the city and county fire rescue and emergency medical services concurrently of changes in state of readiness.

H. The air medical communication specialist is responsible for tracking flight status to maintain current helicopter location and activity.

I. If the air medical agency's aircraft is not already in service, the air medical communication specialist may deploy the helicopter to an emergency scene for a patient meeting trauma alert criteria. A twenty minute time frame is suggested as a guideline only and is not intended to be an absolute. Appropriate scenarios include the following:

1. If the patient is inaccessible by a ground rescue approach
2. If total transport time by ground significantly exceeds transport time by air
3. Strong suspicion of spinal cord injury, where ground transportation may aggravate injury

J. The air medical program may decline the deployment of the helicopter to an emergency scene response request. Examples of such situations include but are not limited to:

1. Inclement weather: the pilot decides mission viability subject to environmental conditions, and advises the air medical communication specialist accordingly
2. The presence of hazardous materials
3. Certain presumption of death conditions such as a blunt trauma code

K. Dependent on the particular situation, additional assistance needed by the flight or ground crew may be requested through either the air medical communication specialist or the emergency medical dispatcher.

II. PRE-HOSPITAL PROCEDURES

A. Trauma alert identification procedures

1. To identify a trauma alert in the field, refer to the age-appropriate Adult or Pediatric [Child] Trauma Scorecard Methodology in Appendix A at the end of this document.

2. Consider the Elder Gray-Area Non-Trauma Alert Criteria in Appendix B at the end of this document for the 65 years or older trauma patient, who even if doesn't meet trauma alert criteria, might still benefit from a trauma center.

B. Trauma alert notification procedures

1. Once finding that a trauma patient meets the necessary age-dependent trauma alert criteria, a medical or public safety responder will issue a prehospital trauma alert from the scene. Once en route, the emergency medical technician (EMT)/paramedic personnel will provide the trauma center or initial receiving hospital with an estimated time of arrival and pertinent patient information, including at least the following elements from the patient care record.

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

2. The on-scene EMT/paramedic personnel will advise the emergency medical dispatcher immediately that they are calling a trauma alert. When notifying that dispatcher of a trauma alert, they will include in the request:

   a. Type of trauma alert(s): adult or pediatric
   b. Number of patients
   c. Mechanism of injury
   d. Destination
   e. Airway and ventilation status, oxygen saturation, if known
   f. Hemodynamic status (characteristics of peripheral pulses, e.g. weak, strong, or vital signs if available)

3. The emergency medical dispatcher will then notify the trauma center or initial receiving hospital that a trauma alert patient will be transported to their facility. The EMT or paramedic, and dispatcher personnel must specifically use the words "trauma alert" in their communications when announcing that a patient meets one or more of the trauma alert criteria and relay any available information about patient status.

4. If the condition of a non-trauma alert patient changes to trauma alert either while on scene or en route, either the ground or flight crew shall request a "trauma alert".

5. Only an on-duty a medically trained prehospital provider who has had contact with the trauma patient may call a trauma alert. Discussion of a patient's condition with the air medical communication specialist or the on-duty emergency physician is no substitute for an explicit declaration of a "trauma alert" by field personnel in the prehospital realm of care.

6. “Downgrading of a trauma alert” is not supported. Once a prehospital provider has called a trauma alert, whether from the scene or en route to a hospital, the patient’s trauma alert status may not be rescinded by the same or other prehospital provider.

C. Coordination of patient care

There may be situations where two or more emergency medical service agencies consecutively respond to a trauma call. Multiple units (ground and/or air) may be mobilized to a particular scene depending on the number of patients, or an individual patient's condition. The emergency care administered by each emergency medical service is of foremost importance to the patient's outcome. While the initial responding agency and transporting provider are together on the scene, they will collaborate in a team approach to patient care. Differences of opinion regarding patient assessment or therapeutic measures must not compromise the patient's status or cause delays in patient transport. Providing emergency treatment that is in the best interest of the patient must always take priority.

1. Whenever more than one emergency medical service is on the scene, the initial responding agency will turn over the management of the patient to the transporting agency after giving a verbal patient report. The EMT or paramedic shall assure that key patient information is relayed by following a standard reporting format:

a. Patient's identity
b. Patient history
c. Initial patient assessment and significant findings
d. Patient care rendered to the present
e. Patient response to that treatment

2. At times, a BLS service could be the first to intervene in the care of a patient who requires ALS assistance. In these circumstances, optimum patient care is facilitated when transfer of responsibility for the patient between the two agencies is accomplished during the exchange of report upon the latter's arrival.

3. While a BLS provider does not routinely treat or transport critically injured patients, occasionally it may be called upon to do so.

   a. If the emergency medical dispatcher advises that the earliest anticipated ALS response time (ground or air) to the scene is greater than the estimated time that the on-scene BLS unit can transport to a trauma center, the BLS service may transport the trauma alert patient to that facility.

   b. If the number of patients exceeds the capacity of all ALS services that are otherwise engaged in a mass casualty response, and when directed by the incident commander, the BLS unit may transport the trauma alert patient to a trauma center or a non-trauma center meeting the criteria for an initial receiving hospital as per 64J-2.002(3)(a), F.A.C.

4. There will be instances when the trauma patient would benefit from the rapid transport or specialized treatment modalities that an air medical service can provide. Although the clinical capabilities of the air and ground units may not differ greatly, the flight crew's chief priorities are to minimize scene time and facilitate rapid transport to the appropriate facility, while providing safe and appropriate emergency care to the patient. To that end, the flight crew will assume medical responsibility for the patient immediately upon receipt of a verbal patient report from the ground crew.

D. Termination of resuscitation efforts

1. A patient either initially meeting or deteriorating to the criteria for a blunt trauma code can be assumed to have sustained a terminal injury. When all of the conditions listed below are satisfied, no resuscitative measures are required, and any emergency treatment in progress may be stopped.

2. In deciding if a victim is a blunt trauma code, all of the following conditions must be present:

   a. Present history of blunt trauma
   b. Apneic
   c. Pulseless
   d. No palpable blood pressure
   e. No heart sounds, or
   f. Asystole (no electrical activity on monitor), or
   g. Agonal rhythm (wide ventricular complex with rate < 40)

3. An emergency medical services provider may decide to provide resuscitation for any reason, including scene safety, and transport the patient expeditiously to the nearest appropriate facility.

4. Documentation on the patient care record must specifically address the blunt trauma criteria. Supporting evidence of a rhythm strip must accompany the patient care record. The only exception to the rhythm strip requirement will be the need to deliver care to other victims at the scene of the blunt trauma.

5. Additional agency-specific protocols involving termination of resuscitation efforts for a trauma code at the scene are covered in the individual providers' medical protocols.

E. Documentation completion

1. For each instance in which a trauma patient was:

   a. assessed
   b. medical care was rendered
   c. transported
   d. pronounced dead at the scene
   e. transferred to another licensed service
   f. transferred from one medical facility to another

   and

   for instances when the person or persons for whom the emergency medical services provider was dispatched and a trauma patient:

g. refused treatment
h. transport
i. or both

each fire rescue department or emergency medical services provider involved shall complete the applicable elements of the trauma care information section of the patient care record.

2. As per subsection 64J-1.014(2), F.A.C. (verbatim), the transporting vehicle personnel shall at a minimum provide an abbreviated patient record to the receiving hospital personnel at the time the patient is transferred that contains all known pertinent incident information as defined in subsection 64J-1.014(3), F.A.C. Documentation of known information in an abbreviated patient care record shall not delay response to requests for emergency medical assistance.

3. As per subsection 64J-1.014(3), F.A.C. (verbatim), the abbreviated patient care record shall include all known information listed below:

a. Date of call;
b. Time of call;
c. The service name;
d. Incident ID number;
e. Lead crew signature or identification number;
f. Service name for any other licensed service providing care;
g. Name for first responder agency;
h. The patient's full name or unique identification number if the name is unknown;
i. The patient's age;
j. Patient assessment information (e.g., airway, breathing, circulation, pupils, skin and vitals) taken on scene and en route with times taken for vitals;
k. The initial vitals taken by a non-transport service before the arrival of the transport unit;
l. The patient's medical history, current medications; allergies, and chief complaint;
m. Interventions attempted (e.g., airway, breathing, circulation, and secondary interventions); and
n. Medication(s) administered including the time, medication, dose and route.

4. As per subsection 64J-1.014(4), F.A.C. (verbatim), non-transporting vehicle personnel shall provide an abbreviated patient care record or oral report with known information pertinent to the patient's identification, patient assessment, and

care provided to the patient to the transporting vehicle personnel at the time the responsibility of the patient is transferred to the transporting service.

5. For the trauma patient dead at the scene, all prehospital providers will fax the patient care record for every trauma death at the scene to the Medical Examiner Department at 813-914-4596, immediately upon its completion without solicitation. If the particular emergency medical services unit must go back into service at once, every attempt should be made to comply with this requirement at the earliest available opportunity, but no later than the end of the shift when the death occurred.

6. A TTP exception is any deviation from the identification or management of a trauma alert patient. The following circumstances are examples of such departures. Any TTP exception must be documented and accompanied with a justification for the decision on the patient care record.

   a. Transporting a patient who meets trauma alert criteria as a non-trauma alert
   b. Not providing at the minimum, a written abbreviated patient care record at the time the patient is transported to the hospital

III. TRANSPORT DESTINATION PROCEDURES

A. Determination of most appropriate facility

1. Each EMS provider shall transport or cause to be transported every trauma alert patient to the state-defined chronological/developmental age-appropriate treatment facility. An adult will be taken to a trauma center; a child to a pediatric trauma center. The senior care giver at the scene will determine the trauma center destination in accordance with existing terms and conditions specified in the state-approved Hillsborough County Trauma Agency Plan. Refer to Appendix C for a description and map of the trauma centers' receiving zones. Whenever possible, family members meeting trauma alert criteria at the same scene will be transported to the same trauma center.

   a. There are two trauma/pediatric trauma centers in Hillsborough County: Tampa General Hospital (Level I) and St. Joseph's Hospital (Level II).

   b. Depending on the location of the incident, traffic considerations or weather conditions, the senior care giver may decide at times that it would be faster to transport an adult trauma alert from certain scenes to Lakeland Regional Medical Center (a Level II trauma center) in Polk County, or to Blake Medical Center (a Level II trauma center) in Manatee County than to a Hillsborough County trauma center.

   c. It should be noted that neither the Lakeland Regional nor Blake Medical Centers have the special resources enumerated in part 2 below. A trauma patient for whom such care is anticipated should be transported to the appropriate Hillsborough County trauma center.

2. The transport destination specified in the Trauma Plan's trauma center receiving zone scheme shall be overridden only under specific circumstances to redirect patients with certain traumatic injuries to the trauma center which has specialized capabilities to handle those conditions.

   The HCTA recognizes the following three circumstances under which an alternative trauma center transport destination shall be chosen if the patient meets particular criteria:

   a. Age-specific trauma alert burn criteria: either a 2nd or 3rd burn involving a body surface area of 15% or greater for adults, or 10% or greater for children, and/or a circumferential burn, and/or any high voltage electrical or lightning injury. Currently Tampa General Hospital has the only burn center in the County.

   b. Amputation with the potential for reimplantation. Currently Tampa General Hospital is the only trauma center with a comprehensive hand surgery team on call 24 hours a day.

c. Suspected spinal cord injury with evidence of significant motor or sensory involvement. Currently Tampa General Hospital is the only BSCIP Designated Facility in the County for the Florida's Brain and Spinal Cord Injury Program (BSCIP). This trauma center is certified in both the acute and rehabilitation phases of care.

3. Patients with neck lacerations will be directed as follows:

   a. A patient who has been trauma alerted because of a neck laceration with associated swelling, sustained bleeding, escape of air from wound or stridor, will be transported to the nearest trauma center or pediatric trauma center.

   b. A patient with any other neck laceration not meeting the above-described conditions shall be transported to the nearest trauma center.

4. In cases when a trauma center is unable to accept a trauma alert, such as during a major trauma bypass condition (two trauma surgeons each occupying an operating room suite with an acute trauma case), the patient will be transported to another trauma center. Mutual aid agreements may be pursued between the trauma centers in the county and/or between each of these facilities with out-of-county trauma centers for patient diversion when a trauma center's capacity to handle additional major trauma is temporarily exceeded.

5. The senior care giver on scene or en route who encounters emergency circumstances which will immediately lead to a traumatic cardio/respiratory arrest may decide that transporting a trauma alert to a non-trauma center that is closer than a trauma center is in the best medical interest of the patient.

   Examples of such emergency circumstances include the following:

   a. A traumatic arrest in transit (with on-line physician consultation when possible)
   b. Compromised airway which cannot be managed in the field
   c. A mass casualty incident or natural disaster (according to incident command/management procedure)

6. The EMS provider shall only transport a trauma alert to an initial receiving hospital (non-trauma center) which has previously certified to the Trauma Agency that it meets the state's five prehospital trauma alert hospital transport requirements specified in 64J-2.002(3)(a), F.A.C. Those criteria and certified facilities are listed in section VIII: Documentation of Hospital Criteria.

7. All ground emergency medical transport services responding at the request of agencies located outside of Hillsborough County will deliver trauma patients only to those hospitals which meet the state's five prehospital trauma alert hospital transport requirements specified in 64J-2.002(3)(a), F.A.C.

8. If the senior care giver at the scene determines that the trauma patient does not meet trauma alert criteria nor need trauma center level care, the patient may choose his/her hospital destination.

B. Transport destination deviations

1. Causing a trauma patient to be transported to an inappropriate destination is a TTP exception. The following circumstances are examples of such a departure. Any TTP exception must be documented and accompanied with a justification for the decision on the current patient care record.

   a. Transporting a trauma alert patient to a non-trauma center.
   b. Transporting a trauma alert patient to a hospital that does not meet all five criteria specified in 64J-2.002(3)(a), F.A.C. These hospitals will be listed under "Other" in section VIII.
   c. Transporting a trauma alert patient requiring specialized capabilities contrary to the provisions specified in section III, paragraph A2.
   d. Transporting a trauma alert patient to a trauma center contrary to the provisions specified in section III, paragraph A1.

2. Out-of-county response transport destination decisions will be based upon the protocol of the requesting agency or county.

IV. EMERGENCY INTERHOSPITAL TRANSFER PROCEDURES

A. A trauma alert patient will only be transported to a trauma center or pediatric trauma center facility that can continue the appropriate level of definitive care. Once a trauma alert patient has been brought to a trauma center or pediatric trauma center facility, that patient may not be moved to a facility that is not trauma center or pediatric trauma center until his life-threatening injuries have been stabilized by the necessary operative or nonoperative measures. The attending trauma center physician will decide when the patient may be safely transferred to another facility without compromise of physiological status.

B. Mutual aid agreements may be pursued between the trauma centers in the county and/or between each of these facilities with out-of-county trauma centers to appropriately triage and transfer certain trauma cases between facilities on an ad hoc basis.

C. There will be occasions when a non-trauma center hospital in Hillsborough County should refer a trauma patient to a trauma center or pediatric trauma center facility. The transfer process should be initiated immediately upon the recognition that a patient meets trauma alert criteria, even while resuscitative efforts are underway. This hospital should initiate procedures within 30 minutes of the patient's arrival to transfer the trauma alert patient to a trauma center or pediatric trauma center (Section 64J-2.002 (3)(a) (4), F.A.C.). The transfer should then be implemented without delay.

D. Referral to a trauma center or pediatric trauma center facility should also be strongly considered for any trauma patient with specific injuries, combinations of injuries or who suffered a mechanism of injury consistent with a high-energy transfer. Guidelines for indications to transfer trauma patients early in the resuscitative phase from a non-trauma center to a trauma center are included at the end of this section for physicians at non- trauma centers to facilitate timely transfer decisions for patients suffering trauma. The services available at the initial receiving hospital and the services necessary at the referring trauma center should be taken into account when using these guidelines. As always, the decision to transfer a patient should be made weighing the risks and benefits of that transfer.

E. The referring (non-trauma center emergency department) physician is responsible for initiating the transfer process and communicating directly with the receiving (trauma center) physician about the incoming patient. Contact procedures are specific to each trauma center for ED to ED patient transfers as follows:

1. Tampa General Hospital Transfer Center

Local	(813) 844-7979
Statewide	(800) 247-4472

The same number is used for adult or pediatric referrals. The Transfer Center staff will conference call the referring facility with the Emergency Department attending physician to discuss the case. For a potential Burn Center candidate, the Transfer Center staff will link the caller with the Burn Center attending physician.

2. St. Joseph's Hospital Referral Communication Center

Local	(813) 870-4445
Statewide	1-844-673-6233

The same number is used for adult or pediatric referrals. The Referral Communication Center staff will conference call the referring facility with the trauma surgeon on call to discuss an adult case, otherwise the pediatric trauma surgeon will be consulted. Typically, the Emergency Department attending physician will not be involved in the discussion unless the appropriate trauma surgeon is unavailable.

F. The referring physician is responsible for selecting an appropriate mode of transportation, and organizing patient management during the transfer. The receiving physician must agree with these arrangements. Transportation scheduling procedures are specific to the desired mode of transport:

1. To arrange ground transport by an emergency medical services provider, the hospital staff shall make arrangements for an emergent transfer, according to the patient's medical condition, to take place within an acceptable time frame.

2. To arrange transport by an air medical provider, the hospital personnel will contact the Communication Center of the requested agency directly.

G. An emergency interhospital trauma patient transport may be handled by an ALS service licensed to operate in Hillsborough County or pursuant to the exemptions in the Hillsborough County Ordinance #06-9.

H. The prehospital provider will complete a patient care record for each instance a trauma patient is transferred between hospitals. This form will be left at the receiving facility at the time the responsibility of the patient is transferred.

I. Hillsborough County Trauma Agency Interfacility Trauma Transfer Guidelines

1. Purpose

These guidelines are offered to assist in the appropriate transfer of trauma patients between non-trauma centers and trauma centers. It is expected that these conditions or diagnoses should be discovered within a timely manner and efforts to transfer be initiated immediately upon discovery.

2. General

a. If a patient persistently meets trauma alert criteria or one of the following injury conditions, the patient should be transferred to a Trauma Center.

b. Within 30 minutes of the patient's arrival at the hospital:

i. The sending Emergency Physician will initiate definitive care required by the trauma alert patient; or

ii. The sending Emergency Physician will initiate procedures to transfer the trauma alert patient to a Trauma Center.

c. The sending Emergency Physician will consult the appropriate specialist(s) on call at the request of the receiving Trauma Center Surgeon.

d. An unstable patient with abdominal injuries should be operated upon for hemostasis prior to transfer. If no surgeon is available, such a patient would be transferred.

e. The sending Emergency Physician should not perform in-depth work-ups, imaging and consultations if this will delay the patient from receiving the medical benefits reasonably expected from the provision of appropriate medical treatment at the Trauma Center.

f. Prior to transfer, the sending Emergency Physician and/or surgeon should ensure stability of the patient’s airway, breathing, and circulation.

g. If the patient is 65 years or older and meets one or more of the ELDER GRAY-AREA conditions, consider transferring that patient to a trauma center.

3. HEAD AND SPINE INJURIES

   a. Sustained GCS of 12 or less, or a decrease of 2 or more points from the time of injury
   b. Open or depressed skull fracture
   c. Basilar skull fracture
   d. Brain hemorrhage
   e. Meningeal hemorrhage
   f. Presentation of new neurological deficits
   e. Spinal cord injury, or major/unstable vertebral injury
   g. Subluxations
   h. Open spinal wounds
   i. Neurogenic shock

4. CHEST INJURIES

   a. Pneumothorax, tension pneumothorax, or hemothorax with persistent respiratory insufficiency, or with persistent hemorrhage, after appropriate thoracostomy tube placement
   b. Flail chest.
   c. Pulmonary contusion with respiratory insufficiency
   d. Cardiac tamponade, or other cardiac injury
   e. Aortic disruption
   f. Diaphragmatic hernia
   g. Tracheobronchial tree injuries
   h. Esophageal trauma
   i. Wide mediastinum on upright CXR, or other signs suggesting great vessel injury

5. ABDOMINAL INJURIES

   a. Hemodynamically unstable patients with physical evidence of abdominal trauma, without surgeon evaluation within 30 minutes and/or without capability for surgical intervention within 60 minutes
   b. Solid organ injury without immediate surgical capability
   c. Ruptured hollow viscus

6. ORTHOPEDIC INJURIES

   a. Open pelvic injury
   b. Pelvic fracture with evidence of continuing hemorrhage
   c. Unstable pelvic ring disruption with concomitant abdominal, chest or head injury
   d. One or more open long bone fractures with concomitant abdominal, chest or head injury
   e. One or more open long bone fractures, with no orthopedic surgeon available, or after fracture site(s) has (have) been appropriately cleaned/irrigated by an orthopedic surgeon
   f. Fracture/dislocation with loss of distal pulses after realignment, with either concomitant abdominal, chest or head injury, or no vascular or orthopedic surgeon available
   g. Pediatric fractures, with either concomitant abdominal, chest or head injury, with no vascular or orthopedic surgeon available

7. VASCULAR INJURIES

   a. Major vascular injuries documented by arteriogram, or loss of distal pulses with signs of ischemia after re-alignment of extremity, with either concomitant abdominal, chest or head injury, or no vascular surgeon available.

8. BURN INJURIES

   Burns injuries, including flash/flame, chemical, scalding, contact, or electrical, are to be transferred to a burn center as follows:

   a. Second degree burns over 10% total body surface area in children under 15 years old; or over 15% total body surface area in adults
   b. Second or third-degree burns involving the face, eyes, ears, hands, feet, genitalia, perineum, and major joints
   c. Third-degree burns greater than 5% of the total body surface area in any age group
   d. Electrical burns, including lightning injury
   e. Burns associated with inhalation or other significant major injury or pre-existing disease
   f. Circumferential extremity burns

9. ELDER GRAY-AREA CRITERIA

If the patient is 65 years or older and meets one or more of the following ELDER GRAY- AREA conditions, consider transferring that patient to a trauma center.

a. Motor vehicle collision associated with:
   i. Rapid deceleration of automobile (> 35 mph)
   ii. Pedestrian/bicycle/golf cart
   iii. Motorcyclist
   iv. Vehicle occupant with lack of restraints
   v. Significant passenger space invasion
   vi. Prolonged extrication greater than 20 minutes
   vii. Significant vehicular damage
   viii. Rollover
   ix. Fatality of other occupant

b. Other events associated with high-energy dissipation:
   i. Fall greater than ground level
   ii. Blast

c. Injuries associated with an above mechanism:
   i. Significant chest or pelvic trauma

d. Traumatic injury and currently taking:
   i. Anticoagulants and blood thinners
   ii. Cardiac medications such as beta blockers and antiarrhythmics
   iii. Diabetic medications

e. Traumatic injury and medical history of:
   i. Cardiac
   ii. CHF
   iii. COPD
   iv. Paralysis
   v. Dementia
   vi. Surgical: recent surgery, transplant recipient
   vii. Diabetes

V. EMS MEDICAL DIRECTORS

The Medical Directors for each emergency medical service provider based in Hillsborough County are:

EMERGENCY MEDICAL SERVICE	MEDICAL DIRECTOR
Aeromed	Marshall Frank, D.O.
American Medical Response	Joseph A. Nelson, D.O.
Americare	Gabriel Sanchez, M.D.
Bayflite	Charles I. Sand, M.D.
Lifenet	Charles I. Sand, M.D.
Hillsborough County Fire Rescue	Michael Lozano, Jr., M.D.
Plant City Fire Department	James Bartlett, M.D.
Sun City Center Emergency Squad	Ahmad Ksaibati, M.D.
Tampa Fire Rescue	Catherine L. Carrubba, M.D.
Temple Terrace Fire Department	Brooke Shepard, M.D.
TransCare	Jason L. Johnson, D.O.

VI. HOSPITAL REQUIREMENTS TO RECEIVE TRAUMA ALERTS ON EMERGENCY BASIS

A. The emergency medical service provider may only transport a trauma alert patient to a facility which has previously indicated that it meets the criteria listed in 64J-2.002 (3)(a), F.A.C. Each facility should provide a written attestation signed by the chief executive officer that the above criteria have been met. Those criteria are as follows:

1. Is staffed 24 hours per day with a physician and other personnel who are qualified in emergency:
   a. airway management
   b. ventilatory support
   c. control of life-threatening circulatory problems which include, but not be limited to, placement of:
      i. endotracheal tubes
      ii. establishment of central intravenous lines
      iii. insertion of chest tubes.

2. Has equipment and staff in hospital and available to conduct chest and cervical spine x-rays.

3. Has laboratory facilities, equipment and staff in hospital and available to analyze and report laboratory results.

4. Has equipment and staff on call and available to initiate definitive care required by a trauma alert patient within 30 minutes of the patient's arrival at the hospital, or can initiate procedures within 30 minutes of the patient's arrival to transfer the trauma alert patient to a trauma center or pediatric trauma center.

5. Has a written transfer agreement with at least one trauma center or pediatric trauma center. The transfer agreement shall provide specific procedures to ensure the timely transfer of the trauma alert patient to the trauma center or pediatric trauma center.

VII. HOSPITALS WHICH MAY RECEIVE TRAUMA ALERT PATIENTS

The following are trauma centers, pediatric trauma centers, and hospitals to which the emergency medical service providers may transport trauma alert/trauma patients:

A. Trauma Centers/Pediatric Trauma Centers

1. St. Joseph's Hospital
   (Level II trauma center & pediatric trauma center, Hillsborough County)

2. Tampa General Hospital
   (Level I trauma center & pediatric trauma center, Hillsborough County)

3. Lakeland Regional Medical Center
   (Level II trauma center, Polk County)

4. Blake Medical Center
   Level II trauma center, Manatee County)

B. Non-Trauma Center Hospitals Certifying Compliance With Criteria in 64J-2.002 (3)(a), F.A.C.

1. Brandon Regional Hospital

2. South Bay Hospital

3. Memorial Hospital - Tampa

4. South Florida Baptist Hospital

5. St. Joseph’s Hospital North

6. St. Joseph’s Hospital South

7. Tampa Community Hospital

8. Florida Hospital Carrollwood

9. Florida Hospital Tampa

APPENDIX A

A TRAUMA ALERT MUST BE CALLED FOR:

Hillsborough County Florida

HILLSBOROUGH COUNTY TRAUMA AGENCY

EITHER 1 — A score of 2 or greater for **ADULT** (> 15 y.o.) according to trauma scorecard methodology below:

	1 point	2 points
Airway	• Sustained RR ≥ 30	• Active assistance *(not just oxygen)*
Circu-lation	• Sustained HR > 120	• Lack of radial pulse with sustained HR >120, or • BP < 90
Best Motor Response	• BMR = 5	• BMR of ≤ 4, or • Paralysis, or • Suspected spinal cord injury, or • Loss of sensation
Cutaneous	• Tissue loss (degloving injuries, major flap avulsions > 5 inches) • GSW to extremities	• Amputation proximal to the wrist or ankle, or • 2nd or 3rd degree burns ≥ 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)*
Long Bone Fracture	• Single fracture site due to MVA, or • Single fracture site due to a fall ≥ 10 feet	• Multiple fracture sites
Age	• ≥ 55	
Mechanism of Injury	• Ejection from vehicle *(excluding any motorcycle, moped, ATV, bicycle or open truck bed*, or • Deformed steering wheel *(driver)*	

OR 2 • A GCS score less than or equal to 12 *(excluding those whose baseline is 12 or less)* [SEE SCALE BELOW]

OR 3 • A neck laceration with swelling, sustained bleeding, escape of air from wound or stridor
• Any other neck laceration:
Transport to the nearest trauma center, but do not trauma alert

OR 4 • EMS PROVIDER HIGH INDEX OF SUSPICION

GLASGOW COMA SCALE

Opens Eyes	Spontaneously	4
	To voice	3
	To pain	2
	No response	1
Best Verbal Response	Oriented	5
	Confused	4
	Inappropriate words	3
	Incomprehensible words	2
	No response	1
Best Motor Response	Obeys command	6
	Localizes to pain	5
	Withdraws to pain	4
	Flexion (pain) [decorticate]	3
	Extension (pain) [decerebrate]	2
	No response	1

THE FOLLOWING PATIENT INFORMATION SHOULD BE COMMUNICATED TO THE TRAUMA CENTER OR INITIAL RECEIVING HOSPITAL WHEN EN ROUTE WITH A TRAUMA ALERT:

- 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 if available)*

Effective Jan 2005

A TRAUMA ALERT MUST BE CALLED FOR:

Hillsborough County Florida

HILLSBOROUGH COUNTY TRAUMA AGENCY

EITHER 1 — A score of 2 or greater for **CHILD** (≤ 15 y.o.) according to trauma scorecard methodology below:

	Normal/ 0 ponts	1 point	2 points
Size	• Weighs > 11 Kg (24 lbs)	• Weighs ≤ 11 Kg (24 lbs) or length is ≤ 33 inches	
Airway	• Normal, or • O2		• Assisted *(includes measures such as manual jaw thrust, continuous suctioning, or other adjuncts)*, or • Intubated
Consciousness	• Awake, alert and oriented for age	• Amnesia, or • Reliable Hx of LOC	• 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
Circulation	• Good peripheral pulses, or • SBP ≥ 90	• The carotid or femoral pulse is palpable but neither the radial or pedal pulses are palpable, or • SBP < 90	• Weak or nonpalpable carotid or femoral pulse, or • SBP < 50
Fracture	• None seen nor suspected	• Suspected single closed long bone fracture *(proximal to the wrist or ankle)*	• Any open long bone fracture, or • Multiple fx / dislocation sites *(proximal to the wrist or ankle)*
Cutaneous	• No visible injury, or • Contusion, abrasion, minor laceration		• Major tissue disruption *(major degloving injuries, major flap avulsions, or major soft tissue disruption), or* • Amputation *(proximal to the wrist or ankle)*, or • 2nd or 3rd degree burns to ≥ 10% TBSA, or • Any high voltage electrical or lightning injury, or • Penetrating injury to head, neck, or torso

OR 2 • A neck laceration with swelling, sustained bleeding, escape of air from wound or stridor
• Any other neck laceration:
Transport to the nearest pediatric trauma center, but do not trauma alert

OR 3 • EMS PROVIDER HIGH INDEX OF SUSPICION

PEDIATRIC COMA SCALE (< 2 yrs)

[Optional - Not required to determine pediatric trauma alert]

Opens Eyes	Spontaneously	4
	To speech	3
	To pain	2
	No response	1
Best Verbal Response	Coos, babbles	5
	Consolable	4
	Cries to pain	3
	Moans to pain	2
	No response	1
Best Motor Response	Normal spontaneous	6
	Withdraws to touch	5
	Withdraws to pain	4
	Abnormal flexion	3
	Abnormal extension	2
	No response	1

THE FOLLOWING PATIENT INFORMATION SHOULD BE COMMUNICATED TO THE PEDIATRIC TRAUMA CENTER OR INITIAL RECEIVING HOSPITAL WHEN EN ROUTE WITH A TRAUMA ALERT:

- 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 if available)*

Effective Jan 2005

APPENDIX B

HILLSBOROUGH COUNTY TRAUMA AGENCY PRE-HOSPITAL ELDER GRAY-AREA NON-TRAUMA ALERT CRITERIA

Purpose: To identify "at-risk" older/geriatric trauma patients who might benefit from a trauma center

First check to see if your older trauma patient already meets trauma alert criteria and call an alert as appropriate.

If not a trauma alert, but patient is 65 years or older, consider transporting that individual to a trauma center if one or more of the following conditions are satisfied:

Mechanism of injury:

Burns

Motor vehicle collision associated with:

- Rapid deceleration of automobile (> 35 mph)
- Pedestrian
- Bicycle
- Golf cart
- Motorcycle
- Unrestrained vehicle occupant
- Significant passenger space invasion
- Prolonged extrication greater than 20 minutes
- Significant vehicular damage
- Rollover
- Fatality (other occupant)

Injuries associated with an above mechanism:

- Evidence of chest or pelvic trauma

Other events associated w/high-energy dissipation:

- Fall (> ground level)
- Blast

Traumatic injury and currently taking:

- Anticoagulants and blood thinners
- Cardiac medications such as beta blockers and antiarrhythmics
- Diabetic medications

Traumatic injury and medical history of:

- Cardiac
- CHF
- COPD
- Paralysis
- Dementia
- Recent surgery
- Organ transplant
- Diabetes

HILLSBOROUGH COUNTY TRAUMA AGENCY

Telephone: 813.276.2051 • Fax: 813.272.5346 • http://www.hillsboroughcounty.org/traumaagency/

Revised February 2008

Appendix C

HILLSBOROUGH COUNTY TRAUMA CENTER RECEIVING ZONES

Within the County, patient flow for trauma alerts is partitioned between the two state-approved trauma centers. Since 1992, Interstate 275 remains the boundary demarcating the County into its two trauma center receiving zones for trauma alert patients as follows:

- Patients meeting trauma alert criteria as defined in the County's Uniform Trauma Transport Protocol originating from incidents north and west of this reverse 'L-shaped' thoroughfare are taken to SJH; the remainder are transported to TGH.

- The same regions are observed for determining the destination of trauma alert patients to be transported by ground as by air. Each trauma center is served by an air medical program and serves as the other's back up. The implication of this arrangement is that for these severely injured patients, no matter which provider ultimately transports the patient, the destination is independent of the transporting service.

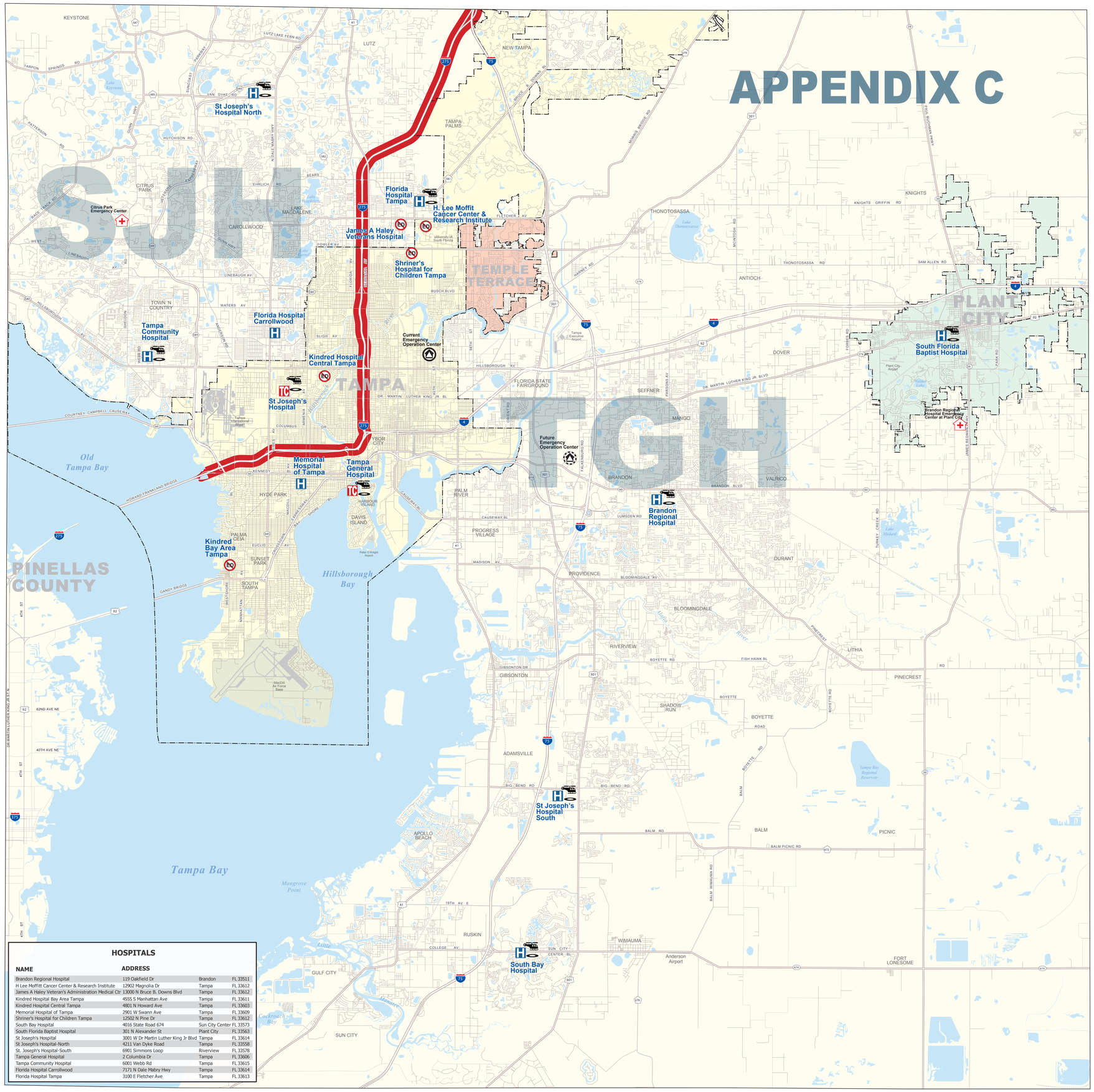
- If the trauma patient does not meet trauma alert criteria nor need trauma center level care, the patient may choose his/her hospital destination.

Source: 2015 Five Year Trauma Plan Update; p. 20

HILLSBOROUGH COUNTY TRAUMA CENTER RECEIVING ZONES

Development & Infrastructure Services

HillsboroughCounty GOVERNMENT Florida



HOSPITALS

NAME	ADDRESS		
Brandon Regional Hospital	119 Oakfield Dr	Brandon	FL 33511
H Lee Moffitt Cancer Center & Research Institute	12902 Magnolia Dr	Tampa	FL 33612
James A Haley Veteran's Administration Medical Ctr	13000 N Bruce B. Downs Blvd	Tampa	FL 33612
Kindred Hospital Bay Area Tampa	4555 S Manhattan Ave	Tampa	FL 33611
Kindred Hospital Central Tampa	4801 N Howard Ave	Tampa	FL 33603
Memorial Hospital of Tampa	2901 W Swann Ave	Tampa	FL 33609
Shriner's Hospital for Children Tampa	12502 N Pine Dr	Tampa	FL 33612
South Bay Hospital	4016 State Road 674	Sun City Center	FL 33573
South Florida Baptist Hospital	301 N Alexander St	Plant City	FL 33563
St Joseph's Hospital	3001 W Dr Martin Luther King Jr Blvd	Tampa	FL 33614
St Joseph's Hospital-North	4211 Van Dyke Road	Tampa	FL 33558
St. Joseph's Hospital-South	6901 Simmons Loop	Riverview	FL 33578
Tampa General Hospital	2 Columbia Dr	Tampa	FL 33606
Tampa Community Hospital	6001 Webb Rd	Tampa	FL 33615
Florida Hospital Carrollwood	7171 N Dale Mabry Hwy	Tampa	FL 33614
Florida Hospital Tampa	3100 E Fletcher Ave	Tampa	FL 33613

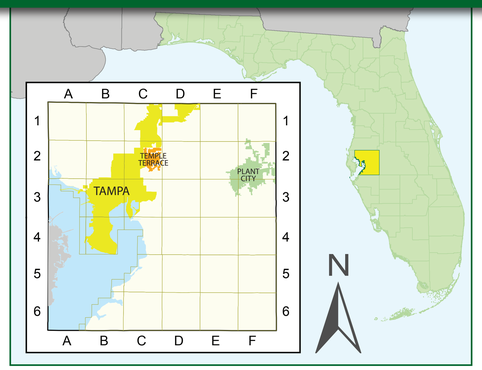
Legend

- Interstate
- US Highway
- State Highway
- County Highway
- City Limits
- Demarcation of Zones

Resource

- Trauma Center
- Non-Trauma Center Hospital
- Non-ED Hospital
- Free-Standing Emergency Department.
- Helipad
- Emergency Operation Center (Current and Future Locations)

Locator Map



NOTE: Every reasonable effort has been made to assure the accuracy of this map. Hillsborough County does not assume any liability arising from use of this map. THIS MAP IS PROVIDED WITHOUT WARRANTY OF ANY KIND, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

SOURCES: This map has been prepared for the inventory of real property found within Hillsborough County and is compiled from recorded deeds, plats, and other public records; it has been based on BEST AVAILABLE data.

Users of this map are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information contained on this map.

601 E Kennedy Blvd
Tampa, FL 33602
(813) 272-5810
printroom@hillsboroughcounty.org

Revise Date: September 20, 2016

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Path: W:\GIS\Public_Works\G16-0449_Trauma Agency Map updates\Map\HILLSBOROUGH COUNTY TRAUMA CENTER RECEIVING ZONES 20160920 REV3F.

TAMPA FIRE RESCUE ADMINISTRATIVE PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Infection Control Protocol	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Policy

To provide guidelines to Tampa Fire Rescue employees for selection, utilization, storage, and acquisition of personal protective equipment (PPE).

Purpose

To provide the appropriate barriers, in the form of PPE, to be utilized in an effort to minimize or eliminate the transmission of infectious disease to Tampa Fire Rescue employees.

Procedure

Standards for PPE will be developed by the Medical Director, Occupational Health, and the Administrative Safety Officer, and will be updated and modified as needed.

- ☐ The department is responsible for the supply, repair, replacement, and safe disposal of infection control PPE.
- ☐ The Infection Control / Safety Committee will determine proper stock supply levels of PPE, both for stations and for response vehicles.
- ☐ PPE will include, but not be limited to, disposable gloves, head covers, face masks, eye protectors, full face shields, fluid-impervious garments, sharps containers, leak-proof disposal bags, and shoe covers.
- ☐ Sharps containers will be sealable, puncture-resistant, and leak proof. They will be color-coded, labeled as a biohazard, and immediately accessible.
- ☐ PPE will be chosen to provide barrier protection against all body fluids.
- ☐ Employees are to don the most appropriate PPE to protect against the potential for spill, splash, or exposure to body fluids. No standard operating procedure or PPE ensemble can cover all situations. Common sense must be used. When in doubt, select maximal rather than minimal PPE.
- ☐ Disposable gloves will be worn during any patient contact when potential exists for contact with blood, body fluids, non-intact skin, or other infectious material.
- ☐ Gloves that are soiled, torn or punctured will be replaced as soon as possible.
- ☐ Hands should be washed after glove removal.
- ☐ When possible, gloves are to be changed between patients in multiple casualty situations.

☐ Structural fire fighting gloves may be worn in situations where sharp or rough edges are likely to be encountered.

☐ Heavy-duty disposable utility gloves may be used for handling, cleaning, decontaminating, or disinfecting potentially contaminated patient care equipment.

☐ Facial protection will be used in any situation where splash contact with the face is possible. Facial protection may be afforded by using both a face mask and eye protection, or by using a full-face shield. This form of protection is to be utilized for every intubation.

☐ When treating a patient with a suspected or known airborne transmissible disease or fever, face masks, or particulate respirators will be used.

☐ Face shields on structural fire fighting helmets will not be used for infection control purposes.

☐ Fluid-resistant garments are designed to protect clothing from splashes. Structural fire fighting gear also protects clothing from splashes and is preferable in fire rescue, or vehicle extrication. The decision to use barrier protection to protect clothing and the type of barrier protection used will be left to the employee. Structural fire fighting gear will always be worn for fire suppression and extrication activities.

☐ Under certain circumstances, head covers and/or shoe covers will be required to protect these areas from potential contamination. Structural fire fighting gear also may be used for barrier protection. Whichever PPE is utilized, it is to be used in its entirety.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	Inter-facility Transports	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Purpose

To provide a means for critically ill or injured patients to be transferred from one medical facility to another.

Policy

Inter-facility transports will be the main mission of Rescue 3, the designated Critical Care Transport Team (CCTT) for Tampa Fire Rescue, twenty-four hours a day, and seven days a week.

Definitions

Inter-facility Transport: Any time a patient is transported from one hospital to another it is, by law, considered an inter-facility transport.

COPCN: Certificate of Public Convenience and Necessity.

Hillsborough County BOCC: Hillsborough County Board of County Commissioners.

AHJ: Authority Having Jurisdiction.

Guidelines for Satisfying Legal Requirements for Inter-facility Transport

A patient may be transferred from one hospital to another hospital, if:

☐ the patient, personal physician or family desires the transfer.
☐ physician to physician communication has been established prior to a request between referring and receiving physicians.
☐ appropriate documentation of need, risk, and benefit has been explained to the patient or family member.

- All medical facilities have standardized forms requiring the signature of referring physician, patient, or designee.

- In the case of a time urgent emergency, where a higher level of care is needed, patient competency to sign is in question, and there is no legal family member to sign, the referring physician must indicate this scenario on the documentation bearing his/her signature, certifying that in his/her judgment the transfer can not wait.

☐ The receiving facility has an assigned bed for this patient, and has accepted the transfer.
☐ The sending and receiving nurses have communicated a patient care report. It is prudent to obtain the name of the nurse calling the report, and the nurse receiving the report on this patient.

Out of County Inter-facility Transports

Decisions regarding this type of transfer will be made on a case by case basis.

☐ The OIC on Rescue 3 will make the decision to transport or not to transport.
☐ If there are any questions they should contact Division Chief 1, online medical control, or the Medical Director.
☐ Mutual aid inter-facility transports for either Hillsborough County Fire Rescue or a private EMS agency will be done within reason, i.e. transports to adjoining counties such as Pinellas, Pasco or Polk Counties.

- In accordance with Florida Statute 401.25(6), Hillsborough County regulates the provision of emergency medical services provided within the county.
- Part of the regulatory process is the issuance of a COPCN by the Hillsborough County BOCC.
- COPCN's are issued for ALS services provided by non-transport, or transport agencies and BLS transport services.
- TFR does not have a COPCN to operate in surrounding counties, unless there is a mutual aid scenario in effect.
- The governing body of each county may adopt ordinances that provide reasonable standards for COPCN's for ALS or BLS services and air ambulance services.

Procedure

☐ Any call from a hospital requesting transport to another facility, even if on the 911 line, must be referred to the CCTT.

- The only deviation from this scenario is when a "non-trauma center" hospital ED is calling to have a patient, meeting "Trauma Alert" criteria, transported to a Trauma Center. This will be handled as any "D" trauma call, and will be dispatched accordingly.

☐ Critical care inter-facility transport requests will come from TFR Signal Division and assigned to Rescue 3 or to the most appropriate available unit, if they are unavailable.
☐ The Rescue Unit will respond to the patient's bedside, evaluate the patient and determine appropriate interventions for transport.
☐ If the OIC on Rescue 3 has any question concerning transport of this patient, he/she should contact Division Chief 1 to report a delay, while an on-line medical control consult is being obtained.

- Discussion with the on-line medical control physician should be concerned with medical care to be delivered, i.e. IV medications in progress, ventilator settings, or general patient condition for transport.

☐ If the OIC feels that this patient will not tolerate the transport, or that the patient's

needs cannot be met by TFR personnel alone, this will be communicated to Division Chief 1. There are two options to resolve this situation.

- Request an additional care-giver from the hospital to accompany the patient, or;
- Refuse the transport and assist in making other arrangements.

☐ All refusals of transport will be discussed with the on-line medical control physician and / or the Medical Director.

☐ When the designated CCTT receives a dispatch for an inter-facility transport, the OIC will follow the established protocols for carrying out the transport and completing the required paperwork.

☐ Only one critical ALS patient at a time will be transported from any facility.

- If you arrive to find more than one patient for transport, advise the sending facility personnel that your protocol does not allow this situation.
- Transport the most critical / time sensitive patient and advise that you will return to transport the other. If the second patient can not wait, Division Chief 1 will be notified and he will initiate the procedure for inter-facility transport of a patient when the CCTT is unavailable.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN. PROTOCOL	REVISION DATE 09/05/17	Medication Administration Error Prevention	ISSUE DATE 7-2011	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Purpose

To provide a method that will reduce or eliminate the potential for medication administration errors.

Policy

Dosage errors are the most common medication error, followed by administration of the wrong medication.
All Tampa Fire Rescue paramedics will adhere to the Six Basic "Rights" of Medication Handling:

"Right" patient
"Right" drug
"Right" dose
"Right" route of administration
"Right" time and frequency
"Right" documentation

Definitions

Administration
Direct introduction of, or application of, a drug into or on the body of a patient by injection, inhalation, ingestion or any other means and, where required by law, shall occur only pursuant to a medical order.

Medication error
Any preventable event that may cause or lead to inappropriate medication use, or patient harm, while the medication is in the control of the health care provider or patient.

Misuse
This occurs when a medication is used inappropriately; i.e. incorrect dose or route, medication contraindicated.

Underuse
The failure to use a medication, in a situation where it has been shown to be of proven benefit to the patient.

Overuse
When a medication, not immediately necessary for a particular situation, is utilized anyway or when a medication is used to treat the side effect of another medication without withdrawing that medication.

Procedure

- When possible, always ask about the patient's allergies to medications before administering anything.
- Make sure that vials and packaging with similar appearance are marked to avoid choosing the wrong one.
- Make certain that the medication you want to administer is the one in your hand.
- Always double check the medication, dose, and expiration date prior to administration.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN. PROTOCOL	REVISION DATE 09/05/17	Utilization of On-Line Medical Control Physician	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Purpose

To specify the process for receiving medical advice when needed to facilitate prompt and appropriate pre-hospital medical care.

Policy

The on-line medical control for Tampa Fire Rescue will be provided by specially designated local emergency room physicians with whom the City of Tampa has a written contract.

Procedure

☐ Contacting the on-line medical control physician will be done through TFR Signal Division, via cellular phone, Med 7 or Med 8 radio.

☐ There should be no delay in appropriate treatment and transport of a critically ill patient while awaiting contact with the on-line medical control physician.

- If the rescue unit is unable to contact the on-line medical control physician in a timely manner, personnel will proceed with the care they determine to be in the best interest of the patient.

☐ Documentation of contact or inability to contact the on-line medical control physician will be noted in the PCR.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	Passengers in TFR Transport Vehicles	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

Only personnel and authorized individuals may ride on a Tampa Fire Rescue transport vehicle.

Purpose

To establish a uniform policy concerning individuals authorized to ride on Tampa Fire Rescue transport vehicles.

Procedure

☐ Individuals authorized to ride on a Tampa Fire Rescue transport vehicle must be:

- a TFR employee.
- a patient being transported to an emergency facility.
- a health care professional, approved by TFR administration, riding as an observer or student. ***(ONE ONLY)***
- a family member or friend (***ONE ONLY)*** may accompany the patient, appropriately restrained in the front passenger seat, as long as they do not interfere with patient care or increase the patient's distress. Consideration should be given to parents providing comfort to children.
- law enforcement personnel, as needed for security.
- anyone with prior approval from TFR administration.
- a health care professional assisting in an inter-facility transport.
- a health care professional who has assumed care and must accompany the patient to the emergency department. (See: Assumption of Patient Care and Liability By an On-scene Physician form)
- a TFR Explorer with valid ride-along authorization.

☐ Requests for permission to ride on a TFR transport vehicle must be made through TFR administration. Ride-along permission forms and release of liability forms will be kept on file in the TFR Rescue office.

☐ Actual patient care should not be performed by an observer / student unless authorized by the OIC of the TFR transport vehicle.

☐ Only one student at a time is authorized to ride on a TFR transport vehicle.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	Patient Care Report Documentation	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

A Tampa Fire Rescue Patient Care Report (PCR) will be completed accurately and legibly, for all patient contact which requires assessment and / or patient care.

Purpose

To document the total patient care provided, including:

- patient name
- mechanism of injury.
- dispatch compliance.
- care provided prior to TFR arrival.
- exam of the patient as required by each specific complaint based protocol.
- past medical history, medications, allergies, Living Will or DNR, and personal physician, if available.
- all times related to the event.
- all procedures and their associated time, along with the crew member performing the procedure.
- all medications administered with their associated time, along with the crew member administering the medication.
- disposition and / or transport information.
- all communication with on-line medical control.
- electronic signature (PIN #) of personnel providing care.
- identification of the individual assuming patient care at the receiving medical facility.
- The names of all TFR personnel on scene, including students and riders.

Procedure

☐ All patient interactions are to be recorded on a PCR or the Refusal Form (if refusing care), including the reason for an inability to complete or document any of the above care.

☐ A copy of the PCR is to be left with the patient at the receiving medical facility.

☐ A full electronic copy of the PCR (ePCR) is to be completed prior to the end of the personnel's shift.

☐ Every patient transported must have an electronic acknowledgement of financial responsibility, signed by the patient or their representative.

☐ If the patient, or their representative is unable to sign, a signature from the receiving facility verifying that the patient was received, must be obtained.

☐ A TFR 365 will be used in those cases in which the TFR laptop is not available. The TFR 365 will be scanned into the PCR.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 01-2018	Patient Personal Property	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

Tampa Fire Rescue will document, and provide for the safe transfer, of a patient's personal property in circumstances where the patient is unable to personally maintain it.

Purpose

The purpose of this policy is to protect the personal property of each patient who receives care from TFR as well as protect TFR and its personnel from undue risk and liability.

Procedure

- ☐ Personnel will inventory personal property removed from a patient and document the disposition of that property in the "Incident" section of the ePCR.
- ☐ If possible, a patient's personal property will be left with a family member or guardian at the scene.
- ☐ If there is nobody who can assume custody of the personal property on the scene, then that property will be transported with the patient to the hospital.
- ☐ Upon arrival at the hospital, personal property will be turned over to the patient's guardian or, if no guardian is present, to the appropriate hospital personnel for safekeeping.
- ☐ Any property not transported with the patient will be documented and given to law enforcement personnel for appropriate disposition.
- ☐ Document on the ePCR what items were transferred and to whom it was given.

TAMPA FIRE RESCUE

DATE: _____ Contact time: _____
INCIDENT #: _____
UNIT #: _____ Release time: _____

RESPONSIBLE PARTY/PATIENT INFORMATION

Name: _____

AGAINST MEDICAL ADVICE (AMA) – REFUSED ASSESSMENT (RA)

CRITERIA FOR REFUSING CARE

The patient meets all of the following:

1. Exhibits no evidence of altered level of consciousness.
2. Exhibits no evidence of alcohol or drug ingestion that impairs judgment.
3. Understands the nature of the medical condition, as well as the risks and consequences of refusing care.

ACKNOWLEDGEMENT OF INFORMATION

A. AMA: I have been advised that medical assistance on my behalf is necessary and that refusal of said assistance could be hazardous to my health, and under certain circumstances include disability and/or death. I have been advised to discuss my medical complaints with my regular health care provider as soon as possible. Nevertheless, I refuse to accept treatment or transport to a medical facility and assume all risks and consequences of my decision.

B. RA: I acknowledge that I may or may not have a medical condition that may require additional medical assessment. I elect to defer any assessment and/or transportation that has been offered to me at the present time. I elect to seek alternative medical care and assume all risks with my decision.

CONTRA ADVISO MEDICO (CAM) – RECHAZAR EVALUACION (RE)
ACUSE DE RECIBO DE LA INFORMACION

A. CAM: He sido informado que hay asistencia medica en mi nombre y esa negative de dicha ayuda podria ser peligroso para mi salud y bajo ciertas circunstancias incluyen incapacidad o muerte. Me han aconsejado que debo discutir mis quejas medicas con mi medico regular tan pronto como sea posible Sin embargo, me niego a aceptar tratamiento o transporte a un centro medico y asumo todos los riesgos y consequencias de mi decision.

B. RE: Reconozco que puedo o no puedo tener una condicion medica que puede requerir evaluacion medica adicional. Yo prefiero aplazar cualquier evaluacion o transporte que se a ha ofrecido a mi en el momento actual. Yo prefiero buscar atencion medica alternativa y asumo todos los riesgos de mi decision.

RELEASE OF LIABILITY: By signing this form, I am releasing Tampa Fire Rescue of any liability or medical claims resulting from my decision to refuse medical care/transport offered.

RESPONSIBLE PARTY/PATIENT RELEASE

Signature: Witness:
Firma: _____ Testigo _____

Paramedic signature: _____ Paramedic signature: _____

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 01-2018	Patient Restraint Policy	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

Restraints should only be utilized for situations in which the patient is exhibiting behavior that represents a danger to themselves or others. This may include, but is not limited to, assertive behavior or behavior which jeopardizes airway, breathing or circulatory resuscitative measures.

A competent patient may not be transported against his or her will, unless under arrest or involuntary detention. In situations in which a life threatening emergency exists or potentially exists, patients with medical conditions that appear to compromise their ability to consent for care may be restrained (when indicated) and transported, without law enforcement authority. If in doubt, consult with a law enforcement officer (LEO) and/or a radio physician as needed for final and most appropriate disposition of the incident. Patient dignity should be maintained during restraint. The method chosen should be individualized to use the least restrictive method of restraint that protects the patient and TFR personnel from harm.

Purpose

The safety of responding personnel, the patient and the community is of paramount importance.

Definitions

Restraint types

- Padded leather or soft restraints
  - Posey®
  - Velcro®- type
- Roller bandages
  - Kling /Kerlix®)
- Law enforcement restraint devices
  - Metal hand-cuffs
  - Plastic flex-cuffs

Procedure

☐ Padded leather or soft restraints may be utilized for patient restraint during transport. TFR personnel shall have a method immediately available to release any restraint used.

☐ A LEO may apply metal handcuffs for initial restraint. They can be replaced with another method of restraint (e.g., those listed above or plastic flex-cuffs provided

by LEO) prior to transport. Metal handcuffs should only be used for restraint when LEO personnel accompany the patient in the TFR transport vehicle.

☐ Be cognizant of concealed weapons.

☐ The minimum number of personnel required on scene, before an attempt can be made to forcibly restrain a patient, is five (5).

- ➢ One rescuer assigned to each extremity and one at the head.

☐ Use only the amount of force that is absolutely necessary to complete the task.

☐ Check distal pulses every 10-15 minutes.

☐ No prone positioning, improvised restraints, or “hog tie” maneuvers are allowed.

☐ Be aware of the potential for positional asphyxia.

Law Enforcement Responsibilities

☐ LEO’s are responsible for the capture and / or restraint of potentially violent patients. TFR personnel should obtain assistance from law enforcement to prepare patients for transport.

☐ Law enforcement agencies retain primary responsibility for safe transport of patients under arrest or involuntary detention.

☐ Patients under arrest or involuntary detention shall be searched thoroughly by a LEO prior to being placed in the TFR transport vehicle.

☐ Law enforcement personnel must always accompany patients who are under arrest.

☐ EMS and law enforcement personnel should mutually agree on the need for law enforcement assistance during transport of involuntary detention patients.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Patient Weight	ISSUE DATE 07-2016	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

The weight of a patient transported by TFR to a medical facility is the primary responsibility of the receiving facility. Crew members may assist in the process when feasible.

Purpose

Obtain accurate patients weight, when transferring patients to medical facilities for immediately critical care attention, i.e. Cath Lab or CT.

Procedure

- ☐ TFR units shall be greeted by the receiving facility when patient weight is required.
- ☐ A receiving facility representative shall accompany the TFR unit while patient is on a TFR transporting stretcher to the facility scale to capture gross weight. The receiving facility staff will calculate the appropriate weight.
- ☐ TFR will provide the receiving facility staff with net weight of TFR stretcher with special attention to extra equipment accompanying the stretcher.
- ☐ All calculation of patient weight will be computed by receiving facility staff.
- ☐ At no time, will TFR units calculate patient weight, for the sole purpose of providing care facilities with said information. Rescue crews are encouraged to use information about weight from the patient when possible.
- ☐ When the patient is unable to provide weight information, the paramedic should make an educated yet conservative estimate.
- ☐ Information on this estimate shall be provided to the facilities staff member in the verbal patient report and then documented in the EPCR.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Patient without a Protocol	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

Anyone requesting EMS service will receive emergent evaluation, care, and transportation (if needed) in a systematic, orderly fashion, regardless of the patient's problem or condition.

Purpose

To insure provision of appropriate medical care for every patient, regardless of the patient's problem or condition.

Procedure

- ☐ Treatment and medical direction for all patient encounters which can be triaged into a TFR patient care protocol is to be initiated by protocol.
- ☐ When confronted with an emergency or situation which does not fit into a patient care protocol, the patient should be treated by the Universal Patient Care Protocol and the on-line medical control physician should be contacted for further instructions.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 9/1/17	Physician On-scene	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

The medical direction of pre-hospital care at the scene of an emergency is the responsibility of those most appropriately trained in providing such care. All care should be provided within the rules and regulations of the State of Florida.

Purpose

The purpose of this policy is to:

- identify a chain of command to allow field personnel to adequately care for the patient.
- assure the patient receives the maximum benefit from pre-hospital care.
- minimize the liability of TFR.

Procedure

☐ When confronted with an on-scene (non-medical control) physician, EMS personnel must review the "Assumption of Patient Care and Liability" form (see appendix) with the physician. The physician must affix his/her signature to the form, stating that he/she agrees to all of the conditions. All components of the form must be verified and approved by on-line medical control physician.

☐ When responding to care for a patient in a physician's office, EMS personnel may follow orders given by the office physician, if the orders conform to current EMS guidelines, and if the physician signs the "Assumption of Patient Care and Liability" form**.** Notify medical control at the earliest opportunity. Any orders given that deviate from TFR protocols will require that the physician accompany the patient to the hospital.

☐ When presented with an emergency where the physician calls over the phone with orders, TFR personnel should advise the physician that orders can only be accepted with approval of on-line medical control physician.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Assumption of Patient Care and Liability By an On-Scene Physician	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Tampa Fire Rescue would like to thank you for your effort and assistance. Please be advised that the EMS professionals are operating under strict protocols and guidelines established by their medical director and the State of Florida. As a licensed physician, you may assume medical care of the patient.

In order to do so, you will need to:

1. receive approval to assume the patient's medical care from the Tampa Fire Rescue Medical Director or approved on-line radio physician.

2. show proper identification including a current Florida Medical Board Registration Card.

3. accompany the patient to the hospital. (REQUIRED)

4. be prepared to personally carry out any interventions that do not conform to the Tampa Fire Rescue Medical Protocols. The EMS personnel cannot perform any interventions that are not included in their protocols.

5. complete the appropriate patient care report.

6. assume the medico-legal responsibility for all patient care activities until care is transferred to another physician at the destination hospital.

7. complete the "Assumption of Medical Care" section below.

Assumption of Medical Care

I, _____, MD; License #: _____,

have assumed authority and responsibility for patient management for

_____.
(Patient's Name)

I understand that I must accompany the patient to the Emergency Department. I further understand that all Tampa Fire Rescue personnel must follow Florida EMS Rules and Regulations as well as Tampa Fire Rescue Medical Protocols.

_____, MD Date: _____/_____/_____Time: _____A /P

_____ TFR _____ Witness

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN. PROTOCOL	REVISION DATE 01-2018	Radio Report Format	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Purpose

To provide for the orderly transmission of patient information while enroute to the hospital.

Policy

The initial radio report to the receiving facility should be limited to 2 minutes or less.

Procedure

☐ Advise if the patient is an emergency or non-emergency transport?

☐ Advise the purpose of the call:

- Patient information to the hospital only.
- Need for on-line physician orders.

☐ The radio report should then include:

- rescue unit identification.
- paramedic's name.
- mechanism of injury, including description of scene, if pertinent.
- patient data, including:
  - patient's age and sex.
  - chief complaint.
  - brief history of the present illness; include past medical history, medications, and allergies *only* if relevant to the chief complaint.
  - vital signs including general appearance, level of consciousness
  - Glasgow Coma Score.
  - pertinent physical findings or body area involved.
  - airway and ventilation status and oxygen saturation, if known.
  - hemodynamic status, especially characteristics of peripheral pulses, e.g. weak or strong.
- care in progress.
- estimated time of arrival to the destination facility.
- request for orders from the on-line medical control physician if that is the purpose of the call.

Cell Phone Use

☐ Cell phones assigned to TFR transport vehicles may be used for official Tampa Fire Rescue business only, including:

- reports to receiving facilities.
- calls to Signal Division, when paged.
- calls to chief officers or RDS, when paged.
- emergency calls, when approved by a supervisor.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 01-2018	Refusal of Service/Transport	ISSUE DATE 07-2016	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Purpose

To assist TFR personnel in dealing with a patient who activates the EMS system, in need of medical attention and /or transport, medically treated by TFR and refuses additional medical care and/or transportation to a medical facility.

Policy

Even though a patient is refusing assistance, the margin of error will ALWAYS fall on the side of assuming the patient requires medical care.

Procedure

Assessment of the person/patient and scene

☐ Obtain a brief history from the patient and /or others in the immediate area.

☐ Obtain the patients vital signs & document this on the PCR; if vital signs are unobtainable secondary to poor patient cooperation, IT MUST BE DOCUMENTED APPROPRIATELY.

☐ Perform a brief physical examination, paying particular attention to alterations in mental status as well as any illness or traumatic injury that may represent a threat to the well-being of the patient.

☐ Assess the competency of the patient. For TFR purposes to provide "informed refusal of medical care", a person/patient shall be defined as one who:

- Is over ≥18 years of age.
- A court emancipated minor.
- A pregnant female.
- An unwed pregnant female < 18 years of age, when the medical issue relates to her pregnancy.
- A parent (of any age) on behalf of their child when the refusal of care does not put the child at risk.
    - Other responsible adult who may refuse medical assessment on behalf of a minor when parent is unavailable:
        - Step-parent
        - Grandparent
        - Adult Sibling
        - Aunt or uncle
        - Appointed/authorize guardian
- A legally married person of any age.

- is awake, alert, and fully oriented to time, person, place, and situation.
- has no alteration in vital signs, mental status, or level of consciousness.
- has no signs of acute injury or illness, and has no signs of chronic illness which may influence the ability to make informed decisions.
- is not intoxicated or impaired by drugs, alcohol, supplements or any substances that would impair their ability to make an informed decision.
- Patient is not exhibiting evidence of mental illness/psychiatric decompensation, suicidal or homicidal thoughts, delusional thoughts, hallucination or bizarre behavior.

Evaluate the refusal of necessary medical care

☐ A parent or legal guardian may refuse care for a minor patient providing he/she is considered competent and the patient :

- exhibits no historical or physical findings of injury or illness.
- is not intoxicated.
- has no alterations in mental status, level of consciousness, or vital signs.

☐ If the patient, parent or guardian is judged incompetent to refuse transport, clearly explain the need for transport.

- Reassure the patient that no harm will result from transport but that complication's up to and including death, may result from a delay in treatment.
- If the patient, parent, or guardian continues to refuse care, enlist the aid of law enforcement personnel to secure patient for transport.

☐ If the patient, parent or guardian is judged competent to refuse transport emphasize the need for care, the risks of refusal of care (including death), and the wish of TFR to transport the patient.

- If patient, parent, or guardian continues to refuse care, he or she must sign the written medical release form in front of a witness and TFR employee.
  - ➢ If patient, parent, or guardian refuses to sign the written release form, reassess the competency of the individual.
  - ➢ If still considered competent to refuse care or transport, document the refusal on the PCR accordingly.

☐ Advise the patient, parent, or guardian that in the event they change their mind, TFR will return to provide the necessary care and transport the patient to a medical facility of their choice, within TFR medical protocol guidelines.

NOTE: All episodes which involve refusal of care or transport must be documented completely on the PCR. All refusal of care documentation will be flagged for quality management review.

Responses to walk-in clinics, doctor's offices and nursing homes are periodically reviewed by the Medical Director and the Rescue Division. These reviews center upon response, deployment and transport criteria as well as facility capabilities and operational impact.

Walk-In-Clinics

For the most part, the attending physicians are general medicine physicians with limited or no emergency room training. With that said, the treatment and capabilities provided by the clinic is limited. The clinics only have an Automated External Defibrillators (AED) on-site and no Advanced Cardiac Life Support (ACLS) medications. For patents with respiratory compromise, the clinics will only utilize an oxygen cannula or non-rebreather mask, and a bag-valve-mask (BVM) in severe cases. The clinics will not place an advanced airway of any kind. Intravenous fluids are rarely if ever initiated by the clinic. If Tampa Fire Rescue (TFR) is called to a walk-in clinic, the patient will need to be evaluated at a hospital as the clinic cannot manage the scope of the issue. In those cases it is appropriate for the patient to be transported to the hospital by TFR.

Nursing Homes

These facilities have limited capabilities on-site. In many cases the physician is not on site at the time of the crisis and has had limited (if any) knowledge of the particular incident. In most cases there are standing facility orders to access 911. Once a TFR unit is on-scene, if the patient meets ALS to BLS Protocol criteria, the request for a BLS unit can be made. If there is an extended response time for BLS ($\geq$30 minutes for Bravo, Charlie or Delta incidents), a TFR transport unit will transport the patient to the appropriate facility. In no case will the TFR unit leave the scene prior to the arrival of a TFR transport unit or BLS unit.

Physicians Offices

When 911 requests from a physician's office are received, the Medical Priority Dispatch System (MPDS) is applied for the proper response. Similar to the walk-in clinics, if we receive a request from a physician's office, it is due to physical findings from the physician. When a TFR transport unit is placed on the alarm the TFR unit will complete the transport.

In summary, the level and scope of care provided by TFR in many cases supersedes the capabilities of the facilities discussed. TFR will continue to respond to various calls for service at these locations. At the direction of the Medical Director, other than nursing homes when the patient meets ALS to BLS protocol criteria, patients will be transported by TFR.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 01-2018	Scanning and Attaching Documents To Patient Care Records	ISSUE DATE 12-2011	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Policy:

This directive establishes the parameters in which Tampa Fire Rescue (TFR) will scan and attach documents to electronic patient care records (e-PCR).

Purpose:

The purpose of this directive is to ensure all ancillary patient care documents are appropriately accounted for and accessible for the patients treated by TFR, as well as other healthcare providers, insurance companies, attorney's and law enforcement agencies as required.

Procedure:

In situations when additional ancillary documentation is generated i.e., refusals, EKG tracings, financial responsibility forms or any other pertinent documentation or medical charting relating to an incident, it should be scanned into the report. This can be accomplished by performing the following. In the Emergency Pro EMS program, find the "Attachment Tab" (it is the last tab in the header).

<u>Using the scanner with DocuMed Emergency Pro/Reporter:</u>

Users can scan and attach documentation to any open report in the following manner:

1. In the list of tabs, find the "Attachments" tab and left click.
2. Click on the "Scanner" icon in the "Obtain Attachment From" section.
3. Click on the "Brother 7860" (or designated printer) in the Select Device window and click OK.
4. In the "What do you want to scan?" window, change the "Paper Source" to the correct selection (Flatbed for platen glass and Document Feeder for the ADF). Also change the option for the type of scan by selecting the "preferred radio button" and click Scan (the user can also see a preview before scanning).
5. Enter a file name for the scanned document and click OK (The file is now listed under attachment on the bottom left with the name given).
6. Once the file is listed under attachment, click "Save Row" or "Accept" to save into report and scan another document (if scanning another document, follow steps 2-6 again).
7. Resume finishing report.

<u>NOTE:</u>

- Code Summaries: All code summaries should be mounted on a TFR 364 and submitted to the Rescue Office or scanned into the e-PCR..
- Medication lists may be scanned into the report, but shall not replace the required information for the selected section(s) of the e-PCR.

Once the appropriate selected items are scanned into the document, personnel will shred the original documents in the station shredder. This is in accordance with Health Information Portability and Accountability Act (HIPAA) safeguards and standards.

It is the responsibility of the paramedic(s) to thoroughly check all equipment assigned for their use during a special event. There will be a Special Event Equipment Check form for each equipment setup and first aid room, in the venue's information binder. The assigned paramedic will print their name legibly, and sign the form, to verify all equipment and supplies are sufficient. A glucometer check must be done, with the readings documented. All equipment setups at the venue must be checked. In the event that a setup is not being used supervisor or lead medic. The supervisor or lead medic will report the needs by email to TFR_Special_Events@tampagov.net (preferred) or by calling 813.274.7550.

It is the responsibility of the supervisor or lead medic to assure that first aid rooms are kept clean and organized at all times. Report any facility problems to the venue management. At the end of the event, all equipment must be properly stored. Garbage will be bagged and placed in a proper receptacle outside the first aid room. Bio-hazardous waste will be placed in the designated container. The supervisor or lead medic will notify the Rescue Office when this container needs to be picked up.

Each employee will verify that his or her name and employee number is correct when signing the payroll log sheet. The correct out- time will be logged. Do not total the hours. Rescue Office personnel will do this.

A Special Event Patient Contact Record must be completed for all patients. The treating paramedic must print his or her name legibly and sign the form. These records are to be reviewed by the supervisor or lead medic to assure completeness.

The payroll log sheet and any patient records will be placed in the event folder for pick up or return to the Rescue Office depending on the venue.

Tampa Fire Rescue Acknowledgment of Financial Responsibility

Patient Name: _____ **Transport Date:** _____ **Inc. #**_____

I request that payment of authorized Medicare, Medicaid, or any other insurance benefits be made on my behalf to TAMPA FIRE RESCUE for any services provided to me by TAMPA FIRE RESCUE now or in the future. I understand that I am financially responsible for the services provided to me by TAMPA FIRE RESCUE, regardless of my insurance coverage, and in some cases, may be responsible for an amount in addition to that which was paid by my insurance. I agree to immediately remit to TAMPA FIRE RESCUE any payments that I receive directly from insurance or any source whatsoever for the services provided to me and I assign all rights to such payments to TAMPA FIRE RESCUE. I authorize TAMPA FIRE RESCUE to appeal payment denials or other adverse decisions on my behalf without further authorization. I authorize and direct any holder of medical information or documentation about me to release such information to TAMPA FIRE RESCUE and its billing agents, and/or the Centers for Medicare and Medicaid Services and its carriers and agents, and/or any other payers or insurers as may be necessary to determine these or other benefits payable for any services provided to me by TAMPA FIRE RESCUE, now or in the future. A copy of this form is as valid as an original.

Privacy Practices Acknowledgment: by signing below, I acknowledge that I have received TFR's Notice of Privacy Practices.

SIGNATURE SECTION:

ONE of the following three sections MUST be completed.

SECTION I – PATIENT SIGNATURE

This Section is for **emergencies or non-emergencies**. The patient must sign here unless the patient is physically or mentally incapable of signing.

X_____
Patient Signature or Mark

If the patient signs with an "X" or other mark, it is recommended that someone sign below as a witness. This can be a Rescue crew member.

X_____
Witness Signature

_____
Witness Printed Name

SECTION II – AUTHORIZED REPRESENTATIVE SIGNATURE

This section is for **emergencies or non-emergencies**. Complete this section **only** if patient is physically or mentally incapable of signing.

Reason the patient is physically or mentally incapable of signing:

_____

Authorized representatives include **only** the following individuals (check one):

- ☐ Patient's Legal Guardian ☐ Patient's Health Care Power of Attorney
- ☐ Relative or other person who receives government benefits on behalf of patient
- ☐ Relative or other person who arranges treatment or handles the patient's affairs
- ☐ Representative of an agency or institution that furnished care, services or assistance to the patient.
- ☐ Rep. of provider or nonparticipating hospital (**only** if reasonable efforts were first made to obtain signature of one of the authorized signers listed above).

I am signing on behalf of the patient. I recognize that signing on behalf of the patient is not an acceptance of financial responsibility for the services rendered.

X_____ _____
Representative Signature Printed Name of Representative

SECTION III - EMERGENCIES ONLY - RESCUE CREW AND FACILITY REPRESENTATIVE SIGNATURES

Complete this section **only** if **all** of the following are true: (1) the call is an **emergency** ambulance transport, (2) the pt was physically or mentally incapable of signing, **and** (3) no authorized representative (Section II) was available or willing to sign on behalf of the pt at time of service.

A. Rescue Crew Member Statement (must be completed by crew member at time of transport)

My signature below indicates that, at the time of service, the patient named above was physically or mentally incapable of signing, and that none of the authorized representatives listed in Section II of this form were available or willing to sign on the patient's behalf.

Reason pt incapable of signing: _____

Name and Location of Receiving Facility: _____ Time at Receiving Facility: _____

X_____ _____
Signature of Crewmember Printed Name of Crewmember

B. Receiving Facility Representative Signature

The patient named on this form was received by this facility at the date and time indicated above. ***This signature is not an acceptance of financial responsibility for the services rendered to this patient.***

X_____ _____
Signature of Receiving Facility Representative Printed Name and Title of Receiving Facility Representative

C. Secondary Documentation (required only if signature in Section B above cannot be obtained)

If no facility representative signature is obtained, the ambulance crew should attempt to obtain one or more of the following forms of documentation from the receiving facility that indicates that the patient was transported to that facility by ambulance on the date and time indicated above. The release of this information by the hospital to the ambulance service is expressly permitted by §164.506(c) of HIPAA.

- ☐ Patient Care Report (signed by representative of facility)
- ☐ Facility Face Sheet/Admissions Record
- ☐ Patient Medical Record
- ☐ Hospital Log or Other Similar Facility Record

(TFR 365)

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 01-2018	Transport of “Baker Act” Patients	ISSUE DATE 6-2011	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Policy

This directive serves to provide information when evaluating, treating, transporting or transferring “Baker Act” Patients.

Purpose

To assist crews in ascertaining the correct destination / disposition of Baker Act patients.

Background

As of June 12, 2011 Tampa General Hospital will no longer be classified as a Baker Act receiving facility. Historically, TFR transports very few patients solely as a Baker Act or BA / 52. On the aforesaid date, TFR will no longer transport patients to Tampa General Hospital for the sole purpose of obtaining a mental health clearance. The following hospitals can be utilized for the sole purpose of mental health clearance:

St. Joseph’s Hospital
St. Joseph’s Hospital – Northside
Town and Country Hospital

These hospitals are identified as a designated Baker Act receiving facility.

Tampa General will still accept those patients deemed to have an emergency medical condition and require evaluation and stabilization. It should be understood that Tampa General Hospital is able to care for Patients that are under a “Baker Act” but are in need of medical treatment.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 01-2018	Transportation of TFR Personnel	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Purpose

To provide a means for response by TFR, when asked to transport injured or ill firefighters (active and retired) to a medical facility for additional testing and evaluation, or transport from a medical facility to their residence. This guideline is in place to assist the Division Chief 1, or his designee, with decisions of this nature

Policy

All emergency or non-emergency calls for assistance will be addressed on a case by case basis, by Division Chief 1.
If there are issues that arise, and these guidelines do not assist in making that determination, the Rescue Division Chief or the Rescue Division Officer (in that order) should be contacted during off hours and on week ends and holidays to assist in that effort.

Definitions

Inter-facility Transport: Any time a patient is transported from one hospital to another, it is by law considered an inter-facility transport.

TFR – CCTT: Rescue 3 is the designated Tampa Fire Rescue Critical Care Transport Team. Their main mission is to provide for inter-facility transportation, twenty-four hours a day, seven days a week.

COPCN: Certificate of Public Convenience and Necessity

Hillsborough County BOCC: Hillsborough County Board of County Commissioners.

AHJ: Authority Having Jurisdiction
All use of the term “Patient” implies active or retired Tampa Fire Rescue personnel.

Procedure

There are four basic categories that effect assisting personnel and families in need of transportation to a medical facility.

<u>Inter-facility Transfers</u>

Any call from a hospital requesting transport to another facility, even if on the 911 line, must be referred to the CCTT.

- The only deviation from this scenario is when a “non-trauma center” hospital emergency department is calling to have a patient, meeting “Trauma Alert” criteria, transported to a Trauma Center. This will be handled as any “D” trauma call, and will be dispatched accordingly.

Emergency Calls for Assistance

These incidents will be addressed on a case by case basis. First and foremost all instances in which there are critical medical determinations that need to be made, the local 911 service should be utilized.

- The AHJ must be notified of the event.
- After the local 911 service arrives and the patient's condition is stable enough, the AHJ may or may not allow TFR to transport the patient.
- If the patient needs to be transported, and the local 911 service will not allow TFR to provide transportation, the AHJ can transport the patient to an appropriate hospital and then an inter-facility transfer can be arranged as described in the "Inter-facility Transfer Policy".

Non - Emergency or Out of County Calls for Assistance

These incidents will be addressed on a case by case basis. First and foremost all instances in which there are medical determinations that need to be made, the local 911 service should be utilized.

- The AHJ must be notified of the event.
- After the local 911 service arrives and the patient's condition is stable enough, the AHJ may or may not allow TFR to transport the patient.
- If the patient needs to be transported, and the local 911 service will not allow TFR to provide transportation, the AHJ can transport the patient to an appropriate hospital and then an inter-facility transfer can be arranged as described in the "Inter-facility Transfer Policy".
- TFR does not have a COPCN for surrounding counties.
- TFR does not have the legal authority to cross county lines to pick up a patient and transport them to a hospital, outside of the confines of our existing mutual aid agreements, regardless of their request.

On-Duty / Line of Duty Injuries

Upon sustaining a "On Duty /Line of Duty" injury the employee's supervisor should contact the on Duty Division Chief and page the OHN.

- For injuries and illnesses of significant nature i.e., significant trauma, evolving cardiac issues i.e. STEMI /evolving MI, or altered level of consciousness situations, those instances should be addressed without delay with treatment and transport initiated as per TFR medical protocols.
- For injuries and illnesses of a minimal nature i.e., sprains/strains, lacerations, minor burns, joint injuries, the OHN will direct the individual to the most appropriate facility.

NOTE: In all instances, the Communications Supervisor will be advised and a Group 2 page will be sent, with the appropriate information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN. PROTOCOL	REVISION DATE 09/05/17	Transport Policy	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

All individuals served by Tampa Fire Rescue will be evaluated and provided with transportation (if indicated) in the timeliest and most appropriate manner for each individual situation.

Purpose

The purpose of this policy is to:

- provide rapid emergency EMS transport when needed.
- provide appropriate medical stabilization and treatment at the scene, when necessary.
- arrange transportation via private provider in non-emergent situations, based on availability.
- provide protection for patients, TFR personnel, and citizens from undue risk, when possible.

Procedure

☐ All trauma patients who present with multi-systems trauma will be transported as soon as possible with the transport goal being 10 minutes or less.

☐ Medical patients will be transported in the most efficient manner possible considering the medical condition. Advanced Life Support procedures should be provided at the scene if it will positively impact patient care to do so, prior to initiating the transport.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09/05/17	Traumatic Cardiac Arrest	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Purpose

To provide a mechanism for discontinuation of resuscitation of patients in cardiac arrest, secondary to trauma.

Policy

Any victim, who meets the criteria for a traumatic arrest, can be assumed to have sustained a terminal injury.

Procedure

☐ Ensure that the patient meets the criteria for traumatic arrest. This will include:

- present history of blunt/penetrating trauma.
- pulseless.
- apnea.
- no palpable blood pressure.
- no heart sounds, OR;
    - agonal rhythm (wide complex ventricular rhythm with a rate less than 20 beats per minute).
    - No electrical activity on an EKG monitor (asystole).

☐ Tension pneumothorax is a potentially correctable traumatic event; therefore bilateral chest decompression should ALWAYS be attempted prior to ceasing resuscitative efforts.

☐ If the above criterion has been met, all resuscitation, including BLS interventions in progress, may be stopped.

- ALS treatment including adequate airway control and ventilation, for a patient who has sustained blunt trauma, may be discontinued if the patient deteriorates to cardio-respiratory arrest. This patient has sustained a terminal injury.

- The Officer In Charge (OIC) may decide to continue resuscitative efforts. If this occurs the patient should be transported to the nearest appropriate facility.

Documentation

- ☐ Documentation of the blunt trauma code criteria on the patient care report (PCR) should include a rhythm strip, unless the scene prohibits it.
- ☐ If requested, a completed ePCR will be faxed to the Hillsborough County Medical Examiner's Office, either by Division Chief 1 or by the Rescue Office.
- ☐ All instances of declaration of death in the field will be immediately communicated to the Medical Director or the on-line medical control physician.

NOTE: These charts will also be flagged for TFR quality management review.

Universal Patient Care Protocol

- Assure scene safety. If scene is unsafe, call for appropriate resources (LEO) and stage until scene is safe.
- Utilize appropriate PPE.
    - Consider airborne or droplet protection.
- Bring all necessary equipment to the scene.
- Demonstrate professionalism and courtesy.
- Perform initial assessment, including BLS maneuvers and early oxygenation if needed.
- Refer to Spinal Immobilization Protocol.
- If patient is in cardiac arrest, see Cardiac Arrest Protocol.
- For ***trauma*** patients:
    - Evaluate mechanism of injury.
    - Perform focused and rapid trauma assessment for injury.
    - Obtain vital signs and SAMPLE history.
- For ***medical*** patients:
    - For responsive patients, obtain SAMPLE history and chief complaint. Perform a focused exam based on chief complaint, and obtain vital signs.
    - For unresponsive patients, first perform a rapid physical exam and obtain vital signs. Then obtain SAMPLE history and history of present illness from family or bystanders.
- Perform detailed assessment while awaiting transportation or prior to transport.
- Perform an ongoing assessment by repeating assessment and vital signs, and evaluating the effect of interventions.
- In patient transfer situations, utilize appropriate handoff including patient information, patient's personal property to transporting agency, and help ready the patient for transport.
- Each and every patient contact which does not result in an EMS transport must have a completed refusal form. A patient who refuses treatment must *always* have documentation demonstrating capacity to make medical decisions.
- Minimal exam if not noted on the specific protocol is vital signs, mental status, and location of injury or chief complaint.
- Required vital signs on ever patient include LOC, BP, pulse, and respirations, including temperature and blood glucose if appropriate.
- Evaluate 12-lead EKG when appropriate, especially patients older than 35 years, females, diabetics, and the elderly with nonspecific, potentially cardiac complaints.
- In the event that only BLS healthcare providers are on scene, proceed with patient assessment and treatment per appropriate protocols, within BLS scope of practice.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE 09-05-17	Vital Signs	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons & Dr. Andrew Thomas Medical Directors

Policy

As a key component in the assessment of any patient, two complete sets of vital signs will be documented for any patient who is evaluated by Tampa Fire Rescue.

Purpose

To insure evaluation of every patient's volume and cardiovascular status, and the documentation of a complete set of vital signs.

Procedure

☐ According to the Tampa Fire Rescue Medical Protocol, a complete set of vital signs will include:

- Pulse rate.
- EKG; 12 lead, if applicable (See 12 lead EKG policy).
- Systolic and diastolic blood pressure, when possible.
- Respiratory rate.
- Breath Sounds
- Pulse oximetry, if applicable.
- Temperature, if applicable.

☐ If the patient refuses this evaluation, the patient's mental status and the reason for refusal must be documented.

☐ Situations which preclude the acquisition of a complete set of vital signs (such as pediatric patients and multiple patient situations) should be documented.

☐ The time vital signs were obtained must be recorded.

☐ Any abnormal vital sign should be repeated and monitored.

Tampa Fire Rescue
Medical Protocol

ADULT TREATMENT

PROTOCOL

- Universal Patient Care Protocol
- If pain is above the umbilicus, perform cardiac monitoring and 12-lead EKG
- IV NS KVO or IV lock
    - If evidence of dehydration (tachycardia, dry mucous membranes, poor skin turgor), administer boluses of NS at 250mL (hold at 500mL if no hypotension)
- For patients with severe nausea and vomiting,
    - Ondansetron 4mg slow IV or 4mg ODT by mouth
- For patients with moderate to severe pain, refer to Pain Control Protocol

- Universal Patient Care Protocol

Dyspnea

- Assess for respiratory distress (tachypnea, accessory muscle movement, retractions), perform continuous pulse oximetry, full vital signs and provide supplemental oxygen as needed to maintain pulse oximetry sats > 94%.
- Observe for signs of impending respiratory failure; refer to **Respiratory Failure** section if needed.
    - Hypoxia (O2 sat < 90) not improved with 100% oxygen
    - Poor ventilatory effort (increasing EtCO2 not improved with treatment)
    - Altered mental status/decreased level of consciousness
    - Inability to maintain patent airway
- Begin CPAP if initial symptoms severe
    - Brief interruptions to administer medications are acceptable

Acute bronchospasm (wheezing or history of asthma or COPD)

- *Albuterol/Ipratropium* 2.5mg/0.5mg via nebulizer
    - Repeat x 2 if wheezing persists
- *Methylprednisolone* 125mg IV if wheezing persists after first nebulizer treatment
- If not improving, *Magnesium Sulfate* 2G IV in 100mL NS over 10-15 minutes
    - Contraindicated if history of renal failure
    - Do not use if CHF suspected
- If **severe** respiratory distress and wheezing persists after above:
    - *Epinephrine* 1:1,000 0.3mg IM (prior permission from online medical physician if patient >55 years old or known to be on beta blockers)
- After treatment of bronchospasm, and return to an asymptomatic state, some patients will refuse transport to the hospital. The following items should be accounted for and included in the assessment and documentation:
    - The presentation is consistent with a mild exacerbation of asthma
    - No severe dyspnea at onset
    - Not initially hypoxic (oxygen saturation < 90%)
    - No pain, fever, or hemoptysis
    - Significant improvement after a single nebulizer treatment, with a complete resolution of symptoms
    - Vital signs within normal limits after treatment given (BP, pulse, respiratory rate, end tidal carbon dioxide, and oxygen saturation)

Acute pulmonary edema (history of CHF, pedal edema, elevated SBP)

- *Nitroglycerine* 0.4mg SL every 5 minutes
    - Contraindicated if SBP < 90
    - Contraindicated if use of a phosphodiesterase-5 (PDE5) inhibitor use within last 24hrs (Viagra or Levitra); 48hrs for Cialis
- For bronchospasm associated with acute pulmonary edema
    - *Albuterol/Ipratropium* 2.5mg/0.5mg via nebulizer
        - Repeat x 2 if wheezing persists

- For hypotension (SBP < 90)
    - *Dopamine* infusion at 5-20mcg/kg/min titrated to maintain SBP > 90

Drowning/near drowning

- Refer to Spinal Immobilization Protocol if indicated
- Consider CPAP for patients with significant dyspnea or hypoxia
- Protect from heat loss
- Patients may develop delayed onset respiratory symptoms
- Refer to Cardiac Arrest Protocol if appropriate

Foreign body obstruction suspected

- Perform obstructed airways procedures per BLS standards
    - Attempt suction and removal with Magill forceps using direct visualization
    - Observe for signs of impending respiratory failure
    - For conscious, non-pregnant adult, administer Heimlich maneuver and assess for response.
    - For pregnant adult, administer chest thrusts and assess for response.
    - If unconscious or unresponsive:
        - Give a series of 30 chest compressions, then inspect for object in mouth prior to attempting breaths
        - If unsuccessful after one series of compressions and ventilations, attempt to directly view object with laryngoscope and remove with Magill forceps

Respiratory Failure

- If suspicion of trauma, refer to Spinal Immobilization Protocol as appropriate
- Suction all debris, secretions from airway
- Supplemental 100% oxygen, then BVM ventilate if indicated
- Monitor EtCO2 (capnography) and pulse oximetry continuously
- The decision of how to manage the airway should be made by the officer in charge.
- Bag valve mask is an acceptable method of airway management if patient oxygen saturations can be maintained and there is no difficulty maintaining seal or issues with chest wall compliance.
    - Use nasal or oral airway if needed
    - Perform jaw thrust/chin lift if needed while maintaining cervical spine protection if concern for trauma.
- If BVM is not deemed appropriate for continued management of the patient airway, proceed with placement of endotracheal tube or supraglottic airway.
- It is acceptable to place a supraglottic airway without prior attempt at endotracheal intubation, especially if a difficult airway is anticipated, or the patient has other immediate needs beyond airway maintenance (e.g., in order to prioritize high quality CPR in a cardiac arrest patient)
- If patient requires medication for placement of advanced airway:
    - Administer sedative medication (one of the following):
        - *Ketamine* 2mg/kg IV

        - *Etomidate* 0.3mg/kg IV
    - Administer paralytic after sedation if needed to facilitate airway placement:
        - *Succinylcholine* 1.5mg/kg IV is preferred unless contra-indication exists
            - Succinylcholine contraindications:
                - Risk for hyperkalemia (e.g. renal failure patients, crush injury)
                - Denervation injury (paralysis, burns, muscular dystrophy)
                - Penetrating eye injury or glaucoma
                - History of malignant hyperthermia
        - If succinylcholine is contraindicated, administer *Rocuronium* 1mg/kg
- Consider apneic oxygenation by administering high flow nasal cannula, starting prior to drug administration and continuing through intubation attempts if possible.
    - This can lengthen time to desaturation and allow more time for intubation attempt.
- If endotracheal tube placement is attempted, provider attempts should be limited to **two attempts** for a medical respiratory failure, and **one attempt** for a trauma respiratory failure.
- If endotracheal tube placement is unsuccessful, proceed with placement of a supraglottic airway if possible.
- Refer to Failed Airway Protocol if these attempts are unsuccessful.
- After airway tube is placed, it is mandatory to confirm proper placement with capnography.
    - Maintain ventilation at rate such that EtCO2 is 35-45mmgHg if possible
    - Maintain capnography to ensure that tube has not become dislodged
    - Failure to obtain initial typical waveform capnography or loss of typical waveform en route should result in immediate removal of the endotracheal tube and maintenance of airway via BVM or supraglottic
    - Waveform capnography strip should be printed and attached to patient care record as documentation of airway confirmation. Failure to do so can result in disciplinary action.
- If drugs were administered for advanced airway placement, or if sedation is required to prevent patient from dislodging airway tube:
    - Administer *Midazolam* 2-4mg or *Fentanyl* 100-250mcg to achieve adequate sedation
    - Particularly remember the importance of adequate sedation when patient has received a long-acting paralytic such as rocuronium.

Failed Airway

- A failed airway is defined as two failed intubation attempts, or anatomy inconsistent with intubation attempts.
    - In the event of one failed intubation attempt in a **medical** patient, the most experienced provider on scene should proceed with second intubation attempt.
    - No more than two intubation attempts total.

- There should not be more than one intubation attempt in a **trauma** patient. In this case, the provider should place a supraglottic airway after the first failed intubation attempt.

- Continue with BVM if able to maintain seal and oxygen saturations
- Place supraglottic airway if possible
- Proceed with cricothyroidotomy per Cricothyroidotomy Protocol if above efforts are unsuccessful.
- Cricothyroidotomy placement should be confirmed with waveform capnography
    - As for other advanced airways, capnography waveform strip should be attached to the patient care record.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
Treatment Protocol	REVISION DATE 01-2018	Allergic Reaction	ISSUE DATE	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- If patient has a previously prescribed epinephrine auto-injector, and shows signs of anaphylaxis, it is appropriate to assist the patient in self-administration of the auto-injector.
- For mild reaction (itching, hives), administer *Diphenhydramine* 1mg/kg IV (maximum 50mg).
    - May be administered IM if no IV access available.
- For moderate reaction (dyspnea, wheezing, chest tightness):
    - *Albuterol/Ipratropium* 2.5mg/0.5mg via nebulizer
        - Repeat x 2 if wheezing persists
    - *Diphenhydramine* 1mg/kg IV (maximum 50mg IV)
        - May be administered IM if no IV access available
    - *Methylprednisolone* 125mg IV
- For severe reaction (BP < 90, stridor, severe respiratory distress):
    - *Epinephrine* 1:1,000 0.3mg IM for rapidly progressive worsening of symptoms
        - Repeat epinephrine if signs of severe reaction or shock persist after initial dose
    - *Albuterol/Ipratropium* 2.5mg/0.5mg via nebulizer
        - Repeat x 2 if wheezing persists
    - *Diphenhydramine* 1mg/kg IV (maximum 50mg IV)
        - May be administered IM if no IV access available
    - *Methylprednisolone* 125mg IV
- For cardiac arrest (or if cardiopulmonary arrest appears imminent):
    - *Epinephrine* 1:10,000 1mg IV (instead of 1:1,000 IM)
    - For cardiac arrest, refer to appropriate protocol based on the presenting rhythm
    - In the setting of cardiac arrest, the following items should be performed in the post-resuscitative phase, if time allows:
        - *Albuterol/Ipratropium* 2.5mg/0.5mg via nebulizer
            - Repeat x 2 if wheezing persists
        - *Diphenhydramine* 1mg/kg IV (maximum 50mg IV)
            - May be administered IM if no IV access available
        - *Methylprednisolone* 125mg IV

- Universal Patient Care Protocol
- If hypoglycemic (BGL < 60):
  - *Dextrose* 50% 25G slow IV
  - If patient is alert enough to self-administer oral agent, give glucose paste or oral glucose containing agent (e.g. orange juice)
  - If hypoglycemia persists, repeat blood glucose check with a different glucometer, and repeat treatment as above if BGL < 60 after 10 minutes
- If blood glucose elevated (>200) with signs of dehydration or DKA:
  - Administer NS 500cc bolus
- If opioid overdose suspected (significantly altered mental status or respiratory depression):
  - *Naloxone* 0.5mg IV/IM/IO/IN
    - Repeat as needed in 0.5mg increments, titrated to mental status and respiratory drive (monitor respiratory status with continuous capnography)
  - If respiratory depression persists, repeat every 3 minutes to a maximum of 8mg.
- If stroke suspected, see CVA Protocol.
- If sepsis suspected (advanced age, high risk for infection, febrile), see Sepsis Protocol.
- If head injury suspected, see Trauma/Head Injury Protocol.
- If cardiac arrhythmia present, see appropriate cardiac arrhythmia protocol.
- Consider restraints if necessary for patient/personnel protection, per the Patient Restraint Protocol.

- Secure scene/scene safety
- Universal Patient Care Protocol
- Remove patient from stressful environment if possible.
- Use verbal techniques (calm, reassurance, establish rapport)
- Treat medical or trauma problems per specific protocol
- If patient wishes to refuse care, ensure patient capacity, and involve law enforcement if needed.
- Utilize appropriate restraint procedures.
    - Document rationale for restraint usage and assess neurovascular status of limbs in restraints.
- Administer high flow oxygen if needed.
- Evaluate blood glucose level
- Obtain EKG if possible.
- If necessary for patient or personnel safety, administer medication for sedation and control of anxiety:
    - *Midazolam* 5mg-10 mg IV
        - Preferred for patient with suspected history of recent substance abuse
        - May give 5mg intranasally x 2 to the bilateral nares (total 10mg) via mucosal atomizer device for more rapid effect if needed
        - Midazolam generally will have a faster onset than haloperidol and an excellent safety profile, and may be used as the preferred agent for more rapid sedation even in patients who are suspected to have behavioral agitation secondary to a psychiatric condition.
    - *Haloperidol* 5mg IV/IM
        - May repeat x 1 in 10 minutes
        - May be of benefit in patients with history of psychosis
        - Contraindicated if patient has long QT
        - Use with caution in patients older than 50
    - *Ketamine* 2mg/kg IM/IV
        - Utilize only in extreme cases of excited delirium
        - If respiratory depression occurs, treat per Respiratory Failure Protocol.

- If patient has signs of dystonic reaction:
    - *Diphenhydramine* 25-50mg IV/IM slow
        - May repeat x 1 after 10min if symptoms persist

- Universal Patient Care Protocol
- Safely obtain information about the animal that caused the bite or sting, such as the species, without exposing anyone else to additional injury
- If it is a domesticated animal such as a dog or cat, attempt to determine if the animal is up to date on vaccinations
- There are two main classes of venomous snake that are native to Florida – *Crotalid* (water moccasin, rattlesnake, and copperhead) and *Elapid* (coral snake). Refer to Appendix for pictures. Treatment should proceed as follows:
    - Do not attempt to capture snake. In the event that the patient presents with a dead snake already in a safe container, it may be recommended to transport this container with the patient for further identification and treatment of envenomation. Always maintain safety for yourself and crew as the first priority. A dead snake can still reflexively bite.
    - Tourniquet use is not recommended in the case of snakebite injury to a limb.
    - Discussion of preferred treatment destination should be done with Poison Control (1-800-282-3171)
    - Refer to Allergic Reactions/Anaphylaxis Protocol as indicated
- If the bite is on a limb:
    - Immobilize the limb
    - Remove any jewelry from the affected extremity if possible
    - Keep the affected extremity below the level of the heart if possible
- Utilize the Pain Control Protocol as indicated

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Bradycardia with a Pulse	ISSUE DATE	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- Assess for appropriateness based on clinical conditions
    - Some adults have a resting heart rate below 50 beats per minute, however this may or may not be an acute bradyarrhythmia
- Identify and treat the underlying cause
    - Bradycardia can result from medications, cardiac disease (including myocardial infarction), respiratory disorders, toxins, head injury/trauma, or other serious causes
    - Ensure a patent airway and provide oxygen if indicated
    - Apply the cardiac monitor and identify the rhythm, check a blood pressure, and pulse oximetry
    - Obtain IV access
    - Perform a 12 lead EKG
- Examine for signs of hypoperfusion (hypotension, altered mental status, signs of shock, chest pain, symptoms of heart failure)
    - If these are not present, monitor patient en route to the hospital
    - If these are present:
        - Administer *Atropine* 0.5mg IV, and repeat every 3-5 minutes as needed, up to 3mg total
        - If atropine is unsuccessful, consider one of the following interventions as second line therapy.
            - Transcutaneous Pacing ***or***
            - *Dopamine* 2-10 mcg/kg/min IV ***or***
            - *Epinephrine* 2-10 mcg/min IV
        - Bolus NS 500ml if there are signs of hypovolemia
    - Strongly consider Online Medical Control consultation

- Universal Patient Care Protocol
- Measure SpCO
    - "Normal" is typically <3%
- Evaluate for symptoms of headache, dyspnea, nausea/vomiting, fatigue, mental status change, dizziness, confusion, arrhythmias, shock, or abnormal vital signs
- Initiate oxygen via non-rebreather if the patient exhibits any symptoms
    - Consider CPAP if there is loss of consciousness, neurologic impairment, or an SpCO >25%
    - If respiratory failure is present, proceed with Respiratory Failure Protocol
- In the setting of unexplained shock or hypotension, with concern for concurrent cyanide exposure, utilize Cyanokit if available

Cardiac Arrest General Approach

In the event a patient suffers cardiac arrest in the presence of EMS, the absolute highest priority is to apply the AED/Defibrillator and deliver a shock immediately if indicated. In the setting of cardiac arrest not witnessed by EMS, perform CPR immediately and continuously while setting up for rhythm analysis and delivery of shocks. If shockable rhythm present, deliver shock without delay. It may be appropriate to avoid rapid transportation in order to prioritize quality chest compressions and early defibrillation when possible.

- Check responsiveness. Open airway, check breathing, feel for carotid pulse.
- If a pulse is not definitely felt <u>within 10 seconds</u>, immediately begin chest compressions while preparing to apply AED/Defibrillator.
- Manage airway with focus on minimal interruptions in chest compressions.
    - 30:2 compression ratio for assisted ventilations. Bag valve mask is an acceptable method to manage airway – it may be preferable in many cases to prioritize compressions and defibrillation while waiting for return of pulses to establish an advanced airway.
        - We recommend placement of nasal cannula on high flow O2 for passive apneic oxygenation while giving assisted ventilations, and this nasal cannula should be attached to capnography on monitor to determine quality of chest compressions and resuscitation efforts.
    - If unable to achieve quality ventilations with BVM, proceed with placement of supraglottic airway or endotracheal tube.
        - Either method of securing airway should be confirmed with capnography, and failure to achieve four-phase wave form capnography should result in removal of the airway.
        - Limit endotracheal tube placement efforts to two attempts. Failure to secure airway at this point should result in placement of a supraglottic device, with confirmation of placement of the SGA by capnography.
        - Waveform capnography strip should be printed and attached to patient care record as documentation of airway confirmation. Failure to do so can result in disciplinary action.
    - Once advanced airway is established, maintain ventilation rate of 8-10 breaths per minute. Avoid hyperventilation as this will decrease venous return to the heart, resulting in decreased perfusion pressure to the brain and heart.
    - Follow algorithm for specific rhythm.
    - Establish peripheral IV or Adult Introsseous Access (IO may be preferred if IV is not easily and quickly established)
        - All medications listed for IV access can be given IO
        - Endotracheal delivery of *Epinephrine, Naloxone, and Atropine* is an acceptable last resort if peripheral IV or IO access cannot be achieved.
        - When delivered via endotracheal tube, administer 2-2.5 times the IV dose diluted in 5-10mL of 0.9% NS or sterile water.

Important Principles for Cardiac Arrest Management

- **Minimize interruptions in chest compressions**
  - Compressions should begin immediately upon identifying pulselessness
  - Compressions should be continuous (no pause for ventilation if advanced airway established)
- **Minimize time between ceasing compressions and delivering shocks in VF/VT**
  - Whenever possible, continue CPR while defibrillator is charging
- **Avoid hyperventilation (use rate of 8-10 breaths/minute)**
- **Capnography is required on every patient with an ETT or SGA in place, and recommended for patients receiving BVM using nasal cannula with high flow O2.**
  - Allows rapid assessment of ROSC (marked by a sudden increase in ETCO2 value).
- **Consider the H's and T's that may have caused the arrest.**

H's	T's
Hypoxia	Toxins
Hypovolemia	Tamponade (Cardiac)
Hydrogen Ion (Acidosis)	Tension Pneumothorax
Hyperkalemia	Thrombosis, Pulmonary
Hypothermia	Thrombosis, Cardiac

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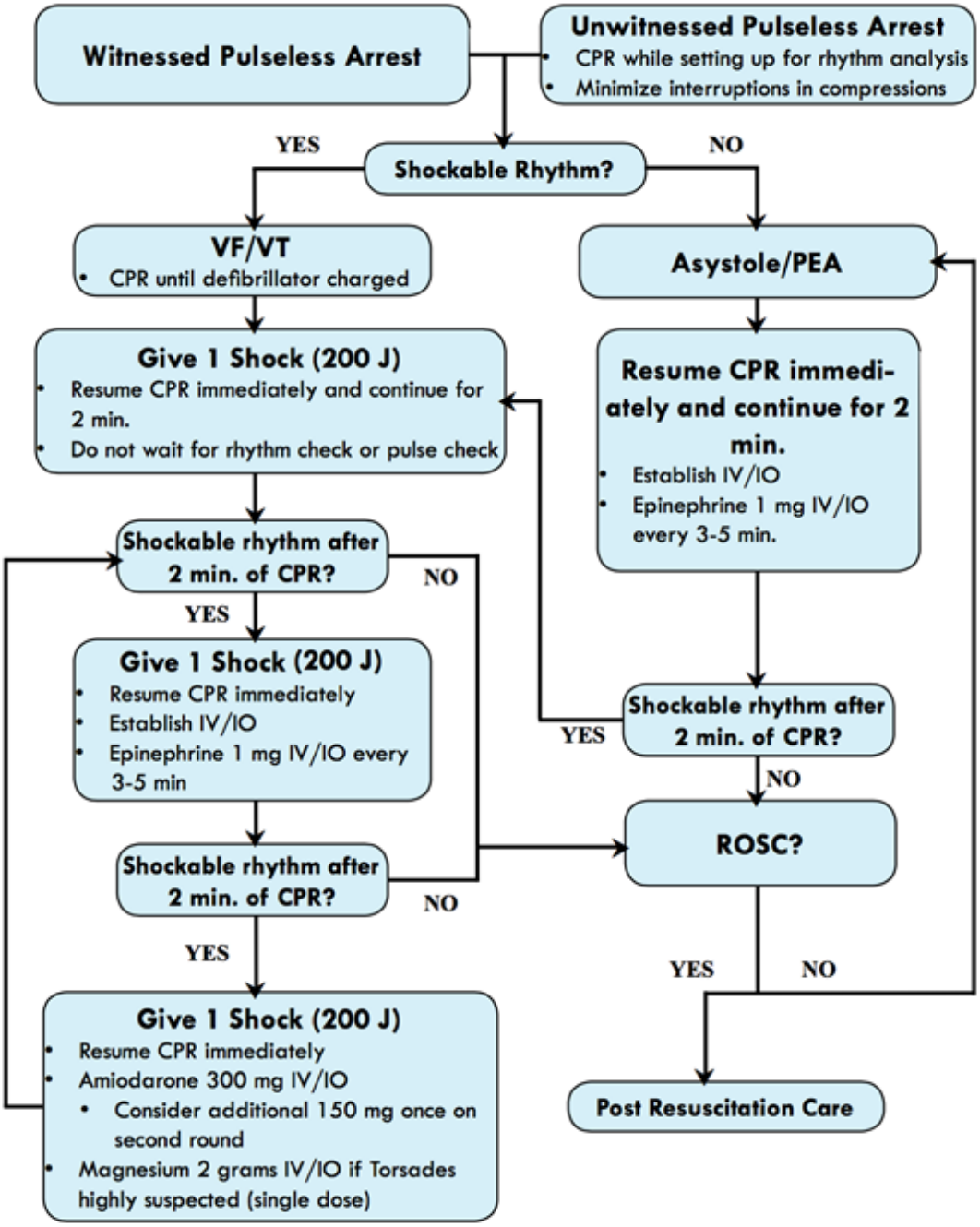
TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Cardiac Arrest	ISSUE DATE	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Cardiac Arrest General Approach



Cardiac Arrest – Asystole

When asystole is seen on the cardiac monitor confirmation of the rhythm shall include a printed rhythm strip, as well as interpretation of the rhythm in more than one lead. Low amplitude V-Fib or PEA may be difficult to distinguish from asystole when using only the cardiac monitor display for interpretation.

- Follow Cardiac Arrest – General Approach Protocol
- Consider and treat possible causes

Potential Cause	Treatment
Hypoxia	• Secure airway and ventilate
Hyperkalemia	• Sodium Bicarbonate 1meq/kg IV/IO • Calcium Chloride 1 gram IV/IO
Hypothermia	• Active rewarming
Toxins (Drug Overdose)	• See below

- *Epinephrine 1:10,000* 1mg IV/IO every 3-5 min during arrest
- Drug overdoses (see Overdose/Toxic Ingestion Protocol)
    - *Calcium Chloride* 1 gram IV/IO for calcium channel blocker OD
        - Avoid if patient on digoxin
    - *Sodium Bicarbonate* 1mEq/kg IV/IO for Tricyclic Antidepressant OD
    - *Naloxone* 2mg IV/IO
        - When narcotic overdose is likely, repeat every 3-5 min
        - May be given IM or via ETT if no IV/IO available
- If no response to resuscitative efforts in 20 minutes (at least two rounds of drugs), consider discontinuation of efforts (see Termination of Resuscitation Protocol).

Cardiac Arrest – Pulseless Electric Activity

- Follow Cardiac Arrest – General Approach Protocol
- Consider and treat possible causes:

Potential Cause	Treatment
Hypovolemia (most common cause)	• Normal saline 1-2 Liters IV/IO
Hypoxia	• Secure airway and ventilate
Hydrogen ion (acidosis)	• Sodium Bicarbonate 1meq/kg IV/IO
Hyperkalemia (end stage renal disease)	• Sodium Bicarbonate 1meq/kg IV/IO • Calcium Chloride 1 gram IV/IO
Hypothermia	• Active rewarming
Toxins (drug overdose)	• See below
Tamponade, cardiac	• Normal saline 1-2 Liters IV/IO • Expedite transport
Tension pneumothorax	• Needle thoracostomy
Thrombosis, coronary	• Expedite transport
Thrombosis, pulmonary	• Expedite transport

- *Epinephrine 1:10,000* 1mg IV/IO every 3-5 min during arrest
- Drug overdoses (see Overdose/Toxic Ingestion Protocol)
  - *Calcium Chloride* 1 gram IV/IO for calcium channel blocker OD
    - Avoid if patient on digoxin
  - *Sodium Bicarbonate* 1mEq/kg IV/IO for Tricyclic Antidepressant OD
  - *Naloxone* 2mg IV/IO
    - When narcotic overdose is likely, repeat every 3-5 min
    - May be given IM or via ETT if no IV/IO available
- If no response to resuscitative efforts in 20 minutes (at least two rounds of drugs), consider discontinuation of efforts (see Termination of Resuscitation Protocol).

Cardiac Arrest – Ventricular Fibrillation/Pulseless Ventricular Tachycardia

- Follow Cardiac Arrest – General Approach Protocol
- Defibrillate at 200J as soon as possible for witnessed VF/VT:
    - Continue CPR immediately after shock (do not stop to check pulse or rhythm)
- Perform 2 minutes of compressions prior to defibrillation attempt in unwitnessed arrest.
- Analyze rhythm after 2 minutes of good CPR; if VT/VT persists:
    - Defibrillate
    - Continue CPR immediately after shock (do not stop to check pulse or rhythm)
    - *Epinephrine 1:10,000* 1mg IV/IO every 3-5 min during arrest
- Analyze rhythm after 2 minutes of good CPR; if VT/VT persists:
    - Defibrillate
    - Continue CPR immediately after shock (do not stop to check pulse or rhythm)
    - *Amiodarone* 300mg IV/IO bolus
        - For persistent VF/VT, give *Amiodarone* 150mg IV/IO bolus on second round
- Continue cycle of CPR&Drug → Rhythm check → CPR → Shock → CPR&Drug → Rhythm check → CPR → Shock as needed
- For persistent VF/VT without interruption despite at least 5 shocks:
    - If a second monitor/defibrillator is available, perform Double Sequential Defibrillation as described in Procedure Protocols
    - Continue CPR immediately after shock (do not stop to check pulse or rhythm)
    - Transport to the nearest Emergency Department
- Additional interventions to consider in special circumstances:
    - *Magnesium Sulfate* 2G IV/IO push over 1-2 min only if suspected polymorphic VT (torsades de pointes) or hypomagnesemic state (chronic alcohol, diuretic use)
    - *Sodium Bicarbonate* 1mEq/kg IV/IO if suspected hyperkalemia (e.g. dialysis patient) or tricyclic antidepressant OD

Cardiac Arrest – Post Resuscitation Care

- Maintain airway. If patient airway has been successfully managed with BVM until this point, consider placement of advanced airway as per protocol.
- If advanced airway is in place, continue to follow capnography. Ventilate with goal ETCO2 35-40
- Obtain a 12-Lead EKG and initiate STEMI Alert if criteria exists.
- For hypotension (systolic BP < 90mmHg):
    - Administer NS 0.5-1 Liter bolus
    - If hypotension not improved by fluid boluses, or when fluid boluses are contraindicated:
        - *Dopamine* at 5-20mcg/kg/min titrated to maintain systolic BP > 90mmHg
- Treat arrhythmias as indicated by Cardiac Arrhythmias Protocol
- If cardiac arrest reoccurs, refer to appropriate algorithm based on presenting rhythm.
    - Total cumulative dose of *Amiodarone* should not exceed 450mg (300mg +150mg)
- If patient becomes combative, administer *Midazolam* 2.5mg every 5 min (maximum 10mg) for sedation.
- **Transport to nearest PCI (Percutaneous Intervention) Capable Hospitals**
    - Brandon Regional Hospital
    - Florida Hospital Carrollwood
    - Florida Hospital Tampa
    - James A. Haley (VA) Hospital
    - St. Joseph's Hospital
    - St. Joseph's Hospital North
    - Tampa Community Hospital
    - Tampa General Hospital

Cardiac Arrest – Termination of Resuscitation (Medical)

The paramedic has the discretion to continue resuscitation efforts in any case despite Termination of Resuscitation criteria being met if scene safety, location, patient's age, time of arrest, or bystander input compels this decision.

When asystole is seen on the cardiac monitor confirmation of the rhythm shall include a printed rhythm strip, as well as interpretation of the rhythm in more than one lead. Low amplitude V-Fib or PEA may be difficult to distinguish from asystole when using only the cardiac monitor display for interpretation.

Medical Control Call Not Required

The paramedic may terminate resuscitative efforts in non-hypothermic adults provided all 6 of the following criteria exist:

- **Initial rhythm is asystole** confirmed in two leads on a printed rhythm strip
- **Terminal rhythm is asystole** confirmed in two leads on a printed rhythm strip
- **Secure airway** confirmed by digital capnography (ETT or SGA)
- At least **four doses of Epinephrine** have been administered (given every 3-5 min)
- Cardiac arrest refractory to at least **20 minutes of ACLS** without any period of return of pulses
- Quantitative **EtCO2 value is <10mmHg** with effective CPR, after 20min of ACLS

*****Do not terminate resuscitation if transport has been initiated*****

Medical Control Required

Medical Control contact for "termination of resuscitation" orders is appropriate if cardiac arrest persists after at least 20min of aggressive ACLS. Provide the Medical Control physician with the following information:

- Initial rhythm and terminal rhythm
- Method of airway management and vascular access
- Medications given during arrest
- ETCO2 value
- Total amount of time working the arrest

The decision to continue efforts and transport is at the sole discretion of the Medical Control Physician. If termination orders are given, document the time the order was given as "time of death."

*****Do not terminate resuscitation if transport has been initiated*****

Cardiac Arrest – No Resuscitation Attempt

No resuscitation attempt is indicated for the following scenarios:

Obvious Signs of Death

- Pulseless, apneic, and no other signs of life present **AND** any of the following:
    - Rigor mortis
    - Decomposition of body tissues
    - Dependent lividity
    - Injuries incompatible with life (e.g. incineration, decapitation, hemicorpectomy)

Blunt or penetrating trauma (all criteria must be met):

- Pulseless, apneic, and no other signs of life present
- Lack of pupillary reflexes and spontaneous movement
- Asystole or agonal rhythm <20bpm on cardiac monitor
- Patients who become pulseless after severe traumatic injury when transport to the nearest ED cannot be accomplished within 15min (i.e. prolonged extrications) provided that all other signs of life are absent and transport has not been initiated

"Do Not Resuscitate" (DNR Order)

- When presented with a State of Florida **DO NOT RESUSCITATE** order (Form 1896)
    - Must be on Yellow Paper and signed by the patient's physician

Use caution in the following scenarios:

- When mechanism of injury is inconsistent with traumatic cardiac arrest
- Lightning or other high voltage electrical injuries
- Drowning
- Suspected hypothermia

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Chest Pain	ISSUE DATE	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- Perform 12-lead EKG
  - If there is ST elevation > 1mm in II, III, aVF → obtain lead V4R
  - Assess for symptoms of RV infarct, including hypotension, JVD, and dry lung sounds
  - STEMI alert for patients with ST elevation >1mm in two or more contiguous leads
  - **For patients with presumed new LBBB with symptoms of acute MI, expedite transport to PCI-capable center but do not transmit as STEMI**
  - If STEMI present, declare 'STEMI Alert' and transmit 12-lead EKG to appropriate facility.
  - If patient is a STEMI Alert, place two IV lines, minimum 18G when possible.
- Particularly for patients with worrisome history, symptoms or abnormal initial EKG, perform serial EKGs as possible and save all EKGs performed for presentation to physician on transfer of care at receiving hospital.
- Administer *Aspirin* 325 mg PO
- Administer *Nitroglycerine* 0.4mg SL q5m x 3 if BP > 100
  - Avoid NTG in patients with elevation in V4R or signs of RV infarct; or recent use of a PDE-5 inhibitor (sildenafil/Viagra, tadalafil/Cialis, vardenafil/Levitra)
- Consider *Fentanyl* 50mcg q5m x 3 if BP > 100 and patient complains of continued pain despite nitroglycerine
  - Avoid fentanyl in patients with elevation in V4R or signs of RV infarct
- Treat with NS 250-500cc bolus for hypotension with BP < 100
- Do not treat isolated PVCs
- Consider treatment of tachycardia (HR > 100) with *Labetalol* 5mg over 1-2 minutes
  - May repeat q5m to a maximum of 20mg if rate is not controlled
  - Use with caution in patients with asthma or uncontrolled heart failure
  - Use is contraindicated in patients with hypotension (SBP < 100) or signs of shock

- Universal Patient Care Protocol
- Check blood glucose and treat hypoglycemia if blood glucose < 60
    - *Dextrose 50%* 25G slow IV
- Establish as accurately as possible when symptoms first occurred. Use family members and establish time markers as to when patient was last seen without symptoms. Establish contact numbers for individuals who last saw patient normal and record on Stroke Alert Checklist.
- When possible obtain IV access, preferably at two sites, but do not delay transport to secure IV access.
- Perform FAST-ED Stroke Assessment and document in patient care record
- Keep head of stretcher at 30-45 degrees elevation
- Do not treat elevated blood pressure in cases of suspected stroke. For extremely elevated BP (systolic > 220), contact Online Medical Control for treatment recommendations.
- If seizure activity present, treat per Seizure Protocol
- If altered mental status present, treat per Altered Mental Status Protocol
- If respiratory compromise present, treat per Respiratory Failure Protocol as appropriate.
- Transport to closest **Primary** or **Comprehensive Stroke Center** according to results of screening checklists.
    - **Primary Stroke Centers**
        - Brandon Regional Hospital
        - Florida Hospital Carrollwood
        - Florida Hospital Wesley Chapel
        - Memorial Hospital
        - South Bay Hospital
        - South Florida Baptist Hospital
        - St. Joseph's Hospital North
        - St. Joseph's Hospital South
        - Tampa Community Hospital
    - **Comprehensive Stroke Centers**
        - Florida Hospital Tampa
        - St. Joseph's Hospital
        - Tampa General Hospital

Field Assessment Stroke Triage for Emergency Destination (FAST-ED)

(Circle value that apply)

	FAST-ED SCORE
Facial Palsy (Facial droop): Have patient smile or show teeth (look for asymmetry)	
Normal: Both sides of face move equally or not at all	0
Abnormal: One side of face droops (or is clearly asymmetric)	1
Untestable: Patient unable to perform this specific test	0
Arm Weakness (Arm drift): Have patient close eyes and extend arms palms up	
Normal: Both arms remain up > 10 seconds or slowly drifts down equally	0
Mild: One arm drifts down in < 10 seconds with some effort against gravity	1
Moderate/Severe: One arm falls rapidly against gravity or no movement at all	2
Untestable: Patient unable to perform this specific test	0
Speech Changes (Expressive aphasia): Have patient repeat the following words "Mama" "Huckleberry" and "Baseball Player"	
Normal: Speech content normal AND repeats 2-3 items correctly	0
Abnormal: Speech content clearly abnormal OR repeats 0-1 items correctly	1
Untestable: Patient unable to perform this specific test	0
Speech Changes (Receptive aphasia): Ask patient "show me two fingers" (no visual clues)	
Normal: Patient shows two fingers	0
Abnormal: Patient does not understand or does not show two fingers	1
Untestable: Patient unable to perform this specific test	0
Eye Deviation (Gaze deviation): Ask the patient to follow your finger as you move it from right to left and back from left to right	
Normal: No deviation, eyes move to both sides equally	0
Gaze preference: Patient has clear difficulty when looking to one side (left or right)	1
Forced deviation: Eyes are deviated to one side and do not move	2
Untestable: Patient unable to perform this specific test	0
Denial/Neglect (Anosognosia): Ask patient "Are you weak anywhere"	
Normal: Patient recognizes weak side or has no weakness	0
Abnormal: Patient does not recognize their weak side	1
Untestable: Patient unable to perform this specific test	0
Denial/Neglect (Asomatognosia): Show the patient his/her weak arm and ask "Whose arm is this?"	
Normal: Patient recognizes his/her weak arm or no weakness at all	0
Abnormal: Patient does not recognize his/her weak arm	1
Untestable: Patient unable to perform this specific test	0

TOTAL SCORE _____

0 = NOT A STROKE ALERT (STOP) **1-9 = POSSIBLE "STROKE ALERT" (Continue to Section 2)**

Section 2 (Exclusion Criteria)

Baseline GCS (Prior to event) _____	**≤ 12:** Patient ***IS NOT*** a stroke alert, Transport to closest Primary or Comprehensive stroke center **> 12** or unknown: **Continue**
Time since last seen normal _____	**> 12** hours: Patient ***IS NOT*** a stroke alert, Transport to closest Comprehensive stroke center **≤ 12** hours or unknown: **Continue**
Blood Glucose Level _____	**< 60** and symptoms improve with D50: Patient ***IS NOT*** a stroke alert **< 60** and symptoms do not improve with D50: **Continue to Section 3** **≥ 60**: **Continue to Section 3**

Section 3 (Destination Determination)

(Check all that apply)

- ☐ Estimated arrival at Emergency Department is greater than 3.5 hours since time last seen normal
- ☐ Witnessed seizure at onset.
- ☐ Patient taking any blood thinner except aspirin. [Example: Coumadin (warfarin), Plavix (Clopidogrel bisulphate), Pradaxa (dabigatran), Brilinta (ticagrelor), Xarelto (rivaroxaban), Lovenox (enoxaparin), Fragmin (dalteparin)]
- ☐ Recent GI or urinary tract bleeding within the last 21 days.
- ☐ Recent surgery or invasive procedure within the last 14 days
- ☐ Head trauma, spinal surgery or previous stroke within the last 90 days.
- ☐ Woman of child bearing age who has a positive pregnancy test
- ☐ Known Intracranial pathology (Tumor, Aneurysm, ArterioVenous Malformation (AVM) or Intracranial Hemorrhage)
- ☐ Sudden onset of worst headache ever

Are any items checked in this section?

YES: "STROKE ALERT" TRANSPORT TO CLOSEST COMPREHENSIVE STROKE CENTER

NO: FAST-ED SCORE 1-3---"STROKE ALERT"-TRANSPORT TO CLOSEST PRIMARY OR COMPREHENSIVE STROKE CENTER

FAST-ED SCORE 4-9---"STROKE ALERT"-TRANSPORT TO CLOSEST COMPREHENSIVE STROKE CENTER

- Universal Patient Care Protocol
- For hypoglycemia (blood glucose < 60):
  - *Dextrose* 50% 25G slow IV
  - If patient is alert enough to self-administer oral agent, give glucose paste or oral glucose containing agent (e.g. orange juice)
  - If hypoglycemia persists, repeat blood glucose check with a different glucometer, and repeat treatment as above if BGL < 60 after 10 minutes
  - If IV access unobtainable, and oral administration is not possible, call Online Medical Control for permission for possible D50 25G IO.
- If blood glucose elevated (>200) with signs of dehydration or DKA:
  - Administer NS 500cc bolus
  - Signs/symptoms of DKA can include: excessive thirst, frequent urination, generalized weakness, vomiting, anorexia, confusion, abdominal pain, dyspnea, toxic appearance, dry skin, dry mucous membranes, tachypnea, tachycardia, hypotension, fruity odor on the breath, agitation, or chest pain
- A patient who was previously hypoglycemic may refuse transport in the following circumstances (all criteria must be met):
  - The patient has a known history of diabetes
  - The patient does not take oral hypoglycemic medications (glipizide, glyburide)
    - **Contact online medical control physician for patient on oral diabetes medications who demonstrates capacity and refuses medical transport.**
  - Initial presentation was consistent with hypoglycemia (rapid improvement and complete resolution of symptoms after administration of glucose, with vital signs within normal limits after correction of blood sugar)
  - There is no indication of an intentional overdose or dosing error.
  - Additional patient safety measures that should be considered:
    - A family member or caregiver should be available to stay with the patient and assist if a relapse occurs.
    - Assure that the patient understands that transport has been offered, and document refusal appropriately.
    - Inform the patient to follow-up with their physician as soon as possible and to re-contact 911 if symptoms recur.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Electrical Injuries	ISSUE DATE	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- This protocol refers to patients with high voltage (>1000 volts) injury, or generalized electrocution from low voltage (<1000 volts) source (e.g. hairdryer in the bathtub scenario). This protocol does not apply to Taser injuries.
- Secure scene; de-energize area
- Universal Patient Care Protocol
- Administer NS 1000cc bolus
- Perform focused assessment looking for entry/exit wounds.
- If injury was associated with a fall, strongly consider spinal immobilization per Spinal Immobilization Protocol.
- Appropriate wound management
- Perform 12-lead EKG in all cases of electrocution injury.
- Pain Control Protocol as appropriate.
- Transport all cases of electrocution to nearest burn center.
- Recognize that patients with electrocution injuries frequently have severe internal damage to muscles, vessels, and nerves, despite a possibly benign outer appearance of wounds.
- Treat cardiac arrest per Cardiac Arrest Protocol. Recognize that victims of lightning strike can have neurologic intact survival and spontaneous recovery even after prolonged cardiac arrest.
- High voltage electrical injuries and lightning strikes should be treated as a Trauma Alert and transported to Tampa General Hospital.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Emergency Incident Rehabilitation	ISSUE DATE	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Emergency Incident Rehabilitation is an important component of ensuring the wellbeing of the firefighters and other personnel responding to a high-demand incident.
- Prompt transport to a hospital should be initiated if the patient exhibits any of the following: chest pain, a heart rhythm other than normal sinus rhythm or sinus tachycardia, syncope, disorientation/confusion, dyspnea that is severe or does not resolve with 10 minutes of high-flow oxygen, abnormal vital signs that persist despite 30 minutes of rest and hydration, inability to hold down fluids, or any other concerning features or notable injuries
- Self-rehab (rest and hydration) should last at least 10 minutes following the depletion of a single 30-minute SCBA cylinder or following 20 minutes of intense work that does not require an SCBA
    - After this period, the crew member may return to duty if cleared by a company officer or designated crew leader
- Formal rehab and medical evaluation with 20 minutes of rest and hydration should occur following any of these:
    - The depletion of two 30-minute SCBA cylinders;
    - The depletion of one 45- or 60-minute SCBA cylinder;
    - Whenever encapsulating chemical protective clothing is worn; or
    - Following 40 minutes of intense work without an SCBA
- After completing 10 minutes of rest and hydration assess pulses
    - If the patient's heart rate is >85% of the maximum-expected-for-age, proceed with IV hydration with normal saline up to 2 liters until HR <100 and SBP >110
        - Transport to the hospital if vitals do not normalize after 2 liters, or sooner if symptoms worsen
    - If patient's heart rate is below 85% of the maximum-expected-for-age, review other vital signs
        - Respirations (target: 8-40 per minute)
        - Blood pressure (target: 100-200 systolic; <110 diastolic)
        - Temperature (target: <101°F)
        - Pulse oximetry (target: >90% on room air)
        - If ALL of these are met, patient may be considered for return to duty
        - If ONE or MORE of these are outside of parameters, additional rest and rehydration are required before re-evaluating in 10 minutes
            - Transport to ED for evaluation is appropriate if vitals remain abnormal after a total of 30 minutes of rest

Age-Predicted 85% Maximum Heart Rate From NFPA

Age	85 Percent
20 – 25	170
25 – 30	165
30 – 35	160
35 – 40	155
40 – 45	152
45 – 50	148
50 – 55	140
55 – 60	136
60 – 65	132

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Eye Injury or Complaint	ISSUE DATE	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- Determine if the nature of the eye disorder is related or unrelated to trauma
    - For non-traumatic complaints, evaluate pupils, perform a focused neurologic exam, evaluate for exposure to chemicals/medications or other substances, and cover both eyes as needed for comfort
    - For traumatic complaints:
        - Evaluate for trauma to other body areas and treat as indicated
        - If the eye was injured by chemical exposure, initiate saline irrigation. Morgan lenses may be utilized.
            - May administer *Tetracaine* 2 drops to affected eye to increase patient's ability to tolerate procedure
            - May repeat dose of tetracaine x 1 if needed after 5 minutes.
        - If the eye was injured by blunt or penetrating trauma, evaluate for signs/symptoms of globe rupture
        - Do not remove impaling foreign bodies
        - Contact lenses may be removed if possible
- Utilize Pain Control Protocol as needed

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Fever	ISSUE DATE	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- Consider infectious causes and maintain appropriate PPE.
- Determine time of last acetaminophen or ibuprofen intake
    - Adult patients of normal size (>50kg) may take 1000mg acetaminophen or 800mg ibuprofen every 6hrs.
    - If patient has recently taken acetaminophen and is still febrile (temp >100.5), administer ibuprofen if there are no contraindications.
    - If patient has recently taken ibuprofen and is still febrile (temp >100.5), administer acetaminophen if there are no contraindications.
- Refer to Sepsis Protocol if appropriate
- Refer to Heat Emergencies Protocol if appropriate

- Universal Patient Care Protocol
- If there is evidence of a hazardous material environment, activate a HazMat response and don appropriate PPE prior to entry or as soon as exposure is determined.
- For a mass casualty incident, follow a START Triage plan.
- If respiratory symptoms, give oxygen and consider *Albuterol/Ipratropium* 2.5mg/0.5mg via nebulizer
- If the eye was injured by chemical exposure, initiate saline irrigation. Morgan lenses may be utilized.
    - May administer *Tetracaine* 2 drops to affected eye to increase patient's ability to tolerate procedure
        - May repeat x 1 if needed after 5 minutes.

- Universal Patient Care Protocol
- Remove patient from heat source
- Expose the patient by removing excess clothing
- Cool the patient with water or mist on the skin and promote air flow over the patient's skin by fanned air
- If cooling causes shivering, treat with *Lorazepam* 2mg IV/IM
- Prolonged heat exposure may result in significant fluid losses which may be treated with NS 500ml if hypovolemia symptoms are present
- Heat emergencies/hyperthermia can occur in the setting of drug exposures. Consider potential use of stimulants such as cocaine, amphetamines (MDMA), "spice", or medications
- Do **not** administer acetaminophen or other antipyretics for suspected heat stroke (hyperthermia from environmental exposure)

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Hemorrhage (Medical)	ISSUE DATE	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- Evaluate for duration and amount of bleeding
- Perform frequent checks of blood pressure and maintain the patient on a continuous monitor for heart rate and pulse oximetry
- Determine if the patient has a bleeding disorder or takes medications that affect bleeding or clotting
- Hypotensive patients should have a peripheral IV and a 500ml Normal Saline bolus. May repeat as needed for continued hypotension.
- For bleeding in pregnancy, refer to Obstetric Emergencies Protocol
- Vaginal bleeding in a woman of childbearing age should warrant consideration for ectopic pregnancy
- For patients with epistaxis
    - Firmly pinch the bridge of the nose (the patient may do this if he/she prefers and can perform it well) for at least 10 minutes
    - Have the patient tilt their head forward (facing down)
- For patients with GI bleed
    - Evaluate for signs or symptoms of upper GI bleed (nausea, vomiting blood, history of cirrhosis or liver disease)
    - Administer *Ondansetron* 4mg IV as needed for nausea/vomiting
- For patients with bleeding dialysis fistula
    - Firm pressure with one finger may be enough to stop bleeding from a dialysis fistula, particularly if bleeding results from recent dialysis access
    - Large lacerations in dialysis fistulas may require direct pressure with hemostatic gauze
    - Tourniquets should be utilized only as a last resort as these will likely destroy the fistula or graft
- For patients with traumatic hemorrhage, please refer to Trauma Protocol

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Hypertension	ISSUE DATE	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- Asymptomatic hypertension does not warrant emergent medication administration. If patient presents with signs of hypertensive urgency/emergency, such as chest pain, severe headache, neurologic deficits, flank pain, or pulmonary edema, medication administration is warranted.
- If patient complains of chest pain, obtain 12-lead EKG and treat per Chest Pain Protocol.
    - Nitroglycerine should be first line antihypertensive and analgesic agent in this group.
- If symptomatic hypertension with focal neurologic deficits, treat per CVA Protocol.
- For all other cases of ***symptomatic*** hypertension with SBP > 220 and diastolic BP > 120, administer *Labetalol* 10mg IV push over 1-2 minutes. May repeat x 1 in 10 minutes if BP is unchanged. Goal is to lower blood pressure no more than 25% initially.
    - Labetalol is contraindicated in cases of bradycardia. Use caution in patients with history of reactive airway disease or recent (<48hrs) cocaine use.
- If hypertensive and pregnant (or <4 weeks postpartum), refer to Obstetric Emergencies Protocol.

- Universal Patient Care Protocol
- For patients with suspected sepsis, refer to Sepsis Protocol.
- For patients with mechanism of trauma, refer to Trauma Protocol.
- Assess for pulmonary edema and signs of cardiogenic shock (auscultate for rales, S3 heart sound, assess for JVD and/or pedal edema).
    - If absent:
        - Administer NS 500mL bolus. May repeat as needed for continued hypotension.
        - Consider *Dopamine* 5-20mcg/kg/min IV
    - If pulmonary edema present:
        - Consider starting with smaller fluid boluses (e.g. NS 250mL), and repeat cautiously while monitoring respiratory status.
        - Administer *Dopamine* 5-20mcg/kg/min IV
        - If BP improves, consider initiating CPAP for treatment of pulmonary edema
            - May cause worsening of hypotension if administered while BP is low.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Hypothermia	ISSUE DATE	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- Consider trauma and spinal precautions if indicated
- Remove wet or frozen clothing
- If the measured temperature is below 95°F (35°C)
    - Warm the patient with blankets
    - Start an IV per the IV Protocol
    - Apply the cardiac monitor
    - Perform a 12 lead EKG
    - Avoid excessive jostling or manipulation of the patient as this can lead to arrhythmias
- If the measured temperature is above 95°F (35°C), transport and utilize any applicable care protocols

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Left Ventricular Assist Device LVAD	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Left Ventricular Assist Devices (LVADs) are surgically implanted circulatory support devices designed to assist the pumping action of the heart. Caring for these patients is complicated, and every effort should be made to contact the patient's primary caretaker (spouse, guardian, etc) and LVAD coordinator during your evaluation. Patients with properly functioning LVADs may not have a detectable pulse, normal blood pressure or oxygen saturation.

- Treat non-LVAD associated conditions in accordance with appropriate Tampa Fire Rescue Medical Protocols
- When possible, transport patient to the hospital where they normally receive care
- Always bring all available LVAD equipment to the Emergency Department with the transported patient.
- Record blood glucose if any weakness, altered mental status or history of diabetes.
    - *Dextrose 50%* 25G slow IV if blood glucose < 60
    - If patient is alert enough to self-administer oral agent, give glucose paste or oral glucose containing agent (e.g. orange juice)
- Assist patient in replacing the device's batteries or cables if needed
- Administer boluses of NS in 250mL increments if signs of hypoperfusion
- Patient complaints frequently arise from device malfunction, from cardiac arrhythmias or acute coronary syndrome, from bleeding (device requires anticoagulant medication), and from infection.
    - Contact LVAD coordinator for further assistance if possible.
    - Determine type of device. Assess alarms. Change batteries if necessary. Reconnect cables. Auscultate for pump sound
    - Treat cardiac arrhythmia per Tachycardia or Bradycardia Protocol if appropriate
    - Treat bleeding per Hemorrhage Protocol if appropriate
    - Treat infection per Sepsis Protocol if appropriate
- Evaluate unresponsive patients carefully for reversible causes prior to initiation of CPR – chest compressions may cause irreversible damage to devices

- Universal Patient Care Protocol

Preeclampsia

- Suspect preeclampsia if the following conditions are met:
  - Gestational age > 20 weeks
  - Elevated blood pressure > 160/110
  - Symptoms are present such as edema, visual disturbance, headache, epigastric pain.
- Severe preeclampsia can present with altered mentation, pulmonary edema, and/or cyanosis
- Eclampsia occurs in the setting of the above signs or symptoms plus seizure activity.
- If preeclampsia is present, administer *Labetalol* 10mg IVP every 10minutes until SBP < 130 and DBP < 100.
  - Contraindicated if HR < 60
  - Use with caution in patients with history of asthma
- If seizure activity is present, administer *Magnesium Sulfate* 4G IV in 100mL D5W over 15 minutes
  - Monitor for signs of magnesium toxicity: hyporeflexia, respiratory depression, hypotension
  - If seizure activity still present following administration of magnesium, administer benzodiazepine per Seizure Protocol.
  - Consider other underlying etiology of seizure such as hypoglycemia, head injury, drug overdose or withdrawal, fever or infection.
  - If patient is <20weeks gestation or postpartum and magnesium is being considered, contact Medical Control for orders

Vaginal bleeding

- A visual inspection of the vaginal area to look for crowning or presenting parts is appropriate, but do not place fingers or hand inside the birth canal during assessment.
- If mother is in 1st or 2nd trimester (or unknown pregnancy status), place patient in position of comfort.
- If mother is in 3rd trimester, place in lateral recumbent position.
- If gestational age known to be < 20 weeks, transport to closest hospital.
- If gestational age known to be >20 weeks, transport to closest OB receiving facility.
- Transport any products of conception or fetal material present at the scene to the receiving facility.
- Ensure necessary equipment for emergent vaginal delivery is immediately available.

Childbirth (normal)

- Place mother on supplemental oxygen via nasal cannula
- Do not place fingers or hand inside birth canal for assessment
- If presenting part is not the head (i.e., foot, arm or buttock first), immediately begin transport to nearest OB receiving facility. Continue supportive care and see Childbirth (Emergency) Protocol below.
- Delivery:
    - Slow, controlled delivery of the head; apply gentle perineal pressure
    - If the umbilical cord is wrapped around the child's neck, gently unwrap prior to completion of delivery.
    - Place clamps on umbilical cord 10-12 inches from abdomen, one inch apart, and cut cord between clamps
    - Following delivery, follow Newborn Resuscitation Protocol
    - Allow spontaneous delivery of placenta; do not apply traction to umbilical cord for placental delivery.
    - If placental delivery occurs, package in biohazardous waste bag and hand over to hospital staff upon arrival.
    - Assess for postpartum hemorrhage.
    - Gently massage abdominal wall overlying the uterine fundus until firm.

Childbirth (emergency)

- For prolapsed umbilical cord, encourage mother to refrain from pushing. Place in Trendelenberg or knee/chest position. Insert fingers into vagina to relieve pressure on cord by displacing fetal head up. Keep cord moist with saline soaked gauze. Maintain position and expedite transport.
- For breech presentation, encourage mother to refrain from pushing. Place in Trendelenberg or knee/chest position and support presenting parts. Do not pull.
- For shoulder dystocia, hyperflex the mother's hips and thighs towards her chest and apply anterior to posterior pressure with lateral to medial pressure suprapubic in order to rotate baby's shoulder off pelvic rim

For any overdose or poisoning contact should be made with the Poison Control Center. Whenever possible, determine the agent involved, the time of the ingestion/exposure, and the amount ingested. Bring empty pill bottles, etc., to the receiving facility.

- Universal Patient Care Protocol
- If respiratory depression is present and an overdose is suspected:
    - *Naloxone* 0.5mg via IV/IO/IM/IN route (whichever is easiest)
    - Repeat *Naloxone* dosing as needed if response occurs
    - Management of Respiratory Failure per Respiratory Failure Protocol
- Treatment for specific toxin exposure is indicated only when patients are clearly symptomatic. In the absence of significant symptoms, monitor closely and expedite transport.

Organophosphates

Symptoms include dyspnea, bronchorrhea, lacrimation, vomiting/diarrhea, weakness, paralysis, seizures

- Utilize appropriate Hazardous Materials precautions
- *Atropine* 2mg IV
    - Repeat every 5 minutes until respiratory secretions subside
- If seizures present, see Seizures Protocol
- If respiratory failure present, see Respiratory Failure Protocol

Tricyclic Antidepressant

Symptoms include hypotension, arrhythmias, wide QRS complex (>0.09sec)

- *Sodium Bicarbonate* 50 mEq IV
    - May be repeated in 10 minutes

Calcium Channel Blockers and Beta Blockers

Symptoms include bradycardia, hypotension, heart blocks, hypoglycemia, and pre-syncope or altered mental status

- If bradycardia present, treat per Bradycardia Protocol
- If hypotension present, treat per Hypotension Protocol
- If hypoglycemia present, treat per Hypoglycemia Protocol
- If poisoning due to calcium channel blocker, *Calcium Chloride* 1G slow IV

Dystonic Reaction

Acute uncontrollable muscle contractions

- *Diphenhydramine* 25-50mg IV/IM

Insulin Overdose

Hypoglycemia and altered mental status due to excessive insulin

- Treat glucose < 60mg/dL
  - *Dextrose* 50% 25G slow IV
  - If patient is alert enough to self-administer oral agent, give glucose paste or oral glucose containing agent (e.g. orange juice)
  - If hypoglycemia persists, repeat blood glucose check with a different glucometer, and repeat treatment as above if BGL < 60 after 10 minutes
  - If IV access unobtainable, and oral administration is not possible, call Online Medical Control for permission for possible D50 25G IO.

Opioids

Respiratory depression, altered mentation (somnolence), possibly decreased blood pressure, pinpoint pupils, possibly cardiac arrest

- Treat with *Naloxone* 0.5mg via IV/IO/IM/IN route (whichever is easiest)

- Patients who awaken after treatment with naloxone (whether from EMS or through administration by layperson or other first responder) should be transported to hospital for further evaluation. It is very likely that the effect of the opioid they have used will have systemic effects for longer than the effect of naloxone (very short half life).

  - Patients who have regained capacity after naloxone administration and who wish to refuse treatment are allowed to sign a refusal **only** if the following criteria **are all present**:
    - Patient did not overdose on medication/drugs as part of a suicide attempt
    - Patient used heroin, and not other synthetic long acting opioid (such as fentanyl, methadone, extended release morphine, etc). Please call medical control if concern exists about the duration of effect of the medication that was used.
    - Patient does not have any other medical complaints that would warrant further medical evaluation
    - Patient has a family member or caregiver present who is able to call EMS if symptoms recur

  - In the case of an above refusal, document patient refusal, along with patient vitals

and mental status exam. Obtain signature from witness or family member on refusal form. If patient is willing, obtain patient and/or family member contact info, and relay this information to Poison Control so that they may follow up with the patient at a later time to ensure that symptoms of overdose have not recurred.

- Universal Patient Care Protocol
- Perform patient care according to protocol for specific complaint.
- If pain severity > 6/10, and/or other indication for IV exists:
    - *Fentanyl* 50-100mcg IV, slow
        - May repeat every 5 minutes, to a maximum of 250mcg total dose
        - For repeat dosing above 250mcg, contact Online Medical Control.
        - Contraindicated if SBP < 100
        - Use with caution if patient has head injury, history of COPD, or respiratory distress.
- Document patient's pain score pre- and post-medication administration. Recheck and document patient's vitals after administration of pain medication.
- If applicable, consider Palliative Care directive.

- Universal Patient Care Protocol
- Palliative care and DNR orders indicate that medical providers should abstain from certain procedures with the understanding that the goal is to achieve patient comfort and avoid undesired harms or suffering
- However there are still interventions that are may be warranted based on the situation, such as oxygen, IV fluids, antibiotics, pain medications, and other supportive care to aid the patient in achieving their goals of care
- It is important to seek and obtain the **original** DNR order (or high-quality photocopy) **signed by the patient (or surrogate) and his/her physician**
    - DNR orders or copies **MUST** be on yellow paper to be considered valid
- Attempt to verify that the patient's identity matches the DNR
- If questions arise about the validity of the DNR or other requests to withhold elements of care, contact Online Medical Control

- In **Cardiac Arrest**: DNR orders prohibit CPR, ventilation, and ACLS medications
- In **Respiratory Distress**: consider supplemental oxygen, suctioning, and a position of comfort but do not intubate or place a supraglottic airway
- Standard treatment per protocol may be appropriate for reversible or manageable conditions such as hypovolemia, hypoglycemia, fractures, pain control, and infection
- An IV may be established for supportive care for reversible/treatable conditions that are in compliance with the patient's wishes
- POLST forms, Living Wills, and other such documents are also appropriate to guide which treatments that patient would want done (or withheld). Please communicate with the family or Online Medical Control in these situations.
- Patients may refuse transport after receiving medications, though this should be discussed with Online Medical Control and a Patient Refusal Form must be signed

- Universal Patient Care Protocol
- Explore and evaluate events that led up to the patient coming into police custody, including any relevant trauma, substance use/intoxication or overdose, underlying medical conditions, possible psychiatric illness, and exposure to police devices such as a TASER or pepper spray
- If a TASER was used, evaluate for retained prongs, obtain a 12 lead EKG, and utilize any applicable protocols if there is chest pain, dyspnea, arrhythmia, or other symptoms
- If pepper spray was used, irrigate and decontaminate the patient
    - Evaluate for wheezing or respiratory distress and treat per protocol
    - Evaluate for ocular irritation and apply Eye Injuries Protocol
- Evaluate for any other trauma, and utilize Trauma Protocol as necessary
- Evaluate for signs/symptoms of agitated delirium and apply the Behavioral/Agitated Delirium protocol if indicated
- Coordinate with Law Enforcement to obtain any necessary Emergency Department evaluation
- Be alert to positional asphyxia in restrained patients

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Seizure	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- If potential mechanism for trauma, apply Spinal Immobilization Protocol.
- Check blood glucose level early, and treat appropriately.
    - For blood glucose < 60, administer D50 25G IV.
- If patient is actively seizing with airway compromise, apply Airway Protocol.
    - Note, unless patient is in status epilepticus (seizure activity > 5 minutes or >1 seizure in a 5-minute period without return to baseline), airway maneuvers should be limited to noninvasive interventions if possible.
    - Lay the patient in a lateral decubitus position and ensure that tongue is not obstructing airway. Administer supplemental oxygen via nasal cannula or nonrebreather mask for O2 sats < 90%.
    - A nasal pharyngeal or oral pharyngeal airway may be placed for signs of airway obstruction after these initial maneuvers have been tried.
        - Exercise caution when placing fingers in the mouth of a seizing patient; nasal pharyngeal airway may be preferred to avoid provider injury.
    - Rapid sequence intubation should be avoided if the above maneuvers are successful, because paralysis of the patient will limit ability to detect continued seizure activity.
- Treat seizure activity with benzodiazepine. For patients without IV access, the preferred treatment is midazolam via mucosal atomizer device (MAD), before placement of peripheral IV. For patients with IV access already established, the preferred treatment is *Lorazepam* 2-4mg IV/IO slow push.
    - *Midazolam* 5mg via MAD for patients <50kg
    - *Midazolam* 10mg via MAD (5mg to each nare) for patients >50kg
    - Alternative agents in cases of drug shortage: *Diazepam* 5mg IV/IO slow push (may also be given 5mg via MAD)
    - Benzodiazepine dose may be repeated every 5 minutes x 2 (maximum 8mg lorazepam, maximum diazepam 10mg). Do not repeat midazolam dosing via MAD. Contact Online Medical Physician if needed for further medication dosing.
- If patient is no longer seizing at time of EMS assessment, obtain focused history and physical.
- For seizure suspected to be secondary to primary head injury, refer to Trauma Protocol.
- For seizure in pregnant patient (3rd trimester or <4wks postpartum), consider eclampsia and treat with *Magnesium Sulfate* 4G in 100mL D5W IV/IO over 15 minutes
    - Monitor for respiratory depression when giving magnesium.
    - Refer to Obstetric Emergencies Protocol for further management.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Sepsis	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Sepsis is a rapidly progressing, life threatening condition due to systemic infection. Sepsis must be recognized early and treated aggressively to prevent progression to shock and death. Sepsis can be identified when the following markers of the Systemic Inflammatory Response Syndrome (SIRS) are present in a patient with suspected infection:

- Temperature > 38° C (100.4° F) OR < 36° C (96.8° F)
- Respiratory Rate > 20 breaths/min or EtCO2 < 32
- Heart Rate > 90 beats/min

In addition to physiologic markers of SIRS, severe sepsis may cause hypoxia and inadequate organ perfusion, resulting in metabolic acidosis demonstrated by decreased ETCO2 levels (measured by capnography).

Sepsis Alert

The purpose of a **Sepsis Alert** is to provide pre-arrival Emergency Department notification in order to facilitate rapid assessment and treatment of a suspected severe sepsis patient. A **Sepsis Alert** will be instituted for patients meeting the following **2** criteria:

1. Suspected infection
2. Two or more of the following:
   - Temperature > 38° C (100.4° F) OR < 36° C (96.8° F)
   - Respiratory Rate > 20 breaths/min
   - Heart Rate > 90 beats/min
   - ETCO2 ≤ 25

In the case of a **Sepsis Alert**, perform the following actions:

- When possible, notify the receiving ED of incoming Sepsis Alert prior to arrival
- IV 0.9% NS en route
  - Administer 250mL boluses until SBP > 90mmHg
  - Total amount IVF should not exceed 2000mL
  - Boluses may be given in rapid succession if SBP remains < 90mmHg
- If systolic BP remains < 90mmHg after 4th fluid bolus (1000mL):
  - *Dopamine* infusion at 5-20mcg /kg/min titrated to maintain systolic BP > 90mmHg
- Report amount of fluids given to receiving hospital

- Universal Patient Care Protocol
- If patient has medical complaint or obvious trauma, refer to appropriate protocol.
- If HR >110, or there are signs of hypertension or respiratory compromise, recommend transport for evaluation. Obtain a signed refusal if patient declines transport.
- Exam should include assessment of ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, and neuro. Additionally, patients with potential mechanism for trauma should have a trauma exam completed.
- If patient has no medical complaint, no obvious trauma, and no vital sign abnormalities, confirm that there is no complaint. Provide vital sign results and suggest that they contact physician with assessment results. Advise patient to call 911 if they develop any symptoms. Patient should sign Refusal Form and this should be attached to the patient care record.

- Universal Patient Care Protocol
- Spinal Care Protocol if appropriate
- Measure SpCO and obtain 12-lead EKG for suspected carbon monoxide, cyanide, or combined exposure.
- Supplemental oxygen is the mainstay of treatment for carbon monoxide exposure, while cyanokit antidote therapy is required for cyanide exposure.
- Mild exposure may be recognized by the presence of soot in the nose, mouth or oropharynx. Moderate exposure may be recognized by the presence of soot in the nose/mouth/oropharynx, along with the presence of altered mental status and/or hypotension. Severe exposure is characterized by the previously mentioned findings, and may progress to respiratory or cardiac arrest.
- Cases of mild exposure should be treated with pulse oximetry monitoring and frequent reassessment.
- Cases of moderate and severe exposure should have an IV established. Check pulse oximetry using co-oximeter (Rad57).
    - Treat hypotension with NS 500cc bolus
    - Administer Cyanokit 5G IV
- Treat other presenting symptoms with appropriate protocol and transport to appropriate facility.
- Personnel should report to rehab for evaluation after 45 minutes (2 thirty minute or 1 sixty minute cylinder), or earlier if requested by the firefighter or the Incident Commander.

- Universal Patient Care Protocol
- Spinal immobilization with cervical collar is recommended in the following circumstances:
    - Neuro exam demonstrates focal neurologic deficit
    - Age greater than 65 years or less than 5 years in the presence of significant mechanism of injury
        - Includes high energy events such as ejection, high falls, and abrupt deceleration crashes. Consider also the "change of plane fall" mechanism in which a patient strikes their head while falling, causing sudden deceleration and hyperextension of the cervical spine.
    - Presence of intoxication or otherwise altered mental status
    - Presence of distracting injury that limits patients ability to detect spinal cord injury
    - Presence of point tenderness over the spinous processes or pain with range of motion
        - NOTE: Range of motion should not be performed until rest of the above checklist has been assessed.
- C-collars may be removed from conscious patients that poorly tolerate them due to anxiety or shortness of breath. Consider using pillows, towels, tape, etc. in these patients.
- If manual cervical stabilization is hampering ability to intubate the patient, consider adjunct airway tools and devices.
- Patients who are alert enough to follow commands can typically minimize their own spinal movement without the use of a spine board. The decision whether or not to implement spinal immobilization is the responsibility of the officer in charge.
- Special circumstances
    - Patients who are markedly agitated, confused, and/or combative from head injury/intoxication may not be able to follow commands with regard to minimizing spinal movement
    - Patients may remain on a backboard if the crew deems it safer for the patient and/or crew, and this will be at the discretion of the crew
    - A multi-system blunt trauma patient, such as from high velocity crash or significant fall, who is unable to follow commands due to combativeness, intoxication, or decreased mental status, should remain on the backboard or scoop for their safety until handoff to the ED.
- A long spine board, scoop stretcher, short board, or Kendrick Extrication Device (KED) may be used to minimize movement of the patient when moving them from the point of injury to the stretcher.
    - Once the patient is moved to the stretcher, use a log-roll or lift-slide technique, and lay the patient flat on the stretcher and leave the C-collar (as appropriate) in place.
    - Elevate the back of the stretcher as needed for patient comfort.
    - Do not transport a patient to the hospital on a back board, short board, KED, or vacuum mattress, unless it is necessary for patient safety.
    - Note: patients who are alert enough to follow commands can typically maintain stabilization of their own spine without assistance.
- Patients with **penetrating trauma** (e.g. gunshot wound or stabbing) do not require immobilization unless they show neurologic deficits indicating potential spinal cord injury. In cases where neurologic deficit is present and spinal cord injury is suspected, spinal

immobilization is recommended so long as it does not impede respirations, and does not impair assessment of bleeding.

- For patients with spinal immobilization, document motor function before/after spinal immobilization.
- It is unnecessary to perform a “standing takedown” for backboarding patients who are ambulatory after an injury.
    - In these cases, place c-collar (as appropriate), and allow patient to sit on cot, and then lie flat.

- Universal Patient Care Protocol
- Consider Spinal Immobilization Protocol, if appropriate
- Check blood glucose
    - If blood glucose <60, administer glucose gel if patient is alert. Administer *Dextrose* 50% 25 grams if patient is unable to take PO.
    - Recheck blood glucose 5-10 minutes after initial treatment.
- Place patient on cardiac monitor and obtain 12-lead EKG.
- Consider potential causes and refer to appropriate protocol:
    - Bradycardia
    - Tachycardia
    - Altered Mental Status
    - Hypotension/Shock
    - Pregnancy
    - Seizure
    - Stroke/CVA
- Remember that 25% of geriatric syncope is cardiac dysrhythmia based.
- Remember the "rule of 15s" for syncope
    - Approximately 15% of the following life-threatening conditions present with syncope: subarachnoid hemorrhage, acute coronary syndrome, aortic dissection, leaking aortic aneurysm, and ruptured ectopic pregnancy

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Tachycardia with Pulse	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- May be a primary dysrhythmia, such as atrial fibrillation, supraventricular tachycardia, or ventricular tachycardia with a pulse. Alternatively, tachycardia may result from another primary problem such as anemia, dehydration, hemorrhage, medication/drug use or withdrawal, anxiety or pain. Management of the patient will hinge on identifying whether the patient is **stable** or **unstable**, and identifying any underlying cause.
- Perform vital signs, paying special attention to blood pressure and oxygen saturation. Identify rhythm using cardiac monitor, and treat immediately if patient is unstable. If time allows, 12-lead EKG is preferred for interpretation of rhythm.
- Identify and treat underlying causes.
    - Maintain patient airway, assist breathing as necessary, and provide supplemental oxygen if indicated.
    - Refer to Pain Protocol if indicated.
- Unstable patients (as evidenced by hypotension, acutely altered mental status, signs of shock, ischemic chest pain, or acute heart failure) should be treated with synchronized cardioversion.
    - Initial recommended dose is dependent on rhythm
        - Narrow, regular: 50-100J
        - Narrow, irregular: 120-200J
        - Wide, regular: 100J
        - Wide, irregular: defibrillation dose (NOT synchronized)
    - May administer *Midazolam* 1-2mg IV/IN prior to cardioversion if time allows.
- Stable patients who are asymptomatic likely will not benefit from immediate treatment. It is certainly reasonable to treat these patients with close observation, and rapid transport as opposed to administration of an anti-arrhythmic medication.
- For patients who are not unstable, but who are symptomatic, determine whether rhythm is regular or irregular, and whether QRS complex is wide or narrow.
    - For irregular tachycardias (most likely atrial fibrillation), administer *Diltiazem* 0.25 mg/kg (maximum 20mg) IV over 2 minutes.
        - May be repeated in 15 minutes if initial dose ineffective.
        - Use of diltiazem is contraindicated if patient has history of WPW (be especially concerned in the presence of atrial fibrillation with a widened QRS)
    - For regular, narrow complex tachycardias (most likely supraventricular tachycardia if rate >160), attempt vagal maneuvers, then treat with adenosine if vagal maneuvers are unsuccessful.
        - Treatment of sinus tachycardia should be aimed at treating underlying cause, and not with vagal maneuvers or antidysrhythmic administration.
        - Vagal maneuvers can include having the patient bear down (instruct to contract abdominal muscles), having patient blow through a straw, or performance of carotid massage. Auscultate bilateral carotids to rule out bruit prior to performance of carotid massage. Carotid massage is more effective when performed with patient in Trendelenburg position, if time allows.

        - *Adenosine* dosing: first dose, 6mg rapid IV push, followed by rapid NS flush. Second dose of 12mg may be repeated in 3 minutes if initial dose is ineffective.
        - *Diltiazem* 0.25mg/kg (maximum 20mg) IVP may be given if SBP > 100 and vagal maneuvers and adenosine are ineffective.
    - For regular, wide complex tachycardias (most likely ventricular tachycardia), administer *Amiodarone* 150mg over 10 minutes.
        - Follow by maintenance infusion of 1mg/min for 6hrs.
        - Torsades de pointes, or polymorphic VT, should be treated with *Magnesium Sulfate* 2G (in 100mL D5W), slow infusion over 15 minutes
        - Consider possibility of hyperkalemia as etiology of wide-complex tachycardia (especially in dialysis patients), and treat with *Calcium chloride* 1G IV/IO if suspected.
        - Consider call to Online Medical Physician for further recommendations.
- Perform 12-lead EKG on initial assessment if time permits, and always perform 12-lead EKG after cardioversion or administration of antiarrhythmic. Provide copy of all rhythm strips/EKGs to accepting hospital.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Trauma	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

General approach to trauma patients:

- Consider air transport based on mechanism and distance from appropriate hospital.
- Assess all trauma patients for Trauma Alert criteria. If criteria are met, begin transport to Trauma Center within 10 minutes of arrival on scene whenever possible.
- Spinal Immobilization Protocol as appropriate
- Secure airway if indicated per Respiratory Failure Protocol
- Manage bleeding per Hemorrhage Protocol if appropriate
- Assess Disability – neurologic status/record Glasgow Coma Score
- Head to toe examination to assess for injuries
- Apply physical restraints if needed to ensure patient/crew safety
- Prevent loss of body heat
- IV 0.9% NS KVO or IV lock
- If BP < 90, administer boluses of NS at 250mL until BP > 90
- Assess for tension pneumothorax
    - Tension pneumothorax should be suspected in patients who exhibit:
        - Severe respiratory distress with hypoxia
        - Unilateral decreased or absent lung sounds (may see tracheal deviation away from collapsed lung field)
        - Evidence of hemodynamic compromise (shock, hypotension, tachycardia, altered mental status)
    - **Pleural decompression for tension pneumothorax should only be performed when all three of the above criteria are present. If indicated, perform pleural decompression at 2nd intercostal space, midclavicular line.**
    - In the setting of traumatic cardiac arrest with suspected chest trauma, perform bilateral pleural decompressions as part of the resuscitation efforts. Contact Online Medical Control if termination of efforts is being considered. Do not terminate resuscitative efforts if transport underway.
- Do not delay transport to perform procedures on scene unless immediately needed to stabilize patient (e.g. airway management, hemorrhage control)

Burns

- Remove rings, bracelets, or other constricting items.
- Expose patient as appropriate.
- For chemical burns, remove clothing and brush off any visible dry chemicals or powder. Flush area with water or NS for 10-15 minutes
- For thermal burns, check co-oximetry, and cover with burn sheet or sterile dressings
    - <10% TBSA, wet dressings with normal saline
    - >10% TBSA, 1L bolus NS
    - Leave blisters intact
- Pain control per Pain Control Protocol

- Consider early intubation for inhalation injuries

  - Flash burns/explosions/brief contact with fire does not cause inhalation injuries frequently. Consider inhalation injuries more likely in closed space burns.
  - Worrisome signs and symptoms include hoarseness, stridor, oral edema, or soot in the **posterior** oropharynx.
  - Singed eyebrows or hair may not necessarily be a worrisome feature.
- Critical burns (transport to Burn Center):
  - Partial thickness or deep thickness burns > 10% TBSA (total body surface area)
  - Second or third-degree burns involving the face, eyes, ears, hands, feet, genitalia, perineum or major joints
  - Third-degree burns in any age group
  - Electrical burns, including lightning injury
  - Burns associated with inhalation or other significant major traumatic injury or pre-existing disease
  - Circumferential extremity burns

Dental Injuries

- Control bleeding with gentle pressure
- If whole tooth is avulsed, immerse tooth in milk (if available) or normal saline.
  - Do not attempt to clean the tooth
  - Reimplantation may be possible if patient treated within 4 hours of the avulsion and tooth is kept in good condition.
- Refer to Pain Control Protocol as appropriate.

Head trauma

- If status epilepticus (seizure >5 minutes or more than one seizure without return to baseline in a 5-minute period), or history of seizure disorder that led to trauma, refer to Seizure Protocol. For simple seizure lasting < 5minutes, that appears to be a result of primary head injury, avoid treatment with benzodiazepines.
- If patient has respiratory failure or needs intubation for airway protection, be mindful that **hypotension, hypoxia, and hyperventilation** are the leading causes of secondary brain injury. Whenever possible, these patients should be managed in the least invasive manner to maintain O2 saturation > 90% (i.e. NRBM or BVM, with 100% O2). Maintain appropriate blood pressure with fluid boluses if indicated. Maintain EtCO2 40 with ventilations. Do not hyperventilate unless clear signs of active herniation (developing pupil asymmetry or bilateral dilatation, bradycardia in the setting of hypertension, posturing, irregular respirations). In the setting of suspected **acute** herniation, a short period of hyperventilation with goal EtCO2 35-40 should be attempted.
- Be mindful for potential concomitant cervical spine trauma and refer to Spinal Immobilization Protocol as appropriate.
- For combativeness, refer to Behavioral Emergencies/Agitated Delirium Protocol as appropriate.

Cardiac Arrest

- **Criteria for termination of resuscitation (blunt or penetrating trauma, all criteria must be met):**
    - Pulseless, apneic, and no other signs of life present
    - Lack of pupillary reflexes and spontaneous movement
    - Asystole or agonal rhythm <20bpm on cardiac monitor **and multiple lead EKG**
    - Patients who become pulseless after severe traumatic injury when transport to the nearest ED cannot be accomplished within 15min (i.e. prolonged extrications) provided that all other signs of life are absent and transport has not been initiated
    - Perform needle decompression of the chest prior to declaring termination, as tension pneumothorax is a potentially reversible cause of cardiac arrest in these patients
    - Place call to Online Medical Control for discussion prior to termination of resuscitation

Extremity trauma

- Control bleeding with direct pressure
- Apply tourniquet to extremity bleeding that is not controlled with direct pressure
    - Tourniquets are most effective in life saving efforts if performed early, prior to the onset of shock.
    - Pain Control Protocol as appropriate after placement of tourniquet if not hypotensive
    - Do not let down tourniquet if it was effective in controlling initial bleeding.
    - Do not release a tourniquet that was applied by bystander if initial bleeding was reported to be severe.
    - Document time of tourniquet placement in patient care record
- Pain Control Protocol as appropriate
- Clean wound of debris and apply sterile dressing
- Splint in position found, recheck neurovascular status after splinting, and elevate extremity
- If amputation of extremity, consider whether re-implantation is possible
    - If no chance of reimplantation, transport to the most appropriate trauma center per catchment area
    - If chance of reimplantation, wrap amputated part in sterile dressing soaked in NS. Place on ice if available (do not freeze).
        - Transport to Tampa General Hospital

Crush Injury/Prolonged Extrication

Patients with crush injury or prolonged extrication are at risk for developing rhabdomyolysis. Release of the trapped extremity can lead to arrhythmias from hyperkalemia and acidosis. This is unlikely in most extrication scenarios, and this protocol should only be considered with patients who have been immobilized for extended periods of time (at least two or more hours).

- Universal Patient Care Protocol
- Pain management per Pain Control Protocol
- Refer to Extremity Trauma Protocol for management of bleeding or amputation
- Administer *Sodium Bicarbonate* 25 mEq slow IV push just prior to release of trapped extremity
- Administer normal saline 500mL bolus.
- Maintain cardiac monitoring to observe for signs of hyperkalemia or acidosis (peaked T waves, QRS prolongation), and repeat treatment with sodium bicarbonate 25 mEq slow IV push x 1 if these signs are present (maximum 50 mEq bicarbonate treatment)

ADULT TRAUMA ALERT

Hillsborough County Florida

HILLSBOROUGH COUNTY TRAUMA AGENCY

EITHER 1 — **A score of 2 or greater for ADULT (> 15 y.o.) according to trauma scorecard methodology below:**

	1 point	2 points
Airway	• Sustained RR ≥ 30	• Active assistance *(not just oxygen)*
Circu-lation	• Sustained HR > 120	• Lack of radial pulse with sustained HR >120, or • BP < 90
Best Motor Response	• BMR = 5	• BMR of ≤ 4, or • Paralysis, or • Suspected spinal cord injury, or • Loss of sensation
Cutaneous	• Tissue loss (degloving injuries, major flap avulsions > 5 inches) • GSW to extremities	• Amputation proximal to the wrist or ankle, or • 2nd or 3rd degree burns ≥ 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)*
Long Bone Fracture	• Single fracture site due to MVA, or • Single fracture site due to a fall ≥ 10 feet	• Multiple fracture sites
Age	• ≥ 55	
Mechanism of Injury	• Ejection from vehicle *(excluding any motorcycle, moped, ATV, bicycle or open truck bed*, or • Deformed steering wheel *(driver)*	

OR 2
- A GCS score less than or equal to 12 *(excluding those whose baseline is 12 or less)* [SEE SCALE BELOW]

OR 3
- A neck laceration with swelling, sustained bleeding, escape of air from wound or stridor
- Any other neck laceration:
  Transport to the nearest trauma center, but do not trauma alert

OR 4
- EMS PROVIDER HIGH INDEX OF SUSPICION

GLASGOW COMA SCALE

Opens Eyes	Spontaneously	4
	To voice	3
	To pain	2
	No response	1
Best Verbal Response	Oriented	5
	Confused	4
	Inappropriate words	3
	Incomprehensible words	2
	No response	1
Best Motor Response	Obeys command	6
	Localizes to pain	5
	Withdraws to pain	4
	Flexion (pain) [decorticate]	3
	Extension (pain) [decerebrate]	2
	No response	1

THE FOLLOWING PATIENT ASSESSMENT INFORMATION SHOULD BE COMMUNICATED TO THE TRAUMA CENTER OR INITIAL RECEIVING HOSPITAL WHEN EN ROUTE WITH A TRAUMA ALERT:

- Age
- Sex
- Mechanism of injury
- Body area involved
- GCS
- Airway and ventilation status
- Vital signs
- Circulation (pupils, skin, peripheral pulses)

Printed 2011

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hillsborough County Trauma Agency Elder Gray-area Criteria	ISSUE DATE 09-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

HILLSBOROUGH COUNTY TRAUMA AGENCY
PRE-HOSPITAL ELDER GRAY-AREA NON-TRAUMA ALERT CRITERIA

Purpose: To identify "at-risk" older / geriatric trauma patients who might benefit from a trauma center

First check to see if your older trauma patient already meets trauma alert criteria and call an alert as appropriate.
If not a trauma alert, but patient is 65 years or older, consider transporting that individual to a trauma center if one or more of the following conditions are satisfied:

Mechanism of injury:

- Burns

Motor vehicle collision associated with:

- Rapid deceleration of automobile (> 35 mph)
- Pedestrian
- Bicycle
- Golf cart
- Motorcycle
- Unrestrained vehicle occupant
- Significant passenger space invasion
- Prolonged extrication greater than 20 minutes
- Significant vehicular damage
- Rollover
- Fatality (other occupant)

Injuries associated with an above mechanism:

- Evidence of chest or pelvic trauma

Other events associated w/high-energy dissipation:

- Fall (> ground level)
- Blast

Traumatic injury and currently taking:

- Anticoagulants and blood thinners
- Cardiac medications such as beta blockers and antiarrhythmics
- Diabetic medications

Traumatic injury and medical history of:

- Cardiac
- CHF
- COPD
- Paralysis
- Dementia
- Recent surgery
- Organ transplant
- Diabetes

- Assure scene safety. If scene is unsafe, call for appropriate resources (LEO) and stage until scene is safe.
- Utilize appropriate PPE.
    - Consider airborne or droplet protection.
- Bring all necessary equipment to the scene.
- Demonstrate professionalism and courtesy.
- Perform initial assessment, including BLS maneuvers and early oxygenation if needed.
- Refer to Spinal Immobilization Protocol.
- If patient is in cardiac arrest, see Cardiac Arrest Protocol.
- For ***trauma*** patients:
    - Evaluate mechanism of injury.
    - Perform focused and rapid trauma assessment for injury.
    - Obtain vital signs and SAMPLE history.
- For ***medical*** patients:
    - For responsive patients, obtain SAMPLE history and chief complaint. Perform a focused exam based on chief complaint, and obtain vital signs.
    - For unresponsive patients, first perform a rapid physical exam and obtain vital signs. Then obtain SAMPLE history and history of present illness from family or bystanders.
- Perform detailed assessment while awaiting transportation or prior to transport.
- Perform an ongoing assessment by repeating assessment and vital signs, and evaluating the effect of interventions.
- In patient transfer situations, utilize appropriate handoff including patient information, patient's personal property to transporting agency, and help ready the patient for transport.
- Each and every patient contact which does not result in an EMS transport must have a completed refusal form. A patient who refuses treatment must *always* have documentation demonstrating capacity to make medical decisions.
- Minimal exam if not noted on the specific protocol is vital signs, mental status, and location of injury or chief complaint.
- Required vital signs on ever patient include LOC, BP, pulse, and respirations, including temperature and blood glucose if appropriate.
- Evaluate 12-lead EKG when appropriate, especially patients older than 35 years, females, diabetics, and the elderly with nonspecific, potentially cardiac complaints.
- In the event that only BLS healthcare providers are on scene, proceed with patient assessment and treatment per appropriate protocols, within BLS scope of practice.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Vomiting and Diarrhea	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- Utilize IV protocol if signs or symptoms of hypovolemia, and give NS 500cc bolus
- Check blood glucose level
    - For blood glucose < 60, administer D50 25G IV.
- For symptomatic nausea/vomiting, administer *Ondansetron* 4mg IV/IM over 2-5m
    - Avoid ondansetron if patient suspects or confirms that they are pregnant

Tampa Fire Rescue
Medical Protocol

PEDIATRIC TREATMENT

PROTOCOL

Dyspnea

- Assess for respiratory distress (tachypnea, accessory muscle movement, retractions), perform continuous pulse oximetry, full vital signs and provide supplemental oxygen as needed to maintain pulse oximetry sats > 94%.
- Observe for signs of impending respiratory failure; refer to **Respiratory Failure** section if needed.
    - Hypoxia (O2 sat < 90) not improved with 100% oxygen
    - Poor ventilatory effort (increasing EtCO2 not improved with treatment)
    - Altered mental status/decreased level of consciousness
    - Inability to maintain patent airway

Acute bronchospasm (wheezing or history of asthma)

- *Albuterol/Ipratropium* 2.5mg/0.5mg via nebulizer
    - Repeat x 2 if wheezing persists
- *Methylprednisolone* 2mg/kg IV if wheezing persists after first nebulizer treatment (maximum 125mg)
- If **severe** respiratory distress and wheezing persists after above:
    - *Epinephrine* 1:1,000 IM 0.01mg/kg

Drowning/Near Drowning

- Refer to Spinal Immobilization Protocol if indicated
- Consider CPAP for patients with significant dyspnea or hypoxia
- Protect from heat loss
- Patients may develop delayed onset respiratory symptoms
- Refer to Cardiac Arrest Protocol if appropriate

Foreign Body Suspected

- Perform obstructed airways procedures per BLS standards
    - Attempt suction and removal with Magill forceps using direct visualization
    - Do not perform blind finger sweeps.
    - If conscious and responsive, administer back blows or Heimlich maneuver as appropriate, and assess for response.
    - Observe for signs of impending respiratory failure
    - If unconscious or unresponsive:
        - Give a series of 30 chest compressions, then inspect for object in mouth prior to attempting breaths
        - If unsuccessful after one series of compressions and ventilations, attempt to directly view object with laryngoscope and remove with Magill forceps

Respiratory Failure

- If suspicion of trauma, refer to Spinal Immobilization Protocol as appropriate
- Suction all debris, secretions from airway
- Supplemental 100% oxygen, then BVM ventilate if indicated
- Monitor EtCO2 (capnography) and pulse oximetry continuously
- The decision of how to manage the airway should be made by the officer in charge.
- Bag valve mask is an acceptable method of airway management if patient oxygen saturations can be maintained and there is no difficulties maintaining seal or issues with chest wall compliance.
    - Use nasal or oral airway if needed
    - Perform jaw thrust/chin lift if needed while maintaining cervical spine protection if concern for trauma.
- If BVM is not deemed appropriate for continued management of the patient airway, proceed with placement of endotracheal tube or supraglottic airway.
- If patient requires medication for placement of advanced airway:
    - Administer sedative medication (one of the following):
        - *Ketamine* 2mg/kg IV
        - *Etomidate* 0.3mg/kg IV
    - Consider administration of paralytic after sedation if needed to facilitate airway placement:
        - *Succinylcholine* 1.5mg/kg IV is preferred unless contra-indication exists
            - Succinylcholine contraindications:
                - Risk for hyperkalemia (e.g. renal failure, crush injury)
                - Denervation injury (paralysis, burns, muscular dystrophy)
                - Penetrating eye injury
                - History of malignant hyperthermia
        - If succinylcholine is contraindicated, administer *Rocuronium* 1mg/kg
- If endotracheal tube placement is attempted, provider attempts should be limited to **two attempts** for a medical respiratory failure, and **one attempt** for a trauma respiratory failure.
    - It is acceptable to place a supraglottic airway without prior attempts at endotracheal intubation, especially if a difficult airway is anticipated, or the patient has other immediate needs beyond airway maintenance (e.g., in order to prioritize high quality CPR in a cardiac arrest patient)
- If endotracheal tube placement is unsuccessful, proceed with placement of a supraglottic airway if possible.
- Refer to Failed Airway Protocol below if these attempts are unsuccessful.
- After endotracheal tube is placed, it is mandatory to confirm proper placement with capnography.
    - Maintain ventilation at rate such that EtCO2 is 35-45mmgHg if possible
    - Maintain capnography to ensure that tube has not become dislodged
    - Failure to obtain initial typical waveform capnography or loss of typical waveform en route should result in immediate removal of the endotracheal tube and maintenance of airway via BVM or supraglottic

- Waveform capnography strip should be printed and attached to patient care record as documentation of airway confirmation. Failure to do so can result in disciplinary action.

- If drugs were administered for advanced airway placement, or if sedation is required to prevent patient from dislodging endotracheal tube:
  - Administer *Midazolam* or *Fentanyl* to achieve adequate sedation
    - *Midazolam* 0.1mg/kg (max 1-2mg)
      - May repeat every 5min
    - *Fentanyl* 1mcg/kg (max 50mcg)
      - May repeat every 5min
  - Particularly remember the importance of adequate sedation when patient has received a long-acting paralytic such as rocuronium.

Failed Airway

- A failed airway is defined as two failed intubation attempts, or anatomy inconsistent with intubation attempts.
  - In the event of one failed intubation attempt in a medical patient, the most experienced provider on scene should proceed with second intubation attempt.
  - No more than two intubation attempts total.
- Continue with BVM if able to maintain seal and oxygen saturations
- Place supraglottic airway if possible
- Proceed with cricothyroidotomy per Cricothyroidotmy Protocol if above efforts are unsuccessful.
  - Cricothyroidotomy placement should be confirmed with waveform capnography

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Pediatric Allergic Reaction	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- If patient has a previously prescribed epinephrine auto-injector, and shows signs of anaphylaxis, it is appropriate to assist the patient in self-administration of the auto-injector.
- For mild reaction (itching, hives), administer diphenhydramine 1mg/kg IV (maximum 50mg).
    - May be administered IM if no IV access available.
- For moderate reaction (dyspnea, wheezing, chest tightness):
    - *Albuterol/Ipratropium* 2.5mg/0.5mg via nebulizer
        - Repeat x 2 if wheezing persists
    - *Diphenhydramine* 1mg/kg IV (maximum 50mg IV)
        - May be administered IM if no IV access available
    - *Methylprednisolone* 2mg/kg IV (maximum 125mg)
- For severe reaction (BP < 90, stridor, severe respiratory distress):
    - *Epinephrine* 1:1,000 IM **0.01mg/kg** for rapidly progressive worsening of symptoms
        - This dosing is not addressed in weight-based tape. Use caution with weight-based calculations, and utilize Medical Control for dosing recommendations as needed.
            - Repeat epinephrine if signs of severe reaction or shock persist after initial dose
    - *Albuterol/Ipratropium* 2.5mg/0.5mg via nebulizer
        - Repeat x 2 if wheezing persists
    - *Diphenhydramine* 1mg/kg IV (maximum 50mg IV)
        - May be administered IM if no IV access available
    - *Methylprednisolone* 2mg/kg IV (maximum 125mg)
- For cardiac arrest (or if cardiopulmonary arrest appears imminent):
    - *Epinephrine* 1:10,000 IV (instead of 1:1,000 IM) **0.01mg/kg** per weight based tape
    - For cardiac arrest, refer to appropriate protocol based on the presenting rhythm
    - In the setting of cardiac arrest, the following items should be performed in the post-resuscitative phase, if time allows:
        - *Albuterol/Ipratropium* 2.5mg/0.5mg via nebulizer
            - Repeat x 2 if wheezing persists
        - *Diphenhydramine* 1mg/kg IV (maximum 50mg IV)
            - May be administered IM if no IV access available
        - *Methylprednisolone* 2mg/kg IV (maximum 125mg)

- Universal Patient Care Protocol
- If hypoglycemic (BGL < 60):
  - *Dextrose 25%* per weight-based tape if less than age 8
    - If older than age 8, D50 may be used.
  - If patient is alert enough to self-administer oral agent, give glucose paste or oral glucose containing agent (e.g. orange juice)
  - If hypoglycemia persists, repeat blood glucose check with a different glucometer, and repeat treatment as above if BGL < 60 after 10 minutes
- If blood glucose elevated (>200) with signs of dehydration or DKA:
  - Administer NS 20cc/kg bolus
- If opioid overdose suspected (significantly altered mental status or respiratory depression):
  - *Naloxone* per weight-based tape.
    - Naloxone can be given in 0.5mg increments, titrated to mental status and respiratory drive (monitor respiratory status with continuous capnography)
  - If respiratory depression persists, repeat weight based dose every 3 minutes to a maximum of 8mg.
  - If IV has not been established, naloxone can be given IM or via mucosal atomizer device.
- If sepsis suspected (high risk for infection, febrile), see Sepsis Protocol.
- If head injury suspected, see Trauma/Head Injury Protocol.
- If cardiac arrhythmia present, see appropriate cardiac arrhythmia protocol.
- Consider restraints if necessary for patient/personnel protection, per the Restraints Protocol.

BLS Healthcare Provider Algorithm

- For an unresponsive patient, activate the emergency response and send another person for an AED
- Assess for breathing (is there abnormal or no breathing?) and pulse for 6-10 seconds
    - If breathing is normal and there are normal pulses, continue to assess while awaiting help
        - If the pulse is less than 60 beats per minute and perfusion is poor despite adequate oxygenation and ventilation, initiate compressions
    - If breathing is abnormal and there are normal pulses, assist ventilations
        - 1 breath every 3 seconds for children <8 years of age
        - 1 breath every 5-6 seconds for children older than 8
    - If there are no pulses, initiate CPR
- CPR rate depends on the number of rescuers
    - 1 rescuer cycle: 30 compressions, followed by 2 rescue breaths
    - 2 rescuer cycle: 15 compressions, followed by 2 rescue breaths
- Apply the AED
    - If possible, perform this without interrupting compressions
    - Allow the AED to check the rhythm
        - If a shock is advised, perform chest compressions until the AED has charged, then CLEAR from the patient and deliver the shock, then resume 30 compressions followed by 2 rescue breaths
        - If a shock is NOT advised, continue CPR (30:2 cycle) for 2 minutes, stopping for rhythm analysis (AED) every 2 minutes, or until ALS providers arrive

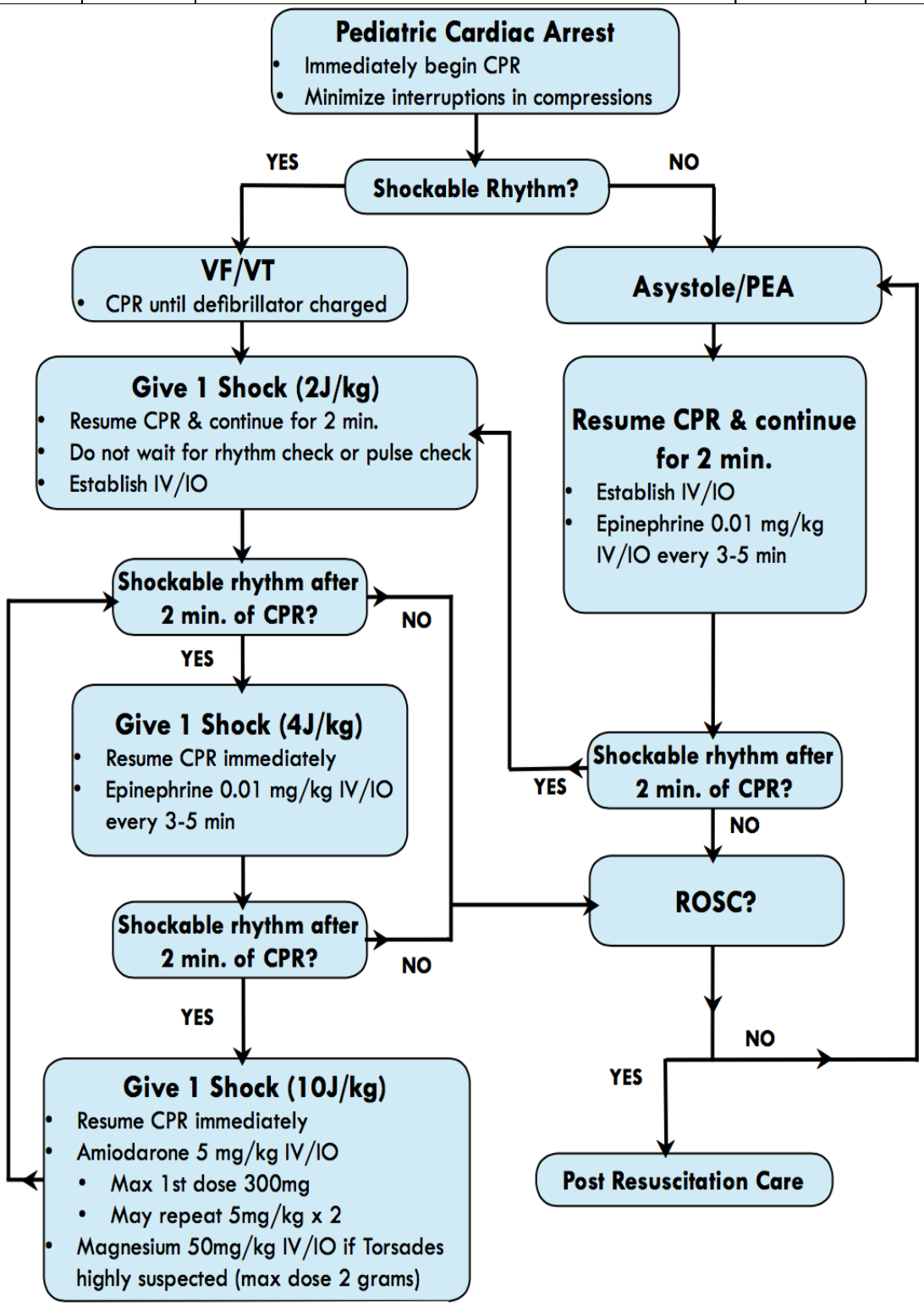
- Universal Patient Care Protocol
- Identify/Treat the Underlying Cause
    - Maintain a patent airway and assist oxygenation and ventilation as needed
    - Apply the cardiac monitor to identify the rhythm
    - Closely monitor blood pressure and pulse oximetry
    - Obtain IV/IO access
    - If time allows, obtain a 12-lead EKG
- If treating these threats **resolves** the cardiopulmonary distress, continue to support the ABCs, give oxygen, and promptly transport; utilizing Online Medical Control if needed
- If treating these threats **does not resolve** the distress, initiate CPR if the heart rate is <60 with poor perfusion despite adequate efforts for oxygenation and ventilation
    - If this does not resolve the bradycardia, utilize
        - *Epinephrine (1:10,000)* 0.01 mg/kg IV or IO, every 3-5 minutes
            - If there is no IV/IO access but an ETT is in place, you may use Epinephrine (1:1,000) at a dose of 0.1 mg/kg in the endotracheal tube, however this is considered less effective
        - *Atropine* 0.02 mg/kg IV or IO, with a *minimum* dose of 0.1mg and a maximum single dose of 0.5 mg; this may be repeated one additional time
    - Consider transcutaneous pacing for bradycardia
    - Continue to closely monitor pulses and utilize the Cardiac Arrest Algorithm if pulses are lost

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Pediatric Cardiac Arrest (Non-Traumatic)	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- Check for responsiveness, breathing, and pulse. Start chest compressions while placing on monitor and applying AED/defibrillator as soon as possible.
- Determine cardiac rhythm and refer to appropriate protocol for further management actions.
- Airway management per Respiratory Failure Protocol
- Check blood glucose and treat glucose < 70mg/dL
    - *D25W or D25-Half-NS* 2mL/kg (maximum 50mL) for children ≤ 8 years old
    - *D50W* 1mL/kg (maximum 50mL) for children ≥9 years old
- Due to the child's critical condition, initiate transport without delay

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE 01-2018	Pediatric Cardiac Arrest (Non-Traumatic)	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors



Asystole/PEA

- Confirm the presence of asystole in two leads
- Minimize any interruptions in chest compressions
- Using the most readily available route, administer (during CPR):
  - *Epinephrine (1:10,000)* 0.01mg/kg IV/IO every 3-5 min during arrest
    - If no IV/IO available, *Epinephrine (1:1,000)* 0.1mg/kg (max of 10mg) diluted in 5mL of NS via endotracheal tube; give 5 manual ventilations after drug administered
  - Treat any suspected contributing factors:
    - If hypovolemic, administer normal saline 20mL/kg IV/IO bolus; may repeat x 2 (to a maximum total of 60mL/kg)
    - If hypoxic, secure airway and assist ventilation
      - BVM is sufficient to address hypoxia and assist ventilation
    - If hypothermic, rewarm
    - If hyperkalemia suspected (history of renal failure/dialysis):
      - *Calcium chloride* 20mg/kg IV/IO (maximum dose 1 gram)
      - *Sodium bicarbonate* 1mEq/kg IV/IO (maximum dose 50mEq)
    - If toxin ingestion, see Pediatric Overdose Protocol
    - Assess for tension pneumothorax:
      - Unilateral decreased or absent lung sounds (may see tracheal deviation away from collapsed lung field)
      - Evidence of hemodynamic compromise
      - If tension pneumothorax suspected due to history or condition, perform pleural decompression at 2nd intercostal space, mid-clavicular line

Ventricular Fibrillation or Pulseless Ventricular Tachycardia

- Defibrillate at 2J/kg (maximum 200 J on biphasic device)
- Continue CPR immediately after shock (do not stop to check pulse or rhythm)
- Analyze rhythm after two minutes of good CPR; if VF/VT persists:
    - Defibrillate at 4J/kg (maximum 200 J)
    - Continue CPR immediately after shock (do not stop to check pulse or rhythm)
    - *Epinephrine (1:10,000)* 0.01mg/kg IV/IO every 3-5 min during arrest
        - If no IV/IO available, *Epinephrine (1:1,000)* 0.1mg/kg (max of 10mg) diluted in 5mL of NS via endotracheal tube; give 5 manual ventilations after drug administered
- Analyze rhythm after two minutes of good CPR; if VF/VT persists:
    - Defibrillate at 10J/kg (maximum 200 J on biphasic device)
        - All subsequent shocks at 10J/kg (maximum 200 J on biphasic device)
    - Continue CPR immediately after shock (do not stop to check pulse or rhythm)
    - *Amiodarone* 5mg/kg IV/IO bolus (maximum individual dose 300mg)
        - For persistent VF/VT, repeat *Amiodarone* 5mg/kg IV/IO bolus on second and third round (maximum total dose 15mg/kg)
- Continue cycle of CPR & Drug → Rhythm Check → CPR → Shock → CPR & Drug → Rhythm Check → CPR → Shock as needed
- *Magnesium Sulfate* 50mg/kg IV/IO for suspected torsades de pointes

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Pediatric Fever	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- Consider infectious causes and maintain appropriate PPE.
- Determine time of last acetaminophen or ibuprofen intake
    - Do not administer NSAIDs to children < 6 months
    - *Ibuprofen* 10mg/kg PO x 1 (max 800mg)
    - *Acetaminophen* 15mg/kg PO x 1 (max 1000mg)
    - If patient has recently taken acetaminophen and is still febrile (temp >100.5), administer ibuprofen if there are no contraindications.
    - If patient has recently taken ibuprofen and is still febrile (temp >100.5), administer acetaminophen if there are no contraindications.
- Aspirin is contraindicated in children for management of fever unless specifically ordered by physician for treatment of rare syndromes such as Kawasaki.
- For most children with febrile seizure, treatment with antiepileptic drugs is **not** recommended. In case of status epilepticus (seizure lasting >5 minutes or greater than 2 seizures without return to baseline in a 5-minute period), refer to Seizure Protocol and contact Online Medical Physician.
- Refer to Sepsis Protocol if appropriate
- Refer to Heat Emergencies Protocol if appropriate

- Universal Patient Care Protocol
- For pediatric hypotension, *if patient is symptomatic*, administer NS bolus 20ml/kg. Repeat 1-2 times as needed, to a maximum of 60cc/kg.
    - As a general rule, a pediatric patient should have a normal systolic BP that is 70+(Age x 2).
- For <u>symptomatic</u> hypotension refractory to fluid bolus as above, consider *Dopamine* using a weight-based tape.
- For patients with suspected sepsis, refer to Sepsis Protocol.
- For patients with mechanism of trauma, refer to Trauma Protocol.
- For patients with hypotension that is suspected to be secondary to a medication/drug overdose, refer to the (Pediatric) Overdose Protocol.

- Universal Patient Care Protocol
- It is a priority to keep the newborn warm and dry
- Assess estimated gestational age
- Suction meconium if present
    - If thick meconium is found in the amniotic fluid at the time of delivery or is present in the oropharynx, intubation should be performed before stimulation. Meconium aspiration syndrome is a severe complication for the neonate.
    - If meconium is present at the time of the delivery, but the neonate has normal vital signs and demonstrates vigorous muscle activity, then use bulb suction or 12F or 14F catheter to remove meconium from nasopharynx and oropharynx
    - If the neonate is depressed (apnea, heart rate < 100bpm, or decreased muscle tone), perform direct suctioning of the trachea prior to other resuscitative measures.
        - Select appropriate endotracheal tube using weight-based tape.
        - Continuously monitor the heart rate because suctioning may result in vagal stimulation and bradycardia.
        - Intubate by standard technique (drugs should not be required)
        - Attach the meconium aspirator
        - Apply low suction while endotracheal tube is withdrawn (suction should not last > 3-5 seconds)
        - If no meconium is aspirated, proceed with standard resuscitation
        - If meconium is aspirated, re-intubate the neonate and follow the same procedure until little or no meconium is recovered, or until the heart rate indicates that resuscitation must proceed without delay.
        - No more than two attempts should be performed.
- Consider oxygenation with room air for the newborn as opposed to supplemental O2

Minute of Life	Target SpO_2 (Preductal)
1 min	60%–65%
2 min	65%–70%
3 min	70%–75%
4 min	75%–80%
5 min	80%–85%
10 min	85%–90%

Data from Kattwinkel J, Bloom RS, et al: Textbook of Neonatal Resuscitation. 6th ed. Elk Grove Village, IL: American Academy of Pediatrics and the American Heart Association; 2010.

For any overdose or poisoning, contact should be made with the Poison Control Center. Whenever possible, determine the agent involved, the time of the ingestion/exposure, and the amount ingested. Bring empty pill bottles, etc., to the receiving facility.

- Universal Patient Care Protocol
- If respiratory depression is present and an overdose is suspected:
    - *Naloxone* 0.1mg/kg (maximum dose 2mg) via IV/IO/IM/IN route (whichever is easiest)
    - Management of Respiratory Failure per Respiratory Failure Protocol
- Treatment for specific toxin exposure is indicated only when patients are clearly symptomatic. In the absence of significant symptoms, monitor closely and expedite transport.

Organophosphates

Symptoms include dyspnea, bronchorrhea, lacrimation, vomiting/diarrhea, weakness, paralysis, seizures

- *Atropine* 0.02mg/kg IV (minimum dose 0.1mg, maximum 0.5mg)
    - Repeat every 5 minutes until respiratory secretions subside
- If seizures present, see Pediatric Seizures Protocol

Tricyclic Antidepressant

Symptoms include hypotension, arrhythmias, wide QRS complex (>0.09sec)

- *Sodium Bicarbonate* 1 mEq/kg IV (maximum 50 mEq)
    - May be repeated in 10 minutes

Calcium Channel Blockers and Beta Blockers

Symptoms include bradycardia, hypotension, and heart blocks

- *Atropine* 0.02mg/kg IV (minimum dose 0.1mg, maximum dose 0.5mg)
- If hypoglycemia present, treat per Hypoglycemia Protocol
- If poisoning due to <u>calcium channel blocker</u>, *Calcium Chloride* 20 mg/kg slow IV (maximum 2 grams)

Dystonic Reaction

Acute uncontrollable muscle contractions

- *Diphenhydramine* 1mg/kg IV/IM (maximum dose 50mg)

Insulin Overdose

Hypoglycemia and altered mental status due to excessive insulin

- Treat glucose < 60mg/dL
  - *D25W* or D25-half-NS 2mL/kg (maximum 50mL) for children ≤ 8 years old
  - *D50W* 1mL/kg (maximum 50mL) for children ≥9 years old

- Universal Patient Care Protocol
- Perform patient care according to protocol for specific complaint.
- If pain severity > 6/10:
    - *Fentanyl* 0.5mcg/kg IV (maximum dose 100mcg), slow IV push
        - May repeat every 5 minutes, to a maximum of 3 doses
            - Contact Online Medical Control if additional doses of pain medication is considered
        - May be administered via mucosal atomizer device if IV placement not successful or not otherwise needed. Intranasal dose is 1.5mcg/kg (maximum dose 100mcg)
        - Fentanyl is contraindicated in hypotension
        - Use with caution if patient has head injury or respiratory distress.
- Document patient's pain score pre- and post-medication administration.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Pediatric Seizure	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- If potential mechanism for trauma, apply Spinal Immobilization Protocol.
- Check blood glucose level early, and treat appropriately.
    - For blood glucose < 70,
        - Administer D25W 2mL/kg for children < 8 years old
        - Administer D50 2mL/kg for children > 8 years old (maximum 50mL or 25g)
- If febrile, refer to Fever Protocol.
- If patient is actively seizing with airway compromise, apply Airway Protocol.
    - Note, unless patient is in status epilepticus (seizure activity > 5 minutes or >1 seizure in a 5-minute period without return to baseline), airway maneuvers should be limited to noninvasive interventions if possible.
    - Lay the patient in a lateral decubitus position and ensure that tongue is not obstructing airway. Administer supplemental oxygen via nasal cannula or nonrebreather mask for O2 sats < 90%.
    - A nasal pharyngeal or oral pharyngeal airway may be placed for signs of airway obstruction after these initial maneuvers have been tried.
    - Rapid sequence intubation should be <u>avoided</u> if the above maneuvers are successful, because paralysis of the patient will limit ability to detect continued seizure activity.
- Treat seizure activity with benzodiazepine. For patients without IV access, the preferred treatment is midazolam via mucosal atomizer device (MAD), before placement of peripheral IV. For patients with IV access already established, the preferred treatment is lorazepam 0.1mg/kg IV/IO slow push (maximum 4mg/dose).
    - *Midazolam* 0.2mg/kg (max 10mg, 5mg to each nare) via MAD
    - *Lorazepam* 0.1mg/kg (max 4mg) via IV
    - Alternative agents (to be used only in cases of drug shortage): *Diazepam* 0.2mg/kg IV/IO slow push (max 5mg/dose)
    - Benzodiazepine dose may be repeated every 5 minutes x 2 (maximum lorazepam 8mg, maximum diazepam 10mg). Do not repeat midazolam dosing via MAD. Contact Online Medical Physician if needed for further medication dosing.
- If patient is post-ictal, obtain focused history and physical.
- For seizure suspected to be secondary to primary head injury, refer to Trauma Protocol.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Pediatric Tachycardia w/Pulse And Poor Perfusion	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- May be a primary dysrhythmia, such as atrial fibrillation, supraventricular tachycardia, or ventricular tachycardia with a pulse. Alternatively, tachycardia may result from another primary problem such as anemia, dehydration, hemorrhage, medication/drug use or withdrawal, anxiety or pain. Management of the patient will hinge on identifying whether the patient is **stable** or **unstable**, and identifying or any underlying cause.
- Perform vital signs, paying special attention to blood pressure and oxygen saturation. Identify rhythm using cardiac monitor.
- Identify and treat underlying causes.
    - Maintain patient airway, assist breathing as necessary, and provide supplemental oxygen if indicated.
    - Refer to Pain Protocol if indicated.
- Unstable patients (as evidenced by hypotension, acutely altered mental status, signs of shock, ischemic chest pain, or acute heart failure) should be treated with synchronized cardioversion.
    - Begin with 0.5-1J/kg; if not effective, increase to 2J/kg.
    - May administer *Midazolam* 0.1mg/kg (max of 1-2mg) prior to cardioversion if time allows.
- Stable patients who are asymptomatic likely will not benefit from immediate treatment. It is certainly reasonable to treat these patients with close observation, and rapid transport as opposed to administration of an anti-arrhythmic medication.
- For patients who are not unstable, but who are symptomatic, determine whether rhythm is narrow or wide-complex.
    - For narrow complex tachycardias suspected to be sinus tachycardia, aim treatment at suspected underlying cause (pain, dehydration, etc.).
    - For narrow complex tachycardias suspected to be SVT, attempt vagal maneuvers, then treat with adenosine if vagal maneuvers are unsuccessful.
        - Vagal maneuvers can include having the patient bear down (instruct to contract abdominal muscles), having patient blow through a straw, or performance of carotid massage. Auscultate bilateral carotids to rule out bruit prior to performance of carotid massage. Carotid massage is more effective when performed with patient in Trendelenburg position, if time allows.
        - *Adenosine* 0.1mg/kg rapid bolus (max 6mg) followed by rapid saline flush. Repeat in 3 minutes if needed with *Adenosine* 0.2mg/kg (maximum 12mg).
    - For regular, wide complex tachycardias (most likely ventricular tachycardia), administer amiodarone 5mg/kg (maximum 300mg) over 20 minutes.
        - Torsades de pointes, or polymorphic VT, should be treated with *Magnesium Sulfate* 50mg/kg IV/IO (maximum 2 grams) over 10 minutes
        - Consider call to Online Medical Physician for further recommendations.

- Perform 12-lead EKG on initial assessment if time permits, and always perform 12-lead EKG after cardioversion or administration of antiarrhythmic. Provide copy of all rhythm strips/EKGs to accepting hospital.
- Contact online medical control for recommendations regarding treatment with diltiazem if indicated.

General approach to trauma patients:

- Universal Patient Care Protocol
- Consider air transport based on mechanism and distance from appropriate hospital.
- Assess all trauma patients for Trauma Alert criteria. If criteria are met, begin transport to Trauma Center within 10 minutes of arrival on scene whenever possible.
- Spinal Immobilization Protocol as appropriate
- Secure airway if indicated
- Control active bleeding with direct pressure
- Assess Disability – neurologic status/record Glasgow Coma Score
- Head to toe examination to assess for injuries
- Apply physical restraints if needed to ensure patient/crew safety
- Prevent loss of body heat
- IV 0.9% NS KVO or IV lock
- If BP < 90, administer boluses of NS at 250mL until BP > 90
- Assess for tension pneumothorax
    - Tension pneumothorax should be suspected in patients who exhibit:
        - Severe respiratory distress with hypoxia
        - Unilateral decreased or absent lung sounds (may see tracheal deviation away from collapsed lung field)
        - Evidence of hemodynamic compromise (shock, hypotension, tachycardia, altered mental status)
    - **Pleural decompression for tension pneumothorax should only be performed when all three of the above criteria are present. If indicated, perform pleural decompression at 2nd intercostal space, midclavicular line.**
    - In the setting of traumatic cardiac arrest with suspected chest trauma, consider bilateral pleural decompressions as part of the resuscitation efforts.
- Do not delay transport to perform procedures on scene unless immediately needed to stabilize patient (e.g. airway management, hemorrhage control)

Burns

- Remove rings, bracelets, or other constricting items.
- Expose patient as appropriate.
- For chemical burns, remove clothing and brush off any visible dry chemicals or powder. Flush area with water or NS for 10-15 minutes
- For thermal burns, check co-oximetry using Rad57, and cover with burn sheet or sterile dressings
    - <10% TBSA, wet dressings with normal saline
    - >10% TBSA, 1L bolus NS
    - Leave blisters intact
- Pain control per Pain Control Protocol
- Consider early intubation for inhalation injuries

  - Flash burns/explosions/brief contact with fire does not cause inhalation injuries frequently. Consider inhalation injuries more likely in closed space burns.
  - Worrisome signs and symptoms include hoarseness, stridor, oral edema, or soot in the **posterior** oropharynx.
  - Singed eyebrows or hair may not necessarily be a worrisome feature.
- Critical burns (transport to burn center):
  - Partial thickness burns > 10% TBSA
  - Any third-degree burns
  - Partial thickness or deep thickness burns to face, eyes, hands, or feet
  - Electrical burns
  - Respiratory burns
  - Deep chemical burns
  - Burns to patients with chronic diseases
  - Burns associated with major trauma

Head Trauma

- If status epilepticus (seizure >5 minutes or more than one seizure without return to baseline in a 5-minute period), or history of seizure disorder that led to trauma, refer to Seizure Protocol. For simple seizure lasting < 5minutes, that appears to be a result of primary head injury, avoid treatment with benzodiazepines.
- If patient has respiratory failure or needs intubation for airway protection, be mindful that **hypotension, hypoxia, and hypoventilation** are the leading causes of secondary brain injury. Whenever possible, these patients should be managed in the least invasive manner to maintain O2 saturation > 90% (i.e. NRBM or BVM, with 100% O2). Maintain appropriate blood pressure with fluid boluses if indicated. Maintain EtCO2 40 with ventilations. Do not hyperventilate unless clear signs of active herniation (developing pupil asymmetry or bilateral dilatation, bradycardia in the setting of hypertension, posturing, irregular respirations). In the setting of suspected **acute** herniation, a short period of hyperventilation with goal EtCO2 35-40 should be attempted.
- Be mindful for potential concomitant cervical spine trauma and refer to Spinal Immobilization Protocol as appropriate.
- For combativeness, refer to Behavioral Emergencies Protocol as appropriate.

Extremity trauma

- Control bleeding with direct pressure
- Apply tourniquet to extremity bleeding that is not controlled with direct pressure
  - Tourniquets are most effective in life saving efforts if performed early, prior to the onset of shock.
  - Pain Control Protocol as appropriate after placement of tourniquet if not hypotensive
  - Do not let down tourniquet if it was effective in controlling initial bleeding.
  - Do not release a tourniquet that was applied by bystander if initial bleeding was reported to be severe.
  - Document time of tourniquet placement in patient care record

- Pain Control Protocol as appropriate
- Clean wound of debris and apply sterile dressing
- Splint in position found, recheck neurovascular status after splinting, and elevate extremity
- If amputation of extremity, consider whether re-implantation is possible
    - If no chance of reimplantation, transport to the most appropriate trauma center per catchment area
    - If chance of reimplantation, wrap amputated part in sterile dressing soaked in NS. Place on ice if available (do not freeze).
        - Transport to Tampa General Hospital

Crush Injury/Prolonged Extrication

Patients with crush injury or prolonged extrication are at risk for developing rhabdomyolysis. Release of the trapped extremity can lead to arrhythmias from hyperkalemia and acidosis. This is unlikely in most extrication scenarios, and this protocol should only be considered with patients who have been immobilized for extended periods of time (at least two or more hours).

- Universal Patient Care Protocol
- Pain management per Pain Control Protocol
- Refer to Extremity Trauma Protocol for management of bleeding or amputation
- Administer *Sodium Bicarbonate* 1 mEq/kg slow IV push (maximum 25meq) just prior to release of trapped extremity
- Administer normal saline 500mL bolus.
- Maintain cardiac monitoring to observe for signs of hyperkalemia or acidosis (peaked T waves, QRS prolongation), and repeat treatment with *Sodium Bicarbonate* 1meq/kg slow IV push x 1 if these signs are present (maximum 50 mEq total bicarbonate treatment)

PEDIATRIC TRAUMA ALERT

Hillsborough County Florida

HILLSBOROUGH COUNTY TRAUMA AGENCY

EITHER 1 **A score of 2 or greater for CHILD (≤ 15 y.o.) according to trauma scorecard methodology below:**

	Normal/ 0 ponts	1 point	2 points
Size	• Weighs > 11 Kg (24 lbs)	• Weighs (11 Kg (24 lbs) or length is ≤ 33 inches	
Airway	• Normal, or • O2		• Assisted *(includes measures such as manual jaw thrust, continuous suctioning, or other adjuncts)*, or • Intubated
Consciousness	• Awake, alert and oriented for age	• Amnesia, or • Reliable Hx of LOC	• 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
Circulation	• Good peripheral pulses, or • SBP ≥ 90	• The carotid or femoral pulse is palpable but neither the radial or pedal pulses are palpable, or • SBP < 90	• Weak or nonpalpable carotid or femoral pulse, or • SBP < 50
Fracture	• None seen nor suspected	• Suspected single closed long bone fracture *(proximal to the wrist or ankle)*	• Any open long bone fracture, or • Multiple fx / dislocation sites *(proximal to the wrist or ankle)*
Cutaneous	• No visible injury, or • Contusion, abrasion, minor laceration		• Major tissue disruption *(major degloving injuries, major flap avulsions, or major soft tissue disruption)*, or • Amputation *(proximal to the wrist or ankle)*, or • 2nd or 3rd degree burns to ≥ 10% TBSA, or • Any high voltage electrical or lightning injury, or • Penetrating injury to head, neck, or torso

OR 2

- A neck laceration with swelling, sustained bleeding, escape of air from wound or stridor
- Any other neck laceration:
  Transport to the nearest pediatric trauma center, but do not trauma alert

OR 3

- EMS PROVIDER HIGH INDEX OF SUSPICION

[Optional - Not required to determine pediatric trauma alert]

PEDIATRIC COMA SCALE (< 2 yrs)

Opens Eyes	Spontaneously	4
	To speech	3
	To pain	2
	No response	1
Best Verbal Response	Coos, babbles	5
	Consolable	4
	Cries to pain	3
	Moans to pain	2
	No response	1
Best Motor Response	Normal spontaneous	6
	Withdraws to touch	5
	Withdraws to pain	4
	Abnormal flexion	3
	Abnormal extension	2
	No response	1

THE FOLLOWING PATIENT ASSESSMENT INFORMATION SHOULD BE COMMUNICATED TO THE PEDIATRIC TRAUMA CENTER OR INITIAL RECEIVING HOSPITAL WHEN EN ROUTE WITH A TRAUMA ALERT:

- Age
- Sex
- Mechanism of injury
- Body area involved
- GCS
- Airway and ventilation status
- Vital signs
- Circulation (pupils, skin, peripheral pulses)

Printed 2011

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE 01-2018	Pediatric Vomiting and Diarrhea	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

- Universal Patient Care Protocol
- Utilize IV protocol if signs or symptoms of hypovolemia, and give NS 20cc/kg bolus
- Check blood glucose level
    - For blood glucose < 60, administer D25 2mL/kg for children < 8 years old. Administer D50 2mL/kg for children > 8 years old (maximum 50mL or 25G)
- For symptomatic nausea/vomiting, administer ondansetron.
    - Administer 0.1mg/kg IV (max 4mg) for children <40kg.
    - Administer *Zofran* 4mg ODT or IV for children > 40kg (oral route preferred if patient does not require IV for other reason).

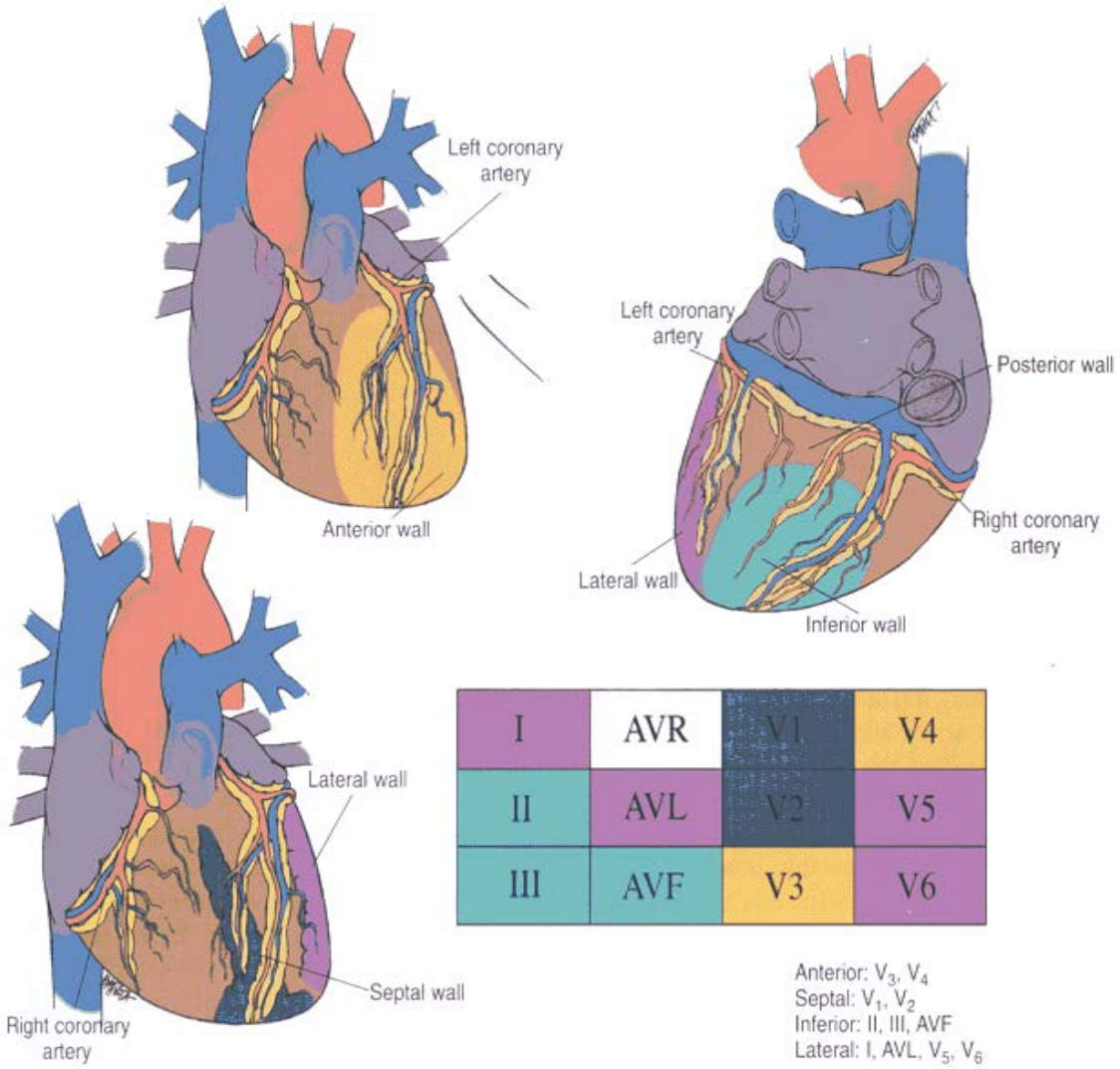
- Assure scene safety. If scene is unsafe, call for appropriate resources (LEO) and stage until scene is safe.
- Utilize appropriate PPE.
    - Consider airborne or droplet protection.
- Bring all necessary equipment to the scene.
- Demonstrate professionalism and courtesy.
- Use weight-based resuscitation tape.
- Determine approximate age to direct you to the correct protocol
    - Neonate < 28 days, infant 28 days – 1 year, child 1 year – puberty
- Perform initial assessment, including BLS maneuvers and early oxygenation if needed.
- Refer to Spinal Immobilization Protocol.
- If patient is in cardiac arrest, see Pediatric Cardiac Arrest Protocol.
- For ***trauma*** patients:
    - Evaluate mechanism of injury.
    - Perform focused and rapid trauma assessment for injury.
    - Obtain vital signs and SAMPLE history.
- For ***medical*** patients:
    - For responsive patients, obtain SAMPLE history and chief complaint. Perform a focused exam based on chief complaint, and obtain vital signs.
    - For unresponsive patients, first perform a rapid physical exam and obtain vital signs. Then obtain SAMPLE history and history of present illness from family or bystanders.
- Perform detailed assessment while awaiting transportation or prior to transport.
- Perform an ongoing assessment by repeating assessment and vital signs, and evaluating the effect of interventions.
- In patient transfer situations, utilize appropriate handoff including patient information, patient's personal property to transporting agency, and help ready the patient for transport.
- Any patient contact which does not result in an EMS transport must have a completed refusal form.
- Minimal exam if not noted on the specific protocol is vital signs, mental status, and location of injury or chief complaint.
- Required vital signs on ever patient include LOC, BP, pulse, and respirations, including temperature and blood glucose if appropriate.

Tampa Fire Rescue
Medical Protocol

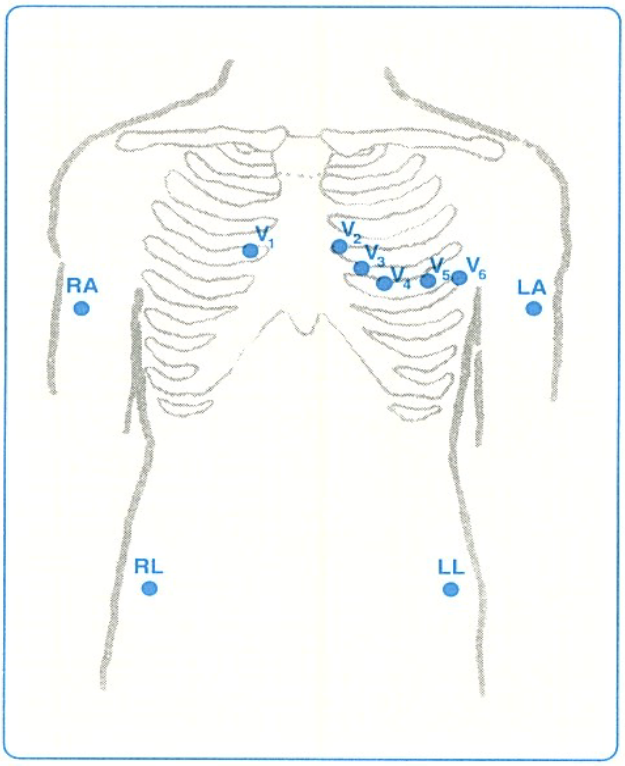
PROCEDURE

PROTOCOL

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 01-2018	12 Lead Diagram	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	12 Lead Placement Chart	ISSUE DATE 05-2010	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors



V1-Right parasternally, 4th intercostal space

V2-Left parasternally, 4th intercostal space

V3-Directly between V2 and V4

V4-5th intercostal space, left mid clavicular line

V5-Directly between V4 and V6

V6-Left mid axillary line, same plane as V4

V7-Posterior axillary line, same plane as V4

V8-Mid scapular line, same plane as V4

V9-Left paravetebral area, same plane as V4

V4R-5th ICS, right mid clavicular line

V5R-Directly between V4R and V6R

V6R-Right mid-axillary line, same plane as V4R

Indicative Lead Groups

Inferior Wall-II, III & aVF

Septal Wall-V1, V2

Anterior Wall-V3, V4

Lateral Wall-V5, V6, I, & aVL

Posterior Wall-V7-V9

Right Ventricle-V4R-V6R

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 01-2018	12 Lead EKG	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Policy

A 12 lead EKG, with an electronic interpretation of myocardial infarct or ischemia, will be transmitted to the receiving facility, preferably prior to arrival of the patient.

Purpose

To provide a baseline symptomatic EKG in all patients with a cardiac complaint, with the intent to improve the time to acute intervention (catheterization, PCI) when indicated.

Indications

A 12 lead EKG will be performed on the following patients:

- chest pain or discomfort
- isolated, atraumatic, left arm or jaw pain
- shortness of breath
- abdominal pain (especially epigastric in nature, and in females)
- unexplained diaphoresis, nausea or vomiting
- atraumatic back or mid-scapular pain
- geriatric or diabetic patient complaining of general weakness
- suspicion of cardiac event
- syncope or near-syncope
- return of spontaneous circulation after cardiac arrest
- anaphylaxis patients who have received epinephrine

Procedure

☐ Position patient, supine if possible or at least in semi-fowlers position.

☐ Prepare electrode contact area by cleansing or shaving, if needed.

- Apply limb leads to extremities.
- Apply precordial leads to torso, using landmarks for accuracy.

☐ Attach the 12-lead adapter cable to standard monitor cable.

☐ Switch monitor to 12-lead (diagnostic) mode.

- Enter demographic information. (Age*, gender, ID*)
- Acquire 12-lead tracing, minimizing patient movement during acquisition time.
- Obtain RV4 if elevation seen in inferior leads.

☐ Interpret tracing for STEMI criteria. A STEMI alert should be called for evidence of ST elevation > 1mm in two or more contiguous leads.

☐ Performance of serial EKGs is encouraged in patients who have ongoing chest pain, a suspected change in rhythm, or other patients for whom you have clinical concerns.

☐ Declare a “STEMI Alert” if applicable.

☐ Transmit a 12 lead tracing:

- to the receiving facility, if a STEMI Alert is declared, and upon request.
- to TFR QA Office.

☐ Leave the precordial leads in place, on arrival at the Emergency Department, for reference.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Apneic Oxygenation	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Purpose

- Hypoxia during the peri-intubation period may contribute to detrimental outcomes in patients who undergo out-of-hospital intubation.
- Apneic oxygenation can prevent time to desaturation (SpO2 < 90%) in patients who are undergoing intubation.

Indications

- This is an optional technique to lengthen time to desaturation in adult and pediatric patients undergoing out-of-hospital intubation.

Precautions

- The intention of this protocol is not to prevent further airway management with patients in cardiac arrest. Apneic oxygenation serves as a means to delivery oxygen only while a further advanced airway (supraglottic device or endotracheal tube) is being placed.

Procedure

- If second oxygen source is available, place nasal cannula and connect to high flow (at least 15L/min).
- Continue with other methods of preoxygenation while preparing for RSI as per protocol (BVM if hypoventilating or apneic, or nonrebreather at high flow if patient is spontaneously breathing at an adequate rate).
- Leave nasal cannula in place at attached to high flow oxygen during laryngoscopy while endotracheal tube is being placed.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Automated External Defibrillation	ISSUE DATE 11-2011	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Purpose

Successful resuscitation of out-of-hospital arrest depends on a series of critical interventions known as the Chain of Survival.

- Immediate recognition of cardiac arrest and activation of the emergency response system
- Early CPR with an emphasis on chest compressions
- Rapid defibrillation
- Effective advanced life support
- Integrated post–cardiac arrest care

Indications

- When an out-of-hospital cardiac arrest is not witnessed by EMS personnel, EMS may initiate CPR while applying the AED in preparation for rhythm identification. In such instances, 2 minutes of CPR should be performed before attempted defibrillation.

- For attempted defibrillation of children 1 to 8 years of age with an AED, the rescuer should use a pediatric dose-attenuator system if one is available. If the rescuer provides CPR to a child in cardiac arrest and does not have an AED with a pediatric dose-attenuator system, the rescuer should use a standard AED.

- For infants (<1 year of age), a manual defibrillator is preferred. If a manual defibrillator is not available, an AED with pediatric dose attenuation is desirable. All of TFR's AED units have pediatric dose attenuation. If neither is available, an AED without a dose attenuator may be used.

Precautions

- The AED is to be applied only to patients without a palpable pulse.
- The AED can be safely used on metal surfaces that are wet or dry.
- Medication patches should be removed prior to application of the pads.
- If required for proper defibrillation pad adhesion, any excess hair on the patients chest can be shaved.
- If the patient has an implantable pacemaker or an internal defibrillator, do not place the defibrillation pads directly over the implanted device. If the presence of an implanted device affects pad placement, place the defibrillation pad as close to the recommended pad placement as possible.

Procedure

- Utilize appropriate PPE.
- Assess the patient for absence of responsiveness, respiration or signs of circulation.

- Initiate CPR until the AED is available.
- Turn on the AED and follow its prompts.
- Perform any special procedures required (remove medication patches, shave excess chest hair, etc.)
- When the pads are properly attached, the device will automatically analyze the patient for a shockable rhythm, such as ventricular fibrillation. Ensure that no one touches the patient during analysis.
- On completion of the analysis, the AED will prompt the rescuer as to the appropriate course of action. Follow the device prompts:
  - **Shock Advised**
    - Ensure that no one is touching the patient, state loudly to "Stand Clear" then press the shock button.
    - Immediately complete 2 minutes of CPR and evaluate the patients pulse.
    - Continue CPR and analysis and shocks until the patient regains adequate circulation, the defibrillator advises to stop CPR for analysis, or transport arrives to take over patient care.
    -
  - **No Shock Advised**
    - Continue CPR until the patient regains adequate circulation, the defibrillator advises to stop CPR for analysis, or transport arrives to take over patient care.

NOTE: The lowest energy dose for effective defibrillation in infants and children is not known. The upper limit for safe defibrillation is also not known, but doses >4 J/kg (as high as 9 J/kg) have effectively defibrillated children and animal models of pediatric arrest with no significant adverse effects. Automated external defibrillators with relatively high-energy doses have been used successfully in infants in cardiac arrest with no clear adverse effects.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 01-2018	Bougie Airway Adjunct	ISSUE DATE 5-2010	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Description

The Bougie (boo-gee) Airway Adjunct is a 60cm long, flexible stylet with a 35 degree angle on the distal 3cm. Also called Gum Elastic Bougie, Intubating Stylet, Tracheal Tube Introducer (TTI) and Flex-Guide Endotracheal Tube Introducer (FTI)

Indications

- Unable to pass an endotracheal tube through the vocal cords.
- Ability to visualize the epiglottis but not the vocal cords
  - ⇒ Obesity, edema, trauma, anaphylaxis, tumor, blood, C-collar

Contraindications

Given the need, there are no known absolute contraindications.

Advantages

- Can be used with limited view
- Can prevent the need for crichothyrotomy or tracheostomy
- Simple device, with no moving parts
- Inexpensive

Disadvantages

- Can cause tracheal perforation
- Requires a skilled assistant
- Requires familiarization with new equipment
- Can only be used with a 6.0 endotracheal tube or larger

Procedure

☐ Consider lubricating the Bougie tube to facilitate easier insertion of the endotracheal tube.

☐ Insert the laryngoscope and maintain view of the glottis

☐ GENTLY advance the bougie into the trachea, and visually confirm its placement within the trachea.

☐ Maintain visualization of the vocal cords and apply gentle crich pressure while an assistant slides the endotracheal tube over the stylet, bevel down, while

withdrawing the bougie.

☐ Confirm placement

- Direct visualization
- A “click” of the tracheal rings may be felt.
- The bougie tube is felt to stop or get caught as it enters smaller bronchioles. (ability to pass > 40cm without resistance likely indicates that bougie is in esophagus)

  ⇒ MOST reliable method

  ⇒ CRITICAL to withdraw, not remove, the stylet prior to advancing the endotracheal tube.
- The person applying cric pressure feels the tube pass.
- The Bougie is felt to rotate as it enters the right mainstem (clockwise) or left mainstem (counter clockwise) bronchus.
- In an un-paralyzed patient proper placement will induce coughing.
- Follow usual protocols for airway confirmation after endotracheal tube is passed, including auscultation of bilateral breath sounds, absence of epigastric sounds, capnography, misting in tube.

Complications

- Advancing the Bougie too far can damage the bronchioles and/or the carina.

  ⇒ Gently advance the Bougie.

  ⇒ Do not advance the Bougie while advancing the endotracheal tube.

  ⇒ Make sure that the bevel of the endotracheal tube is properly situated to prevent it from getting caught on the cartilage.
- Esophageal intubation

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TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 01-2018	Capnography Waveform Interpretation	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Respiratory Cycle

⇨ Oxygen is inhaled into the lungs and carried into the blood
⇨ Ventilation CO_2 is transported back from the blood to the lungs & exhaled

Relationship between CO_2 and respiratory rate (RR):

⇨ ↑ RR= ↓CO_2 = HYPER-ventilation ($ETCO_2$ <35) → respiratory alkalosis
⇨ ↓ RR= ↑CO_2 = HYPO-ventilation ($ETCO_2$ >45) → respiratory acidosis

NOTE: Normal range of $ETCO_2$ is 35-45 mmHg

"Intubation" applications

- Verification of ETT placement
- ETT surveillance during transport
- CPR - compression efficacy, early sign of ROSC, survival predicator

"NON-Intubation" applications

- Bronchospasm: asthma, COPD, anaphylaxis
- Hypoventilation: drugs, stroke, post-ictal
- Shock & circulatory compromise
- Hyperventilation Syndrome

Three questions to ask every time capnography is used.

⇨ Is the ET tube in the trachea? (rise and fall of detectable CO_2)
⇨ What is the $ETCO_2$ value? (height of the wave form)
⇨ What is the shape of the waveform?

CAPNOGRAPHY WAVEFORM ANALYSIS:

NORMAL: "Square box" waveform; baseline CO_2 = 0; $ETCO_2$ = 35-45mmhg
Management: Monitor

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 01-2018	Capnography Waveform Interpretation	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

DISLODGED ETT: Loss of waveform, loss of $ETCO_2$

Management: Remove existing ETT and replace with either additional ET placement attempt **if allowed by protocol**, or with LMA if patient has undergone maximum intubation attempts. It may be preferable to proceed with LMA placement even if patient has not undergone maximal intubation attempts.

***Maximum one intubation attempt for trauma pts, two for medical pts**

ESOPHAGEAL INTUBATION: Absence of waveform, absence of detectable $ETCO_2$

Management: Remove existing ETT and replace with either additional ET placement attempt **if allowed by protocol**, or with LMA if patient has undergone maximum intubation attempts. It may be preferable to proceed with LMA placement even if patient has not undergone maximal intubation attempts.

***Maximum one intubation attempt for trauma pts, two for medical pts**

CPR: "Square box" waveform baseline CO_2 = 0; $ETCO_2$= 10-15 mmHg (possibly higher) with adequate CPR

Management: Consider changing rescuers if $ETCO_2$ drops < 10. Check for return of pulse if patient has sudden rise in EtCO2.

"SHARKFIN" with / without prolonged expiration= Bronchospasm (asthma, COPD, allergic rxn):

Management: Bronchodilators (Albuterol, epinephrine) per protocol

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 01-2018	Capnography Waveform Interpretation	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

RISING BASELINE: Patient is re-breathing CO_2
Management: Check equipment for adequate oxygen inflow. Allow intubated patient more time to exhale

HYPOVENTILATION: ↓RR; Prolonged waveform; typical $ETCO_2$ >45 mmHg.
Management: Assist ventilations or intubate if needed

HYPERVENTILATION: ↑RR, shortened waveform; typical $ETCO_2$ <35 mmHg
Management: Assessment if conscious, ↓assisted ventilation rate if unconscious / intubated. May be seen in patients with metabolic acidosis from DKA, sepsis, etc.

PATIENT BREATHING AROUND ETT: Angled, sloping downstroke on waveform
Adult: Broken cuff or tube is too small.
Pediatric: Tube is too small.

:

Indications

Synchronized cardioversion is indicated to treat:

- unstable tachyarrhythmias associated with an organized QRS complex and a perfusing rhythm (pulses).
- unstable supraventricular tachycardia due to reentry, atrial fibrillation, and atrial flutter.
- unstable, monomorphic ventricular tachycardia.

The unstable patient demonstrates signs of poor perfusion, including altered mental status, ongoing chest pain, hypotension, or other signs of shock (eg, pulmonary edema).

Contraindications

Synchronized cardioversion is not used for treatment of VF, pulseless VT, or unstable polymorphic (irregular) VT. These rhythms require delivery of high-energy, unsynchronized shocks.

Cardioversion will not be effective for treatment of junctional tachycardia or ectopic or multifocal atrial tachycardia because these rhythms have an automatic focus. In fact, shock delivery to a heart with a rapid automatic focus may increase the rate of the tachyarrhythmia.

Description

Synchronized cardioversion is shock delivery that is timed (synchronized) with the QRS complex. This synchronization avoids shock delivery during the relative refractory portion of the cardiac cycle, when a shock could produce ventricular fibrillation (VF). The energy (shock dose) used for a synchronized shock is lower than that used for unsynchronized shocks (defibrillation). These low-energy shocks should always be delivered as synchronized shocks because if they are delivered as unsynchronized shocks they are likely to induce VF.

Procedure

If time permits, consider sedation with *Midazolam*, 1 - 2 mg IV per protocol.

Atrial fibrillation

- Initial monophasic dose is 100 J to 200 J.

- Biphasic dose : 100J - 120J – 150J – 200J.

Supraventricular tachycardia or atrial flutter

- Initial biphasic dose of 50 to100 J is often sufficient.
- If the initial 50 J shock fails, providers should increase the dose in a stepwise fashion (100J – 120J – 150J – 200J)

Ventricular Tachycardia

- Pulseless VT should be treated as VF.

Unstable monomorphic (regular) VT with pulses:

- treated with synchronized cardioversion at initial energies of 100 J.
- If there is no response to the first shock, increase the dose in a stepwise fashion (120J – 150J – 200J).

Unstable polymorphic (irregular) VT with or without pulses:

- treated as VF using unsynchronized, high-energy shocks (i.e., defibrillation).

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 01-2018	Continuous Positive Airway Pressure	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Purpose

The application of positive end expiratory pressure by face mask, for the patient who is able to breathe spontaneously, to assist in the relief of hypoxemia.

Indications

- Moderate respiratory distress with at least two of the following:
  - Retractions or accessory muscle use
  - RR > 25
  - SpO2 < 92%
- May be used and may prevent need for intubation in patients with exam consistent with pulmonary edema (rales, JVD, hypoxia) or bronchospasm (wheezing, hypoxia, tachypnea)

Contraindications

- Respiratory and / or cardiac arrest
- Penetrating chest trauma
- Severe hypotension (SBP<90)
- Persistent nausea / vomiting or active GI bleed.
- Questionable ability to protect airway, i.e. stroke, obtunded, etc.

Procedure

☐ Pre-assemble necessary equipment.

☐ Explain the procedure to the patient to alleviate anxiety.

☐ Test the equipment prior to placing it on the patient.

☐ Hook up oxygen tubing to regulator and start the flow of oxygen

☐ Check the yellow tag on the oxygen tubing to determine how many LPM of O2 is needed for the desired flow rate

☐ Hook the oxygen tubing up to the mask prior to placing on the patient.

☐ Assist the patient with proper application of the mask, explaining the procedure to them as it is completed.

☐ Secure the mask to the patient's face, using the least amount of pressure needed to create a seal.

☐ Depress the nose adjustment tab on the front of the mask and allow it to seat itself on the patient's face

☐ Watch the **PEEP** valve and ensure that it remains open during inspiration.

☐ Adjust oxygen flow rate to the desired level of PEEP.

☐ Monitor the patient's condition including respiratory rate, mental status, and FIO_2 titrated to a SaO_2 of 94% or greater.

- If the patient's condition is improving, continue to monitor.
- If the patient's condition deteriorates despite an increase of O2, discontinue the CPAP device and prepare for endotracheal intubation or LMA placement.

☐ Medications (e.g.,duoneb) may be given in-line during treatment with CPAP per protocol.

☐ **DO NOT DISCONNECT THE OXYGEN TUBING FROM THE REGULATOR WITHOUT DISCONNECTING THE TUBING FROM THE FACEMASK FIRST**

Document

- PEEP level
- FiO_2
- Patient tolerance
- Effects / adverse reactions

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Cricothyrotomy Protocol	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Policy

The QuickTrach® Emergency Crichothyrotomy Device is indicated to establish rapid, emergency airway access, in any situation that requires a patent airway be maintained, and where endotracheal intubation and LMA insertion have been unsuccessful.

Contraindications

The QuickTrach® Emergency Crichothyrotomy Device is not specifically designed for use in pediatric patients and therefore is relatively contraindicated unless approved by on-line medical control.

Procedure

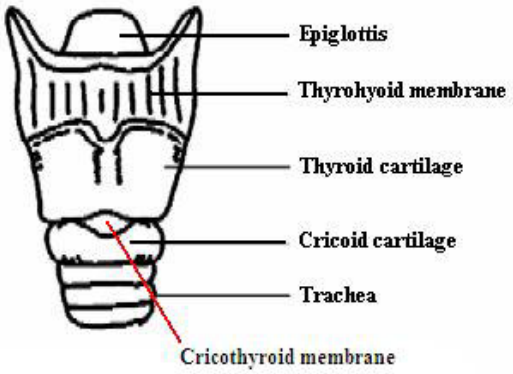
☐ Patients with airway injuries may have spinal injuries. The cervical spine should always be immobilized before beginning the procedure. Care should always be exercised to avoid additional spinal injury.

☐ Aseptic technique should always be utilized.

Step One

Place the patient in a supine position.

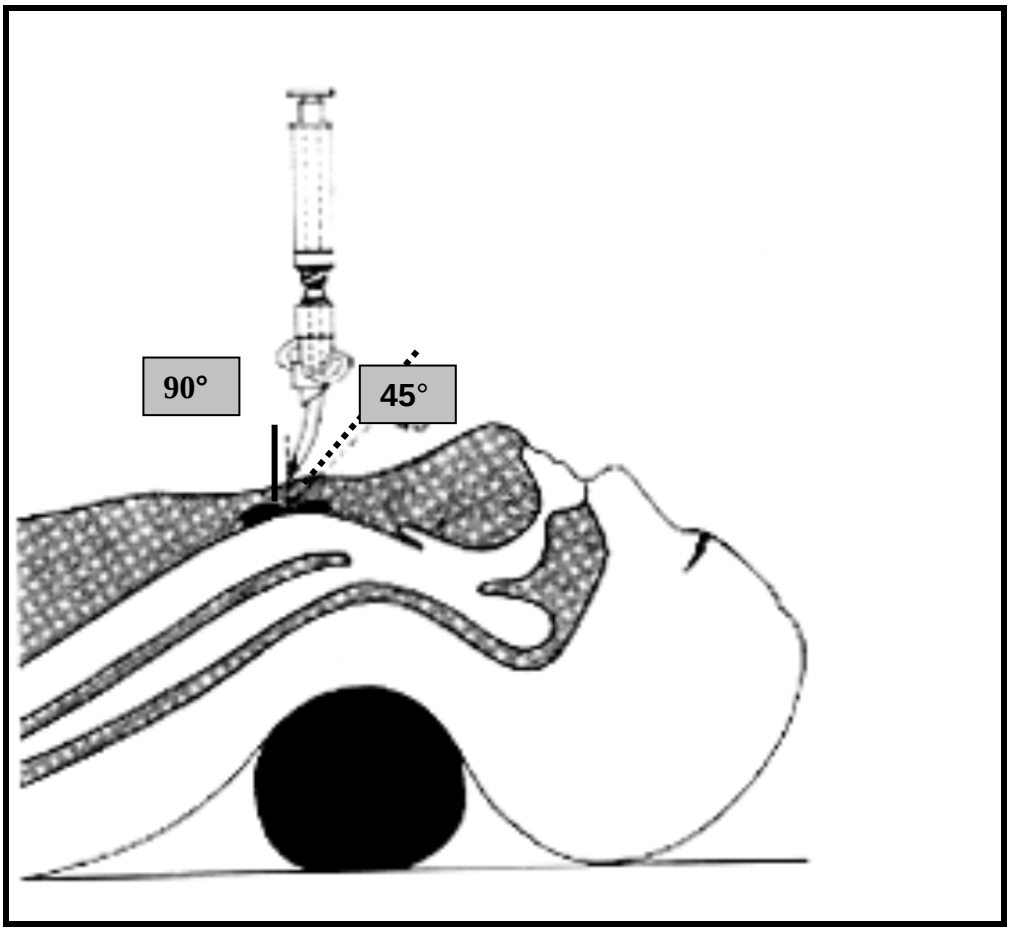
- Assure stable positioning of the neck.
- Secure the larynx between the thumb and forefinger.
- Find the cricothyroid ligament, located between the thyroid cartilage and the cricoid cartilage. This is the puncture site.



Step Two

Firmly hold the device and puncture the cricoid ligament at a 90° angle.

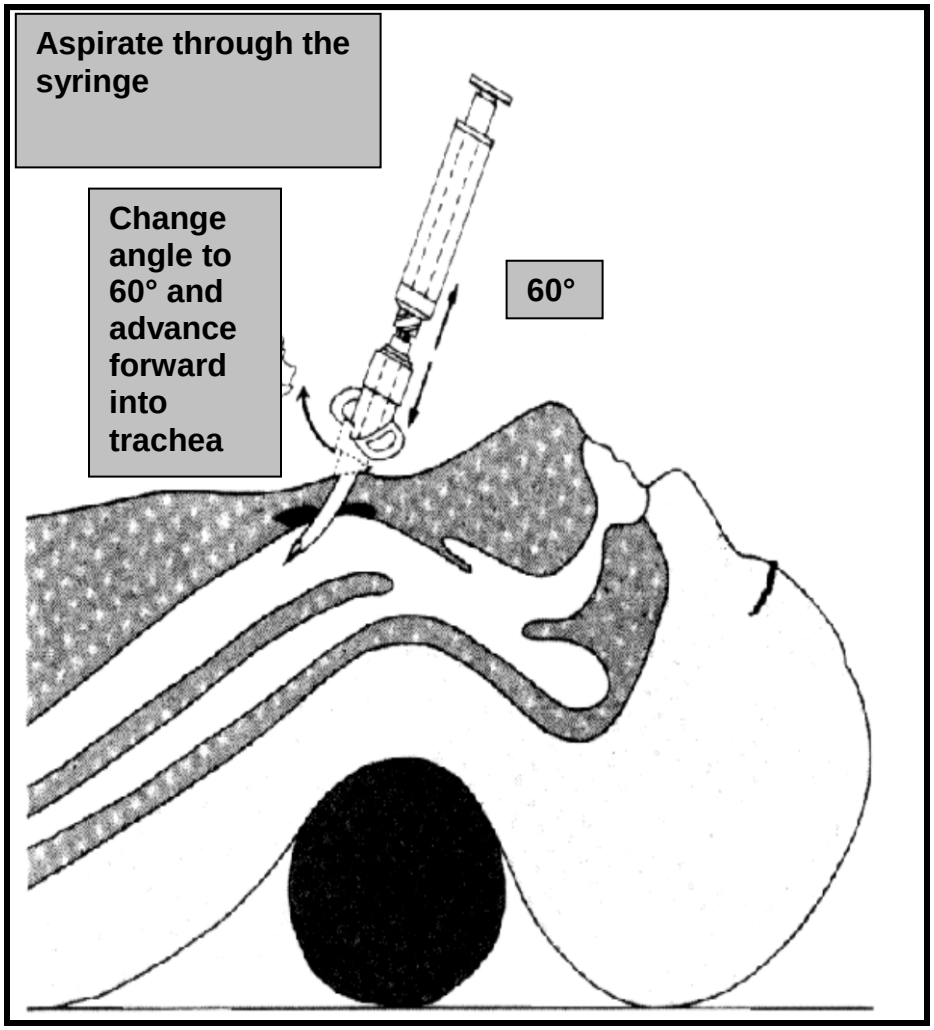
- An incision of the skin with a scalpel is unnecessary.
- The opening of the trachea is achieved by the insertion of the trocar of the device through the skin.
- This reduces the risk of bleeding as only the smallest opening necessary is made.



Step Three

After puncturing the cricothyroid ligament, check the entry of the needle into the trachea by aspirating air through the syringe.

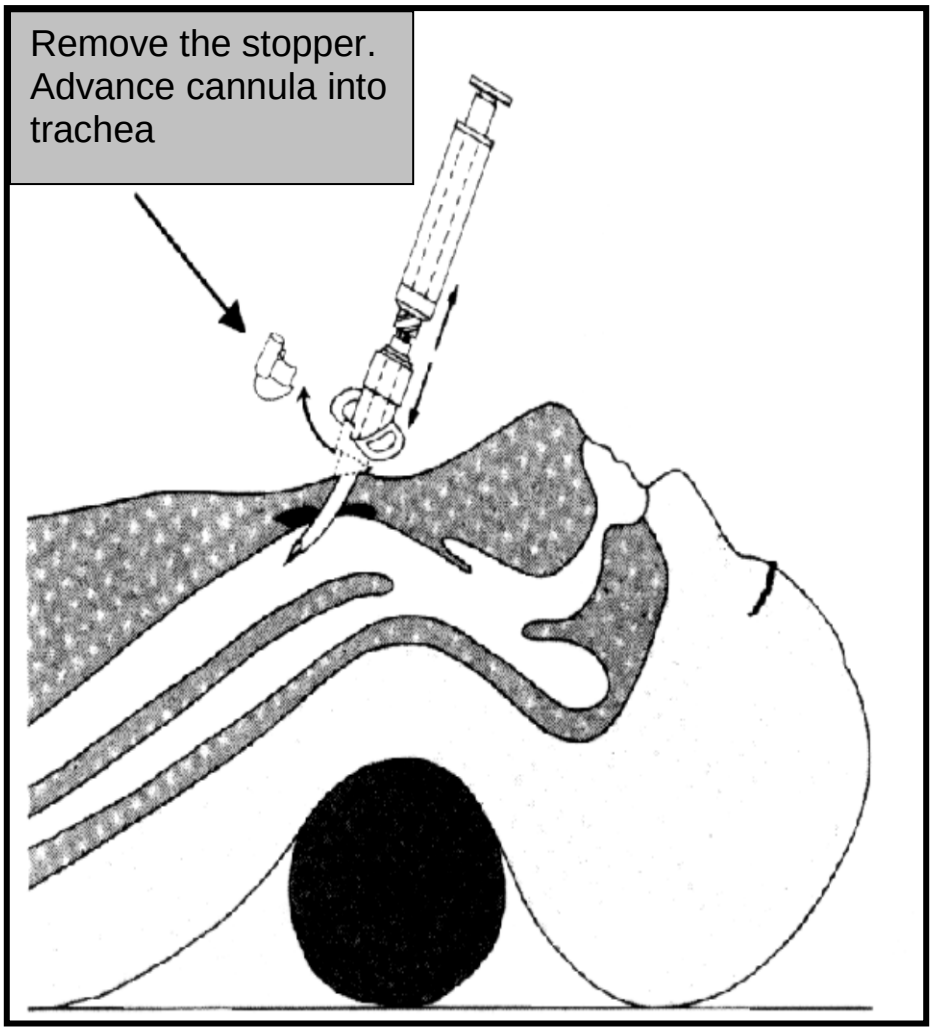
- If air is present, the needle is in the trachea.
- Change the angle of the insertion to 60° and advance the device forward into the trachea to the level of the stopper.
- The stopper reduces the risk of inserting the needle too deeply, causing damage to the posterior wall of the trachea.



Step Four

Remove the stopper.

- After the stopper has been removed, be careful not to advance the device further with the needle is still attached.



Step Five

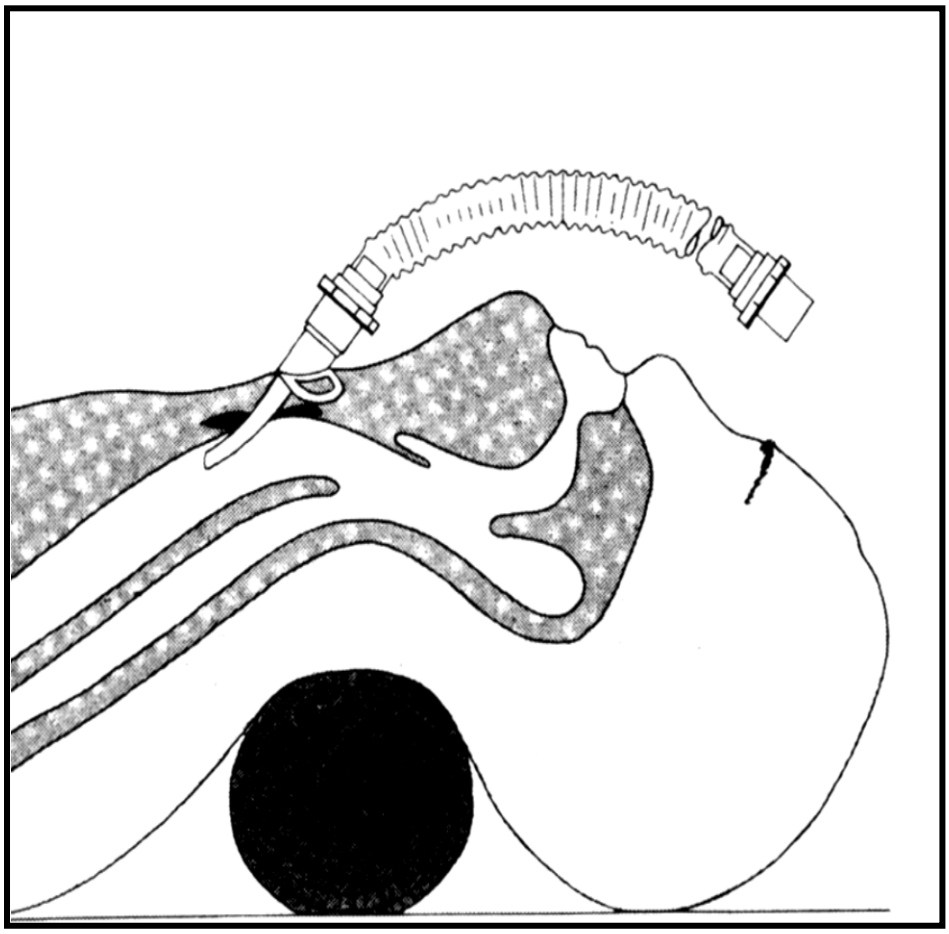
Hold the needle and the syringe firmly and slide only the plastic cannula along the needle into the trachea until the flange rests on the neck.

- Carefully remove the needle and the syringe.

Step Six

Secure the cannula with the neck tape.

- Apply the connecting tube to the 15mm connection, and connect the other end to the BVM or ventilator circuit.



NOTE: Confirm placement as you would an endotracheal tube with documentation of bilateral breath sounds, absence of epigastric sounds, positive capnography.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Double Sequential Defibrillation	ISSUE DATE 01-2018	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Purpose

- Ventricular fibrillation without response to five standard shocks is known as "refractory VF".
- Case studies have shown successful resolution of refractory VF with double sequential defibrillation.

Indications

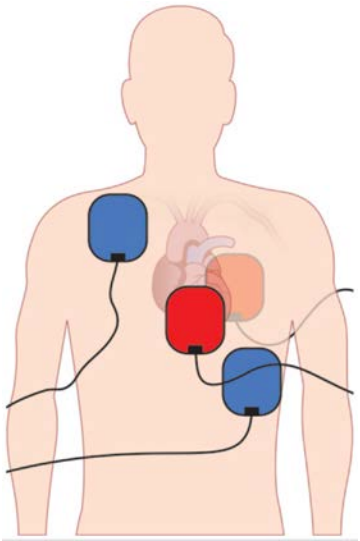
- Patients with VF without response to five standard maximum-energy shocks may undergo double sequential defibrillation
- Subsequent rounds of refractory VF may continue to be treated with double sequential defibrillation when two monitors are available

Precautions

- This procedure is only recommended for patients with refractory VF that has not responded to five shocks.
- If required for proper defibrillator pad adhesion, any excess hair on the patients chest can be shaved.
- If the patient has an implantable pacemaker or an internal defibrillator, do not place the defibrillator pads directly over the implanted device. If the presence of an implanted device affects pad placement, place the defibrillator pad as close to the recommended pad placement as possible.
- Refractory VF is rare – it is not recommended that two sets of defibrillator pads be placed at the onset of cardiopulmonary resuscitation in VF arrest.
- Double sequential defibrillation has not been described in pediatric patients and is therefore only recommended in adult out-of-hospital cardiac arrest.

Procedure

- Perform standard CPR, ALS treatment with medications, and defibrillation until five shocks have been reached. At this time, if two cardiac monitors are available, prepare for double sequential defibrillation.
- Place pads during two minutes of CPR following the fifth shock, and work to minimize interruptions in compressions while placing the second set of pads.
- Place pads as shown in figure below.



- During next rhythm check, if patient remains in VF, simultaneously charge defibrillators and simultaneously deliver shocks.
- It is recommended that compressions continue while defibrillators are charging.
- Resume compressions immediately after defibrillation and treat per ALS protocols.
- Double sequential defibrillation may be repeated if VF continues.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 6-2014	Endotracheal Intubation	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Indications

- Failure of oxygenation not treatable with less aggressive airway intervention (e.g., nasal cannula, nonrebreather, CPAP)
- Failure of ventilation (rising end-tidal CO2) that is not successfully treated with CPAP (or in cases where CPAP is contraindicated)
- GCS < 8 in patients who appear not to be protecting their airway
  - Consider whether mentation will improve with time (e.g., post-seizure state) or by medication (e.g., naloxone, D50)
- To secure the airway early in patient who has anticipated development of respiratory failure (e.g., angioedema or inhalational injury)
- To decrease the work of breathing in circumstances of shock (e.g., severe sepsis)
- Supraglottic airway placement is an acceptable alternative to endotracheal intubation in most of the above situations, and may be preferable in order to meet other treatment priorities

Contraindications

Given the need, there are no known absolute contraindications.

Procedure

☐ Have all airway supplies, including suction and cricothyrotomy equipment, readily available.

☐ If trauma is known or suspected, maintain in-line cervical spine stabilization by holding the head in a neutral position. DO NOT HYPER-EXTEND OR DISTRACT THE NECK.

☐ Hyper-oxygenate the patient with 100% O_2, via BVM, prior to intubation attempt.

☐ Insert laryngoscope blade into the oropharynx to facilitate visualization of the vocal cords. Remove any obstructing secretions or foreign bodies with suction and / or Magill forceps.

☐ Visualize the vocal cords while inserting the endotracheal tube. Insert approximately 1-2 cm past vocal cords and inflate the distal cuff. If a stylet is used, it is removed after the tube has passed the cords.

☐ Confirm proper tube placement.

- Auscultation: Initially place the stethoscope over the epigastrium and listen for sounds during ventilation while visualizing chest wall movement. As soon as possible use the 5-point auscultation method to verify your initial assumption of

success.

- Initiate capnography. Capnography should be used as the gold standard for confirmation of intubation, as auscultation is known to not be completely reliable. Failure to obtain capnography should result in removal of the endotracheal tube with reinsertion attempts allowed per protocol (one attempt for trauma patients, two for medical patients). Document presence of capnography in PCR and attach strip with waveform. Patient care records with absence of this charting are potentially subject to review and remediation.

☐ Ventilate the patient via ETT, using a BVM delivering 100% O_2. Consider application of the auto-vent for prolonged ventilation.

- If intubation attempt is unsuccessful after 30 seconds, re-oxygenate prior to a second attempt (if second attempt permitted per protocol)
- Intubation attempts should be limited to 2 tries in medical patients, and one attempt in trauma patients.
- If unsuccessful, alternate means of airway control such as BVM, LMA or cricothyrotomy, should be considered.

☐ After tube placement is confirmed, secure the ETT to the face using tape or a TFR approved commercial ETT holder.

- A cervical collar can be utilized to facilitate securing of the ETT in all patients, not just those who require spinal motion restriction.
- Continuous monitoring of tube placement, especially after movement, is required and should be documented.
- $EtCO_2$ monitors should remain in place and be monitored during transport.

☐ Ventilate the patient via ETT using a BVM, delivering 100% O_2. Consider application of the Auto-vent for prolonged ventilation.
☐ If intubation attempt is unsuccessful after 30 seconds, re-oxygenate prior to a second attempt (if second attempt permitted per protocol)
☐ Intubation attempts should be limited to 2 tries in medical patients, and one attempt in trauma patients.
☐ If unsuccessful, alternate means of airway control such as BVM, LMA or cricothyrotomy, should be considered.

Rapid Sequence Intubation

☐ May be used for any intubation scenario where sedation and paralysis is needed for securement of endotracheal tube.
☐ Use with caution in patients with anticipated difficult airway.
☐ It is recommended to use sedative (e.g., etomidate or ketamine) per protocol,

followed by an awake look and use of paralytic if needed (e.g., succinylcholine or rocuronium)

Documentation

- ☐ Indications for intubation.
- ☐ Tube size.
- ☐ Oxygenation prior to and during intubation attempts.
- ☐ Classification and condition of airway.
- ☐ Number of attempts and any difficulty with intubation.
- ☐ Confirmation of placement.
  - auscultation
  - visualization
  - capnography reading (attach strip to PCR)
  - oxygen saturation
  - chest rise
  - ventilatory compliance
  - how the patient “looks”
- ☐ Depth of insertion and how the tube is secured.
- ☐ Personnel who performed procedure
- ☐ Manual in line spinal motion restriction if applicable and if cricoid pressure was utilized.
- ☐ How the patient is ventilated after intubation. (BVM, automatic ventilator)
- ☐ Cardiac rhythm and pulse oximetry readings when available.
- ☐ Status of ET tube after movement. (loading/unloading)
- ☐ Status of the tube at the receiving facility.

  - Clinical improvements
  - What doctor confirmed tube placement at the receiving facility

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 01-2018	EZ-IO Intraosseous Infusion System	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Indications

Intravenous fluids or medications are indicated and peripheral venous access cannot be completed in two attempts or 90 seconds AND one or more of the following exist:

- Respiratory compromise. (SaO_2 ≤80%, rate less than 10 or greater than 40)
- Hemodynamic instability. (systolic blood pressure <90)
- Profound hypovolemia with altered mental status.

May be used as first-line access in patients with cardiac arrest.

Contraindications

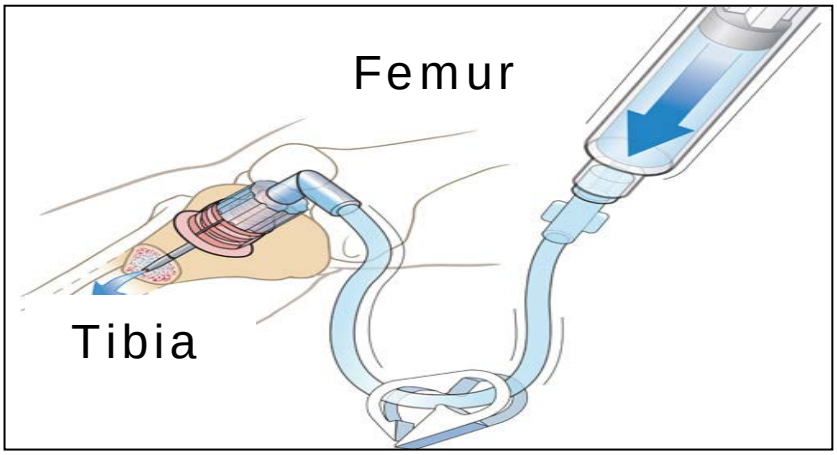
- Fracture of bone selected for IO infusion.
- Excessive tissue at insertion site with absence of anatomical landmarks.
- Previous significant orthopedic procedures to the selected bone:
  - ➤ intraosseous insertion / attempt within past 24hours.
  - ➤ prosthesis or surgical procedure to selected bone.

- Infection at site selected for insertion.
- Patients less than 3 kg body weight.

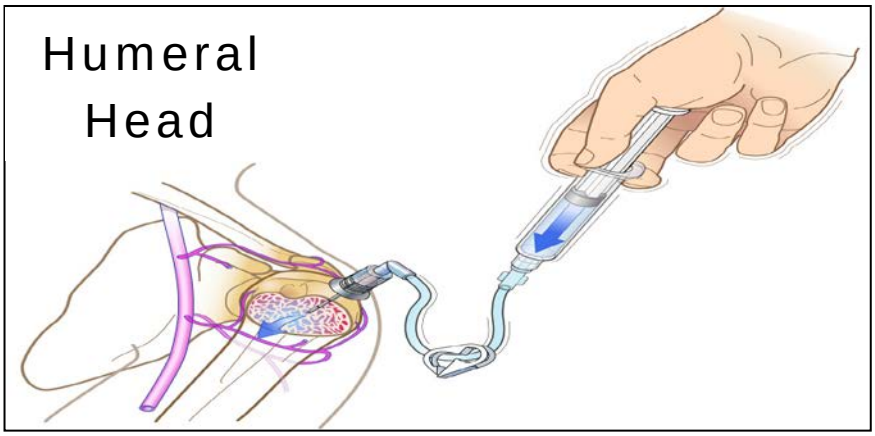
Procedure

☐ Locate appropriate site.

- Tibia: 1cm inferior and medial to the anterior tibial tuberosity on the flat anterior medial surface of the tibia.



- Humeral head: (Alternate site for patients ≥40kg.) Anterior surface of the humeral head.



☐ Prepare insertion site with alcohol or betadine, using aseptic technique.

☐ Prepare EZ-IO® driver and appropriate needle set.
- AD: for patients ≥ 40 kg
- PD: for patients 3 to 39 kg

☐ Stabilize site and insert needle set with driver. Hold the drill at 90 degrees to the bone and insert the needle until either the hub touches the skin or until a sudden lack of resistance is met.

☐ Remove driver while stabilizing the catheter hub.

☐ Remove stylet and place in a sharps container.

☐ Confirm placement of catheter:
- Catheter stands firmly at 90 degrees to bone angle.
- It is possible to aspirate a small amount of bone marrow.
- Blood observed at the tip of the stylet.
- Free flowing fluid through catheter without evidence of extravasation.

☐ If patient is conscious, administer Lidocaine through the catheter, over 45 – 60 seconds, for comfort.
- Adult: 20 – 50 mg
- Pediatric: 0.5 mg / kg

☐ Flush the catheter with Normal Saline. Administration requires a hard push on the plunger.
- Adult: 10cc
- Pediatric: 5cc

☐ Begin infusion at appropriate rate (flow may be slower than that of IV lines due to the anatomy of the intraosseous space. Use a pressure bag / device as needed).

☐ Dress insertion site, secure tubing, apply wristband, and monitor infusion.

Complications and Precautions

- Extravasation, with the potential for Compartment Syndrome due to fluid accumulation.
- Pain from infusion of large quantities of fluid or medications in conscious patients. May be resolved with Lidocaine administration.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 06-2017	Daily Glucometer Checks	ISSUE DATE 05-2010	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

Policy

All Tampa Fire Rescue Glucometers will be check each shift.

All Glucometers at Special Event venues will be checked at the beginning of every event and logged on equipment checklist.

Purpose

Daily checks are required for device accuracy as well as state and federal regulations. TFR Units with glucometers will now check them daily. The results will be logged on the TFR 368 form (available on Form Docs). The form will be maintained in the apparatus records book on the unit. When the form is complete it will be sent to the rescue office for storage.

Procedures

The glucometer Control Solution is a two-part test system, which gives two levels of readings. The log sheet has Level 1 and Level 2 Boxes.

- Write in the numerical value on the meter in the appropriate box.
- Be sure to indicate the date that the solutions or test strips are opened.
- **Once the solutions and test strips have been opened they are good for 90 days.**
- Each box of solution has instructions for checking the glucometer.

Use Control Solution For:

- Daily checks.
- When you open a new bottle of test strips.
- Whenever you suspect the meter or test strips may not be functioning properly.
- If test results appears to be abnormally high or low or are not consistent with clinical symptoms.
- Possible damaged meter.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Intravenous Catheterization	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Policy

Because of the significant risk to pre-hospital personnel when invasive procedures are Involved, the following procedure applies. If an IV is not necessary for immediate patient care, nor as a reasonable precaution during transport, then it should not be initiated.

Procedure

- ☐ Assemble all necessary supplies.
- ☐ Select peripheral site, and apply a venous tourniquet to the area just proximal to the intended puncture site
- ☐ Prepare puncture site using alcohol swabs.
- ☐ Secure the vein with the fingers of the non-dominant hand; ascertain that movement of the extremity is minimized.
- ☐ Insert needle and catheter assembly into the vein; watch for free blood return.
- ☐ When intra-luminal placement is confirmed by blood return, advance the catheter off of the needle until it is flush with the skin. Remove the needle assembly and discard safely.
- ☐ Remove the tourniquet.
- ☐ Attach the IV fluid line to the catheter hub; insure patency by briefly running the fluid wide open. Adjust the rate of infusion to the patient's fluid needs.
- ☐ Secure the catheter using a Veni-Guard®, tape, or an occlusive dressing as indicated.

Saline Lock

- ☐ Use for medication administration or as a second line in cardiac and CVA patients.
- ☐ Follow catheterization procedure as above.
- ☐ Once successful canulation of the vein has been confirmed, insert the saline lock and flush with 3 ml saline.
- ☐ Follow each medication administration with the saline flush.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 01-2018	Laryngeal Mask Airway (LMA)	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Indications

The Laryngeal Mask Airway (LMA):

- is a blind insertion airway that can be utilized by ALS and BLS personnel.
- is intended for use as an alternative to the facemask for achieving and maintaining control of the airway.
- can be used when unexpected difficulties arise in connection with airway management.
- Is not a suitable long-term airway because it does not protect against aspiration but is an acceptable method of prehospital airway management

Contraindications

The LMA should not be used on any patient with a gag reflex.

Equipment

The LMA comes in seven sizes:

#1	< 5 kg
#1.5	5 – 10 kg
#2	10 – 20 kg
#2.5	20 – 30 kg
#3	30 – 50 kg
#4	50 – 70 kg
#5	> 70 kg

Procedure

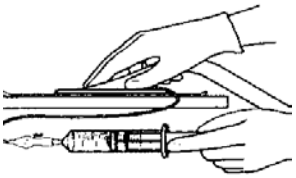
☐ Visual inspection

- Do not use if the LMA appears damaged in any way.

☐ Inflation Test

- Completely deflate the cuff. It should be flat and unwrinkled. To deflate, press down on a flat sterile surface or a piece of gauze and deflate with a syringe until it looks like the rim of a saucer.
- Over-inflate the cuff to the volume specified for the particular sized airway, and check for leaks.

- Deflate the cuff completely so that it is flat and free from wrinkles.



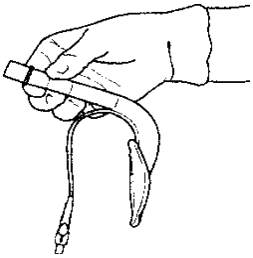
Insertion

☐ Apply a sterile, water-based lubricant to the distal, posterior surface of the cuff.

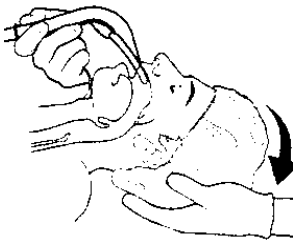
☐ Pre-oxygenate the patient prior to insertion.

☐ Place patients head in the “sniffing position”. Do not manipulate cervical spine if trauma is suspected.

☐ Hold the LMA like a pen, with the index finger placed at the junction of the cuff and the tube, and the black line on the airway tube orientated anteriorly, toward the patient’s nose.

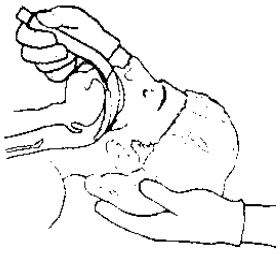


☐ Place your free hand under the patient’s head. Insert the tip of the LMA, pressing upwards against the hard palate, flattening the cuff against it.

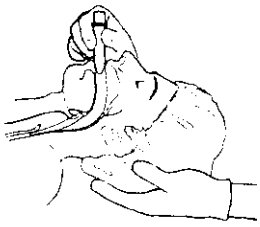


☐ Push the jaw gently downwards with your middle finger, to open the mouth further.

☐ As your index finger enters the mouth, the finger joints begin to extend. Using the index finger, press backwards toward the other hand, this now exerts counter-pressure.



☐ Advance the LMA into the hypopharynx until a definite resistance is felt. Before removing your finger, carefully remove your other hand from behind the patient's head and press down on the airway tube. This prevents the LMA from being extracted when the finger is removed.

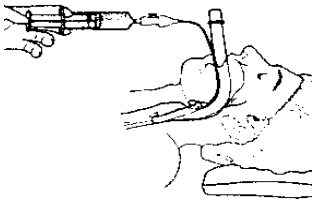


☐ The LMA should now be correctly located with its tip pressed against the upper esophageal sphincter.

☐ After insertion, the black line on the airway tube should be oriented anteriorly toward the patient's nose. Without holding the tube, inflate the cuff with just enough air to obtain a seal. In most cases, only half of the maximum volume is sufficient to achieve a seal.

NOTE Never over-inflate the cuff
NOTE Do not hold the tube during inflation as this prevents the mask from seating itself correctly.

☐ Signs of correct placement include the slight outward movement of the tube upon cuff inflation and the presence of a smooth oval swelling in the neck around the thyroid and cricoid area, or no cuff visible in the oral cavity



☐ Verify placement and proper ventilation using the “5 Point Auscultation” method. The mask may leak slightly for the first three or four breaths before settling into position in the pharynx. Confirm placement with EtCO2 and document in PCR.

☐ Secure the LMA to the patient’s face using either adhesive tape or a mechanical tube-holder.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	MAD Nasal Medication Delivery Device	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Indications

Atomization allows for non-invasive delivery of medications with rapid absorption by nasal mucosal surfaces.

Contraindications

Severe, recent or chronic, deformity of the nose (nares) which would prohibit the aerosolized dispersal of medication over nasal mucosa.

Description

- Provides a fine mist of medication to the nasal mucosal surface.
- Latex free and disposable.
- The soft plug on the end inhibits run-off of medication, permitting it's use with the patient in any position.
- The leur-lock connector allowing rapid attachment to a syringe.

Procedure

☐ Assemble necessary equipment.

- syringe
- needle to draw up the medication
- atomizer

☐ Aspirate the proper volume of medication.

☐ Twist off / remove the syringe from the needle.

☐ Attach the atomizer tip via the luer-lock mechanism, twisting it into place.

☐ Using your free hand to hold the crown of the head stable, place the tip of the atomizer snugly against the nostril aiming slightly up and outward.

☐ Briskly compress the syringe plunger to deliver half of the medication into the nostril.

☐ Move the device over to the opposite nostril and administer the remaining medication into that nostril.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE 01-2018	Morgan® Lens	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Indications

Used when continuous irrigation of the eye (s) is indicated.

Contraindications

- Trauma is observed to the eye
- Contact lens that may have adhered to the eye must remain without removal, and the Morgan® Lens cannot be used.

Precautions

- Use only on an intact globe.
- The Morgan® Lens can cause corneal abrasions, especially if it is left in place without continuous irrigation in effect.

Procedure

Insertion:

☐ Place the patient in a supine position on the stretcher.

☐ Place clean towels under the patient's head to absorb the irrigation solution.

☐ Irrigate the eye to remove any obvious foreign materials prior to inserting the Morgan® Lens

☐ Instill two drops of *Tetracaine* in affected eye(s).

☐ Attach standard IV tubing to a 1000 cc bag of normal saline and connect it to the Morgan® Lens; flush tubing and wet the lens.

☐ Instruct the patient to look down and insert the lens under the upper lid.

☐ Instruct the patient to look up, retract the lower lid, and drop the lens in place.

☐ Maintain irrigation at steady flow.

☐ Monitor patient comfort and ascertain a constant supply of irrigation solution during the use of the Morgan® Lens.

Removal:

☐ Instruct the patient to look up, retract the lower lid to expose the inferior border of the lens.

☐ Instruct the patient to look down, retract the upper lid and remove the lens.

NOTE: To prevent potential eye injury, ascertain a constant supply of irrigation solution or discontinue use of the Morgan® Lens.

NOTE: Coach the patient to avoid blinking whiles the lens in place.

NOTE: If only one eye is being irrigated, lower the affected eye to keep runoff from contaminating the unaffected eye.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Nasogastric / Orogastric Tube	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Purpose

Nasogastric / orogastric tube placement is used primarily to evacuate gastric contents and decompress gastric distention.

Policy

Nasogastric / orogastric tube placement will not be utilized by Tampa Fire Rescue as an elective procedure.

Indications

- To relieve gastric distention severe enough that it impairs effective ventilation of an adult or pediatric patient, as a result of prolonged CPR or rescue breathing.
- To relieve gastric distention severe enough that it impairs effective ventilation or poses an aspiration hazard in a pediatric patient, following submersion or near drowning.
- To facilitate removal of gastric contents prior to removal of an LMA, in order to prevent possible aspiration.
- Any time an on-line medical control physician orders its use.

Contraindications

- In the above situations there are no absolute contraindications.
- Maxillofacial trauma is a relative contraindication for use of the nasal route.

Precautions

- Insertion of the orogastric / nasogastric tube may cause or exacerbate bleeding. Use caution in patients with known hepatic cirrhosis, esophageal or gastric bleeding disorders or disease.
- Insertion is likely to cause gagging and vomiting in the semi-conscious patient who has an intact gag reflex, which may result in aspiration, if the airway is not secured.

Adverse Reactions

- aspiration
- significant and possibly exsanguinating hemorrhage
- nasal sinus injury
- inadvertent intubation of the trachea
- inadvertent intubation of the cranium (through the cribriform plate)

Equipment

- appropriate PPE
- double lumen silicone tube with Salem Sump® vent, of appropriate size
- water soluble lubricant
- aspirating or bulb syringe
- suction equipment (i.e. yankauer tip)
- adhesive tape

Procedure

☐ Gather equipment.

☐ Don appropriate PPE.

☐ Position patient (if possible, flexion of the head is desirable).

☐ Measure the tube from the tip of the nose, around the ear, to the approximate vicinity of the epigastrium, and note length to be inserted.

☐ Apply water soluble lubricant to the distal 5 cm of the tube.

☐ Insert slowly, until the noted length has been inserted. If resistance is met, remove and attempt insertion into the other nare. Be aware of possible regurgitation and aspiration.

☐ Place a stethoscope over the epigastrium, while injecting air into the tube with an aspirating or bulb syringe, and listen for loud bubbling sounds. If no sound is heard, retract the tube 5 cm and inject air again. If there is still no evidence of air being introduced into the stomach then remove the tube and attempt reinsertion.

☐ After confirmation of placement, secure the tube in place with tape.

☐ Connect tube to low suction (80 cm/$H_2$0 or less) and document results.

☐ Vent the tube as necessary, to prevent occlusion.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Trans-cutaneous External Pacemaker	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Indications

Transcutaneous pacing is indicated as a temporizing measure for treatment of symptomatic bradycardias, including sinus bradycardias and atrioventricular (AV) nodal blocks.

Contraindications

Active pacing may not be necessary for hemo-dynamically stable, awake patients.

Procedure

☐ Place multi-purpose pads over anterior and posterior chest wall, just left of the sternum and spine, respectively.

☐ Set Zoll indicator to **PACER**.

☐ Set pacer **RATE** - set pacer rate at 20-30 bpm above the patient's intrinsic rate.

☐ Set alarms appropriately and arm pacer.

☐ Turn on pacing element and set **AMPERAGE**:

- Conscious patients requiring pacing may be given Ativan 0.05 mg / kg, IV push. Titrate to patient comfort, up to a maximum dose of 4 mg or a systolic blood pressure of > 100 mm/Hg.

- Set amperage at lowest setting; gradually increase the amperage until patient demonstrates electrical capture on EKG and mechanical capture as evidenced by pulses simultaneous with paced beat.

  ➢ Set amperage approximately 5 milliamps above capture point.

☐ When mechanical capture is obtained:

- Adjust the heart rate to maintain a systolic BP > 100 mm/Hg.
- Do not exceed a paced rate of 90 bpm.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Trauma Tourniquet	ISSUE DATE 2/2014	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Indications

To stop bleeding when life-threatening limb hemorrhage is not controlled with direct pressure or other simple measures, as may occur with a mangled extremity, amputation or penetrating injury to a large extremity artery.

Contraindications

None, given the need. This is used in an extreme situation when other efforts to control hemorrhage have failed and especially in the multi-trauma patient when medical personnel must attend to other resuscitation needs.

Procedure

- Expose the extremity by removing clothing in proximity to the injury.
- Route the band around the extremity, directly over exposed skin, at least 5 cm proximal to the injury.
- Pass the band through the buckle, pulling the band tight.
- Twist the rod (windlass) until bright red bleeding stops.
- Tighten the screw on the buckle to prevent loosening during movement.
- Lock the rod in place with the triangular clip.
- Record the date and time of application on the tourniquet.
- The tourniquet is effectively applied when there is cessation of bleeding from the injured extremity, indicating total occlusion of arterial blood flow. Any pre-existing distal pulse should be absent at that time as well.

Tourniquet time and removal

- Tourniquets should be removed as soon as possible, under conditions where the hemorrhage can be directly controlled.
- Tourniquet placement must be communicated in patient reports for all pre-hospital to hospital and inter-hospital transfers.

NOTE Tourniquet time > 6 hours is associated with distal tissue loss.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Zoll Monitor Battery Management	ISSUE DATE 9-2011	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Policy:

IT IS ESSENTIAL THAT BATTERIES ARE TESTED ON A REGULAR, ROTATING BASIS!!

- Every battery needs to be marked with your station and numbered (1-3, 1-6, or 1-9).
- There should be three (3) batteries per unit at the station.
- A test needs to be done on at least 1 battery every Thursday.
- Once tested, document the test and battery number in the station logbook.

Inspection:

- Assure that both the monitor and base charger are clean. (no fluid spills, dust or dirt).
- Make sure nothing is stored on the charger.

Testing:

- The battery capacity test cycle automatically charges, discharges, and recharges the battery.
- If a battery is inside a battery compartment and the corresponding TEST button is pressed, a battery capacity test is performed.
- If a battery test is performed (this could take up to 6 hours), and the battery ready light comes on, the battery is fully charged and ready.
- If the test is performed and the fault light comes on, the battery has failed the test and you need to test the battery compartment.
- If the battery compartment is empty and the TEST button is pressed, a compartment test is performed. An audible tone will sound, indicating that the test has passed. If the compartment passes, the battery will need to be replaced.
- If the test fails, contact the EEMSO.

Battery Charging:

Lead Acid Battery:
When new and fully charged, a Lead Acid battery will provide at least 2 hours of monitoring. Use of defibrillator, stripchart recorder, and pacemaker will reduce this time.

- Lead Acid battery packs require **full recharging** after use. The full charging cycle for the Lead Acid battery is complete in four (4) hours or less
- When plugged into vehicles repeated **short cycle recharging** occurs, resulting in reduced capacity and early battery pack failure. For this reason, monitors

which use lead acid batteries should not be continuously plugged into the vehicle. Keep your power cord readily accessible for emergencies.

- If the battery runs down and the unit shuts off, the selector switch should always be turned to the OFF position before removing the battery.
- Always wait until the battery base charger has completed its charge cycle before removing batteries
- After inserting a new battery, the selector switch may then be turned to the desired operating mode to resume operation.

Lithium Ion Batteries

The 12 Lead E series monitors come with Lithium Ion batteries (the shorter ones with the battery level indicator on the top).

- A depleted Lithium Ion battery pack can be recharged at any time. Unlike Lead Acid batteries, the repeated short-cycle recharging of a lithium ion battery ***will not*** result in reduced charge capacity and early battery failure.
- Never store a lithium ion battery in a fully depleted state as it will damage the battery
- A monitor with a Lithium Ion battery can stay plugged in, without damage to the battery from constant power interruption.

QUICK REFERENCE CHART FOR ZOLL BASE CHARGER:

LED OPERATION					
	CHARGER ON	**BATTERY READY**	**FAULT**	**TESTING**	**DESCRIPTION**
QuickCharge with battery in compartment	**ON**				CHARGING is in progress
		ON			CHARGING is complete
			ON		CHARGING is complete and the battery is NOT usable until tested
MANUAL TEST with battery in compartment and "**TEST**" button pushed				**ON**	MANUAL TEST is in progress
		ON		**ON**	MANUAL TEST is complete and the battery is in good condition
			ON	**ON**	MANUAL TEST is complete and the battery is NOT usable

IF YOU HAVE A MONITOR THAT SHOULD NOT BE CONSTANTLY PLUGGED IN, KEEP THE AC POWER CORD READILY ACCESSIBLE FOR EMERGENCY CHARGING

Tampa Fire Rescue
Medical Protocol

PHARMACOLOGY

PROTOCOL

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 01-2018	Adenosine (Adenocard)	ISSUE DATE 01-2018	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Adenosine is an endogenous nucleotide. It slows conduction through the AV node. It is useful in blocking re-entrant pathways in supraventricular tachycardia.

INDICATIONS

Treatment of supraventricular tachycardias

CONTRAINDICATIONS

- Second- or third-degree AV blocks
- Atrial flutter
- Atrial fibrillation
- Ventricular tachycardia
- Wolff-Parkinson-White
- Hypersensitivity to this medication
- May cause bronchoconstriction in patients with asthma

SIDE EFFECTS

facial flushing	headache
dyspnea	vertigo
nausea	chest pain
palpitations	hypotension
paresthesia	metallic taste

DOSAGE AND ADMINISTRATION

Adult:

- 6 mg rapid IVP followed by a 20 mL saline flush in a proximal IV
- If no conversion after 1 - 2 minutes, repeat dose of 12 mg rapid IVP followed by another 20 mL saline flush

Pediatric:

- Refer to "Weight Based Resuscitation Tape" for pediatric dosing.

Note:

- Should be administered in a free flowing IV in a large proximal vein

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 01-2018	Albuterol	ISSUE DATE 01-2018	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Albuterol is a sympathomimetic bronchodilator. It acts selectively on beta-2 receptors to relax bronchial smooth muscle.

INDICATIONS

Bronchospasm secondary to asthma or exacerbation of COPD

CONTRAINDICATIONS

- hypertension
- hypersensitivity to albuterol
- tachycardia secondary to digitalis toxicity

PRECAUTIONS

- patients with cardiovascular disease
- patients in CHF

SIDE EFFECTS

headache	hypertension
drowsiness	palpitations
vertigo	dysrhythmias
nausea	

DOSAGE AND ADMINISTRATION

Adult

- 2.5 mg in 3 – 6 ml normal saline solution, via nebulizer, with O_2 set to 6 liter/min
- May be repeated if no adverse effects are present and symptoms persist

Pediatric

- 2.5 mg in 3 – 6 mg normal saline solution, via nebulizer, with O_2 set at 6 liter / min.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 01/2018	Ipratropium Bromide/Albuterol Sulfate Duoneb	ISSUE DATE 7-1-2012	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

- Each 3 mL vial of DuoNeb (ipratropium bromide and albuterol sulfate) contains 3.0 mg (0.1%) of albuterol sulfate (equivalent to 2.5 mg (0.083%) of albuterol base) and 0.5 mg (0.017%) of ipratropium bromide in an isotonic, sterile, aqueous solution containing sodium chloride.

- DuoNeb is expected to maximize the response to treatment in patients with chronic obstructive pulmonary disease (COPD) by reducing bronchospasm through two distinctly different mechanisms: sympathomimetic (albuterol sulfate) and anticholinergic / parasympatholytic (ipratropium bromide). Simultaneous administration of both an anticholinergic and a β2-sympathomimetic is designed to produce greater bronchodilation effects than when either drug is utilized alone at its recommended dosage.

INDICATIONS

Treatment of bronchospasm associated with

- Asthma
- COPD
- Respiratory distress
- Drowning
- Allergic reaction
- Toxic inhalation

SIDE EFFECTS

- Headache
- Tachycardia
- Palpatations
- Dizziness
- Nausea
- Dry mouth
- Infrequently, this medication may cause severe sudden worsening of breathing problems right after use.

CONTRAINDICATIONS

- Albuterol-Ipratropium is contraindicated in patients with a history of hypersensitivity to any of its components, or to atropine and its derivatives

PRECAUTIONS

- Cardiovascular disorders, especially coronary insufficiency, cardiac arrhythmias, and hypertension
- Convulsive disorders
- Hyperthyroidism
- Diabetes
- Narrow-angle glaucoma
- Prostatic hypertrophy, or bladder-neck obstruction.
- Hepatic or renal insufficiency
- Should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

DOSAGE AND ADMINISTRATION

Adult:

3 ml vial: May repeat two times if wheezing persists

Pediatric:

3 ml vial: May repeat two times if wheezing persists

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 01-2018	Amiodarone Cordarone	ISSUE DATE 01-2018	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Amiodarone is an antiarrhythmic medication; calcium, potassium and sodium channel blocker; negative chronotropic, negative dromotropic, and vasodilator. It possesses characteristics of all four Vaughn Williams antiarrhythmic classes (I- Na channel blocker, II - antisympathetic, III - lengthens cardiac action potential, IV - negative chronotropic effects). Potassium channel blockage results in slowing of conduction and prolonged refractoriness at the AV node. Vasodilation can decrease cardiac workload and as a result, decrease myocardial oxygen consumption.

INDICATIONS

- shock-refractory V-Fib
- shock-refractory pulseless V-Tach
- hemodynamically unstable V-Tach refractory to other therapy
- control of hemodynamically stable VT
- use as an adjunct to electrical cardioversion of SVT and PSVT
- use in significant ventricular ectopy treatment modality

CONTRAINDICATIONS

- hypersensitivity to the drug
- cardiogenic shock
- sinus bradycardia
- high degree AV block

INCOMPATIBILITIES

Aminophylline	Cefamandole Nafate
Cefazolin Sodium	Mezlocillin Sodium
Heparin Sodium	Sodium Bicarbonate

SIDE EFFECTS

bradycardia	AV block
nausea	vasodilatation and hypotension (requires close monitoring)

DOSAGE AND ADMINISTRATION

Adult:

Cardiac Arrest - VF/ pulseless VT

- 300 mg IV / IO push followed by an immediate 20-30 ml flush
- If refractory, consider a repeat dose in 3-5 minutes, of 150 mg IV/IO push followed by an immediate 20-30 ml flush

Ventricular ectopy:

- For Ventricular Tachycardia with pulse and unstable PSVT administer 150 mg (in 100ml D5W) slow IV over 10 minutes
- For maintenance infusion mix 150 mg in 100 ml D_5W. Set infusion pump to 40 ml per hour.
- 1.5 mg / ml, at 40 ml / hour → 60 mg / hour; which is equal to 1 mg / min

Recurrent ventricular fibrillation post ROSC (NOT refractory ventricular fibrillation)

- 150 mg IV over 10 minutes

Pediatric:

Cardiac Arrest - VF / pulseless VT

- 5 mg/kg IV/IO bolus (maximum 300mg)
  - If VF / pulseless VT persists, repeat Amiodarone 5 mg/kg IV/IO on second and third round (maximum total dose 15 mg/kg)
- Refer to "Weight Based Resuscitation Tape" for pediatric dosing

Regular Wide Complex Tachycardia

- 5 mg/kg (in 100ml D5W) IV/IO over 20 minutes

NOTE:

- Medication is in soap based solution that must be drawn up slowly using a large bore needle (min. 18 gauge) to avoid agitating the contents into a foam.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 01-2018	ASPIRIN	ISSUE DATE 01-2018	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Aspirin interferes with platelet aggregation and is known as an anti-platelet medication.

INDICATIONS

- myocardial infarction patients
- reduce the risk of death in patients with previous infarction
- unstable angina
- cardiac related chest pain

CONTRAINDICATIONS

- known hypersensitivity to this medication
- recent history of gastric or duodenal ulcers

PRECAUTIONS

- patients taking diabetic medications
- patients taking medications for anticoagulation or gout

SIDE EFFECTS

- anaphylaxis
- gastrointestinal bleeding (if previous condition exists)

DOSAGE AND ADMINISTRATION

Adult:

- 324 mg P.O. (four chewable baby or one chewable adult strength)

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 01-2018	Atropine	ISSUE DATE 9-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Atropine is a potent parasympatholytic drug that inhibits the actions of acetylcholine at the postganglionic parasympathetic neuroeffector sites. Effects include dilation of the pupils, relaxation of the bronchioles, decreased gastric motility and increased heart rate. It produces both positive chronotropic and positive dromotropic effects.

INDICATIONS

- symptomatic bradycardia
- organophosphate poisoning

CONTRAINDICATIONS

- tachycardia
- narrow angle glaucoma
- myasthenia gravis

SIDE EFFECTS

palpitations	tachycardia
headache	vertigo
dry mouth	blurred vision
urinary retention	nausea/vomiting
flushed skin	

paradoxical bradycardia from too slow administration

DOSAGE AND ADMINISTRATION

Cardiac/Bradycardia

Adults:

- 0.5mg IV push, rapidly
- May be repeated every 3 - 5 minutes
- Maximum dose is 3 mg.

Pediatric:

- 0.02 mg/kg, minimum dose 0.1 mg, maximum dose 0.5 mg
- May repeat for a second dose
- Refer to "Weight Based Resuscitation Tape" for pediatric dosing.

Organophosphate overdose / toxic ingestion

Adults:

- 2 mg every 5 minutes until symptoms controlled, no maximum dose

Pediatrics:

- 0.02 mg/kg IV (minimum dose 0.1mg), repeat every 5 minutes until respiratory secretions subside

Note:

- Atropine may be given via E.T. tube, by adding 2 - 2.5 times the IV dose, mixed with 5 to 10 mL of sterile water or saline, and injected directly into the ETT.
- Use caution in patients with MI history or myocardial ischemia due to increased myocardial oxygen consumption

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 01-2018	Calcium Chloride	ISSUE DATE 09-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Calcium chloride is an essential electrolyte for functional integrity of the nervous and muscular system, cardiac contractility and coagulation of blood.

INDICATIONS

- hypocalcemia
- hyperkalemia
- calcium channel blocker toxicity
- magnesium sulfate overdose
- cardiac resuscitation

CONTRAINDICATIONS

- ventricular fibrillation during arrest
- hypercalcemia
- digitalis toxicity

PRECAUTIONS

- use caution in patients taking digitalis
- patients with renal disease
- calcium precipitates on contact with sodium bicarbonate

SIDE EFFECTS

bradycardia
peripheral vasodilation
hypotension
tissue sloughing (following accidental IM administration or secondary to extravasation of medication)

DOSAGE AND ADMINISTRATION

Hyperkalemia:

Adult:

- 1 gram, IV/IO

Pediatric:

- 20 mg/kg, IV/IO, maximum dose 1 gram
- Refer to "Weight Based Resuscitation Tape" for pediatric dosing.

Calcium Channel Blocker Overdose/Toxicity:

Adult:

- 1 gram, IV/IO slowly

Pediatric:

- 20 mg/kg (0.2 ml/kg), IV/IO slowly
- Refer to “Weight Based Resuscitation Tape” for pediatric dosing.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Dextrose	ISSUE DATE 09-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Dextrose is a carbohydrate (monosaccharide) in a hypertonic solution which, when given intravenously, increases blood glucose levels.

INDICATIONS

- hypoglycemia
- altered levels of consciousness
- coma or seizure of unknown etiology

CONTRAINDICATIONS

- none

PRECAUTIONS

- Use caution in patients with CVA and intra-cerebral hemorrhage

SIDE EFFECTS

- warm, painful burning sensation from administration of the medication
- thrombophlebitis and sclerosis of the vein may occur

DOSAGE AND ADMINISTRATION

Adult:

- 25 grams IV slow

Pediatric:

- Preferentially use Dextrose 25% if age is <8 years old
- Refer to "Weight Based Resuscitation Tape" for pediatric dosing.

NOTE: Dextrose is not approved for oral administration; therefor it is to be given IV only.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Diazepam Valium, Diastat	ISSUE DATE 6-19-12	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Diazepam is a sedative-hypnotic benzodiazepine. It acts on the limbic, thalamic and hypothalamic regions of the CNS to potentiate the effects of inhibitory neurotransmitters. It raises the seizure threshold and produces sedation and amnesia.

INDICATIONS

- Seizure control
- Acute anxiety
- Muscle relaxant
- Pre-medication prior to cardioversion

SIDE EFFECTS

- Hypotension
- Respiratory depression
- Ataxia
- Confusion
- Nausea
- CNS depression

CONTRAINDICATIONS

- Shock
- Coma
- Respiratory depression
- Substance abuse of CNS depressants
- Hypersensitivity to this medication

PRECAUTIONS

Use caution in patients with renal or hepatic insufficiency. Smaller doses usually required for the elderly.

DOSAGE AND ADMINISTRATION

Adult:

- 5 mg IV/IO or MAD. May repeat as needed after 5 minutes, up to max dose of 10mg

Pediatric:

- 0.2 mg/kg IV/IO or MAD (maximum 5 mg dose), may repeat as needed after 5 minutes to a maximum of 10mg

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Diltiazem (Cardizem)	ISSUE DATE 09-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Diltiazem is a calcium channel blocker which inhibits transport of calcium into myocardial and vascular smooth muscle cells resulting in inhibition of excitation-contraction coupling and subsequent contraction. It causes systemic vasodilation with resultant decrease in blood pressure and coronary vasodilation.

INDICATIONS

- management of supraventricular tachycardia
- rapid ventricular rates in atrial flutter or fibrillation

CONTRAINDICATIONS

Hypersensitivity
2nd or 3rd degree AV block
Recent myocardial infarction
Wolff-Parkinson-White syndrome (WPW)
Sick Sinus Syndrome
Hypotension (<90 mmHg systolic)
Pulmonary congestion

PRECAUTIONS

- patients with renal or hepatic insufficiency or CHF
- geriatric patients
- pregnancy, lactation or children
- history of serious ventricular dysrhythmias

SIDE EFFECTS / ADVERSE EFFECTS

epistaxis	dyspnea	dysrhythmias
CHF	peripheral edema	bradycardia
chest pain	hypotension	palpitations
syncope	tachycardia	nausea / vomiting
flushing	diaphoresis	urticaria
hyperglycemia	muscle cramps	paresthesia / tremor

DOSAGE AND ADMINISTRATION

Adult:

- Consider vagal maneuvers as first line for a regular, narrow complex tachycardia suggestive of SVT (AVNRT)
- 0.25 mg/kg IV over 2 minutes, maximum of 20mg
- May be repeated in 15 min if initial dose is ineffective

Pediatrics

- Consider expert consultation; typical dose is 0.25 mg/kg IV over 2 minutes
- Avoid use in infants

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Diphenhydramine Benadryl	ISSUE DATE 9-2009	APPROVED Dr. A. Thomas & Dr. R. Semmons

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Diphenhydramine is an antihistamine. It blocks the effects of allergic reactions, inhibits motion sickness and causes mild sedation.

INDICATIONS

- anaphylaxis
- extrapyramidal reaction to phenothiazine medications
- mild to moderate allergic reactions

CONTRAINDICATIONS

- asthma (relative contraindication)
- narrow angle glaucoma
- patients taking MAO inhibitors

PRECAUTIONS

- Use caution in pregnant patients
- Benadryl may have additive effects when used with other CNS depressant medications

SIDE EFFECTS

drowsiness	sedation
hypotension	tachycardia
palpitations	drying of bronchial secretions
dry mouth	urinary retention

DOSAGE AND ADMINISTRATION

Adults:

- 1 mg/kg (max 50 mg) IV, or IM if no IV access
- Dystonic reaction: give 25 – 50 mg IV/IM

Pediatric:

- 1 mg/kg (max 50 mg) IV, or IM if no IV access

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Dopamine	ISSUE DATE 01-2018	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Dopamine is an endogenous catecholamine, which is a precursor to norepinephrine. Primarily acts upon alpha-1 and beta-1 receptors. Low dose ranges <2mcg/kg/min results in vasodilation of the renal, mesenteric and cerebral arteries. Dose ranges of 2-10 mcg/kg/min cause beta stimulation which results in increased cardiac output with minimal changes in SVR or preload. Dose ranges of 10-20 mcg/kg/min result in alpha response with vasoconstriction of the renal, mesenteric and peripheral vasculature.

INDICATIONS

- Hypotension with signs and symptoms of shock, which do not respond to volume replacement
- Second line drug for symptomatic bradycardia

CONTRAINDICATIONS

- tachydysrhythmias
- patients with Pheochromocytoma
- hypovolemic shock prior to fluid replacement

PRECAUTIONS

- Can cause an increase in myocardial oxygen consumption thus worsening the cardiac status of the patient. Should be carefully monitored.
- Use with caution in cardiogenic shock with accompanying CHF.

SIDE EFFECTS

hypertension	tachydysrhythmias (dose related)
headache	nausea and vomiting

DOSAGE AND ADMINISTRATION:

Hypotension/shock refractory to fluid resuscitation
Adult:

- Infusion rate 5-20 mcg/kg/min IV and titrate for response.

Bradycardia with a pulse
Adult

- Infusion rate 2-20 mcg/kg/min IV and titrate for response.

All indications:
Pediatric:
Refer to "Weight Based Resuscitation Tape" for pediatric dosing.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Epinephrine	ISSUE DATE 01-2018	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Epinephrine is an endogenous catecholamine with beta-1, beta-2 (bronchodilation and vasoconstriction of skeletal muscle) and alpha 1 (peripheral vasoconstriction) adrenergic effects. It has positive inotropic, chronotropic and dromotropic effects, along with increased SVR, increased coronary and cerebral perfusion and increased automaticity. It causes an increase in myocardial oxygen demand.

INDICATIONS

- cardiac arrest
- acute bronchospasm from asthma or COPD
- anaphylaxis

CONTRAINDICATIONS

- there are no known contraindications in cardiac arrest

PRECAUTIONS

- hyperthyroidism
- diabetes mellitus
- glaucoma
- may exacerbate angina, hypertension, SVT and CHF
- protect solution from intense light sources
- is unstable in alkaline solutions

SIDE EFFECTS

CNS stimulation		anxiety
headache	nausea, vomiting	
palpitations	tachycardia	
dizziness	hyperglycemia	

DOSAGE AND ADMINISTRATION

Cardiac arrest:

Adult

- 1 mg IV / IO of Epinephrine (1:10,000) push every 3-5 minutes
- Can be given via ET tube at 2 - 2.5 times the normal dose diluted in 10ml of NS

Pediatric

- Epinephrine (1:10,000) 0.01 mg/kg IV or IO every 3-5 minutes

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Epinephrine	ISSUE DATE 01-2018	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

Anaphylaxis:

Adult:

- 0.3mg of Epinephrine 1:1,000 via intramuscular injection
- May repeat if signs and symptoms of shock persist after the initial dose
- If patient appears to be nearing cardiac arrest or develops cardiac arrest, give 1mg IV of 1:10,000 epinephrine

Pediatric:

- Per weight-based tape, inject the 1:1,000 epinephrine intramuscularly
- May repeat if signs and symptoms of shock persist after the initial dose
- If patient develops cardiac arrest, give 1:10,000 epinephrine IV per weight-based tape dosing

Severe respiratory distress/bronchospasm secondary to asthma/COPD:

Adult:

- 0.3mg of 1:1000 via intramuscular injection
    - Discuss with online medical control prior to use if >55 years old or known use of beta blockers

Pediatric:

- Per weight-based tape, inject the 1:1,000 epinephrine intramuscularly

Bradycardia with a pulse

Adult

- Epinephrine 2-10 mcg/min IV is one option (alternatives are transcutaneous pacing and Dopamine)

Pediatric (if refractory to chest compressions/oxygenation)

- Epinephrine (1:10,000) 0.01 mg/kg IV or IO every 3-5 minutes

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Etomidate Amidate	ISSUE DATE 01-2018	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Etomidate is a hypnotic drug without analgesic or muscle relaxing properties. It usually causes myoclonus on injection; for this reason, it is usually given concomitantly with neuromuscular blocking agents and analgesics.

INDICATIONS

- induction prior to use of neuromuscular blocking agents and/or analgesics
- supplement to use of neuromuscular blocking agents and/or analgesics

CONTRAINDICATIONS

- hypersensitivity
- pregnancy or lactation
- patients under 3 months of age

PRECAUTIONS

- Patients with renal or hepatic insufficiency

SIDE EFFECTS / ADVERSE EFFECTS

- Transient venous pain at injection site
- Transient skeletal muscle spasms/ twitching (myoclonus).

COMPLICATIONS

- Anticipate that the patient will awaken rapidly and be left without residual analgesia.
- Medicate with additional narcotics and neuromuscular blockers, as needed.

DOSAGE AND ADMINISTRATION

Adult/Pediatrics Dose:

- 0.3 mg/kg IV
- Administered IV, the onset of action is usually within 1 minute with duration of action of 5 minutes
- Patient is usually fully awake within 7-14 minutes

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 01-2018	Fentanyl Sublimaze	ISSUE DATE 01-2018	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Fentanyl is an opioid analgesic. It binds to opiate receptors in the CNS, altering the response to and the perception of pain. It may produce CNS and/or respiratory depression in higher doses.

INDICATIONS

- Pain control
- Sedation of the intubated patient

CONTRAINDICATIONS

- Patients currently taking MAO inhibitors
- Hypersensitivity to this medication
- Hypotension
- Abnormalities in lead V4R or other indications of inferior wall myocardial infarct

USE WITH PRECAUTION

- Head injury
- COPD history
- Respiratory difficulty

SIDE EFFECTS

apnea	laryngospasm
respiratory depression	arrhythmia
bradycardia	circulatory depression
hypotension	nausea and vomiting

skeletal and thoracic muscle rigidity

DOSAGE AND ADMINISTRATION

Pain Control

Adult:

- 50 - 100 mcg, IV push slowly over 1-2 minutes, or IM injection, may repeat every 5 minutes to a total of three doses or a maximum cumulative dose of 250 mcg
- Recheck a pain score & vitals including a HR, RR, and BP between doses

Pediatric:

- 0.5 mcg/kg, IV push slowly over 1-2 minutes, not to exceed 100 mcg.
- 1.5mcg/kg via mucosal atomization device if IV access unsuccessful or not otherwise needed.
- May repeat every 5 minutes to a total of three doses or a maximum cumulative

dose of 250 mcg

- Recheck a pain score & vitals including a HR, RR, and BP between doses

Sedation in a patient with an advanced airway

Adult:

- 100 to 250 mcg IV, may repeat to a maximum cumulative dose of 250mcg
- Discuss with online medical control if additional doses are needed

Pediatric:

- Please use weight-based dosing, administered IV or IO

NOTE:

- Dosage may be adjusted up for large body weight adults
- Dosage may be adjusted down for elderly or debilitated patients or in patients where there is a strong suspicion that other drugs or alcohol are under effect.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Glucose, Oral	ISSUE DATE 07-2012	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION

ACTION
After absorption from the GI tract, glucose is distributed in the tissues and provides a prompt increase in circulating blood sugar.

INDICATIONS
Hypoglycemia

SIDE EFFECTS
Nausea

CONTRAINDICATIONS
None, given the need.

PRECAUTIONS
- Altered level of consciousness may impair a patient from following directions or cooperating.
- Ascertain the patient's ability to swallow an oral preparation of glucose without airway compromise.
- Must be swallowed, not absorbed sublingually or buccally.

DOSAGE AND ADMINISTRATION

Adults:
15g PO for patients with an intact gag reflex and who are able to handle their own secretions.

Pediatrics:
5-15g PO for patients with an intact gag reflex and who are able to handle their own secretions

NOTE:
Often it is possible to revive a hypoglycemic patient without using the entire tube. This is done based on the promptness of the patient response.

If the patient becomes alert and refuses transport, please follow instructions per the "Diabetic Emergencies" protocol and utilize online medical control.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Haloperidol Haldol	ISSUE DATE 09-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Haloperidol is the first of the butyropherone series of antipsychotics. The precise action has not been clearly established, though it is known to have effect on dopaminergic and seritonergic receptors.

INDICATIONS

- For prompt control of the acute agitated delirium patient with moderately severe to severe symptoms.
- Preferentially used in the setting of an acute psychiatric episode

SIDE EFFECTS

tachycardia	hypotension
hypertension	ventricular arrhythmias
nausea / vomiting	dry mouth
blurred vision	diaphoresis
laryngo / bronchospasm	

CONTRAINDICATIONS

- Severe, toxic CNS depression or comatose states from any cause.
- Hypersensitivity
- Known prolonged QT

PRECAUTIONS

- Use cautiously for patients with severe cardiovascular disorder because of the possibility of transient hypotension and / or angina.
- Use carefully for patients on anti-convulsive therapy or with a history of seizures because haloperidol may lower the convulsive threshold.
- Known hypersensitivity.
- Use with caution in patients >50 years old.
- Haloperidol is capable of potentiating the effects of CNS depressants such as alcohol, opiates, and anesthetics.

DOSAGE AND ADMINISTRATION

Agitated Delirium

Adult:

- 5 mg IV/IM, may repeat x1 in 10 minutes

Pediatric:

Safety and effectiveness in pediatric patients have not been established.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Hydroxcobalamin CyanoKit®	ISSUE DATE 9-2009	APPROVED Dr. A. Thomas & Dr. R. Semmons

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Cyanide is an extremely toxic poison. Specifically cyanide binds with cytochrome a^3 in the mitochondria. Inhibition of cytochrome a^3 prevents the cell from using oxygen and forces anaerobic metabolism, cellular hypoxia and metabolic acidosis. The action of hydroxycobalamin in the treatment of cyanide-based poisoning is based on its ability to cyanide ions.

INDICATIONS

- Patients with known or suspected cyanide poisoning. Cyanide poisoning can present after:
  - Breathing smoke from household or industrial fires
  - Breathing or swallowing cyanide
  - Skin exposure to cyanide

SIDE EFFECTS

Anaphylaxis	Hypertension
Nausea/Vomiting	Stomach Pain/ Diarrhea
Pulmonary edema	Irregular heart rate
Skin and urine redness	Acne-like rash
Headache/Dizziness	Eye Swelling, irritation, redness

INCOMPATIBILITIES

Do not administer Cyanokit through the same IV line with:

Ascorbic acid	Nitroglycerin
Blood products	Pentobarbital
Diazepam	Propofol
Dobutamine	Thiopental
Dopamine	Sodium thiosulfate
Fentanyl	Sodium nitrate

DOSAGE AND ADMINISTRATION

Always following the included packaging instructions with the kit.
Typical instructions are as follows:
Adult:

- Dose: 5 grams in 1 vial

1. Add 200 ml 0.9% normal saline to vial using transfer spike. Fill to line. Keep vial in upright position.
2. Rock or rotate vial for 60 seconds to mix solution. **Do not shake.**
3. Infuse vial using vented IV tubing. Infuse over 15 minutes.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Ketamine	ISSUE DATE 02-2013	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION

ACTION

Ketamine is a rapid acting general anesthetic producing an dissociative state characterized by profound analgesia, normal pharyngeal-laryngeal reflexes, normal or slightly enhanced skeletal muscle tone, cardiovascular and respiratory stimulation, and occasionally a transient and minimal respiratory depression.

INDICATIONS

Indicated for induction in adults and children or management of agitated delirium.

SIDE EFFECTS

- hypertension
- tachycardia
- respiratory depression
- laryngospasm
- nausea
- vomiting

CONTRAINDICATIONS

- Known hypersensitivity
- Patients in whom a significant elevation of blood pressure would constitute a serious hazard.
  - Hemorrhagic stroke
  - B/P $\geq$ 240 / 120
- Children less than 3 months of age

DOSAGE AND ADMINISTRATION

Agitated Delirium

Adult/Pediatric Dose

- 2 mg/kg IV/IM –
  - Utilize only in extreme cases of excited delirium, as studies show that as many as 30-40% of patients treated with ketamine in the prehospital environment may require intubation in the emergency department for sedation and respiratory depression. If respiratory depression occurs, treat per Respiratory Failure Protocol.

Respiratory Failure – Induction Agent

Adult/Pediatric Dose

- 2 mg/kg IV2 mg/kg IV

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Labetalol Normodyne	ISSUE DATE 09-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Labetalol is an adrenergic blocking agent with selective alpha and non-selective beta adrenergic blocking actions thus lowering blood pressure without reflexive tachycardia.

INDICATIONS

- Acutely symptomatic hypertension (≥220 / ≥120 mmHg)
- May be used in presence of CVA symptoms
- May be used for sinus tachycardia in the setting of chest pain
- Pregnant or recently (<6 weeks) delivered hypertensive patient (>140 systolic or >100 diastolic, or a relative increase of +30 systolic and +20 diastolic from the patient's normal, pre-pregnancy blood pressure) especially if acutely symptomatic for pre-eclampsia/eclampsia

CONTRAINDICATIONS

- hypersensitivity to the medication
- high degree AV block
- cardiogenic shock
- bradycardia
- hypotension

PRECAUTIONS

- heart failure
- hepatic disease
- diabetes
- asthma

SIDE / ADVERSE EFFECTS

- postural hypotension
- diaphoresis
- vertigo, nausea and vomiting

DOSAGE AND ADMINISTRATION

Adult:

Symptomatic Hypertension

- 10 mg IV over 1-2 minutes
- May be repeated in 10 minutes, if no significant change in blood pressure
- The goal is to lower the blood pressure, but not by more than 25%

Pre-eclampsia/eclampsia

- 10 mg IV over 1-2 minutes
- May be repeated in 10 minutes, if no significant change in blood pressure
- The goal is to lower blood pressure to SBP <130 and DBP <100

Sinus Tachycardia in the setting of acute chest pain

- 5 mg IV over 1-2 minutes, observe for adverse response.
- If no adverse response and patient is still in sinus tachycardia, then repeat 5 mg dosage in 5 minutes to a maximum of 20mg if tachycardia persists. Repeat and document vital signs between doses.
- Maximum effect occurs usually within five minutes of administration.

NOTE:

- Constant blood pressure monitoring is required.
- Patient should always be in a supine position during the administration of Labetalol.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Magnesium Sulfate	ISSUE DATE 09-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Magnesium Sulfate depresses myoneural junctions, decreasing excitability of neural as well as myocardial membranes. It is this depressant effect that is responsible for depressing the central nervous system, potentially limiting seizure activity. The depression of cardiac muscle activity is thought to be the mechanism by which Magnesium Sulfate helps to control intractable V-Tach and other dysrhythmias.

INDICATIONS

- cardiac arrest, only if torsade de pointes or suspected hypomagnesemia is present.
- life threatening ventricular arrhythmias due to digitalis toxicity
- seizures from eclampsia
- bronchospasm secondary to COPD or status asthmaticus

CONTRAINDICATIONS

- symptomatic heart block (myocardial depressant)
- use with caution in patients with renal impairment

ADVERSE EFFECTS

cardiac arrest at high serum concentrations.
severe bradycardia
respiratory paralysis
depressed reflexes
hypotonia
sweating
diaphoresis
flushing
hypotension
hypothermia
prolonged PR interval
widened QRS complex

INCOMPATIBILITIES

IV Alcohol
barium
Clindamycin
Hydrocortisone
Polymyxin
solutions containing soluble phosphates
Bicarbonates
Calcium
Dobutamine
Hyperalimantation
Procain

DOSAGE AND ADMINISTRATION

Adult:

Respiratory Distress

- 2gm mixed in a 100ml bag of D5W given over 10-20min

Eclampsia

- 4gm mixed in a 100ml bag of D5W given over 15min

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Methylprednisolone	ISSUE DATE 11-2017	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Methylprednisolone is a potent anti-inflammatory glucocorticoid, a type of steroid. Its anti-inflammatory effect is used to control conditions of severe inflammation such as anaphylaxis and severe allergic reactions, exacerbations of COPD and asthma, and other diseases. Onset of effect can occur within an hour of administration, and last for nearly twelve hours.

INDICATIONS

- Acute bronchospasm (asthma or COPD)
- Allergic reactions including anaphylaxis

CONTRAINDICATIONS

- Known hypersensitivity to methylprednisolone sodium succinate
- Systemic fungal infections

USE WITH CAUTION

- Known tuberculosis infection
- Patients who have received steroids within the past 12 hours

SIDE EFFECTS

Nervousness
Dizziness
Headache
May raise serum glucose levels (hyperglycemia)

DOSAGE AND ADMINISTRATION

Adults:

- 125mg IV (preferred) or IM

Pediatric:

- 2 mg/kg IV, maximum 60mg *or*
- Refer to "Weight Based Resuscitation Tape" for pediatric dosing
    - Avoid intramuscular (IM) route in children)

Note:

Please review Act-O-Vial packaging for instructions on mixing and preparing methylprednisolone for injection

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Midazolam Versed	ISSUE DATE 9-2009	APPROVED Dr. A. Thomas & Dr. R. Semmons

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Midazolam is a short acting benzodiazepine. It acts at many levels of the CNS to produce generalized CNS depression. Effects may be mediated by gamma-aminobutyric acid (GABA), an inhibitory neurotransmitter.

INDICATIONS

- Sedative effects for agitation or following intubation
- Treatment of seizure

CONTRAINDICATIONS

- known hypersensitivity to other benzodiazepines
- hypotension/shock
- respiratory distress

USE CAUTIOUSLY IN

- pulmonary disease
- CHF
- renal impairment
- severe hepatic impairment
- geriatric or debilitated patients

SIDE EFFECTS

agitation
excess sedation
bronchospasm
nausea and vomiting
drowsiness
apnea/respiratory depression
coughing

DOSAGE / ADMINISTRATION

Adult:

Sedation after intubation or pre-treatment before cardioversion:

- 2 - 4 mg IV/IO

Agitated Delirium:

- 5-10 mg IV/IO <u>or</u> 10 mg MAD (5mg per nostril via mucosal atomized device)

Seizure (preferred agent if there is not IV access)

- Patients <50kg: 5 mg via MAD
- Patients >50kg: 10 mg via MAD (5 mg per nostril)

Pediatric:
You may refer to weight-based tapes

Sedation after intubation or pre-treatment before cardioversion:

- 0.1 mg/kg IV/IO (max 2 mg)

Agitated Delirium:

- 5-10 mg IV/IO <u>or</u> 10 mg MAD (5mg per nostril via mucosal atomized device)

Seizure (preferred agent if there is not IV access)

- 0.2 mg/kg via MAD – half given in each nostril (max 10mg total, 5mg per nostril)

NOTE:

- After IV dose, onset will be 1.5 - 5 minutes, with peak being rapid
- Reassess and document vital signs after each administration, but this is not required between administering into the left and right nostrils

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Naloxone Narcan	ISSUE DATE 09-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Naloxone is a synthetic opioid antagonist. It competes at opiate receptor sites resulting in reversal of respiratory depression, sedation and pupillary effects.

INDICATIONS

- acute CNS depression
- decreased level of consciousness from opiate overdose or unknown etiology

CONTRAINDICATIONS

- There are no known contraindications

PRECAUTIONS

- known narcotic dependent patients; may cause severe withdrawal effects
- pre-existing cardiac disease
- patients who have received cardio-toxic drugs

SIDE EFFECTS

- tachycardia
- hypertension
- hypotension
- nausea and vomiting

DOSAGE AND ADMINISTRATION

Adults:

- 0.5mg IV, IO, IM, IN (whichever is easiest) – may be dosed as a single 2mg dose or may be given in increments of 0.5mg up to four times, depending on the protocol and patient's clinical presentation
- For severe respiratory depression (<6 breaths per minute) administer 2 mg.

Pediatric:

- 0.1 mg/kg IV, IO, IM, IN
- Refer to "Weight Based Resuscitation Tape" for pediatric dosing.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Nitroglycerin	ISSUE DATE 09-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Nitroglycerin is a peripheral vasodilator which reduces preload and to a lesser extent, after-load, thus decreasing myocardial oxygen demand.

INDICATIONS

- Ischemic chest pain
- Hypertension
- Acute pulmonary edema which may be secondary to another process such as congestive heart failure

CONTRAINDICATIONS

- Hypotension
- Head injury or other concern for intracranial hemorrhage
- Use of a phosphodiesterease-5 inhibitor (such as sildenafil/Viagra or vardenafil/Levitra) in the past 24 hours, or past 48 hours if tadalafil/Cialis
- acute coronary syndrome/myocardial infarction if there are abnormalities of lead V4R, or other signs of right ventricular infarct

PRECAUTIONS

- patients with glaucoma as it may increase intraocular pressure

SIDE EFFECTS

transient headache	diaphoresis
hypotension	syncope
nausea and vomiting	tachycardia

DOSAGE AND ADMINISTRATION

- 0.4 mg tablet, sublingually or one metered dose spray of 0.4 mg, sublingually
- May be repeated every 3 – 5 minutes up to 3 times

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Ondansetron Zofran	ISSUE DATE 09-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Ondansetron is an anti-emetic. It blocks the effects of serotonin located in vagal nerve terminals and the chemoreceptor trigger zone in the central nervous system.

INDICATIONS

- Prevention and treatment of nausea and vomiting

CONTRAINDICATIONS

- hypersensitivity

PRECAUTIONS

- liver impairment (use single doses not to exceed 8 mg)
- pregnant or lactating females
- children <3 years of age (safety not established)

SIDE EFFECTS

headache	dizziness
drowsiness	fatigue
weakness	diarrhea
abdominal pain	constipation
dry mouth	extrapyramidal reactions

DOSAGE AND ADMINISTRATION

Adult:

- 4 mg IV or IM
- Administer over at least 30 seconds, preferably over 2-5 minutes
- Peak effects: (IV) in 15 – 30 minutes, duration of 4 hours

Pediatric:

- 0.1 mg/kg IV for children <40kg
- 4 mg/kg IV or a 4mg oral dissolving tablet sublingual for children >40kg
    - Oral route is preferred if the child does not otherwise require an IV
- Refer to "Weight Based Resuscitation Tape" for pediatric dosing as needed

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Rocuronium Zemuron	ISSUE DATE 05-2010	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION
Rocuronium is a non-depolarizing, neuromuscular blocker that competitively blocks acetylcholine receptors without stimulation.

INDICATIONS
- Rocuronium is used for skeletal muscle paralysis, following an induction agent, in rapid sequence intubation. Paralysis may also facilitate chest wall compliance during mechanical ventilation.

SIDE EFFECTS
Transient hypertension or hypertension.

CONTRAINDICATIONS
Known hypersensitivity to the drug or to bromides.

PRECAUTIONS
Use caution in patients with liver disease – duration of action in these patients is about 1.5 times longer

DOSAGE AND ADMINISTRATION

Adult
- 1 mg/kg IV

Pediatric
Refer to "Weight Based Resuscitation Tape" for pediatric dosing.

NOTE
- Rocuronium is a long-acting paralytic and lasts longer than the RSI induction agents (etomidate, ketamine), so be sure to provide post-intubation sedation because patients will not be able to express awareness or discomfort while paralyzed
- Onset of action about 45 – 60 seconds
- Duration of action about 25 – 70 minutes

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Sodium Bicarbonate	ISSUE DATE 09-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Sodium bicarbonate is an alkalizing agent, which causes blood pH to rise.

INDICATIONS

- Overdose of tricyclic antidepressant, aspirin, cocaine, or diphenhydramine.
- Prolonged resuscitation with effective ventilation; on return of spontaneous circulation after long arrest interval.
- Severe acidosis, either diagnosed or suspected (as in PEA arrest)
- Hyperkalemia, either diagnosed or suspected (as in PEA arrest)
- Pre-treatment prior to the release of a trapped extremity with a serious crush injury

CONTRAINDICATIONS

- metabolic and respiratory alkalosis
- hypocalcemia
- hypokalemia

PRECAUTIONS

- infiltration can cause necrosis
- can inactivate catecholamines and precipitate calcium preparations

SIDE EFFECTS

- metabolic alkalosis
- seizures
- electrolyte imbalance

DOSAGE AND ADMINISTRATION

Adults:

- 1 mEq/kg, IV/IO bolus
- May be repeated, after 10 minutes, at 0.5 mEq / kg
- 25 mEq IV/IO for pre-treatment in a crush injury, prior to the release of the trapped extremity; these patients may require a second dose of 25 mEq if symptomatic of hyperkalemia

Pediatric:

- Refer to "Weight Based Resuscitation Tape" for pediatric dosing.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE 11-2017	Succinylcholine Anectine	ISSUE DATE 09-2009	APPROVED Dr. Andrew Thomas Dr. Rachel Semmons Medical Directors

REFER TO THE "MEDICATION ADMINISTRATION ERROR PREVENTION" POLICY PRIOR TO THE ADMINISTRATION OF ANY MEDICATION.

ACTION

Succinylcholine is a short acting, motor nerve depolarizing, skeletal muscle relaxant. It binds to cholinergic receptors in the motor neuron end plate to cause muscle depolarization (fasciculations) followed by paralysis.

INDICATIONS

- Used after induction of anesthesia to produce skeletal muscle paralysis.
- To achieve temporary paralysis where endotracheal intubation is indicated and where muscle tone or seizure activities prevent it.
- Patients who demonstrate a high probability of airway compromise during transport.

CONTRAINDICATIONS

- Known hypersensitivity to the drug.
- Penetrating eye injuries, history of glaucoma and malignant hyperthermia (consider using Rocuronium.)

SIDE EFFECTS

Hypotension
Tachycardia
Hypertension
Cardiac arrest
Ventricular dysrhythmias
Brief elevation of serum potassium
Bradycardia, especially with a repeat dose and in children under 5 years old
Increased intracranial, intraocular and intragastric pressure
Malignant hyperthermia (rare but life-threatening complication)

DOSAGE AND ADMINISTRATION

Adult:

- 1.5 mg/kg IV/IO push
- In extreme circumstances: deep IM injection of 3 - 4 mg/kg; total dose not to exceed 150 mg, however paralytics should ideally be given with IV access

Pediatric:

Refer to "Weight Based Resuscitation Tape" for pediatric dosing.

NOTE:

- Following IV injection, complete paralysis is obtained within 1 minute and persists for approximately 2 – 4 minutes
- Effects start to fade within 4 - 10 minutes

IM effects start within 3 minutes and the duration can be from 10 – 30 minutes

Tampa Fire Rescue
Medical Protocol

APPENDIX

PROTOCOL

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	APGAR Score	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Policy

The APGAR score should be obtained and recorded at 1 minute and 5 minutes after delivery.

SIGN	0	1	2
Appearance Color	Blue; Pale	Body pink; Extremities Blue	Pink
Pulse Heart Rate	Absent	< 100 per minute	> 100 per minute
Grimace Reflex Irritability (When feet are stimulated)	No response	Some motion	Cry
Activity Muscle Tone	Limp	Some flexion	Good flexion
Respiratory Effort	Absent	Weak cry	Strong cry

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Carboxyhemoglobin Reference Guide	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

	Carboxy- hemoglobin Reference Guide	
COHb Level (%)	**Signs & Symptoms**	**Pre-Hospital Treatment**
0-4	None-Normal (Non-Smoker)	None (Smoker 3-5% Higher)
5-9	Minor Headache	None- Normal (Non-Smoker)
10-19	Headache Shortness of Breath	ABC's 100% Oxygen Consider Transport
20-29	Headache Nausea Dizziness Fatigue	ABC's 100% Oxygen Transport Consider HBO
30-39	Severe Headache Vomiting Vertigo ALCO	ABC's 100% Oxygen Transport Consider HBO
40-49	Confusion Syncopy Tachycardia	ABC's 100% Oxygen Transport Consider HBO
50-59	Seizure Shock Apnea	ABC's 100% Oxygen Transport Consider HBO
60-up	Cardiac Arrhythmias Coma Death	ABC's 100% Oxygen Transport Consider HBO

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	EZ IO Guide	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

EZ-IO®

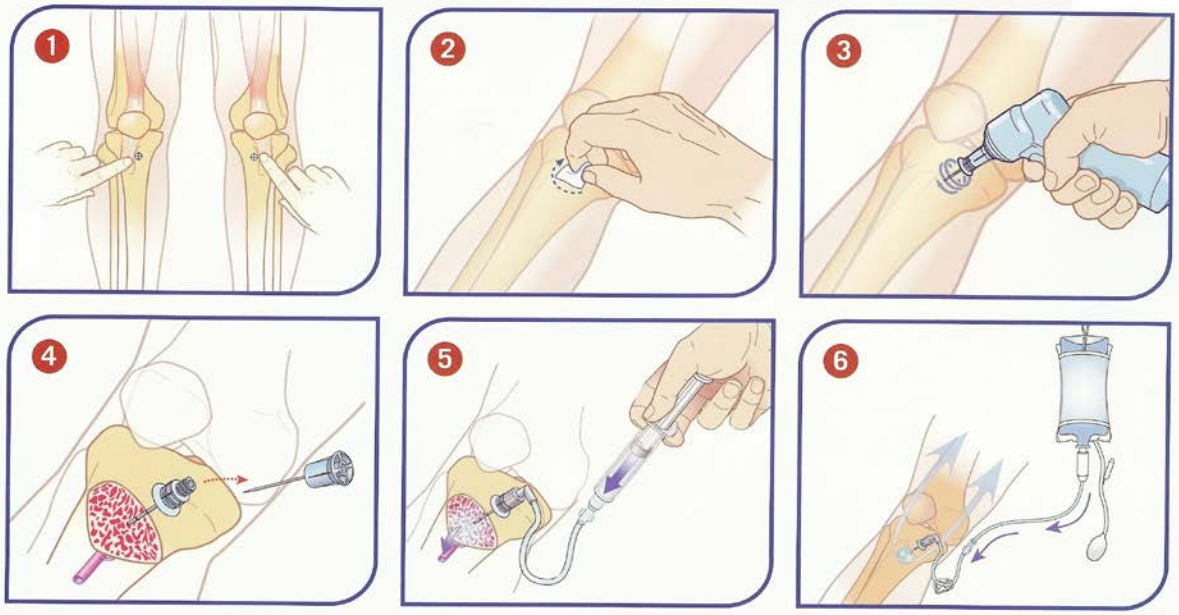
EZ-IO
Intraosseous Infusion System

To Insert Needle Set:

1. Protect yourself (BSI)
2. Identify indication
3. Check for contraindication
4. Locate landmarks 1*
5. Clean site 2
6. Prepare driver and needle set
7. Stabilize leg
8. Insert EZ-IO® needle set 3
9. Remove driver from needle set
10. Remove stylet from catheter 4
11. Confirm placement
12. Attach EZ-Connect™
13. Inject IO 20-40 mg of 2% Lidocane in alert patients
14. Syringe bolus (flush) IO with 10 ml NS 5
15. Start infusion under pressure 6
16. Secure tubing and catheter

*additional sites available

Do Not Leave the EZ-IO catheter in for more than 24 hours.



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Glasgow Coma Scale	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

Eye Opening	
None	1 = Even to supra-orbital pressure
To pain	2 = Pain from sternum/limb/supra-orbital pressure
To speech	3 = Non-specific response, not necessarily to command
Spontaneous	4 = Eyes open, not necessarily aware
Verbal Response	
None	1 = No verbalization of any type
Incomprehensible	2 = Moans/groans, no speech
Inappropriate	3 = Intelligible, no sustained sentences
Confused	4 = Converses but confused, disoriented
Oriented	5 = Converses and oriented
Motor Response	
None	1 = To any pain; limbs remain flaccid
Extension	2 = Shoulder adducted and shoulder and forearm internally rotated
Flexor response	3 = Withdrawal response or assumption of hemiplegic posture
Withdrawal	4 = Arm withdraws to pain, shoulder abducts
Localizes pain	5 = Arm attempts to remove supra-orbital/chest pressure
Obeys commands	6 = Follows simple commands
	TOTAL POSSIBLE SCORE 3 - 15

TAMPA FIRE RESCUE MEDICAL PROTOCOL

APPENDIX	REVISION DATE	HIPAA Form	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

THIS NOTICE DESCRIBES HOW MEDICAL INFORMATION ABOUT YOU MAY BE USED AND DISCLOSED AND HOW YOU CAN GET ACCESS TO THIS INFORMATION. PLEASE REVIEW IT CAREFULLY.

TAMPA FIRE RESCUE is required by law to maintain the privacy of certain confidential health care information, known as Protected Health Information or PHI, and to provide you with a notice of our legal duties and privacy practices with respect to your PHI. Tampa Fire Rescue is also required to abide by the terms of the version of this Notice currently in effect.

Uses and Disclosures of PHI: Tampa Fire Rescue may use PHI for the purposes of treatment, payment, and health care operations, in most cases without your written permission. Examples of our use of your PHI: For treatment, payment, health care operations, and reminders for scheduled transports and information on other services.

Use and Disclosure of PHI Without Your Authorization: Tampa Fire Rescue is permitted to use PHI without your written authorization, or opportunity to object, in certain situations, and unless prohibited by a more stringent state law.

Patient Rights: As a patient, you have a number of rights with respect to your PHI, including:

The right to access, copy or inspect your PHI;The right to amend your PHI;The right to request an accounting; The right to request that we restrict the uses and disclosures of your PHI.

Internet, Electronic Mail, and the Right to Obtain Copy of Paper Notice on Request. If we maintain a web site, we will post a copy of the complete Notice on our web site.

Revisions to the Notice: Tampa Fire Rescue reserves the right to change the terms of this Notice at any time, and the changes will be effective immediately and will apply to all PHI that we maintain.

Your Legal Rights and Complaints: You have the right to complain to us, or the Secretary of the United States Department of Health and Human Services of you believe your privacy rights have been violated.

For further information or to request the complete printed version of this Notice, please contact the Tampa Fire Rescue Privacy Officer at:

Tampa Fire Rescue Privacy Officer, 808 E. Zack St., Tampa, FL. 33602; Telephone number (813) 274-7005, fax number (813) 274-7006, or view the complete Notice by going to www.tampagov.net, click on "Department home page links", then "Fire Rescue".

ACKNOWLEDGMENT OF RECEIPT

BY AFFIXING MY (PATIENT OR GUARDIAN) SIGNATURE, I ACKNOWLEDGE THAT I HAVE RECEIVED A COPY OF THE TAMPA FIRE RESCUE "PRIVACY STATEMENT".

_____

SIGNATURE OF PATIENT OR GUARDIAN

TFR USE ONLY

***PATIENT UNABLE TO SIGN DUE TO EMERGENCY CONDITION.** ☐
***LEFT COPY OF "PRIVACY NOTICE" WITH PATIENT AT HOSPITAL.** ☐
***PATIENT REFUSED TO SIGN.** ☐

INCIDENT#: _____ **DATE:** _____

_____

SIGNATURE OF OFFICER / ACT. OFFICER

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Medical Abbreviations	ISSUE DATE 7-2011	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

A & O X 3	alert and oriented to person, place and time
AAA	abdominal aortic aneurysm
ABC	airway, breathing, circulation
ABD	abdomen
ACLS	Advanced Cardiac Life Support
A – Fib	atrial fibrillation
ALS	advanced life support
ALTE	apparent life threatening event
ama	against medical advice
AMA	American Medical Association
AMI	acute myocardial infarction
amt	amount
approx	approximately
appt	appointment
ARDS	adult respiratory disease
asa	aspirin
ATF	arrive to find…
AV	atrioventricular
ASAP	as soon as possible
ASHD	arteriosclerotic heart disease
BIID, bid	twice in the day
bilat	bilateral, bilaterally
BLS	basic life support
BM	bowel movement
BP, B/P	blood pressure
BUN	blood urea nitrogen (lab test)
BVM	bag-valve mask
c/o	complaints of

C1, C2	Refers to cervical vertebrae #1, #2, a location on the spine
Ca, CA, C/A	cancer
CABG	coronary arterial bypass graft
CAD	coronary artery disease
CAT or CT scan	computerized axial tomography
CATH	catheter
CBC	complete blood count (lab test)
CC, c/c	chief complaint
CCU	coronary care unit
CHD	coronary heart disease
CHF	congestive heart failure
CNS	central nervous system
cont.	continued
C / O	complaint of, complains of, or complaining of
CO_2	carbon dioxide
COPD	chronic obstructive pulmonary disease
CP	chest pain
CPR	cardiopulmonary resuscitation
CSF	cerebrospinal fluid
c-spine	cervical spine
CT	cat scan
CVA	cerebral vascular accident
CXR	chest x-ray
D_5W	5% dextrose in water
DKA	diabetic ketoacidosis
DM	diabetes mellitus
DNR	Do Not Resuscitate
DOA	dead on arrival
DOB	date of birth

DT, DT's	delirium tremens
Dx	diagnosis
ECG, EKG	electrocardiogram
EEG	electroencephalogram
e.g.	example
ENT	ears, nose, throat
ET, ETT	endotracheal tube
ETOH	ethanol , alcohol
F	Female
FB	foreign body
F/U, FU	follow-up
FUO	fever of unknown origin
Fx	fracture
g	grams
G tube	gastric tube
GC	gonorrhea
GERD	gastro-esophageal reflux disease
GI	gastrointestinal
GSW	gunshot wound
gtts	drops
GU	genitourinary
gyn	gynecology
H/A	headache
H_2O	water
HEENT	head, eyes, ears, nose, throat
hgb, hct	hemoglobin, hematocrit (blood cell measurements)
HR	heart rate

HS, hs	hours of sleep, or “at bedtime”
HTN	hypertension
Hx, hx	history
ICP	intracranial pressure
ICU	intensive care unit
I & O	intake and output (amount of fluid taken in and urine output)
ID	incision and drainage (to cut and drain a boil)
IDDM	insulin dependant diabetes mellitus
IM	intramuscular
Inj	injection
IO	intraosseous
IV	intravenous
IVP	intravenous pyelogram (x-ray of the kidneys and bladder)
JVD	jugular vein distension
kg	kilogram
KVO	keep vein open
L	left
L1, L2, L3	Refers to the lumbar section of the spine
lab	laboratory
LAT	lateral
lb	pound
LBBB	left bundle branch block
L & D	labor and delivery
LLQ	left lower quadrant
LMP	last menstrual period
LOC	level of consciousness
LP	lumbar puncture (spinal tap)

LPN	licensed practical nurse
L-spine	lumbar spine
LR	lactated ringers
L/S spine	lumbar-sacral spine
LUQ	left upper quadrant
M	Male
max	maximum
mcg	micrograms
med, meds	medication, medications
mg	milligram
MI	myocardial infarction
min	minute
MRI	magnetic resonance imaging
MS	mental status
MSO_4	morphine sulfate
MVC	motor vehicle collision
NAD	no apparent distress
NC	nasal canula
NEB	nebulizer
NG, NGT	nasogastric tube
NIDDM	non –insulin dependant diabetes mellitus
NKDA	no known drug allergies
norm	normal
NPO	nothing by mouth
NRB	non re-breather
NS	normal saline
NSAID	Non-steroidal anti-inflammatory drug
NSR	normal sinus rhythm

N/V	nausea and vomiting
N/V/D	nausea, vomiting, diarrhea
O_2	oxygen
OB / GYN	obstetrics and gynecology
P	pulse
PA	physician assistant
PAC	premature atrial contraction
palp	palpation
Pap	pap smear (lab test)
path	pathology
PE	pulmonary embolism or physical examination
PERRL	pupils equal round and reactive to light
ph, pH	hydrogen ion concentration (a measure of acidity)
PMHx	past medical history
PO, po	by mouth
prn, p.r.n.	as needed or required
pt	patient
PVC	premature ventricular contraction
q	every
qam	every am
qd	every day
qod	every other day
qh	every hour
q2h, q3h, q4h	every 2 hours, every 3 hours, every 4 hours
qhs	every night (hour of sleep)
qid	four times a day
quad	quadriplegic

R, rt	right
RBBB	right bundle branch block
rbc, RBSC	red blood cell
re:	regarding or about
reg	regular
resp	respiration or breaths
RLQ	right lower quadrant
R/O, r/o	rule out
ROM	range of motion
RUQ	right upper quadrant
Rx, RX	treatment
SA	sinoatrial node
sl	sublingual, “under the tongue”
SIDS	sudden infant death syndrome
SOB	short of breath
S/P, s/p	status post (status post an “event”) s/p MI, s/p CVA, s/p GI bleed
SQ, subq, subc	subcutaneous
s & s, s/s	signs and symptoms
ST	sinus tachycardia
staph	staphylococcus
stat	immediately
STD	sexually transmitted disease
strep	streptococcus
SVT	supraventricular tachycardia
Sx	symptoms
Sz	seizures
T	temperature
T1, T2, T3	Refers to the thoracic spine

TB	tuberculosis
TIA	transient ischemic attack
tid	three times a day
TKO	to keep open
tsp	teaspoon
T-spine	thoracic spine
TUR, TURP	transurethral resection (prostate surgery in men)
Tx	treatment
U/A, u/a	urine analysis
UOA	upon our arrival
URI	upper respiratory infection
UTI	urinary tract infection
VD	venereal disease
VF	ventricular fibrillation
VS	vital signs
VT	ventricular tachycardia
WBC, wbc	white blood cell
W/C	wheelchair
WNL	within normal limits
wt	weight
w/u	work up
x	“times”
y/o	years old
yr	year

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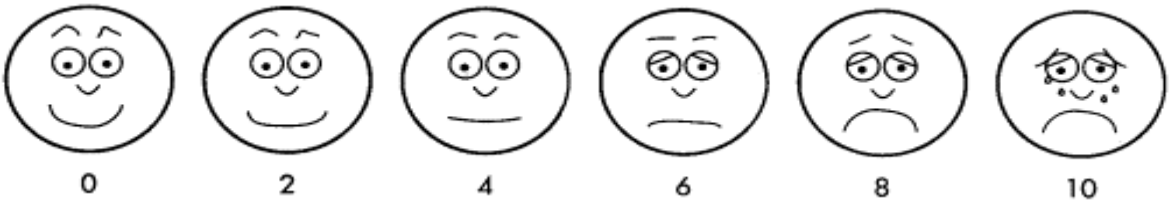
TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Pain Scale	ISSUE DATE 09-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

CHOOSE A FACE THAT BEST DESCRIBES HOW YOU FEEL



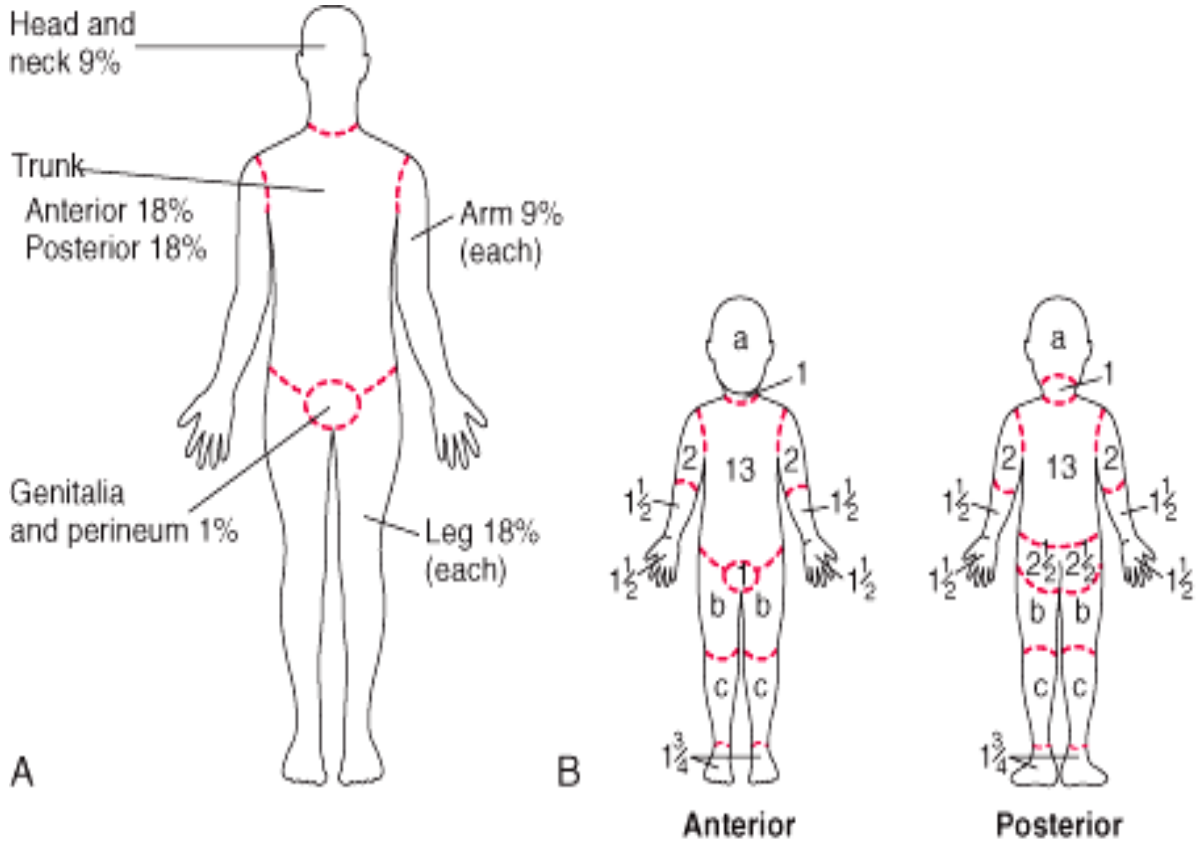
No Pain	Mild Pain	Moderate Pain	Severe Pain	Very Severe	Worst Possible

From Wong, D.L. Hockenberry-Eaton, M. Wilson, D. Winkelstein, M. L. Ahamann, E. DiVito-Thomas, P.A.: Whaley and Wong's Nursing Care of Infants and Children, ed. 6. St. Louis, 1999, p. 2040. Copyrighted by Mosby, Inc. Reprinted by permission.

CHOOSE A NUMBER FROM 0 TO 10 THAT BEST DESCRIBES YOUR PAIN

No Mild Moderate Severe Very Worst

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Rule Of Nines	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors



Lund and Browder Chart

Body part	0 yr	1 yr	5 yr	10 yr	15 yr
a = ½ of head	9 ½	8 ½	6 ½	5 ½	4 ½
b = ½ of 1 thigh	2 ¾	3 ¼	4	4 ¼	4 ½
c = ½ of 1 lower leg	2 ½	2 ½	2 ¾	3	3 ¼

Relative percentage of body surface area (% BSA) affected by growth

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Snakes - Florida	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors

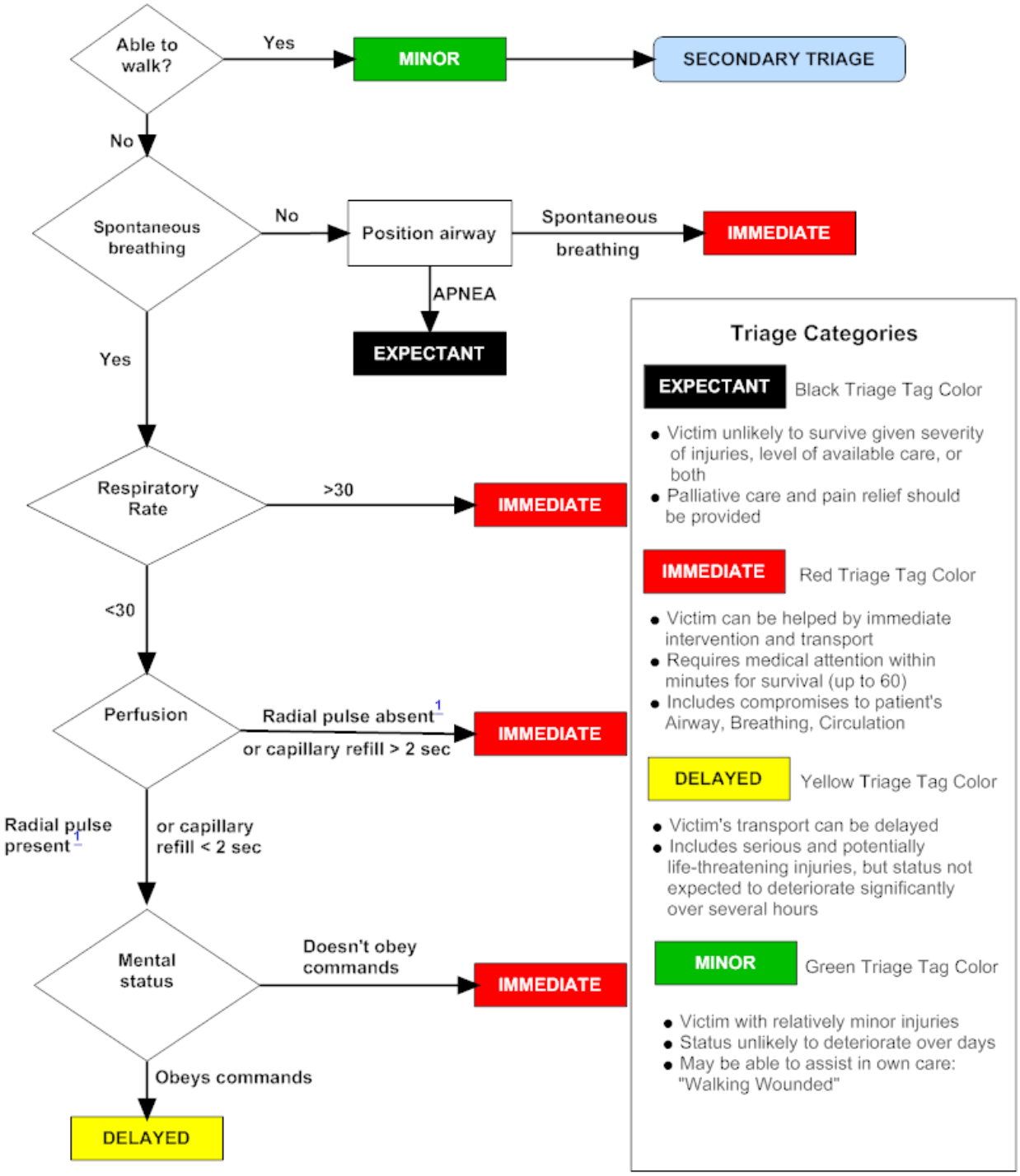
Coral Snake

Cottonmouth - Adult

Pygmy Rattler

Eastern Diamondback

Southern Copperhead

Timber Rattler

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	S.T.A.R.T. Triage Algorithm	ISSUE DATE 9-2009	APPROVED Dr. Rachel Semmons Dr. Andrew Thomas Medical Directors