



Tampa Fire Rescue Medical Protocols

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Tampa Fire Rescue

Medical Protocol



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Approved By:	Dr. Catherine L. Carrubba, Medical Director 
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TAMPA FIRE RESCUE MEDICAL PROTOCOL				
GENERAL PROTOCOL	REVISION DATE	Introduction and Foundation of Practice	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 available 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 fourth 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

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- clearly advise the patient to call back if they subsequently desire treatment and transport
- accurately document all components of the patient encounter

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

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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 orientation to person, place, and time and 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 transport at any time.

Guidelines for the use of these protocols

You will notice the medical protocols are divided into essentially three sections. The upper sections include history, signs, and symptoms and differential. The information in these boxed areas are meant as a guide to assist in obtaining pertinent patient information and to remind each of us to consider multiple potential causes for a patient complaint. From this, you should select those elements which are pertinent to the particular patient you have encountered. It is not expected that every historical

element or sign/symptom be recorded for every patient; it is expected that those elements pertinent to your patient will be included in the patient evaluation.

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The center section describes the essentials of patient care which are presented in a flow chart style. These protocols have been extensively reviewed by the Rescue Division and the Medical Director. This protocol represents proven practices which are the foundation of the care we provide. Virtually every patient should receive care suggested in this section, usually in the order described. Certainly exceptions will exist; the rationale for any deviation from the recommended course should be clearly explained in the patient care report. It is anticipated that such exceptions will be rare and all personnel are strongly encouraged to consult on-line medical control for assistance.

Finally the *Foot Notes* section at the bottom of the protocols provides suggestions for patient care based on experience and common medical knowledge. As with the first section, not every patient will require every element under the Foot Notes section. It is anticipated this section will be used as a practical guide for the implementation of the essentials of patient care.

In summary, these protocols describe the proven practices that are the foundation of our care. The additional information coupled with your experience and education will allow us to provide pre-hospital care second-to-none. Finally, an important item to remember, the manner in which we carry ourselves is often as important as the care we provide. For many of our less critically ill or injured patients, our human interaction has more of a healing effect than any of our proven practices.

Medical Director
City of Tampa Fire Rescue



Rescue Division Chief
City of Tampa Fire Rescue



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
GENERAL PROTOCOL	REVISION DATE	Code of Medical Ethics	ISSUE DATE 9-2009	APPROVED Catherine Carrubba Medical Director

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 EMT's 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.

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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.

Tampa Fire Rescue

Medical Protocol

ADMINISTRATIVE PROTOCOL

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Air Transportation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.

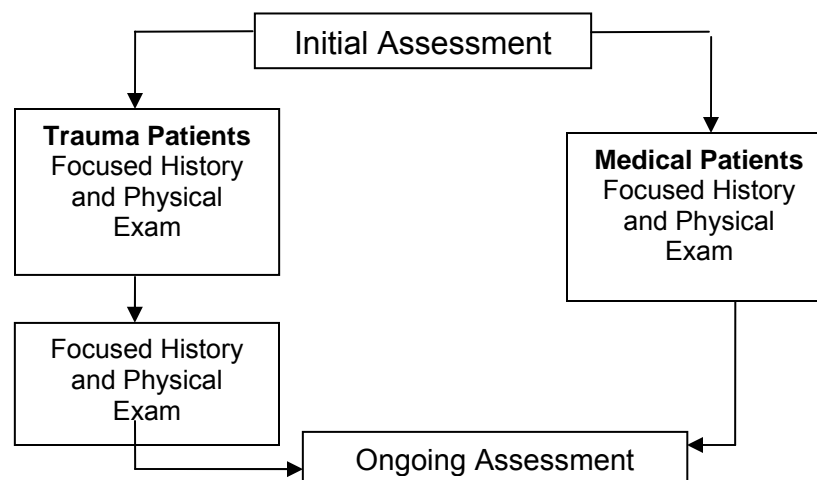
TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	ALS – BLS Determination	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Background:

This document represents a revision of the ALS to BLS Protocol, the first revision since implemented in 1998. 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.



The flow chart above will assist you in your patient care decisions; a chart with normally accepted vital signs is included. Additionally, the protocol has further identified “Dangerous Area” classifications which include the following body areas; abdomen, Chest (if abnormal breathing), Head (if not alert), Groin, Armpit and Neck.

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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

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PROTOCOLS TO BE USED WHEN SUMMONING BLS FROM THE SCENE

ABDOMINAL PAIN

ALS: <ul style="list-style-type: none"> Male ≥ 30; female ≥ 45 (<i>cardiac until proven otherwise</i>). Female age 12-50 who has fainted or has systolic BP <90 (ectopic) Not alert (<i>not at normal baseline</i>) VS not normal for age and size 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status No pain, any age group Abdominal pain present- does not fall within age or symptom categories mentioned under ALS.
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ALLERGIES: HIVES - MEDICATION REACTIONS - STINGS

ALS: <ul style="list-style-type: none"> Difficulty breathing or swallowing Condition worsening Not alert (<i>not at normal baseline</i>) VS not normal for age and size Known history of anaphylaxis 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status No difficulty breathing or swallowing Lungs clear to auscultation Rash, hives or itching may be present
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ANIMAL BITES - ATTACKS

ALS: <ul style="list-style-type: none"> Peripheral bites with serious hemorrhage Severe central bites (<i>see trauma alert criteria</i>) Large carnivores, zoo or exotic animals Any snake bites Not alert; abnormal VS 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status Superficial or minor bites Spider or insect bites, no other symptoms
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ASSAULT - RAPE

ALS: <ul style="list-style-type: none"> Possibly dangerous injuries Uncontrolled hemorrhage Abnormal breathing Not alert; abnormal VS 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status Not dangerous injuries
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BACK PAIN (NON-TRAUMATIC)

ALS: <ul style="list-style-type: none"> Fainting, age ≤ 50 (<i>rule out aortic aneurism</i>) Not alert Abnormal VS 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status
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BREATHING PROBLEMS

ALS: <ul style="list-style-type: none"> Abnormal ventilation or respiratory effort. Patient on home apnea monitor. 	BLS: <ul style="list-style-type: none"> Baseline normal ventilation and respiratory effort. Normal VS; baseline mental status
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BURNS - EXPLOSION

ALS: <ul style="list-style-type: none"> Large burns (> 15% is a Trauma Alert) Explosions; chemical burns (Hazmat) Difficulty breathing Not alert (<i>not at baseline</i>) Burns on face involving nose or mouth 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status Small burns < 15% Sunburn or minor burns
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CARBON MONOXIDE – INHALATION - HAZMAT

ALS: <ul style="list-style-type: none"> Hazmat incident Difficulty breathing Not alert (<i>baseline</i>) Abnormal VS 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status Breathing normally No chemical exposure (Hazmat)
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CARDIAC - RESPIRATORY ARREST

ALS: <ul style="list-style-type: none"> Cardiac/respiratory arrest is ALS. 	BLS: <ul style="list-style-type: none"> NONE
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CHEST PAIN

ALS: <ul style="list-style-type: none"> Abnormal breathing Suspected cocaine use Cardiac history (<i>CAD, past MI, hypertension</i>) Not alert Sweaty or changing color Age \geq 30 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status Normal breathing, age < 30 Regular pulse
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CHOKING

ALS: <ul style="list-style-type: none"> Symptomatic Abnormal breathing Not alert; abnormal VS 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status Not currently choking, can talk or cry (<i>appropriate for age</i>) Breathing normally
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CONVULSIONS - SEIZURES

ALS: ***CONSIDERED CARDIAC ARREST IN PATIENTS > / = 30 YEARS OF AGE *** <ul style="list-style-type: none"> • Pregnancy • Trauma • Diabetic • Cardiac history (<i>CAD, MI, hypertension</i>) • Continuous or multiple seizures • Abnormal breathing • No seizure history • Age \leq 3 	BLS: <ul style="list-style-type: none"> • Normal VS; baseline mental status • Breathing normally • History of epilepsy, with single, short seizure.
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DIABETIC PROBLEMS

ALS: <ul style="list-style-type: none"> • Unconscious; mental status not baseline • Glucose less than 70 • Abnormal breathing (<i>slow or rapid</i>) • High blood sugar with other ALS priority symptoms. 	BLS: <ul style="list-style-type: none"> • Normal VS; conscious and alert (<i>baseline</i>) • Breathing normally • High blood sugar - no associated symptoms
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DROWNING (NEAR DROWNING) - DIVING ACCIDENT

ALS: <ul style="list-style-type: none"> • Abnormal breathing • Not alert • Suspected neck injury • Diving or SCUBA accident 	BLS: <ul style="list-style-type: none"> • Normal VS; baseline mental status • Normal breathing • Normal vital signs • Meets no trauma alert criteria
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ELECTROCUTION - LIGHTNING

ALS: <ul style="list-style-type: none"> • ALL electrocution injuries are ALS 	BLS: <ul style="list-style-type: none"> • NONE
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EYE PROBLEMS - EYE INJURIES

ALS: <ul style="list-style-type: none"> • Severe eye injuries • Not alert • Hazmat 	BLS: <ul style="list-style-type: none"> • Minor eye injuries (<i>abrasion, welding, small foreign body, contact lens problem, allergy, infection</i>) • No associated injuries/exposures
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FALLS/TRAUMATIC BACK INJURIES

ALS: <ul style="list-style-type: none"> • Dangerous associated injury • Abnormal breathing • No pain or movement below injury • Numbness or tingling sensations • Not alert; abnormal VS for age • Age ≤ 3 	BLS: <ul style="list-style-type: none"> • Normal VS; baseline mental status • No dangerous associated injuries • Normal breathing • Meets no trauma alert criteria
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HEADACHE

ALS: <ul style="list-style-type: none"> • Not alert • Recent head injury (<i><48 hours</i>) • Stroke symptoms (<i>Refer to Cincinnati Pre-Hospital Stroke Scale</i>) • Sudden onset of severe pain (<i>“worst headache of my life”</i>) • History of cerebral aneurism 	BLS: <ul style="list-style-type: none"> • Normal VS; baseline mental status • Headache with no other symptoms • Describes headache as “typical”, like previous headaches • Negative on Cincinnati Pre-Hospital Stroke Scale
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HEART PROBLEMS

ALS: <ul style="list-style-type: none"> • Abnormal VS • Chest tightness, pressure, constricting band, crushing discomfort (<i>may radiate to arms, jaw, neck, or back</i>) • Nausea, sweating • Not alert • Cardiac history, although alone, is not criteria in an asymptomatic adult patient. (<i>CAD, MI, hypertension</i>) • Patient on home EKG monitor. • Recent cocaine use (<i>within 1 week</i>) • Firing of implanted defibrillator 	BLS: <ul style="list-style-type: none"> • Normal VS; baseline mental status • Asymptomatic patient with cardiac history
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HEAT - COLD EXPOSURE

ALS: <ul style="list-style-type: none"> • Cardiac history (<i>CAD, MI, hypertension</i>) • Not alert • Change in skin color; <ul style="list-style-type: none"> ▪ heat stroke: red, dry skin with decreased mental status ▪ frostbite: pale, grey, numb “bloodless” skin ▪ hypothermia: pale, cyanosis with decreased mental status 	BLS: <ul style="list-style-type: none"> • Normal VS & baseline mental status • No other symptoms
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TAMPA FIRE RESCUE MEDICAL PROTOCOL				
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HEMORRHAGE - LACERATIONS

ALS: <ul style="list-style-type: none"> 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 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status Minor bleeding from non- dangerous area. Non-traumatic bloody urine Vaginal bleeding, minimal blood loss <p><i>(See also Pregnancy/Childbirth/Miscarriage)</i></p>
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INDUSTRIAL - MACHINERY ACCIDENTS

ALS: <ul style="list-style-type: none"> Amputation; candidate for re-implantation <i>(Transport to TGH)</i> Other ALS priority symptoms 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status Minor injury No ALS priority medical symptoms
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OVERDOSE - INGESTION - POISONING

ALS: <ul style="list-style-type: none"> Not alert; unable to speak Abnormal breathing Tricyclic or other anti-depression medication overdose Cocaine Acid or lye Violent <i>(Rule out hypoxia, occult cerebral bleed, overdose, head trauma, etc.)</i> Age ≤ 3 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status No other ALS priority symptoms Violent, not due to hypoxia, occult head injury, acute cerebral bleed. <p><i>When in doubt, call Poison Control at 1-800-222-1222 for specific advice concerning type of overdose/ingestion/exposure.</i></p>
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PREGNANCY – CHILDBIRTH - MISCARRIAGE

ALS: <ul style="list-style-type: none"> 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. 	BLS: <ul style="list-style-type: none"> 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.
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TAMPA FIRE RESCUE MEDICAL PROTOCOL				
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PSYCHIATRIC - SUICIDE ATTEMPT

ALS: <ul style="list-style-type: none"> Abnormal mental status (<i>not alert</i>) Blood sugar < 70 Violent, with suspicion of overdose or other medical cause Hanging, strangulation, or suffocation Suspicion of overdose Suspicion of alcohol or drug withdrawal syndrome (DTs) 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status No other ALS priority symptoms Violent, with normal VS, no evidence for medical cause.
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STAB - GUNSHOT WOUND

ALS: <ul style="list-style-type: none"> Not alert Central wounds (<i>Trauma Alert</i>) Wounds with uncontrolled hemorrhage Abnormal breathing Hypotension 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status Peripheral wound, no ALS priority symptoms
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STROKE - CVA

ALS: <ul style="list-style-type: none"> Weakness or paralysis, numbness, speech or movement problems (<i>refer to the Cincinnati Pre-Hospital Stroke Scale</i>) Not alert - not baseline Abnormal breathing Symptoms not baseline 	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status No change in baseline symptoms No other ALS priority symptoms Symptoms completely resolved
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TRAFFIC ACCIDENTS

ALS: <ul style="list-style-type: none"> Age ≤ 3 Bleeding disorders (<i>i.e. Hemophilia</i>) Meets trauma alert criteria Not alert Abnormal breathing (<i>see also Traumatic Injuries below</i>)	BLS: <ul style="list-style-type: none"> Normal VS; baseline mental status Minor injuries (<i>ankle, arm, collar bone, elbow, finger foot, hand, hip, knee, lower leg, shoulder, toe, wrist</i>) Neck or back pain, no other ALS priority symptoms (<i>see also Traumatic Injuries below</i>)
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TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	ALS – BLS Determination	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

TRAUMATIC INJURIES, SPECIFIC

ALS: <ul style="list-style-type: none"> • Abnormal ABCs • Not alert • Significant mechanism, injury to possibly dangerous area • Suspected spinal cord injury • Trauma alert criteria 	BLS: <ul style="list-style-type: none"> • Normal VS; baseline mental status • Injury to non-dangerous area • Minor abrasions, lacerations to any area with no ALS priority symptoms or criteria
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UNCONSCIOUS - FAINTING (NON-TRAUMATIC)

ALS: <ul style="list-style-type: none"> • Abnormal VS • Multiple recent fainting episodes • Females with abdominal pain age 12-50 • Abnormal breathing • Cardiac history (<i>CAD, MI, hypertension</i>) • Not alert 	BLS: <ul style="list-style-type: none"> • 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
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TAMPA FIRE RESCUE ADMINISTRATIVE PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Blood Draw Protocols	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Purpose

To provide the proper procedure for acquiring legal blood alcohol samples, at the direction of law enforcement.

Policy

TFR companies will not be dispatched to a scene for the sole purpose of drawing blood for legal blood alcohol testing, except under special circumstances, which will be determined by Division Chief 1.

Procedure

If directed by law enforcement to draw blood for legal blood alcohol testing the following procedure will apply;

- ☐ the LEO must provide a sealed evidence kit which contains all of the necessary supplies to obtain the blood sample.
- ☐ following the blood draw the LEO will place the blood sample, along with all of the supplies used to obtain it, back in the kit.
- ☐ a chain of evidence label will be signed by the LEO, and the evidence kit sealed, in the presence of TFR personnel.

Exceptions

- ☐ The Signal Division will notify Division Chief 1 if law enforcement requests that TFR return to the scene for the sole purpose of drawing blood for a legal blood alcohol sample.
 - If Division Chief 1 determines that the circumstances warrant our return, the closest ALS engine will be dispatched to draw blood.
- ☐ Blood draws will not be performed on cadavers.
- ☐ TFR personnel will not draw blood from individuals transported to TFR facilities for such purposes.
- ☐ Under no circumstances will TFR personnel draw blood for DNA testing.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Blunt Trauma Code Guidelines	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 blunt trauma code, can be assumed to have sustained a terminal injury.

Procedure

- ☐ Ensure that the patient meets the criteria for blunt trauma code. This will include:
 - present history of blunt trauma.
 - pulseless.
 - apnea.
 - no palpable blood pressure.
 - no heart sounds, OR;
 - agonal rhythm (wide complex ventricular rhythm with a rate less than 40 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.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Blunt Trauma Code Guidelines	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Bystanders	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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	Child / Adult Abuse Management and Reporting	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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:
 - 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 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, 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	Controlled Substance Protocol	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

PREFACE

- ⇒ Failure to comply with this policy is in direct violation of Florida Administrative Code (FAC): Chapter 64J-2, 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-2.
- ⇒ The Medical Director shall have the final authority in the use of, and accountability for, controlled substances.

Policy

In accordance with FAC 64J-2, 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	REVISION DATE	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.

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) Morphine
- (3) Ativan
- (3) Sublimaze
- (3) Versed

On the third Thursday of each month the OIC will inventory the storage compartment, removing any controlled substance that has reached its expiration date or is deteriorated.

Chain of Control

- ☐ At shift change, or anytime that the on 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.

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

- ☐ 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.

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

- 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;
- ☐ It should be wasted in a sink, witnessed by an R.N. or Florida certified paramedic.
 - The witness must sign the controlled substance logbook.
 - The method of disposal will be documented in the PCR.
 - Document the amount used and the amount wasted, which must equal the total amount of the medication that was originally available in the ampoule.

Damaged or Opened Packaging

If the box lid is opened, or comes open from handling:

- tape the lid shut with clear tape.
- clearly date and initial the tape.
- make sure the expiration date is not obscured.
- document this action at the bottom of the controlled substance logbook page.

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

Replacement

- ☐ Outdated or deteriorated controlled substances will be taken to Central Supply for proper disposal and restocking.
- ☐ 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	Crime Scene Management	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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	Determination of Death Management of the Deceased Patient	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 / who is:
 - apnea
 - no palpable pulse
 - no blood pressure
 - unresponsive
 - not 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.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Determination of Death Management of the Deceased Patient	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- ☐ 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.

Termination of resuscitation efforts

- ☐ Discontinuation of CPR and ALS intervention may be implemented following contact with On-line Medical Control, if ALL of the following criteria have been met.
 - Patient must be 18 years of age or older.
 - Adequate CPR has been administered.
 - A patent airway has been achieved and adequate ventilation is in progress.
 - IV access has been achieved.
 - No evidence or suspicion of any of the following:
 - drug / toxin overdose
 - active internal bleeding
 - hypothermia
 - preceding trauma
 - Rhythm appropriate medications and defibrillation have been administered according to TFR Medical Protocols, for a total of 3 cycles of drug therapy, without return of spontaneous circulation (palpable pulse).
 - All TFR personnel involved in the patient's care agree that discontinuation of the resuscitation is appropriate.
- ☐ Consideration should be taken for the patient's age, duration of resuscitation, any positive response to resuscitation efforts and requests by family members.
- ☐ The paramedic may elect to transport while resuscitation is continued if scene safety is an overriding consideration. *
- ☐ If a bystander or first responder has initiated CPR or semi-automatic defibrillation prior to TFR arrival and any of the above signs of obvious death are present, CPR and ALS therapy may be discontinued by the Paramedic.
- ☐ If doubt exists, continue or start resuscitation immediately.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Determination of Death Management of the Deceased Patient	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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	Determination of Hospital Destination	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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. The obvious exceptions would be in cases of Trauma Alert, Stroke Alert and STEMI 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, within the geographical boundaries of Hillsborough County.

- 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.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Determination of Hospital Destination	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.

NOTE: See attached Hillsborough County E.M.P.C. bypass guidelines for further information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Do Not Resuscitate Order	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.

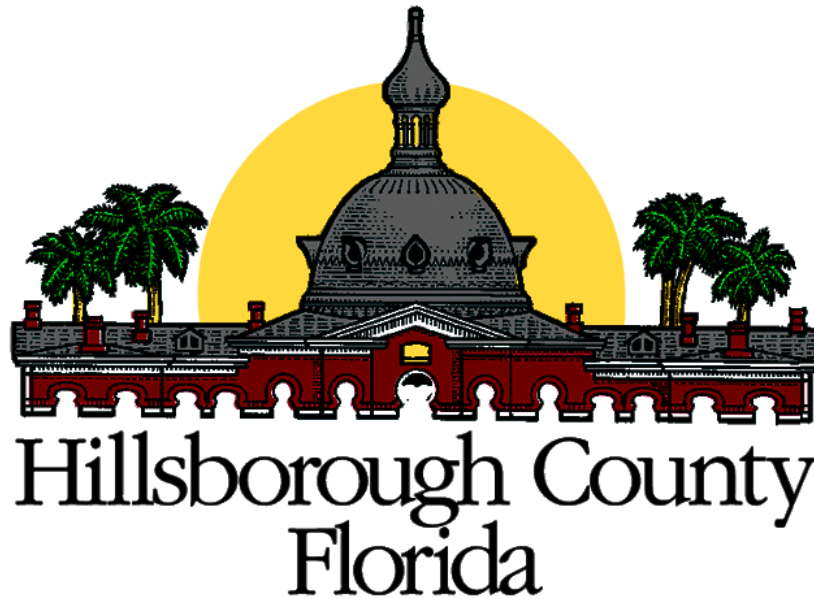
Purpose

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 guardian of the patient.
 - an on-scene physician.
- ☐ 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.

Hillsborough County Trauma System



Uniform Trauma Transport Protocol

System Participants:

Aeromed

American Medical Response

Americare

Bayflite

MEDEVAC

Hillsborough County Fire Rescue

Plant City Fire Rescue

Sun City Center Emergency Squad

Tampa Fire Rescue

Temple Terrace Fire Department

TransCare

Change 9, January 2007

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

Hillsborough County Uniform Trauma Transport Protocol

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Hillsborough County Uniform Trauma Transport Protocol

IA. DISPATCH PROCEDURES - GROUND

- A. In Hillsborough County, there are three ground advance life support emergency medical service providers: Tampa Fire Rescue, Hillsborough County Fire Rescue and Temple Terrace Fire Department. Requests for emergency services are dispositioned 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.

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 and Fire Departments (TTPD): all of Temple Terrace
 4. Plant City Police and Fire Departments (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.

Hillsborough County Uniform Trauma Transport Protocol

- 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. The secondary PSAPs and their areas of responsibility are:
1. Hillsborough County Emergency Dispatch Center (HCEDC): unincorporated County
 2. Tampa Fire Rescue (TFR): City of Tampa
 3. Florida Highway Patrol (FHP): all Florida state road emergencies
 4. Florida Poison Information Center: poison information for entire region

Calls transferred to HCEDC	Calls transferred to TFR
<p>Calls requesting emergency medical assistance originating in unincorporated Hillsborough County:</p> <p>are first routed through the primary PSAP at HCSO (Plant City's 9-1-1 calls are first routed through PCPD)</p> <p>and transferred to the secondary PSAP at HCEDC if call is medical in nature.</p>	<p>Calls requesting emergency medical assistance originating in the following localities*:</p> <p>the City of Tampa, TIA and USF</p> <p>are first routed through the primary PSAP of the respective jurisdiction (TPD, TIA PD, or USF PD)</p> <p>and transferred to the secondary PSAP at TFR if call is medical in nature.</p>
<p>HCEDC, TFR, Temple Terrace Police and Fire Departments, and MacDill AFB Alarm Center have received specialized training in emergency medical dispatch.</p> <p>*The only exclusion to this rule is when there is a request for basic life support (BLS) level of care for a patient with minor injuries and a psychiatric diagnosis, with combative behavior requiring restraint, or other non-ambulatory condition requiring stretcher transport, and/or is a Baker Act anywhere in Hillsborough County. All such calls will be transferred to HCEDC for referral to TransCare.</p> <p>FHP is a primary PSAP for 9-1-1 cellular phone calls only. Otherwise, it operates as the only non-emergency medical dispatch secondary PSAP. Both HCSO and TPD can refer calls in their jurisdiction that jointly falls on FHP's territory.</p> <p>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 Poison Information Center.</p> <p>Calls originating from MacDill AFB are handled there. Requests for additional emergency medical assistance would be processed as solicitation for mutual aid through TFR.</p> <p>Calls originating in the City of Temple Terrace are handled there. The only exception could occur when (a) credible initial request(s) for emergency medical assistance suggested the existence of more than one patient with potentially serious injuries. Depending on the location of the incident, the Temple Terrace PSAP could co-respond either HCFR or TFR through their respective secondary PSAPs, rather than solicit mutual aid upon Temple Terrace Fire Rescue arrival's at the scene.</p>	

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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

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- 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 six BLS ambulance services - American Medical Response, Americare, MEDEVAC, Plant City Fire Rescue, 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. The Cities of Tampa and Temple Terrace, 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.

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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.

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- M. Depending on the severity and extent of an incident, a tiered approach for additional assistance is followed when local emergency medical response needs exceed the capacity of the requested ALS ground emergency medical transport service.
1. 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. These arrangements are listed in the Hillsborough County Trauma Plan.
 2. Any incident, or combination of incidents involving either fifteen (15) or more trauma victims, each with unstable vital signs, and requiring emergency ALS, or for large number of lesser injured victims with unstable vital signs or injuries requiring examination/treatment at more than two hospital facilities, is considered a mass casualty event. Such an event requires activation of Hillsborough County Mass Casualty Operations Procedures. These processes are used to mobilize and coordinate the extraordinary resources necessary within the County and to manage any number of victims that would overload the normal trauma system in case of mass casualties. These activities are organized through the Department of Emergency Management.
 3. For catastrophic disaster response and recovery, Chapter 252, Florida Statutes (State Emergency Management Act, as amended) authorizes the State and its political subdivisions to develop and enter into mutual aid agreements for reciprocal mutual aid and assistance in case of emergencies too extensive to manage unassisted. The State of Florida, Division of Emergency Management developed the Statewide Mutual Aid Agreement to facilitate rapid assistance to all political subdivisions that participate in the mutual aid program and which are impacted by a major disaster. Hillsborough County is a signatory to this agreement. Hillsborough County ordinances further authorize the specific organizational and operational procedures related to declarations of a state of local emergency and coordination of emergency response with other levels of government and private agencies.

IB. DISPATCH PROCEDURES - AIR

- A. There are two air ambulance services available to Hillsborough County: Aeromed, operated by Tampa General Healthcare, and Bayflite, operated by Bayfront Medical Center. 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 specified in the Trauma Plan.
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, that individual will notify all responding field units of the action taken 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

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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

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- 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. Mechanism of injury
 - 3. Trauma alert status with criteria for trauma alert
 - 4. Pertinent primary impressions i.e.: CHI, chest injury, etc
 - 5. Airway status and abnormal vital signs
 - 6. 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.

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- 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.

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II. PRE-HOSPITAL PROCEDURES

A. Trauma alert criteria

1. Identification of an adult trauma alert patient (anatomical and physical development consistent with greater than 15 years of age) will be accomplished using the age-appropriate trauma scorecard methodology as per 64E-2.017, F.A.C.
 - a. If the patient earns a score of 2 when assessed according to the following criteria.

ADULT TRAUMA SCORECARD METHODOLOGY*		
COMPONENT	Item = 1 point	Item = 2 points
AIRWAY ¹	<ul style="list-style-type: none">• Sustained RR \geq 30	<ul style="list-style-type: none">• Active assistance²
CIRCULATION	<ul style="list-style-type: none">• Sustained HR $>$ 120	<ul style="list-style-type: none">• Lack of radial pulse with sustained fast heart rate ($>$120), or• BP $<$ 90
BEST MOTOR RESPONSE	<ul style="list-style-type: none">• BMR = 5	<ul style="list-style-type: none">• BMR of \leq 4, or• Paralysis, or• Suspected spinal cord injury, or• Loss of sensation
CUTANEOUS	<ul style="list-style-type: none">• Tissue loss³• GSW to extremities	<ul style="list-style-type: none">• Amputation⁴, or• 2nd or 3rd degree burns \geq 15% TBSA, or• Any high voltage electrical or lightning injury, or• Penetrating injury to head, neck or torso⁵
LONG BONE FRACTURE	<ul style="list-style-type: none">• Single fracture site due to MVA, or• Single fracture site due to a fall \geq 10 feet	<ul style="list-style-type: none">• Multiple fracture sites
AGE	<ul style="list-style-type: none">• \geq 55	
MECHANISM OF INJURY	<ul style="list-style-type: none">• Ejection from vehicle⁶, or• Deformed steering wheel⁷	

¹ Airway evaluation is designed to reflect the intervention required for effective care

² Not just oxygen

³ Degloving injuries, major flap avulsions ($>$ 5 inches)

⁴ Amputations proximal to the wrist or ankle

⁵ Excluding superficial wounds in which the depth of the wound can be easily determined

⁶ Excluding any motorcycle, moped, all terrain vehicle, bicycle or the open body of a pick-up truck

⁷ Only applies to driver of vehicle

*** NOTE: A SCORE OF 2 OR GREATER DETERMINES AN ADULT TRAUMA ALERT,**

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AND WILL BE TRANSPORTED TO A TRAUMA CENTER

- b. If the patient's score on the Glasgow Coma Scale (GCS) is less than or equal to 12 (excluding patients whose normal GCS score is 12 or less, as established by the patient's medical history or pre-existing medical condition when known), or
- c. In addition to trauma alert conditions "a" or "b" above, a trauma alert shall be called for any patient who has a neck laceration with associated swelling, sustained bleeding, escape of air from wound or stridor, and transported to the nearest trauma center.
 - i) A patient with any other neck laceration not meeting the above-described conditions shall be transported to the nearest trauma center, but not trauma alerted.
 - ii) No detailed wound exploration will be attempted by paramedics or EMTs other than to make the above determinations. Treatment will be directed towards ABCs and rapid transport.
- d. If the adult trauma patient meets neither trauma alert conditions "a", "b" nor "c" above but the senior care giver still has a strong suspicion of serious injury in the patient, the EMT or paramedic may use his/her judgment to transport as a trauma alert as long as the reason is justified on the patient care record left at the trauma center.

2. Elder gray-area criteria

The older/geriatric trauma patient who does not meet any of the aforementioned trauma alert criteria, but is 65 years or older, is "at-risk" and might benefit from a trauma center. It is recommended that the EMT or paramedic transport that patient to a trauma center if one or more of the following conditions are satisfied:

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a. Mechanism of injury

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
- ii) Blast

c. Injuries associated with an above mechanism:

- i) Evidence of chest or pelvic trauma

d. Traumatic injury and currently taking:

- i) Anticoagulants and blood thinners
- ii) Cardiac medications such as beta blockers and antiarrhythmics

e. Medical History of:

- i) Cardiac
- ii) CHF
- iii) COPD
- iv) Paralysis
- v) Dementia
- vi) Surgical: recent surgery, transplant recipient

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3. Identification of a pediatric trauma alert patient (anatomical and physical development consistent with 15 years of age or less) will be accomplished using the age-appropriate trauma scorecard methodology as per 64E-2.017, F.A.C.
- a. If the patient earns a score of 2 when assessed according to the following criteria:

PEDIATRIC TRAUMA SCORECARD METHODOLOGY*			
COMPONENT	Normal / No points	Item = 1 point	Item = 2 points
SIZE	<ul style="list-style-type: none">• Weighs more than 11 Kg (24 lbs)	<ul style="list-style-type: none">• Weighs 11 Kg or less (24 lbs) or measures 33 inches or less in length	
AIRWAY	<ul style="list-style-type: none">• Normal, or• Supplemental O₂		<ul style="list-style-type: none">• Assisted¹, or• Intubated
CONSCIOUSNESS	<ul style="list-style-type: none">• Awake, alert and age-appropriate orientation	<ul style="list-style-type: none">• Amnesia, or• Reliable Hx. of loss of consciousness	<ul style="list-style-type: none">• Altered mental status, or• Coma, or• Paralysis, or• Suspected spinal cord injury², or• Loss of sensation
CIRCULATION	<ul style="list-style-type: none">• Good peripheral pulses, or• SBP is greater than or equal to 90 mm Hg	<ul style="list-style-type: none">• The carotid or femoral pulse is palpable but neither the radial or pedal pulses are palpable, or• SBP is less than 90 mm Hg	<ul style="list-style-type: none">• Weak or nonpalpable carotid or femoral pulse, or• SBP is less than 50 mm Hg
FRACTURE	<ul style="list-style-type: none">• None seen nor suspected	<ul style="list-style-type: none">• Suspected single closed long bone fracture³	<ul style="list-style-type: none">• Any open long bone fracture, or• Multiple fracture / dislocation sites³
CUTANEOUS	<ul style="list-style-type: none">• No visible injury, or• Contusion, abrasion, minor laceration		<ul style="list-style-type: none">• Major tissue disruption⁴, or• Amputation³, or• 2nd or 3rd degree burns to 10% or more of total body surface area, or• Any high voltage electrical or lightning injury, or• Penetrating injury to head, neck, or torso

¹ Includes measures such as manual jaw thrust, continuous suctioning, or other adjuncts

² As evidenced by sensory or motor findings of weakness, decreased strength or sensation

³ Proximal to the wrist or ankle

⁴ Major degloving injuries, major flap avulsions, or major soft tissue disruption

*** NOTE: A SCORE OF 2 OR GREATER DETERMINES A PEDIATRIC TRAUMA ALERT, AND**

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WILL BE TRANSPORTED TO A PEDIATRIC TRAUMA CENTER

- b. In addition to trauma alert conditions “a” above, a trauma alert shall be called for any patient who has a neck laceration with associated swelling, sustained bleeding, escape of air from wound or stridor, and transported to the nearest pediatric trauma center.
 - i. A patient with any other neck laceration not meeting the above-described conditions shall be transported to the nearest pediatric trauma center but not trauma alerted.
 - ii. No detailed wound exploration will be attempted by paramedics or EMTs other than to make the above determinations. Treatment will be directed towards ABCs and rapid transport.
 - c. If the pediatric trauma patient meets neither trauma alert conditions “a” nor “b” above but the senior care giver still has a strong suspicion of serious injury in the patient, the EMT or paramedic may use his/her judgment to transport as a trauma alert as long as the reason is justified on the patient care record left at the trauma center.
4. 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, according to steps 4 & 5 below. 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)

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5. 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)
6. 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.
7. 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" according to steps 3 through 5 above.
8. Only 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.
9. "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.

B. 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.

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- 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 64E-2.015(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.

C. 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.

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)
- 2. 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.

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3. 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.
4. Additional agency-specific protocols involving termination of resuscitation efforts for a trauma code at the scene are covered in the individual providers' medical protocols.

D. 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.

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2. The transporting vehicle personnel shall deliver an accurate and complete copy of the patient care record with the trauma patient to the trauma center, pediatric trauma center, or non-trauma center hospital.
 - a. If the transporting agency is unable to finish the patient care record before returning to service, the emergency medical service provider will at least provide the receiving facility certain written information on that form at the time the responsibility of the patient is transferred to include:
 - i. date of service
 - ii. incident #
 - iii. name and ID#s of all involved agencies
 - iv. patient name
 - v. all information about the assessment and interventions
 - vi. applicable elements of the trauma information section, including reason for trauma alert

A fully completed patient care record will be submitted (by fax or by hand) to the receiving facility before the end of the shift.
 - b. The air medical programs, as secondary response services, frequently do not have access to this information initially and are excepted as follows: The flight crew will leave an abbreviated version of the patient care record completed to the extent possible at the time of delivering the patient to the receiving facility. A fully completed patient care record will be submitted (by fax or by hand) to the receiving facility before the end of the shift.
3. 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) 272-6268 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. To ensure legibility, only the top (original) pages of the form will be faxed.

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4. 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. 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 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 2E or 3E 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 Healthcare has the only

Hillsborough County Uniform Trauma Transport Protocol

burn center in the County.

- b. Amputation with the potential for reimplantation. Currently Tampa General Healthcare 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 Healthcare is the only State Department of Vocational Rehabilitation designated facility in the County for the State 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.

Hillsborough County Uniform Trauma Transport Protocol

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 64E-2.015(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 64E-2.015(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.

Hillsborough County Uniform Trauma Transport Protocol

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 64E-2.015(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 64E-2.015 (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.

Hillsborough County Uniform Trauma Transport Protocol

- 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 Healthcare 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	(800) 234-6428

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:

Hillsborough County Uniform Trauma Transport Protocol

1. To arrange ground transport by an emergency medical services provider, the hospital staff should dial 9-1-1 to place the request according to the dispatch procedures outlined in section IA. The emergency medical dispatcher shall dispatch the closest available ALS ground unit within that jurisdiction to the hospital.
 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. It is recommended that a Hillsborough County's Inter-Hospital Trauma Transfer Order sheet (or hospital equivalent) be utilized during the transfer of any trauma patient between hospitals with the goal of improving patient care and documentation of same during transport. A sample of this format is included at the end of this section.
- I. 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.

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

**HILLSBOROUGH COUNTY TRAUMA AGENCY
INVENTORY OF HOSPITAL SPECIALTY CALL**

TRAUMA CENTER OR INITIAL RECEIVING HOSPITAL	Gen Surg	Neurosurg	Ortho	Vascular
Lewis M. Flint, M.D. Chief, Trauma and Surgical Critical Care Tampa General Healthcare P.O. Box 1289 Tampa FL 33601	Level I Trauma Center			
Forrest Haslup, M.D. Medical Director, Trauma Services St. Joseph's Hospital P.O. Box 4227 Tampa FL 33677	Level II Trauma Center			
Andre Landreville, M.D. Director of Emergency Services University Community Hospital - Carrollwood 7171 N. Dale Mabry Tampa FL 33614	•		•	
Gabriel Sanchez, M.D. Director of Emergency Services Town and Country Hospital 6001 Webb Road Tampa FL 33615	•		•	•
Jack Scott, M.D. Medical Director, Emergency Department Brandon Regional Hospital 119 Oakfield Drive Brandon FL 33511	•	•	•	•
Amy Conley, M.D. University Community Hospital - Fletcher Director of Emergency Services 3100 E. Fletcher Avenue Tampa FL 33613	•	•	•	•
Dean Christensen, M.D. Medical Director, Emergency Department South Florida Baptist Hospital P.O. Drawer H Plant City FL 34289	•		•	
Raymond Slezynski, M.D. Director of Emergency Services Memorial Hospital 2901 Swann Avenue Tampa FL 33609	•		•	
Chester Kokseng, M.D. Director, Emergency Department James A. Haley Veteran's Adm. Hospital 13000 N. Bruce B. Downs Blvd. Tampa FL 33612	NA – Not Initial Receiving Facility for Trauma			
A. Ghassan Ksaibati, M.D. Medical Director, Emergency Department South Bay Hospital 4016 State Road 674 Sun City Center FL 33573	•		•	•

Hillsborough County Uniform Trauma Transport Protocol

Hillsborough County Inter-Hospital Trauma Transfer Orders			
Date/Time	Physician's Orders:		
	Transfer to:		
	Mode of transfer: () Ground ambulance () Helicopter		
	EMS Transport Agency:		
	Accepting Physician:		
	Diagnosis:		
	Patient is being transferred due to: () Trauma Alert Criteria () Other		
	Attach original scene patient care record or list trauma alert criteria:		
	() Copies of all pertinent patient records attached		
	Include copies of following x-rays:		
	Vital Signs Every: () 5 () 10 () 15 Minutes		
	Cardiac Monitor		
	Notify receiving facility if: HR> or HR<		
	SBP> or SBP<		
	DBP> or DBP<		
	Airway: () Continuous monitor O ₂ Sat; Notify receiving facility if SAO ₂ <		
	() CO ₂ monitor		
	Oxygen: () Nasal cannula at	L/min	() Face mask at L/m
	() Ventilator settings	TV	FIO ₂ Rate Mode
	PEEP		
	IV instructions:		
	() Foley to gravity		
	NG tube: () Clamp () Open to air		
	() Chest tube to water seal		
	() Full C-spine precautions		
	Medications during transport:		
	Nursing report called to: _____ Phone number _____		
	Sending Nurse: _____		
	Sending Physician's signature		

Hillsborough County Uniform Trauma Transport Protocol

V. EMS MEDICAL DIRECTORS

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

EMERGENCY MEDICAL SERVICE	MEDICAL DIRECTOR
Aeromed	Catherine L. Carrubba, M.D.
American Medical Response	Joseph A. Nelson, D.O.
Americare	Gabriel Sanchez, M.D.
Bayflite	Charles I. Sand, M.D./Michael Lozano, M.D./Steve Epstein, M.D.
Hillsborough County Fire Rescue	Michael Lozano, Jr., M.D.
MEDEVAC	Janet S. Pettyjohn, D.O.
Plant City Fire Department	Dean Christensen, M.D.
Sun City Center Emergency Squad	Ahmad Ksaibati, M.D.
Tampa Fire Rescue	Catherine L. Carrubba, M.D.
Temple Terrace Fire Department	Dean A. Christensen, M.D.
TransCare	Catherine L. Carrubba, M.D.

VI. HOSPITALS WHICH MAY RECEIVE TRAUMA ALERT PATIENTS

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

A. Trauma Centers/Pediatric Trauma Centers

1. St. Joseph's Hospital (Level II trauma center & pediatric trauma center, Hillsborough County)
2. Tampa General Healthcare (Level I trauma center & pediatric trauma center, Hillsborough County)
3. Lakeland Regional Medical Center, Level II trauma center, Polk County)

B. Non-Trauma Center Hospitals Which Meet State Criteria for Initial Receiving Hospitals per 64E 2.015(3)(a), F.A.C.

1. Brandon Regional Hospital
2. South Bay Hospital
3. Memorial Hospital - Tampa
4. South Florida Baptist Hospital
5. Town & Country Hospital
6. University Community Hospital (Carrollwood campus)
7. University Community Hospital (Fletcher campus)

Hillsborough County Uniform Trauma Transport Protocol

VII. ALL HOSPITALS DISTRIBUTED THE UTTP (FACILITIES WITH EDs)

The following are trauma centers/pediatric trauma centers, and hospitals to which the Hillsborough County emergency medical service provider may transport trauma patients. Each facility has been provided a copy of the Hillsborough County UTTP which the emergency medical service provider will follow to determine trauma transport destinations:

Facility ID#	Trauma Centers/Pediatric Trauma Centers (3)
12914	St. Joseph's Hospital (Level II, trauma center/pediatric trauma)
12915	Tampa General Healthcare (Level I, trauma center/pediatric trauma)
15303	Lakeland Regional Medical Center (Level II, pediatric trauma)

Facility ID#	Non-Trauma Center Hospitals (9)
12909	Brandon Regional Hospital
12912	South Bay Hospital
32902	6th Medical Group, MacDill A.F.B.
12901	Memorial Hospital – Tampa
12913	South Florida Baptist Hospital
12902	Town & Country Hospital
12904	University Community Hospital (Carrollwood campus)
12917	University Community Hospital (Fletcher campus)
32901	James A. Haley Veteran's Administration Hospital

VIII. 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 64E-2.015(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.

Hillsborough County Uniform Trauma Transport Protocol

B. Record of Hillsborough County hospitals' self-certification of compliance with criteria in 64E-2.015(3)(a), F.A.C.

Non-Trauma Center Hospitals (Meet criteria)	Other Hospitals (Do not meet criteria)
1) Brandon Regional Hospital 2) South Bay Hospital 3) Memorial Hospital - Tampa 4) South Florida Baptist Hospital 5) Town & Country Hospital 6) University Community Hospital (Carrollwood)	1) James A. Haley Veteran's Administration Hospital 2) H. Lee Moffitt Cancer Center 3) 6th Medical Group, MacDill A.F.B. 4) Shriner's Hospital for Crippled Children 5) Kindred Central Hospital 6) Kindred Tampa Bay 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.(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

Trauma Transport Destination Determinations

3. Describe the historical patient flow, patient referral, and transfer patterns used to define the geographic areas of the proposed trauma agency.

Hillsborough County's geographical profile holds important implications for area hospitals and the trauma system. HCTAs jurisdiction, a single county trauma service area (TSA #10) shares borders with three multi-county trauma service areas encompassing seven counties: Pasco and Pinellas in TSA #9, Polk in TSA #11 which also includes Hardee, and Manatee in TSA #13, which also counts DeSoto and Sarasota in its region. None of these TSAs has a trauma agency, though the former two have one trauma center each (a level II trauma center/pediatric trauma center and a level II trauma center) within their regions respectively. The second of these, Lakeland Regional Medical Center (LRMC), is an alternative nearby destination to transport critically injured adult patients by ground from easternmost Hillsborough when air transport is neither possible because of inclement weather, nor prudent because of increased time required to reach a more distant in-county trauma center. In recent years, the proliferation of aeromedical bases in West Central Florida has facilitated access to Hillsborough's two trauma centers for these aforementioned contiguous TSAs and other West Central Florida counties such as Citrus, Hernando, and Lake-Sumter.

Hillsborough County Fire Rescue analyzed transport times within the County to determine the most appropriate mode of transport (air or ground). Its administration identified two zones, one central and one east, where flying patients were found not to be indicated. It established a No Fly Zone policy as a guideline for their personnel, subject to revision as the data may warrant. Since implementation in 2002, there has been an overall reduction in the time it takes a trauma alert patient to reach a trauma center, an improvement in helicopter availability, and a reduction in the number of inappropriate flights because of distance. No other agencies are subject to this policy.

Within the County, patient flow for trauma alerts continues 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 others back up. A third flight program (LifeNet5) based out-of-county (Polk) acts as a third tier emergency backup resource. 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. The map LOCATION OF TRAUMA CENTERS, HOSPITALS AND THEIR HELIPADS IN HILLSBOROUGH COUNTY is located in Appendix B.

Trauma Transport Destination Determinations

The response to incidents occurring on the causeways connecting Pinellas County with Hillsborough is determined by the direction of traffic. Pinellas County ambulances will respond to the east bound lanes of the Courtney Campbell, Howard Frankland and Gandy bridges. Hillsborough Fire and Tampa Fire Rescue will answer calls on the west bound lanes of traffic. Patients are usually transported to hospitals in the opposing county of ambulance origin.

Special transport destination criteria

The HCTA supports the principle that certain traumatic injuries recognized in the field are most appropriately managed when those patients are initially transported to the trauma center having the specialized capabilities to handle specific conditions. The HCTA recognizes the following three circumstances under which an alternative trauma center transport destination shall be overridden if the patient meets particular criteria:

- ◆ Suspected spinal cord injury with evidence of significant motor or sensory involvement.

Any patient that the prehospital provider suspects has suffered an insult to the spinal cord and has either a motor or sensory deficit shall be considered to have experienced spinal cord injury for the purpose of determining the most appropriate trauma center. Currently Tampa General Healthcare is the only State Department of Vocational Rehabilitation designated facility in the County for the State Brain and Spinal Cord Injury Program (BSCIP). This trauma center is certified in both the acute and rehabilitation phases of care for these specific injuries.

- ◆ A patient with trauma alert burn criteria (2 or 3 burn involving 15% or greater body surface area) and/or a circumferential burn.

Currently Tampa General Healthcare has the only burn center in the County.

- ◆ A patient with an amputation with the potential for reimplantation. Currently Tampa General Healthcare is the only trauma center with a comprehensive hand surgery team on call 24 hours a day.

All non-trauma center hospitals have transfer agreements with at least one trauma center in the County.

TAMPA FIRE RESCUE ADMINISTRATIVE PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Infection Control Protocol	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.
- ☐ A pocket mask with a one-way valve will be carried on every vehicle and stocked in each station.
- ☐ 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.

TAMPA FIRE RESCUE ADMINISTRATIVE PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Infection Control Protocol	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- ☐ 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	Inter-facility Transports	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Inter-facility Transports	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Inter-facility Transports	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- ☐ 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	Utilization of On-Line Medical Control Physician	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 or Med 7 radio.
 - This system will utilize the odd / even day method with St. Joseph's on even and Tampa General on odd days.
- ☐ 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	Palliative Care	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Purpose

The goal of palliative care is to provide “comfort” care to the patient with a terminal illness, prior to their death.

Policy

The TFR Palliative Care Protocol will only be activated when official documentation of patient status and confirmation of patient identification is available. In their absence, the patient will be cared for according to TFR protocols and training.

Documentation

A State of Florida, out of facility, Do Not Resuscitate Order (DNRO) will serve as official documentation. Verify the signatures of the attending and verifying physician(s), as well as the presence or absence of a Living Will. Ensure that the documentation, or a copy, attends the patient to the receiving facility. If in doubt, contact an on-line medical control physician for confirmation.

Identification

Confirm that the patient is the person referred to in the DNRO. The paramedic should request to see the original DNRO and document it's presence in the ePCR. If the patient's condition does not allow for personal verification of their identity then identification may be verified by individuals who are present at the scene, such as a nurse, hospice program provider, patient's family members, or the patient's physician, if present.

- The name of the individual identifying the patient, the original or a copy of the DNRO, and a copy of the Living Will, if available, must accompany the patient to the receiving facility. A copy of the DNRO will remain with the patient throughout care and will be submitted to the receiving facility to be returned to the patient or the family.

Procedure

☐ **Limited Patient Assessment:**

- History of present illness, along with the reason TFR was called.
- Pertinent medical history, medications, and allergies.
- At least two sets of vital signs.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Palliative Care	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

☐ **Supportive Care for Symptom Control**

- Respiratory Distress
 - Administer oxygen as needed, by nasal canula or oxygen mask only.
 - Position for comfort.
 - Suction as needed.
 - Ventilatory assistance is contraindicated.
- External Bleeding
 - Standard treatment to control bleeding (direct pressure, elevation, dressing).
 - Do NOT establish IV therapy.
- Fractures
 - Immobilize if needed, per TFR protocol.
- Uncontrolled pain or other symptoms (i.e. severe nausea).
 - Allow the patient, family members, or other non-TFR health care provider to administer the patient's medications. This care will not require that they accompany the patient to the hospital.
 - TFR paramedics may administer pain medication, per protocol, via pre-existing IV lines, or IM, if no other pain medication is available for oral use at the scene. See "Pain Management Protocol" for further information.
- Management of Pre-existing IV lines
 - IV lines that are pre-existing should be monitored.
 - Do NOT establish IV therapy.
- Treat other medical complaints such as asthma, burns, etc., according to protocol. However, remember that advanced airway management is contraindicated.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Palliative Care	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

☐ **Inappropriate Care**

- Initiation of IV therapy.
- CPR.
- Intubation or oral airway placement.
- Ventilatory assistance.

☐ **Transportation**

Transport to the hospital that the patient prefers, if feasible.

NOTE: This protocol does not apply to vehicular accidents or multiple patient incidents.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Passengers in TFR Transport Vehicles	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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**) who may accompany the patient, appropriately restrained in the front passenger seat, as long as they do not interfere with patient care or increase the patients distress. Consideration should be given to parents providing comfort to children.
 - law enforcement personnel, as needed for security.
 - any one with prior approval from TFR administration.
 - a health care professional assisting in an inter-facility transport.
 - 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	Patient Care Protocol Use	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Policy

All patient care will be provided as directed by the Tampa Fire Rescue Medical Protocols.

Purpose

The purpose of this policy is to:

- provide written documentation of the expected standard of care.
- provide patient care guidelines which comply with State of Florida EMS regulations.
- provide an initial training and continuing education tool for EMS providers.
- provide a standard of care to which each EMS provider will be held accountable for through monitoring, evaluation, and when necessary, disciplinary action.
- protect Tampa Fire Rescue and its personnel from undue risk and liability.

Procedure

- ☐ Tampa Fire Rescue Medical Protocols have been designed with the following structural components:
 - history
 - signs / symptoms
 - differential
 - treatment algorithm
 - footnotes
- ☐ Each patient evaluation requires the execution of protocol components based on the patient's complaint, following a standard thought process.
 - Obtain historical information from the patient and family.
 - Signs and symptoms should be documented based on the patient's history.
 - A physical exam should be completed based on the required "EXAM" components listed in the "Pearls" section.
 - Each differential should be considered based on the history, signs, symptoms, exam and treatment response.
 - Treatment should be initiated based on the appropriate algorithm.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Patient Care Report Documentation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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:

- 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.
- all medications administered with their associated time.
- 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.

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.
- ☐ A TFR 365 must be submitted for every patient transported.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Patient Personal Property	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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

- ☐ For the purpose of this procedure personal property includes money, coats, hats, gloves, scarves, shoes, dentures, eyeglasses, sporting equipment, canes, wallets, pocketbooks, purses, keys, watches, jewelry, and medications.
- ☐ 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 MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Patient Restraint Policy	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 (law enforcement) 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

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Patient Restraint Policy	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.

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 without a Protocol	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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	Physician On-scene	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 with the physician. The physician must affix his signature to the form, stating that he 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	Radio Report Format	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 and presence of fetal heart tones as appropriate.
 - Glasgow Coma Scale.
 - 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.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Radio Report Format	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 RDO, when paged.
 - emergency calls, when approved by a supervisor.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Refusal of Service	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Purpose

To assist TFR personnel in dealing with the patient who activates the EMS system, and then refuses care and transportation.

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 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; note if vital signs are unobtainable secondary to poor patient cooperation.
- ☐ 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, a competent patient shall be defined as one who:
 - is over 18 years of age, or is an emancipated minor, which includes:
 - a pregnant female.
 - a female who has given birth.
 - a married person of either sex.
 - 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 by drugs or alcohol, and has no history of mental illness.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Refusal of Service	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.
 - Minors exhibiting any of the above findings will be transported by TFR under all conditions.
- ☐ 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 release form in front of two witnesses.
 - 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, document the refusal on the PCR.
- ☐ Advise the patient, parent, or guardian that in the event they change their mind, TFR will return and transport the patient to a medical facility of their choice, within protocol guidelines.

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

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
ADMIN PROTOCOL	REVISION DATE	Transport Policy	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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	Vital Signs	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.
 - 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				
ADMIN PROTOCOL	REVISION DATE		ISSUE DATE	APPROVED Dr. Catherine Carrubba Medical Director

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Tampa Fire Rescue

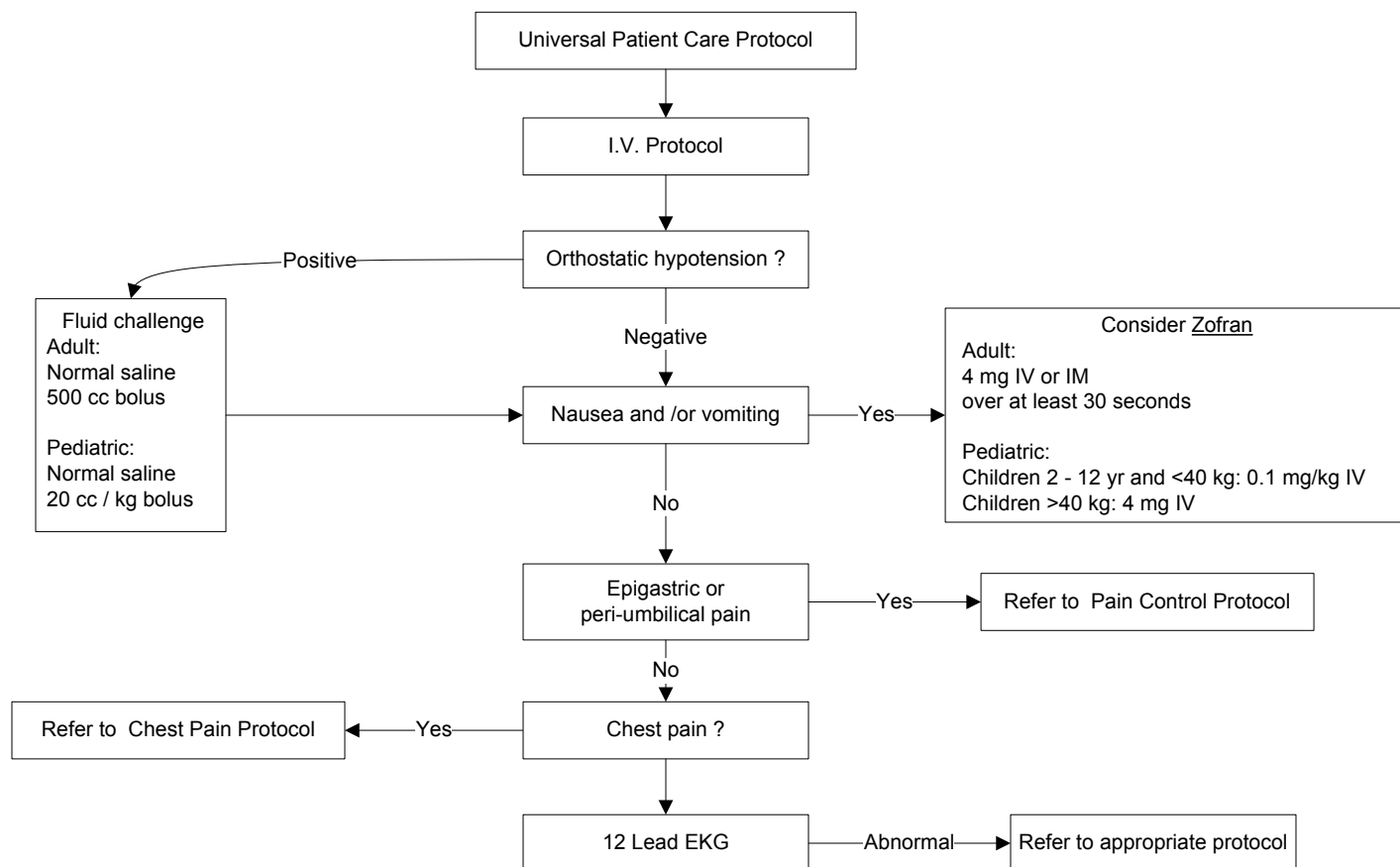
Medical Protocol

TREATMENT PROTOCOLS

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Abdominal Pain	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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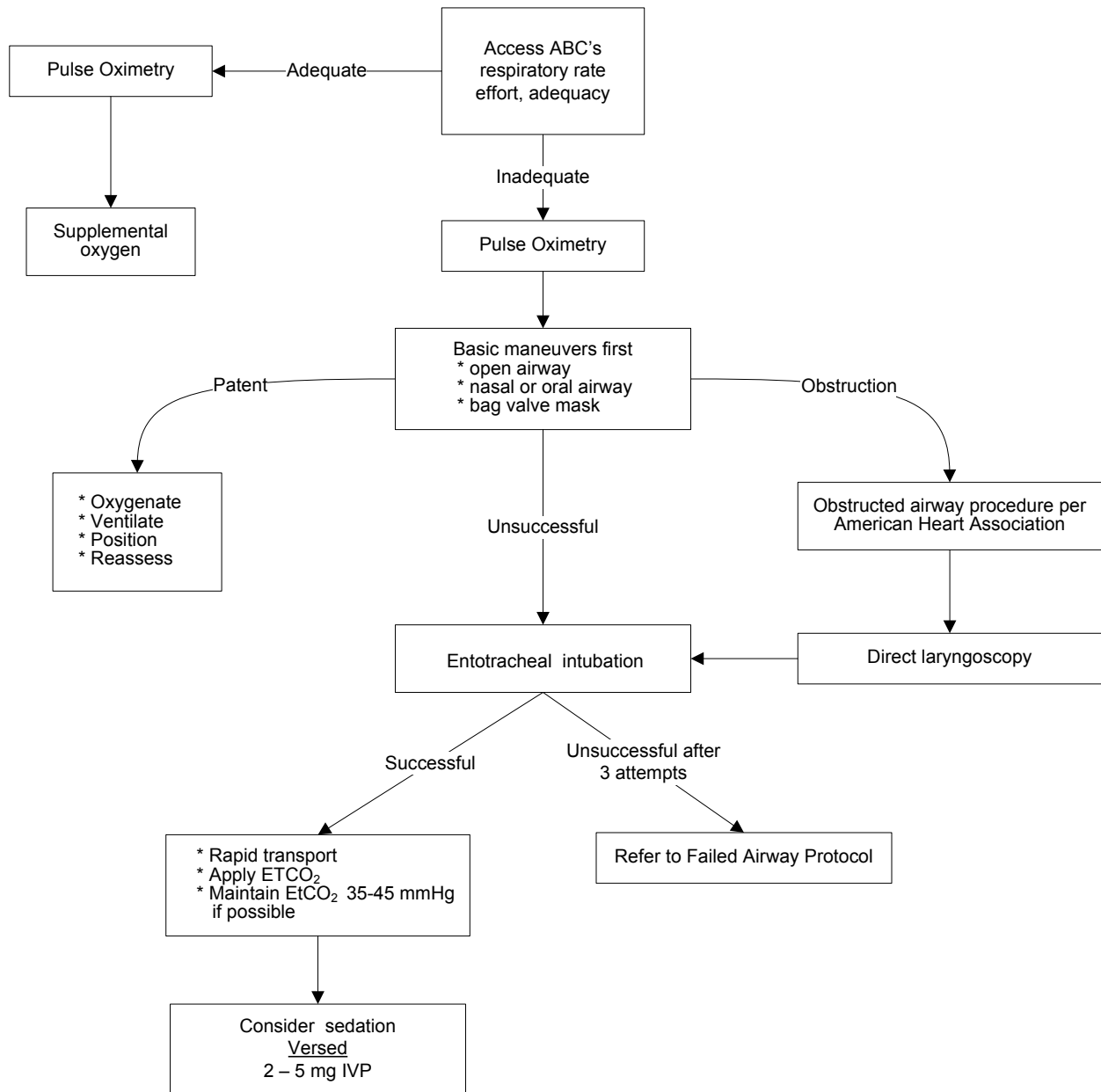
History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Past medical history * Past surgical history * Medications * Onset of pain * Duration of pain * Severity (1-10) * Radiation of pain * Character of pain (sharp, "crampy", constant, dull, etc.) * Fever * Time of last meal * Improvement or worsening with food or activity * Last bowel movement or emesis * Menstrual history (pregnancy) 	<ul style="list-style-type: none"> * Pain (local/migration) * Tenderness * Nausea or vomiting * Diarrhea or constipation * Dysuria * Vaginal bleeding or discharge * Pregnancy 	<ul style="list-style-type: none"> * Pneumonia * Liver (hepatitis, CHF) * Peptic Ulcer * Gallbladder * Myocardial infarction * Pancreatitis * Kidney stone * Abdominal aneurysm * Appendicitis * Bladder/ Prostate Disorder * Pelvic (pelvic inflammatory disease, ectopic pregnancy, ovarian cyst) * Spleen enlargement * Diverticulitis * Bowel obstruction * Gastroenteritis



Footnotes:

- * Exam, ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Evaluate blood glucose levels in all diabetic patients.
- * Abnormal pain in women of childbearing age should be treated as an ectopic pregnancy until proven otherwise.
- * EKG should be performed in all cases of epigastric abdominal pain.
- * Consider abdominal aneurysm in patients over 50 years of age.
- * Appendicitis presents with rebound tenderness.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Airway / Adult	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

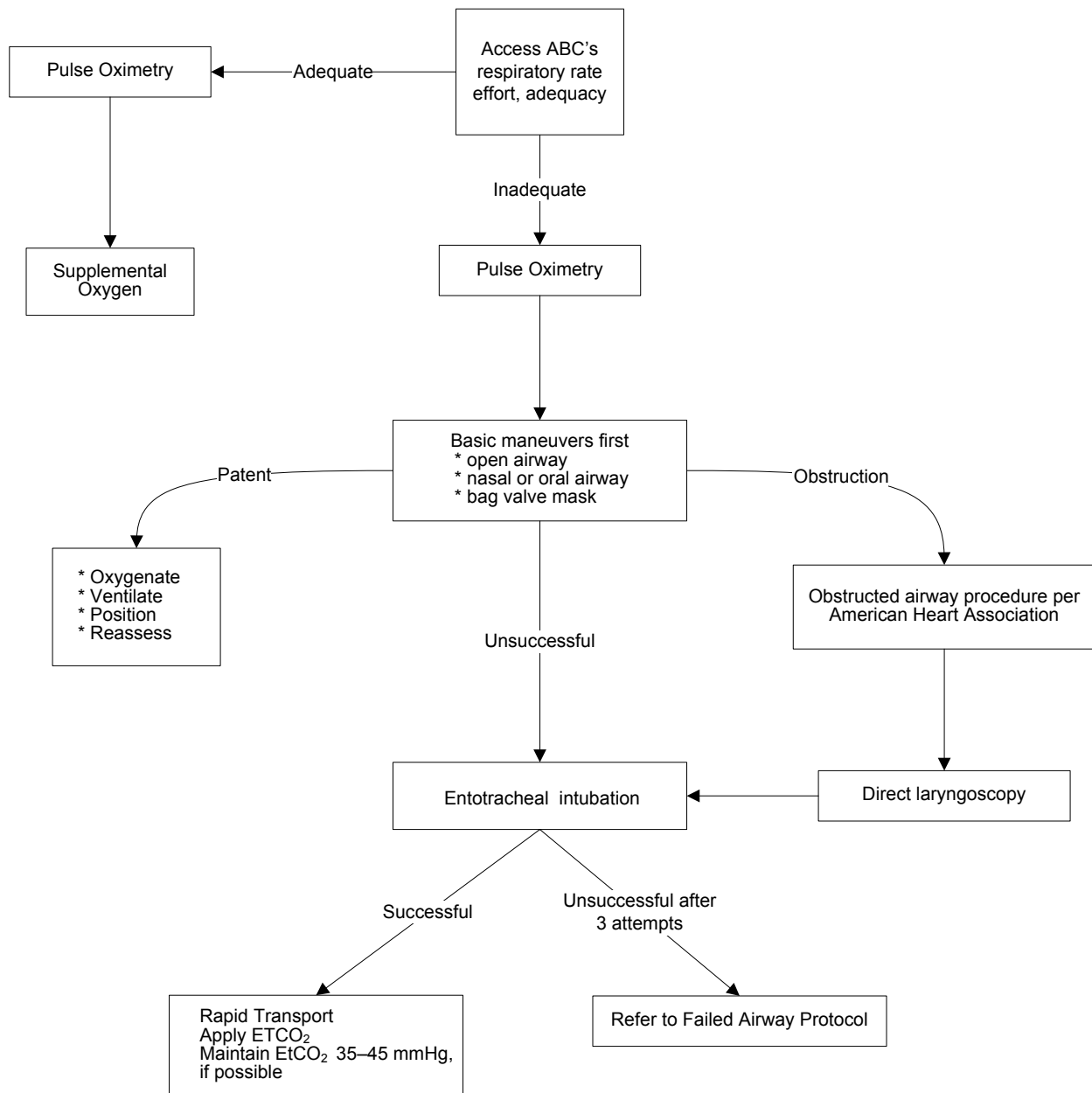


Footnotes:

For this protocol, "Adult" is defined as 12 years of age or older.

- * Capnography is mandatory with all methods of intubation and its use documented on the PCR.
- * ETCO2 should be utilized to monitor ventilations with the BVM.
- * Limit intubation attempts to 3 per patient.
- * Maintain C-spine immobilization for patients with suspected spinal injury.
- * Do not assume hyperventilation is psychogenic; use oxygen, not a "paper bag".
- * Sellick's maneuver should be used to assist with difficult intubations.
- * Nasogastric / orogastric tube placement should be considered in all intubated patients.
- * Continuous pulse oximetry should be utilized in all patients with an inadequate respiratory function.
- * Consider c-collar to maintain ETT placement for all intubated patients (REMOVE COLLAR upon patient TRANSFER).
- * Ventilatory rate should be 8 - 12 per minute to maintain pCO₂ of 35-45 mmHg.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Airway / Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

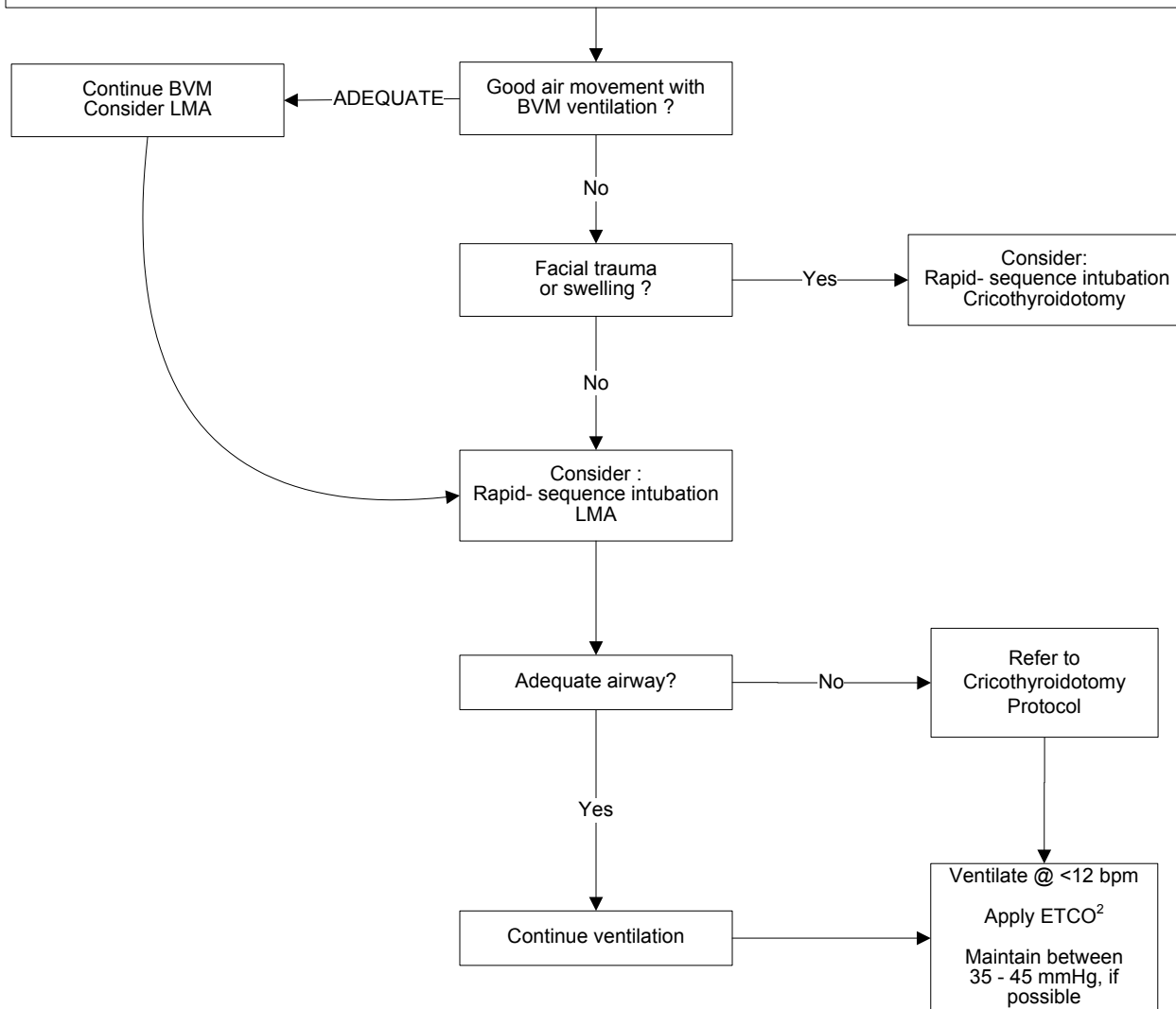


Footnotes:

- * ET capnography is mandatory with all methods of intubation. The results must be documented.
- * ETCO₂ should be utilized to monitor ventilations with the BVM.
- * Limit intubation attempts to 3 per patient.
- * Do not use cuffed ET tubes for patients less than 8 years of age.
- * Maintain C-spine immobilization for patients with suspected spinal injury.
- * Do not assume hyperventilation is psychogenic; use oxygen, not a "paper bag".
- * Sellick's maneuver should be used to assist with difficult intubations.
- * Nasogastric tube placement should be considered in all intubated patients.
- * Continuous pulse oximetry should be utilized in all patients with an inadequate respiratory function.
- * Consider c-collar to maintain ETT placement for all intubated patients (Remove collar upon patient transfer).
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Airway / Adult - FAILED	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Three (3) failed intubation attempts by the most proficient provider on scene, or
anatomy inconsistent with intubation attempts.
NO MORE THAN THREE (3) ATTEMPTS TOTAL



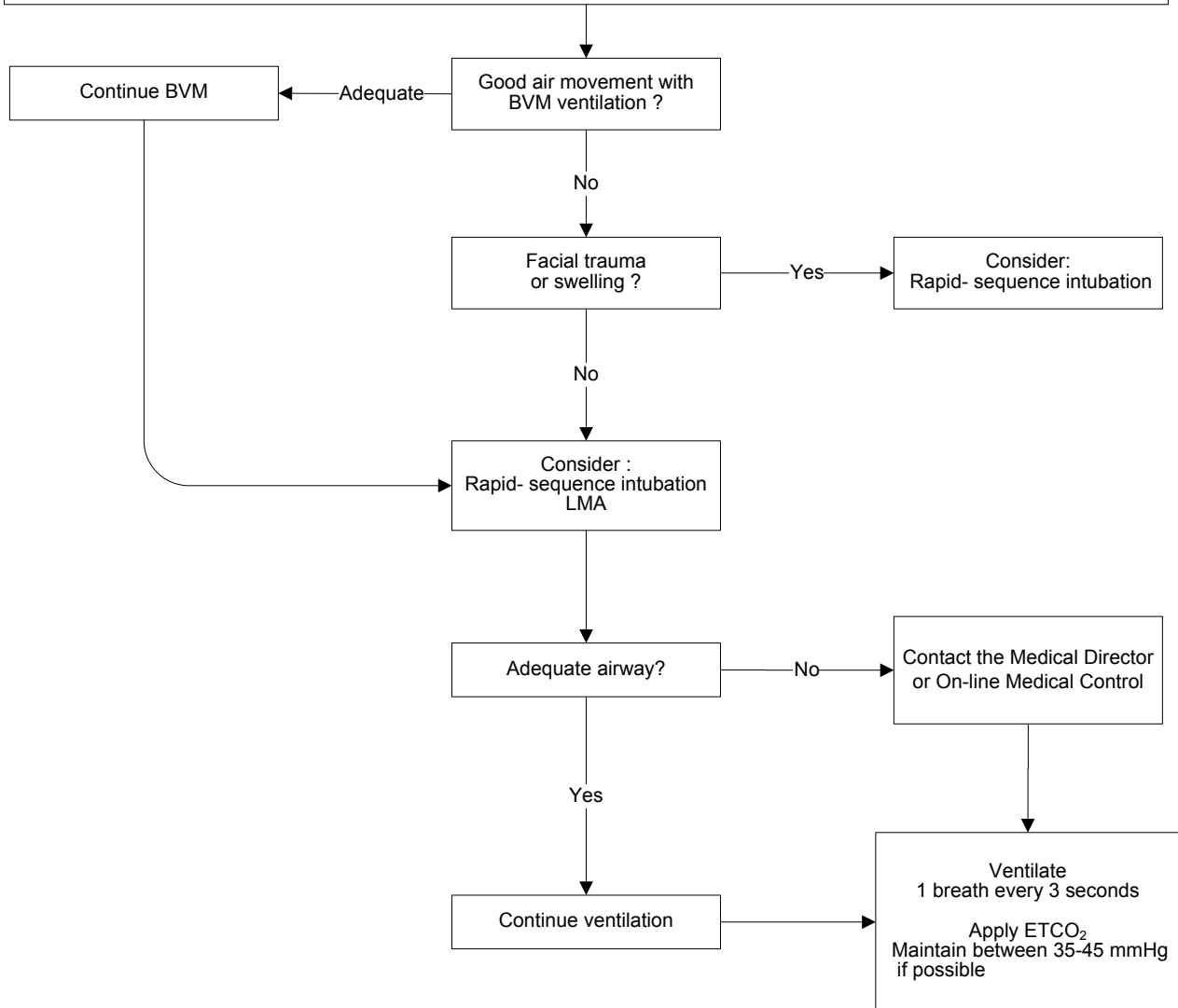
Footnotes:

For this protocol, adult is defined as 12 years old or greater.

- * Capnography is mandatory with all methods of intubation and its use must be documented on the PCR.
- * Continuous ETCO₂ monitoring is required for all intubated patients.
- * Maintain C-spine immobilization for patients with suspected spinal injury.
- * Do not assume hyperventilation is psychogenic; use oxygen, not a "paper bag".
- * Sellick's maneuver or the BURP maneuver may be used to assist with difficult intubations.
- * Paramedics should consider using an LMA when they are unable to intubate a patient.
- * Hyperventilation in head trauma should only be done to maintain a pCO₂ of 35 – 45 mmHg.
- * Nasogastric / Orogastic tube placement should be considered in all intubated patients.
- * Continuous pulse oximetry should be utilized in all patients with an inadequate respiratory function.
- * Ventilatory rate should be 8-12 per minute to maintain pCO₂ of 35 – 45 mmHg.
- * Consider c-collar to maintain endotracheal tube placement for all intubated patients.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Airway / Pediatric - FAILED	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Three (3) failed intubation attempts by the most proficient provider on scene, or
anatomy inconsistent with intubation attempts.
NO MORE THAN THREE (3) ATTEMPTS TOTAL

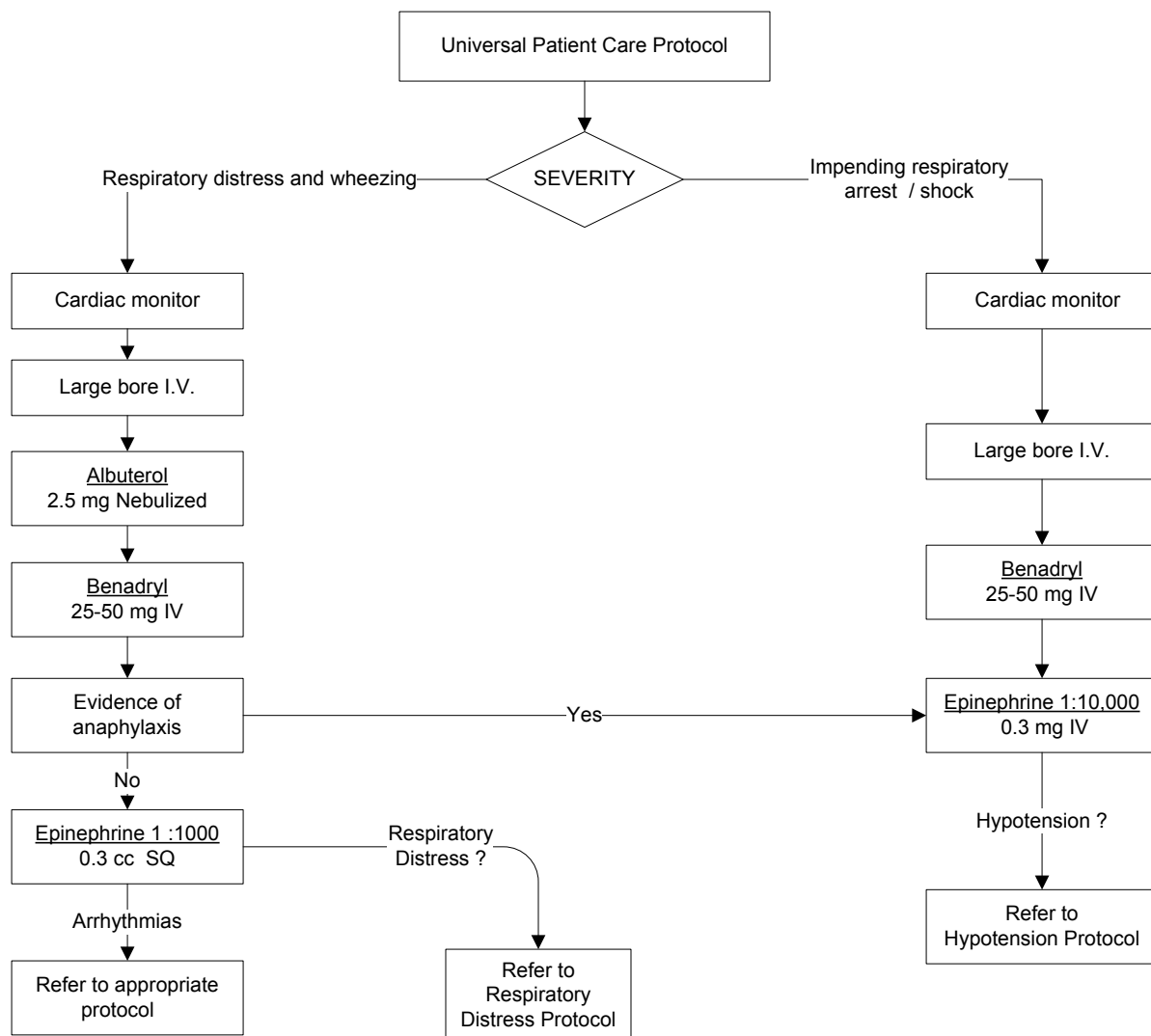


Footnotes:

- * Capnography is mandatory with all methods of intubation and its use must be documented on the PCR.
- * Continuous ETCO₂ monitoring is required for all intubated patients.
- * Maintain C-spine immobilization for patients with suspected spinal injury.
- * Do not assume hyperventilation is psychogenic; use oxygen, not a "paper bag".
- * Sellick's maneuver may be used to assist with difficult intubations.
- * Paramedics should consider using an LMA when they are unable to intubate a patient.
- * Hyperventilation in head trauma should only be done to maintain a pCO₂ of 35-45 mmHg.
- * Nasogastric / Orogastric tube placement should be considered in all intubated patients.
- * Continuous pulse oximetry should be utilized in all patients with an inadequate respiratory function.
- * Ventilatory rate should be 20 per minute to maintain pCO₂ of 35-45 mmHg.
- * Consider c-collar to maintain endotracheal tube placement for all intubated patients.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Allergic Reaction	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Onset and location * Insect sting or bite * Food allergy / exposure * Medication allergy / exposure * New clothing / soap / detergent * Past medical history * Medication history 	<ul style="list-style-type: none"> * Itching or hives * Coughing / wheezing or respiratory distress * Chest or throat constriction * Difficulty swallowing * Hypotension and shock * Edema 	<ul style="list-style-type: none"> * Urticaria * Anaphylaxis (systemic) * Shock (vascular effect) * Angio-edema (drug induced) * Vaso-vagal event * Asthma or COPD * CHF



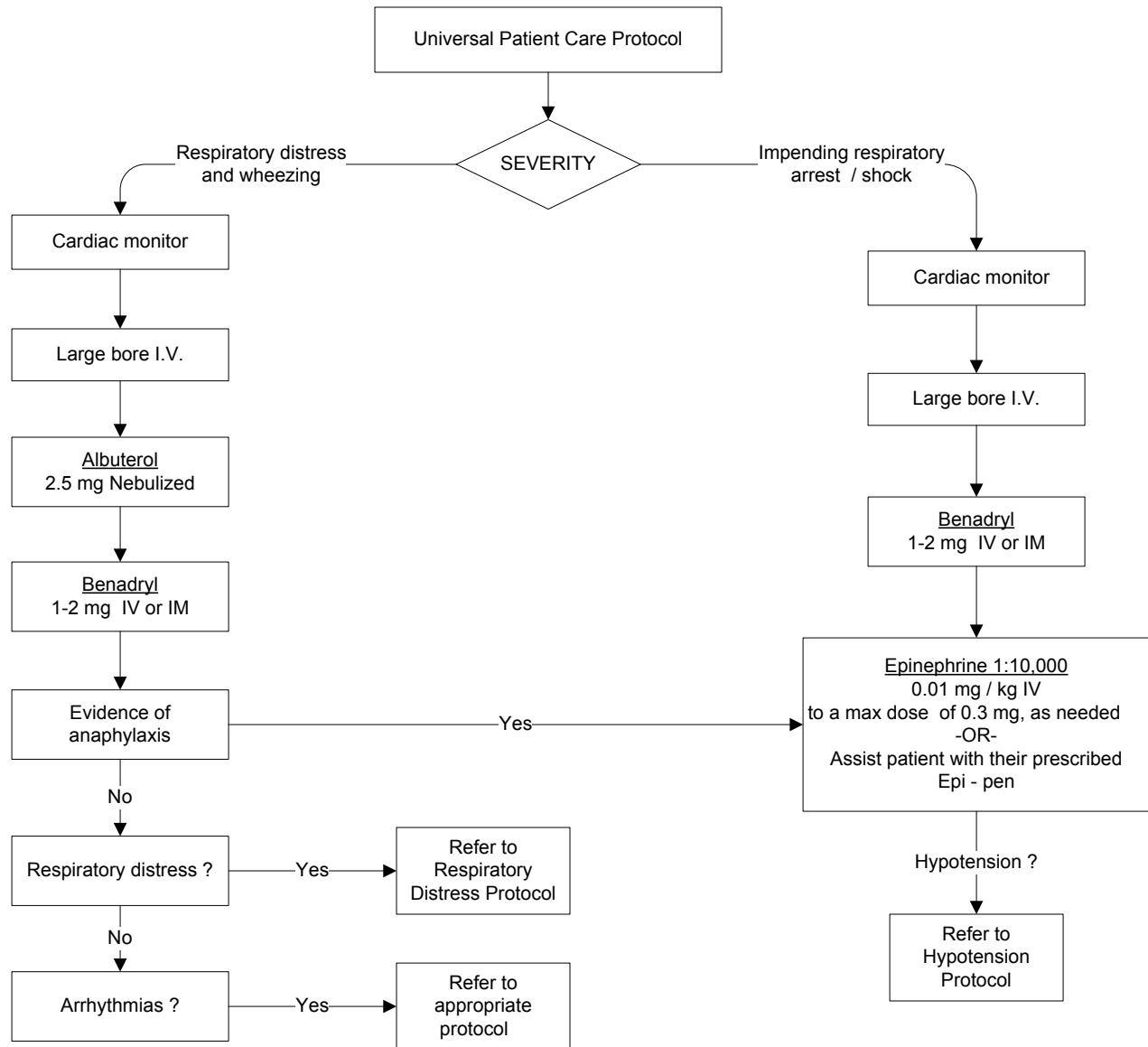
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Administration of epinephrine in patients who are > 35 years of age, have a history of cardiac disease, or with a heart rate greater than 150 , may precipitate cardiac ischemia.
- * Any patient with respiratory symptoms or extensive reaction should receive I.V. medication or I.M. Benadryl.
- * The shorter the onset of the symptoms the more severe the reaction.
- * Anaphylaxis can be defined as hypotension and shock with or without respiratory distress.
- * Most food allergies are due to legumes, nuts, shell fish, eggs, wheat, or milk.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Allergic Reaction Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Onset and location * Insect sting or bite * Food allergy / exposure * Medication allergy / exposure * New clothing / soap / detergent * Past medical history * Medication history 	<ul style="list-style-type: none"> * Itching or hives * Coughing / wheezing or respiratory distress * Chest or throat constriction * Difficulty swallowing * Hypotension and shock * Edema 	<ul style="list-style-type: none"> * Urticaria * Anaphylaxis (systemic) * Shock (vascular effect) * Angio-edema (drug induced) * Vaso-vagal event * Asthma or COPD * CHF



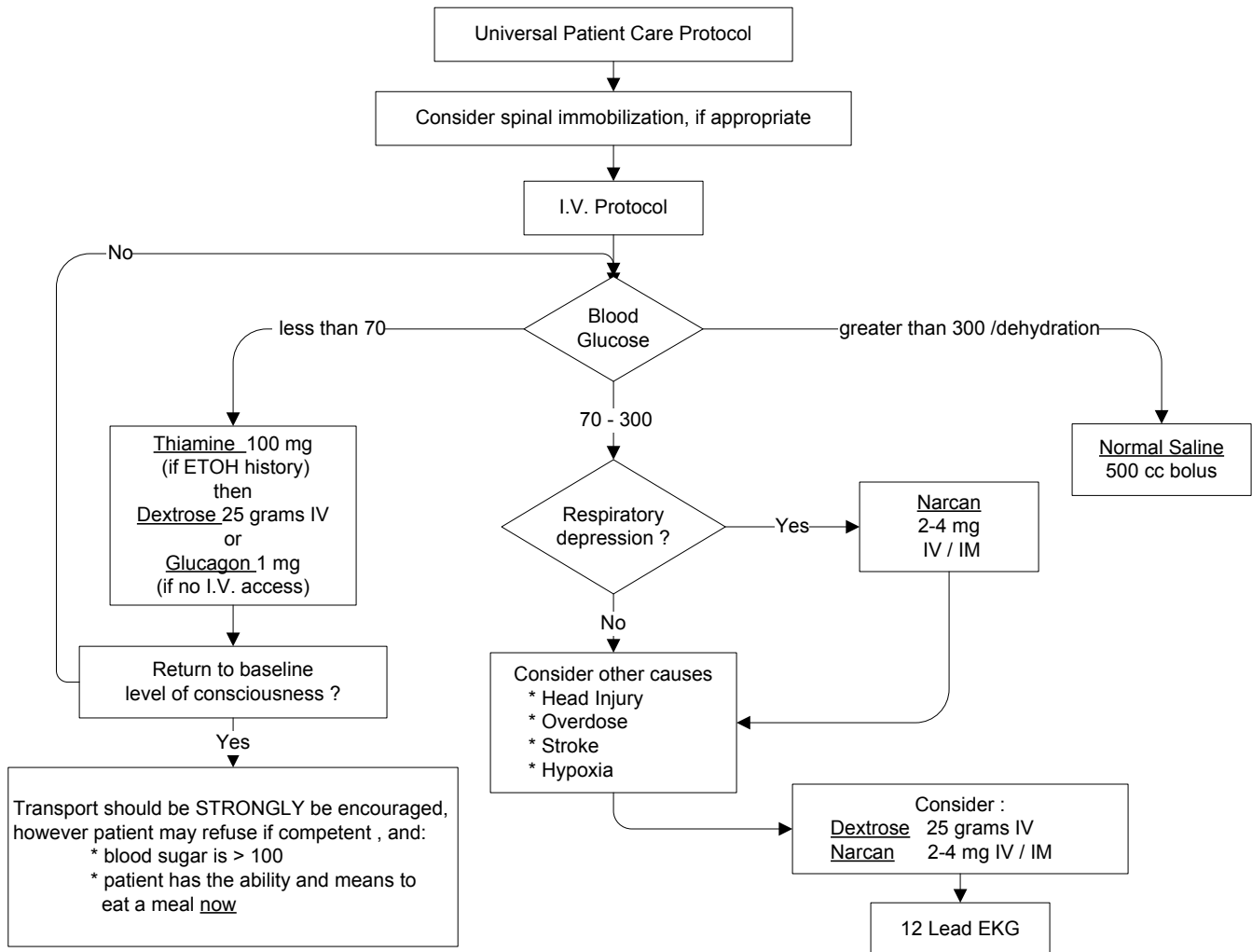
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Any patient with respiratory symptoms or extensive reaction should receive I.V. medication or I.M. Benadryl.
- * The shorter the onset of the symptoms the more severe the reaction.
- * Anaphylaxis can be defined as hypotension and shock with or without respiratory distress.
- * Most food allergies are due to legumes, nuts, shell fish, eggs, wheat, or milk.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Altered Mental Status	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Known diabetic, medic alert tag * Drugs, drug paraphernalia * Past medical history * Medications * History of trauma * Change in condition 	<ul style="list-style-type: none"> * Decreased mental status * Change in baseline mental status * Bizarre behavior * Hypoglycemia (cool, diaphoretic skin) * Hyperglycemia <ul style="list-style-type: none"> : warm dry skin : fruity breath : Kussmal respirations : signs of dehydration 	<ul style="list-style-type: none"> * Head trauma * Cardiac (MI, CHF) * Infection * Thyroid (hyper / hypo) * Shock (septic, metabolic, traumatic) * Diabetes * Toxicologic * Acidosis/ Alkalosis * Environmental exposure * Pulmonary (hypoxia) * Electrolyte abnormality * Psychiatric disorder



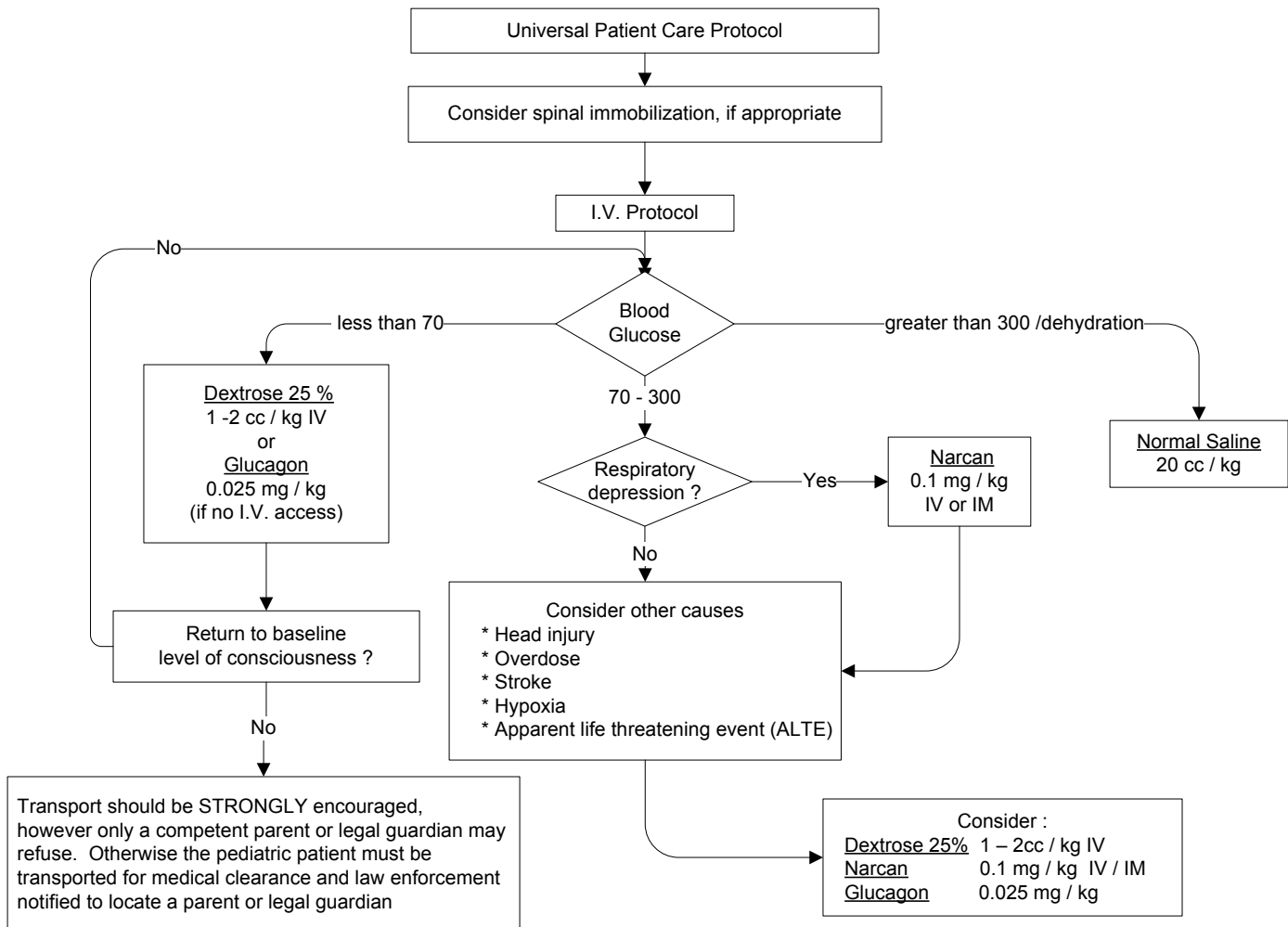
Footnotes:

- * Exam : ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Report to law enforcement if illicit drug use or toxic ingestion.
- * It is safer to assume hypoglycemia than hyperglycemia, if doubt exists.
- * Do not let alcohol confuse the clinical picture. Alcoholics frequently develop hypoglycemia.
- * Low glucose: < 70 mg/dl * Normal glucose 70-120 mg/dl * High glucose > 300 mg/dl.
- * Consider restraints, if necessary for patient's and / or personnel's protection, per the restraint protocol.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Altered Mental Status Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Known diabetic, medic alert tag * Drugs, drug paraphernalia * Past medical history * Medications * History of trauma * Change in condition 	<ul style="list-style-type: none"> * Decreased mental status * Change in baseline mental status * Bizarre behavior * Hypoglycemia (cool, diaphoretic skin) * Hyperglycemia <ul style="list-style-type: none"> : warm dry skin : fruity breath : Kussmal respirations : signs of dehydration 	<ul style="list-style-type: none"> * Head trauma * Cardiac (MI, CHF) * Infection * Thyroid (hyper / hypo) * Shock (septic, metabolic, traumatic) * Diabetes * Toxicologic * Acidosis/ Alkalosis * Environmental exposure * Pulmonary (hypoxia) * Electrolyte abnormality * Psychiatric disorder



Footnotes:

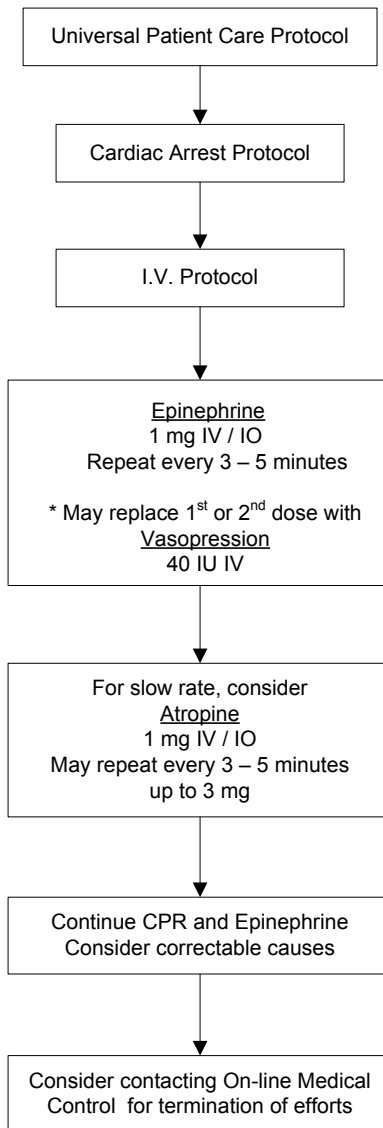
- * Exam : ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Report to law enforcement if illicit drug use or toxic ingestion.
- * It is safer to assume hypoglycemia than hyperglycemia, if doubt exists.
- * Do not let alcohol confuse the clinical picture. Alcoholics frequently develop hypoglycemia.
- * Low glucose: < 70 mg/dl * Normal glucose 70-120 mg/dl * High glucose > 300 mg/dl.
- * Consider restraints, if necessary for patient's and / or personnel's protection, per the restraint protocol.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Asystole	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history * Medications * Events leading to the arrest * Estimated downtime * Suspected hypothermia * Suspected overdose * DNR or Living Will 	<ul style="list-style-type: none"> * Pulseless * Apnea * No electrical activity on EKG 	<ul style="list-style-type: none"> * Medical or Trauma * Hypoxia * Potassium (hyper / hypo) * Drug overdose * Acidosis * Hypothermia * Device (lead) error * Death

IF / WHEN
return of spontaneous
circulation, refer to
Post Resuscitation Protocol



Correctable Causes

- * Acidosis
- * Hypovolemia
- * Hypothermia
- * Hypoglycemia
- * Hyperkalemia
- * Overdose
 - : Narcotics
 - : Tricyclic antidepressants
 - : Calcium channel blockers
 - : Beta blockers
- * Tension pneumothorax

Footnotes:

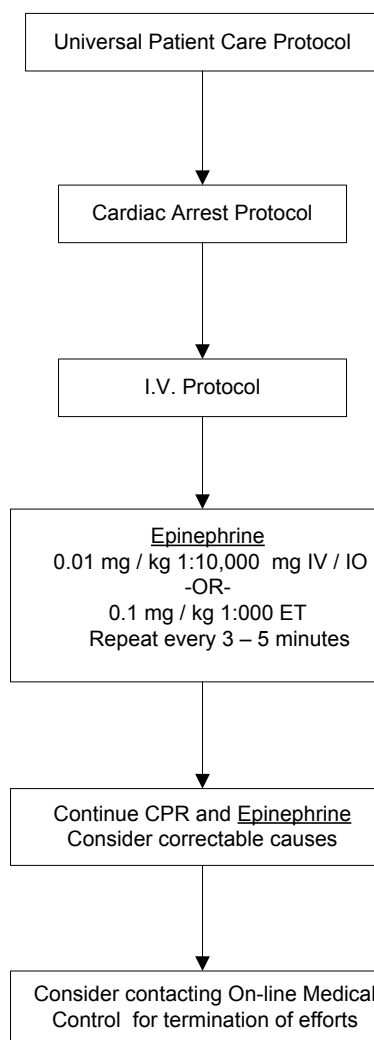
- * Exam ABC's, mental status.
- * Always confirm asystole in more than one lead.
- * Avoid hyperventilation.
- * ALL INTUBATED PATIENTS MUST HAVE CAPNOGRAPHY IN PLACE, and it's use documented on the PCR.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Asystole Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history * Medications * Events leading to the arrest * Estimated downtime * Suspected hypothermia * Suspected overdose 	<ul style="list-style-type: none"> * Pulseless * Apnea * No electrical activity on EKG 	<ul style="list-style-type: none"> * Respiratory failure: FBAO, secretions, infection, hypoxia * Congenital heart disease * Medical or Trauma * Toxin or medication * Hypoglycemia * Acidosis * Hypothermia * Device (lead) error * Death

IF / WHEN
return of spontaneous
circulation, refer to
Post Resuscitation Protocol



Correctable Causes
<ul style="list-style-type: none"> * Acidosis * Hypovolemia * Hypothermia * Hypoglycemia * Hyperkalemia * Overdose <ul style="list-style-type: none"> : Narcotics : Tricyclic antidepressants : Calcium channel blockers : Beta blockers * Tension pneumothorax

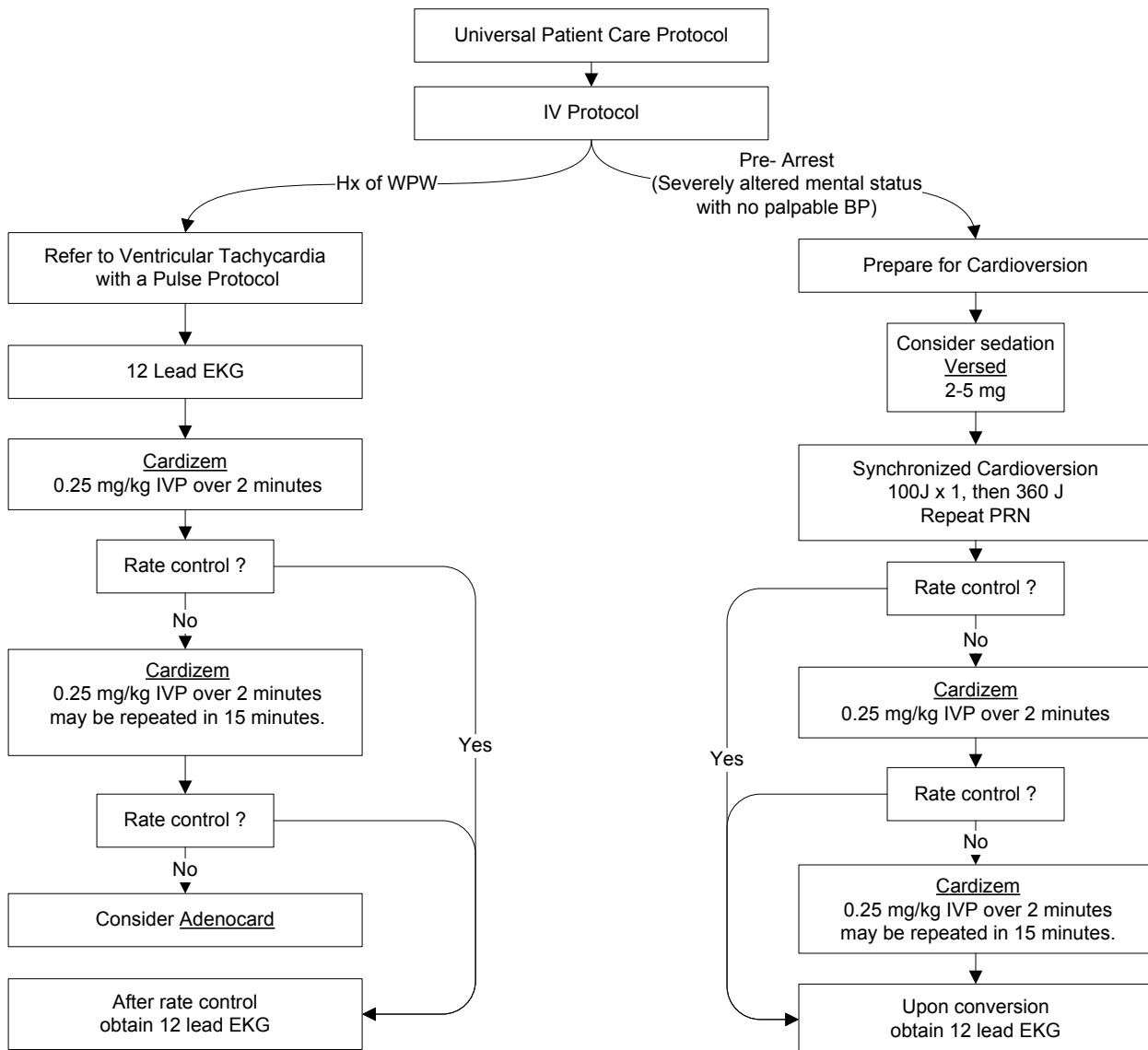
Footnotes:

- * Exam ABC's, vital signs, mental status, skin, neck, heart, lungs, back, extremities, neurological.
- * Always confirm asystole in more than one lead.
- * Avoid hyperventilation.
- * Airway is the most important intervention.
- * In order to be successful in pediatric arrests, a cause must be identified and corrected.
- * ALL INTUBATED PATIENTS MUST HAVE CAPNOGRAPHY IN PLACE, and it's use documented on the PCR.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Atrial Fibrillation	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign / Symptoms:	Differential :
<ul style="list-style-type: none"> * Medications (Aminophylline, diet pills, Thyroid supplements, decongestants, Digoxin) * Diet (caffeine, chocolate) * Drugs (nicotine, cocaine) * Past medical history * History of palpitations * Syncope / near syncope 	<ul style="list-style-type: none"> * HR greater than 160/ min * QRS less than 0.12 Sec * Dizziness, chest pain, SOB * Potential presenting rhythm <ul style="list-style-type: none"> : Sinus Tachycardia : Atrial Fib/ Flutter : Multifocal Atrial Tachycardia 	<ul style="list-style-type: none"> * Heart disease <ul style="list-style-type: none"> : Wolf-Parkinson- White (WPW) * Sick Sinus Syndrome * Myocardial Infarction

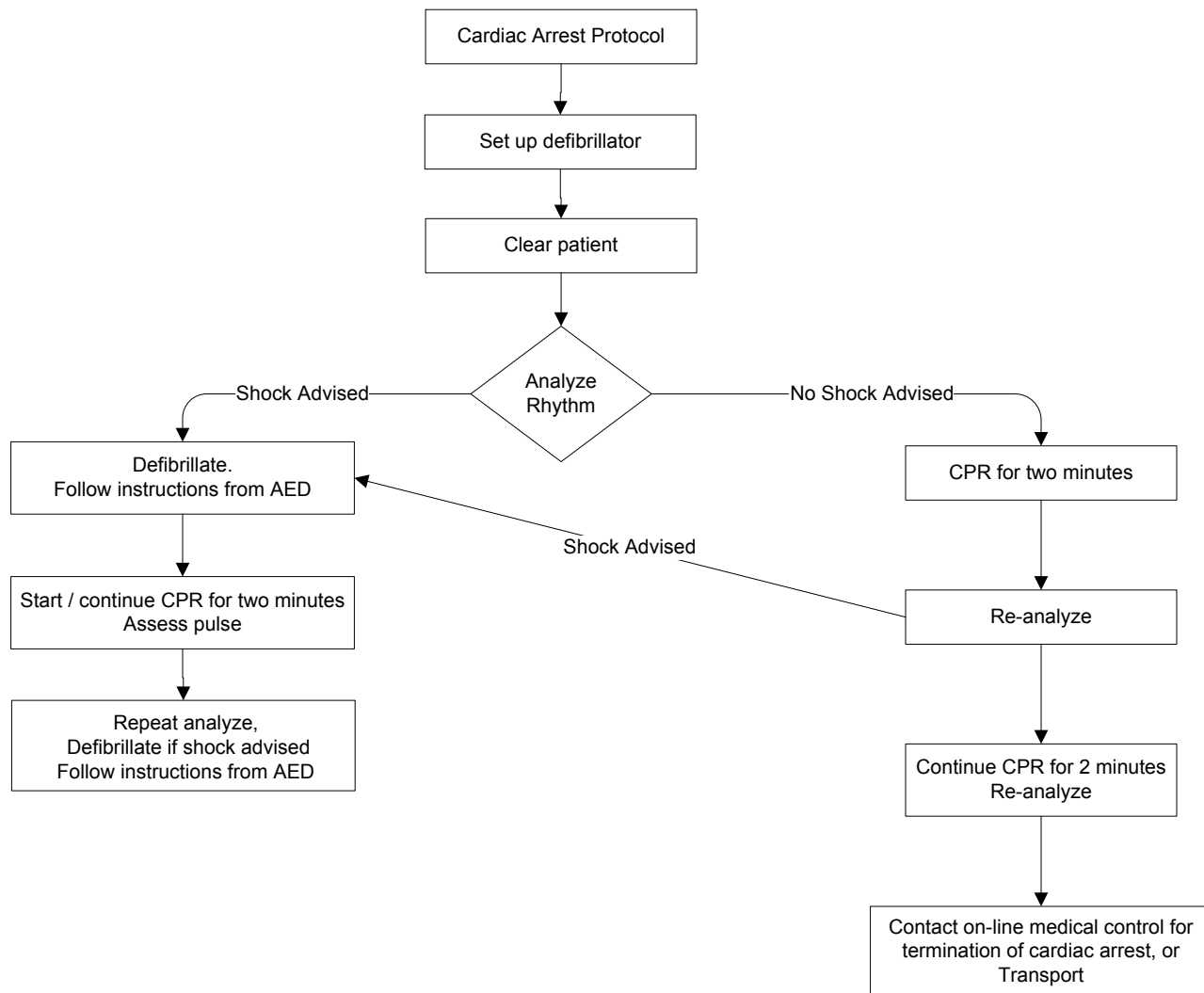


Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Adenocard may not be effective in identifiable atrial flutter, yet it is not harmful.
- * Monitor for hypotension after administration of Cardizem.
- * Monitor for respiratory depression and hypotension associated with Versed.
- * Document all rhythm changes with monitor tracings and obtain tracings with each therapeutic intervention.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Automated External Defibrillation	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

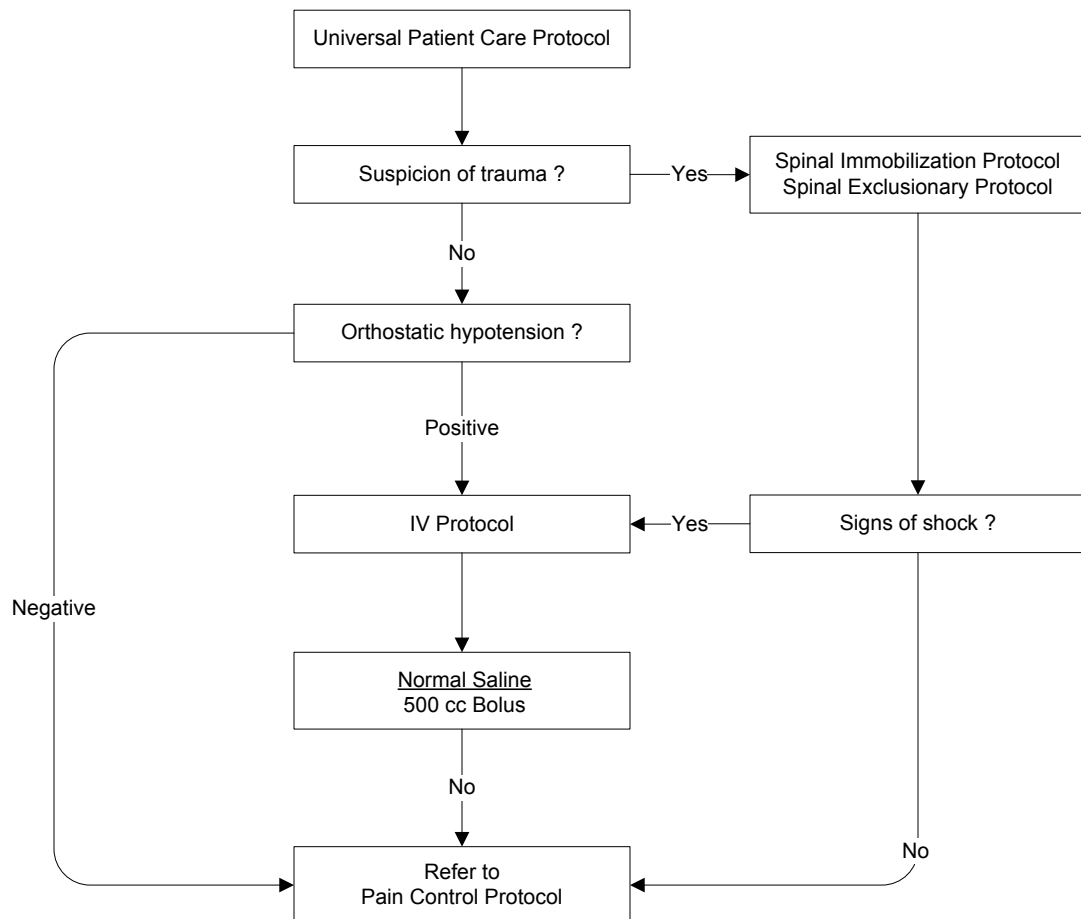
History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Events leading to the arrest * Estimated down time * Past medical history * Medications * Existence of terminal illness * DNR or Living will 	<ul style="list-style-type: none"> * Unresponsive * Apnea * Pulseless 	<ul style="list-style-type: none"> * Medical arrest * Trauma arrest



Footnotes:
<ul style="list-style-type: none"> * Exam: ABC's, vital signs, mental status. * Patient must be greater than 8 years old. * Defibrillation takes precedence over Basic Life Support once the defibrillator is set up and ready. * If no shock is advised, follow protocol and examine patient for pacemaker. * All AED downloads should be forwarded to the rescue office. * ALL INTUBATED PATIENTS MUST HAVE END TIDAL CAPNOGRAPHY IN PLACE, AND DOCUMENT ON PCR. * Cardiac arrests can be terminated in the field if all treatment regiments have been exhausted, and On-line Medical Control has been consulted.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Back Pain	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Past medical history * Past surgical history * Medications * Onset of pain / injury * Previous back injury * Traumatic mechanism of injury * Location of pain * Fever * Improvement or worsening with activity 	<ul style="list-style-type: none"> * Pain (spinous process) * Swelling * Pain with movement * Extremity weakness * Extremity numbness * Shooting pain into extremity * Bowel / bladder dysfunction 	<ul style="list-style-type: none"> * Muscle strain / spasm * Herniated disc * Sciatica * Spinal Fx * Renal stone * Pyelonephritis * Aneurysm * Pneumonia



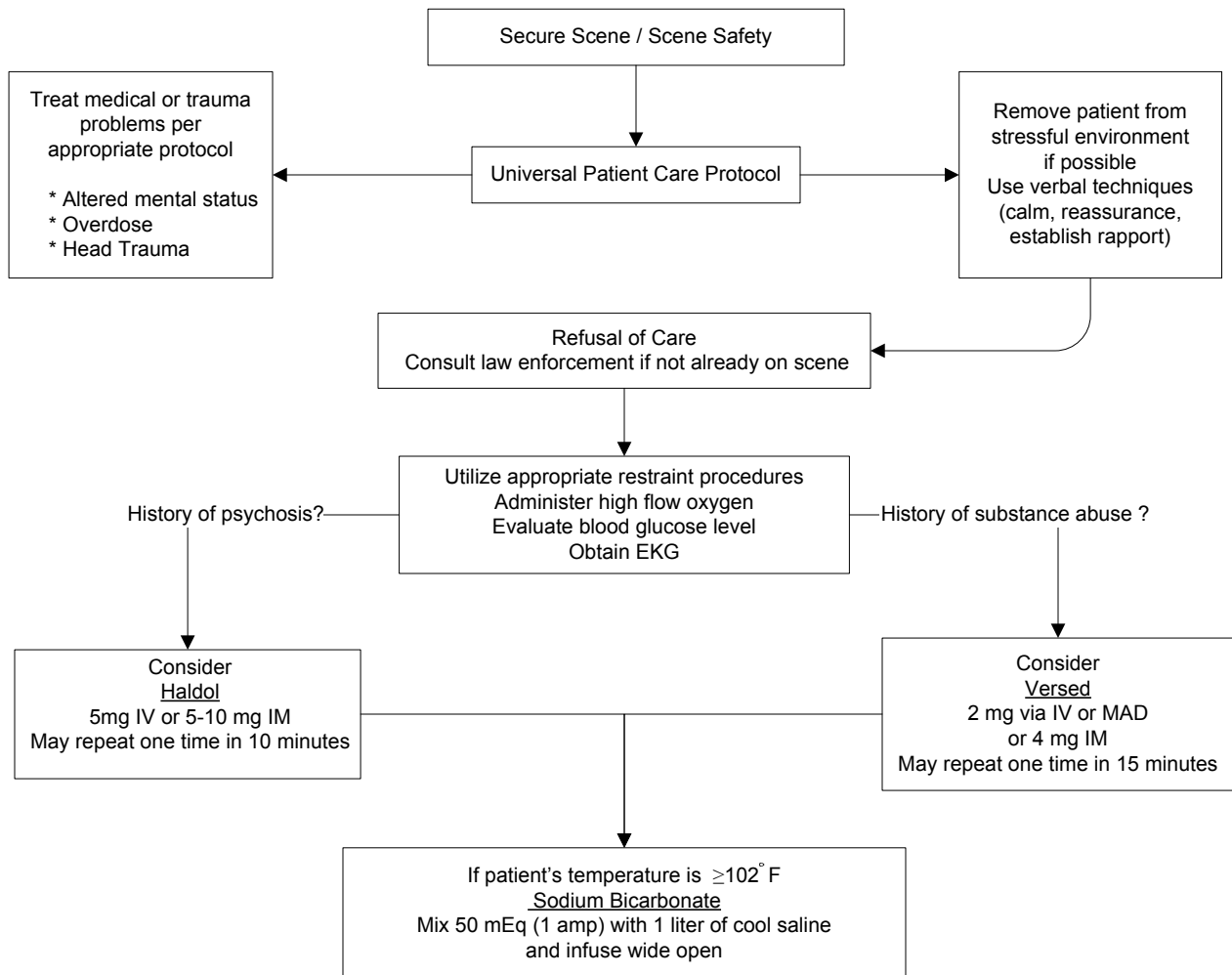
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Consider abdominal aneurysm in patients over the age of 50.
- * Renal stones typically present with an acute onset of flank pain which radiates around to the groin area.
- * Patients with midline pain over the spinous process should be immobilized.
- * Any bowel or bladder incontinence is a significant finding which requires immediate medical evaluation.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Behavioral / Agitated Delirium	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential (Life Threatening):
<ul style="list-style-type: none"> * Time and mechanism of the injury * Situational crisis * Psychiatric illness / medication * Injury to self or threats to others * Medic alert tag * Diabetes * Substance abuse / overdose * Suspected cocaine, amphetamine or hallucinogenic drug use * Cardiac history * Evidence of Agitated Delirium prior to the application of an ECD / Taser 	<ul style="list-style-type: none"> * Anxiety, agitation, confusion * Affect change, hallucinations * Delusional thoughts, bizarre behavior * Combative, violent * Expression of suicidal / homicidal thoughts * Obvious signs of elevated body temperature, ie: hot skin can be felt with a gloved hand * Abnormal complaints including: shortness of breath, chest pain, nausea, or headache 	<ul style="list-style-type: none"> * See Altered Mental Status differential * Hypoxia * Alcohol intoxication * Medication effect / overdose * Withdrawal syndromes * Depression * Bipolar (manic-depressive) * Schizophrenia, anxiety disorders



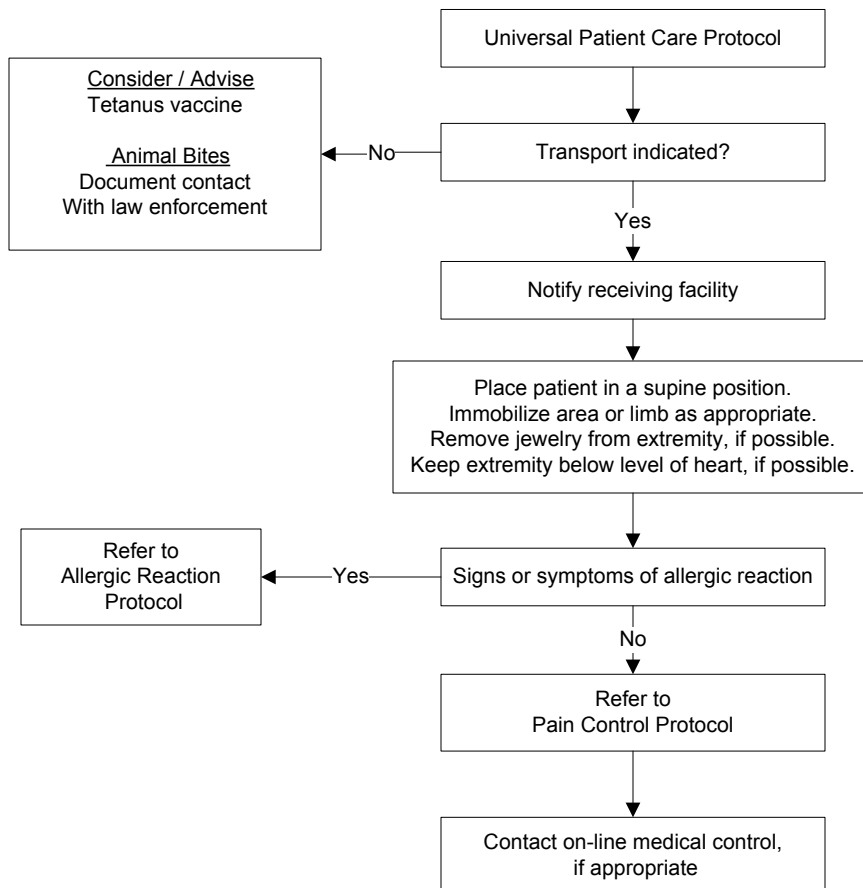
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Remember: Haldol for patients with history of psychosis and Versed for patients with presumed substance abuse.
- * Be sure to consider all possible medical / trauma causes for behavior (hyperglycemia, overdose, substance abuse, hypoxia, head injury, etc).

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Bites and Envenomations	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Type of bite or sting * Description, or if possible bring DEAD creature, with patient, for identification * Time, location, size bite / sting * Previous reaction to bite / sting * Domestic vs. wild * Tetanus and rabies risk * Immune compromised patient 	<ul style="list-style-type: none"> * Rash or skin break * Pain, soft tissue swelling or redness * Blood oozing from the wound * Evidence of infection * Shortness of breath, wheezing or itching * Hypotension or shock 	<ul style="list-style-type: none"> * Animal bite * Human bite * Snake bite (poisonous) * Spider bite (poisonous) * Insect sting/ bite (bee, wasp, ant, tick) * Infection * Rabies * Tetanus



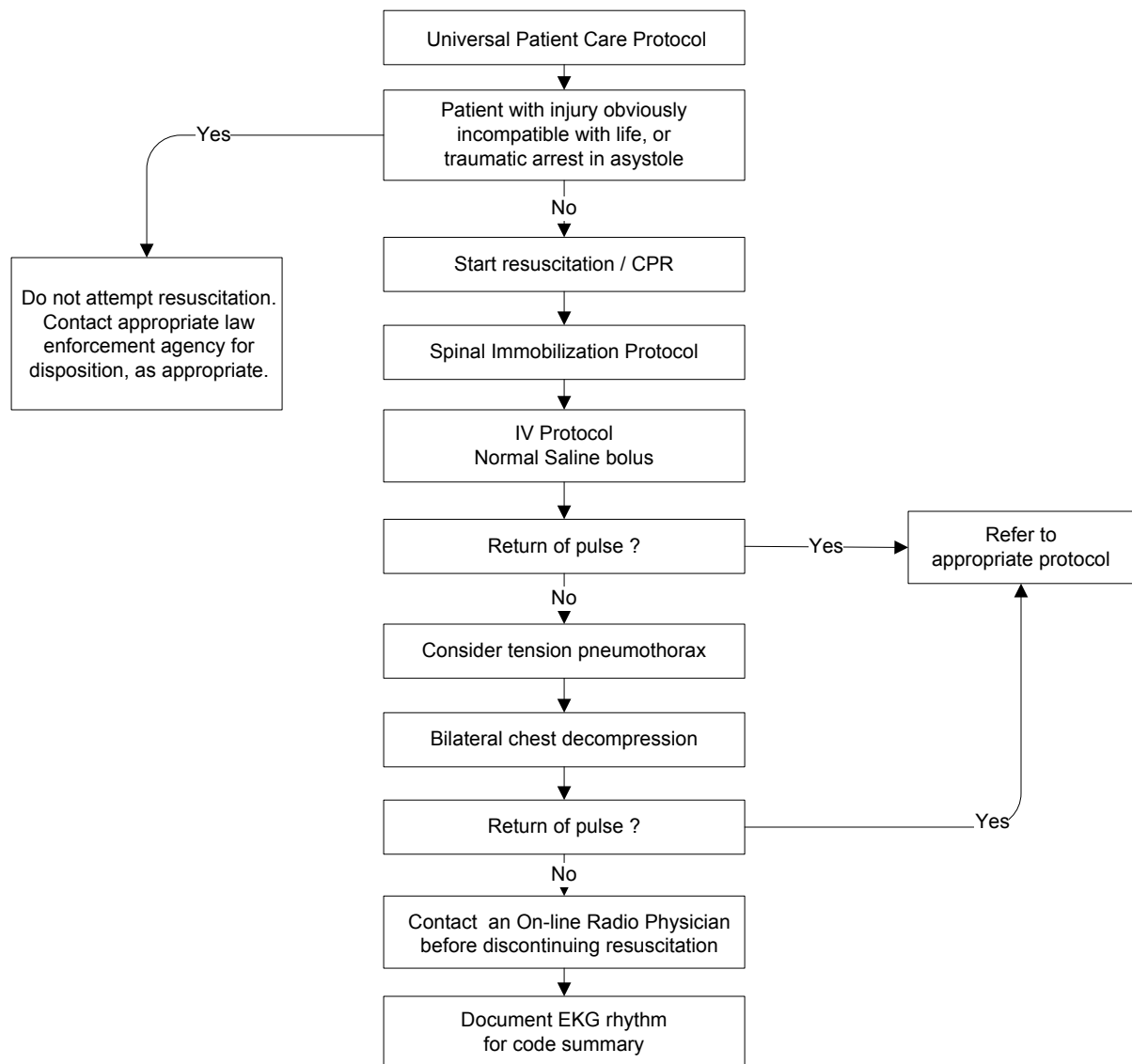
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Human bites are much worse than animal bites due to mouth bacteria.
- * Carnivore bites are more likely to become infected and all have risk of rabies exposure.
- * Cat bites can progress to infection rapidly due to a specific bacteria known as Pasturella multocida.
- * Poisonous snakes in this area are generally of the pit viper family. (See Snake Bite chart)
- * Coral Snake bites are rare: Very little pain but very toxic. (See Snake Bite chart)
- * Amount of envenomation is variable, generally worse with larger snakes and in early spring.
- * If no pain or swelling, envenomation is unlikely.
- * Black Widow spider bites tend to be minimally painful, but over a few hours, muscular pain and severe abdominal pain may develop. (See Spider Bite chart)
- * Brown Recluse spider bites are minimally painful to painless. (See Spider Bite chart)
- * Evidence of infection: swelling, redness, drainage, fever, red streaking proximal to wound.
- * Immune compromised patients are at an increased risk for infection i.e.: diabetes, chemotherapy, transplant patients.
- * Poison Control: 1-800-282-3171

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Blunt Trauma Cardiac Arrest	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign/ Symptoms:	Differential: (Life Threatening)
* Patient who has suffered traumatic injury and is now pulseless	* Evidence of blunt trauma	* Medical condition preceding traumatic event as cause of arrest. * Tension pneumothorax * Hypovolemic shock * External hemorrhage * Unstable pelvic fracture * Displaced long bone fracture(s) * Hemothorax * Intra-abdominal hemorrhage * Retroperitoneal hemorrhage



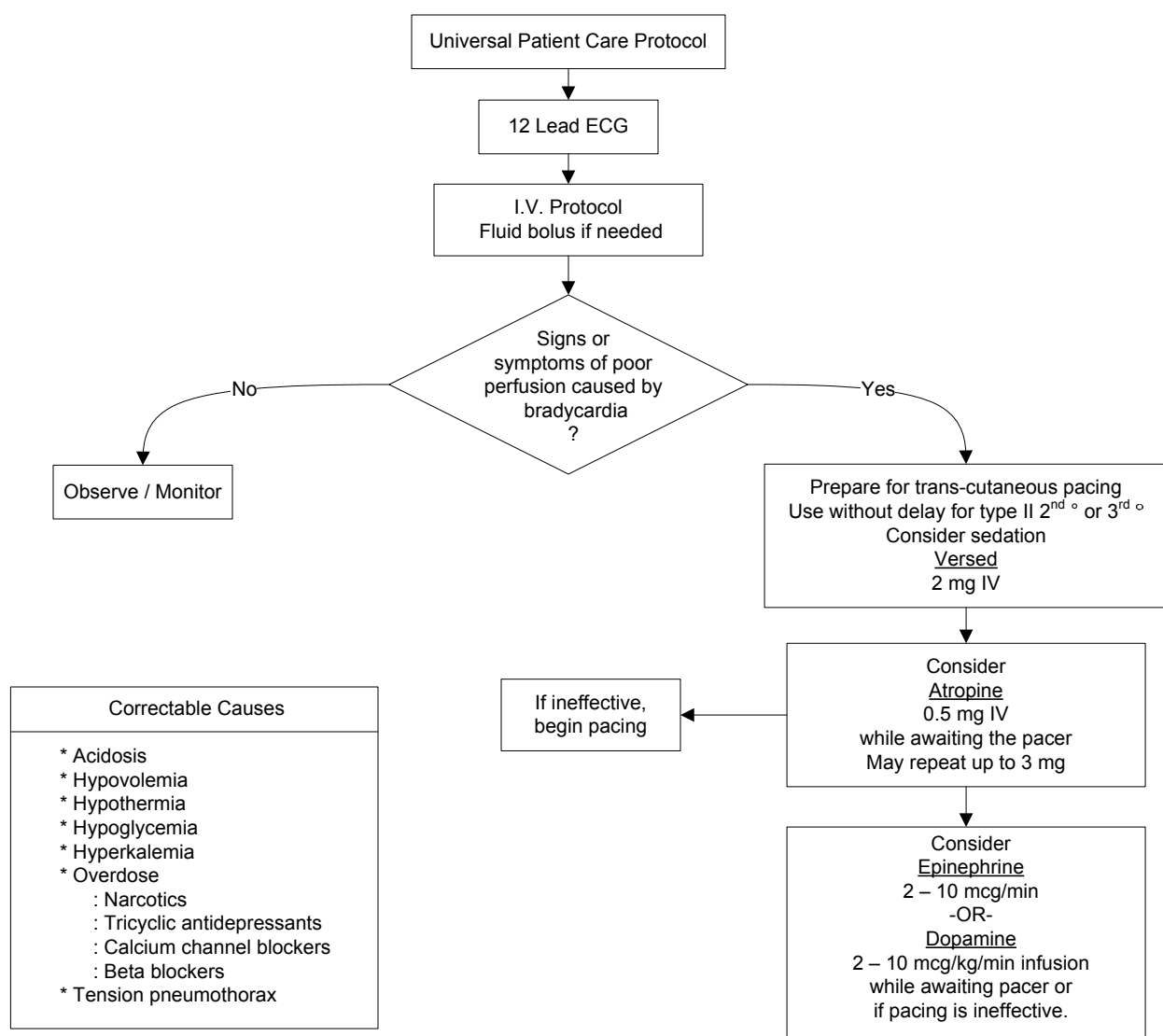
Footnotes:

- * Injuries obviously incompatible with life include decapitation, massively deformed head or chest injuries, or similar injuries that would make resuscitation futile. If in doubt, place patient on the monitor.
- * Consider using medical cardiac arrest protocols if uncertainty exists regarding medical or traumatic cause of arrest.
- * If resuscitation has been started and later it is decided to proceed with a "Termination Of Resuscitation" (TOR) on-line medical control must be contacted prior to termination.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Bradycardia	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history * Medications * Beta blockers : Toprol, Atenolol * Calcium Channel Blockers : Verapamil, Calan * Clonidine * Digitalis * Pacemaker 	<ul style="list-style-type: none"> * HR < 60/min * Chest pain * Respiratory distress * Hypotension or shock * Altered mental status * Syncope 	<ul style="list-style-type: none"> * Acute myocardial infarction * Hypoxia * Hypothermia * Sinus bradycardia * Athletes (Normal) * Head injury with elevated ICP * Spinal cord lesion * Sick Sinus Syndrome * AV blocks (1°, 2°, 3°)



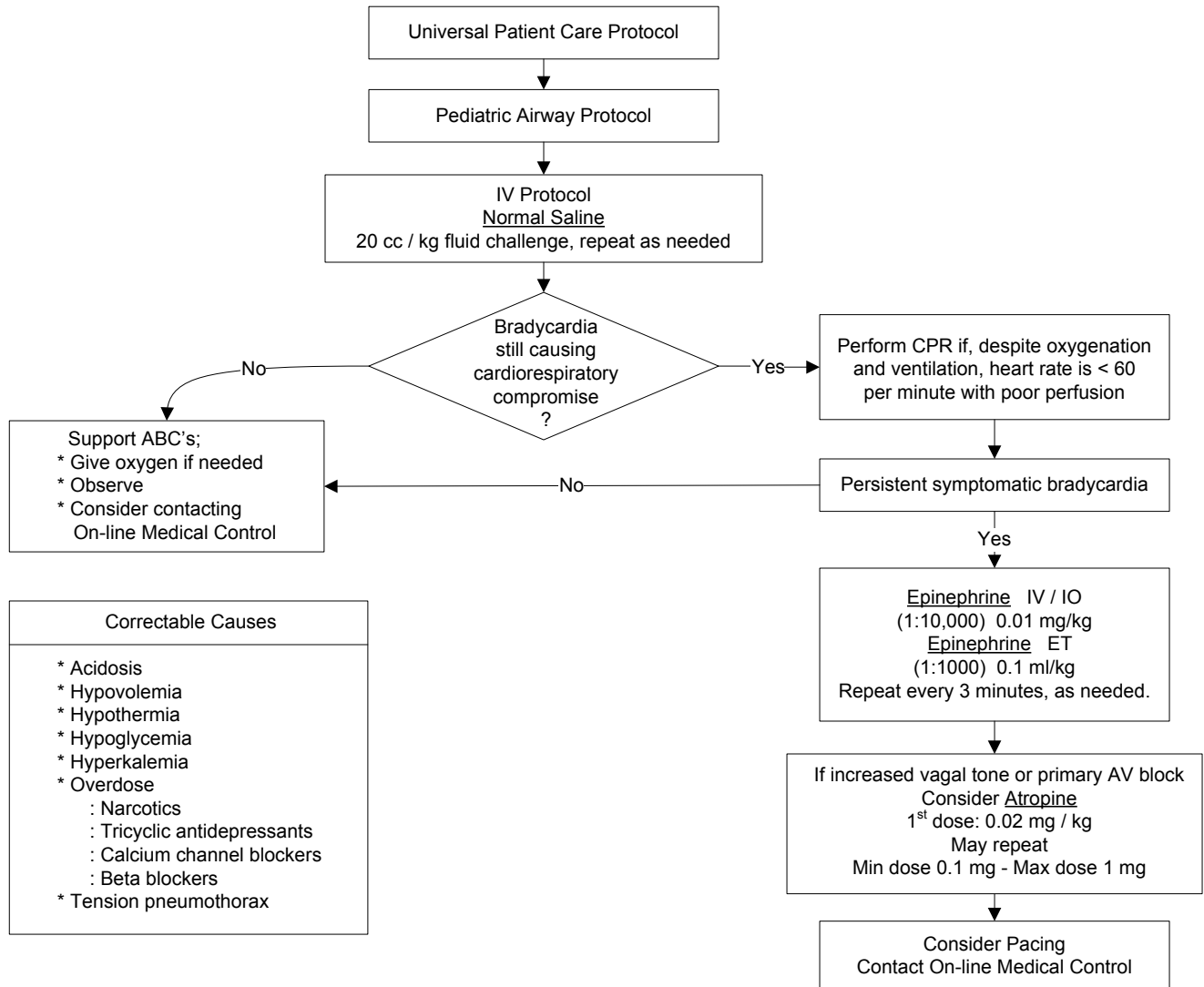
Footnotes:

- * Exam : ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * The use of Lidocaine in heart block can worsen bradycardia and lead to asystole and death.
- * Pharmacological treatment of bradycardia is based on the presence or absence of hypotension.
- * If hypotension exists; treat. If blood pressure is adequate; monitor only.
- * Important: The use of Atropine for PVC's in the presence of MI may worsen heart damage.
- * Initiate oxygenation early and maintain a patent airway.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Bradycardia Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential :
<ul style="list-style-type: none"> * Past medical history * Foreign body airway obstruction * Respiratory distress / arrest * Apnea * Possible toxic or poison exposure * Congenital disease * Medication (maternal or infant) 	<ul style="list-style-type: none"> * Decreased heart rate * Delayed capillary refill / cyanosis * Hypotension or arrest * Altered level of consciousness 	<ul style="list-style-type: none"> * Respiratory drive * Respiratory obstruction: Foreign body, secretions, croup, epiglottitis * Hypothermia * Infection / sepsis * Medication toxicity * Hypoglycemia * Trauma



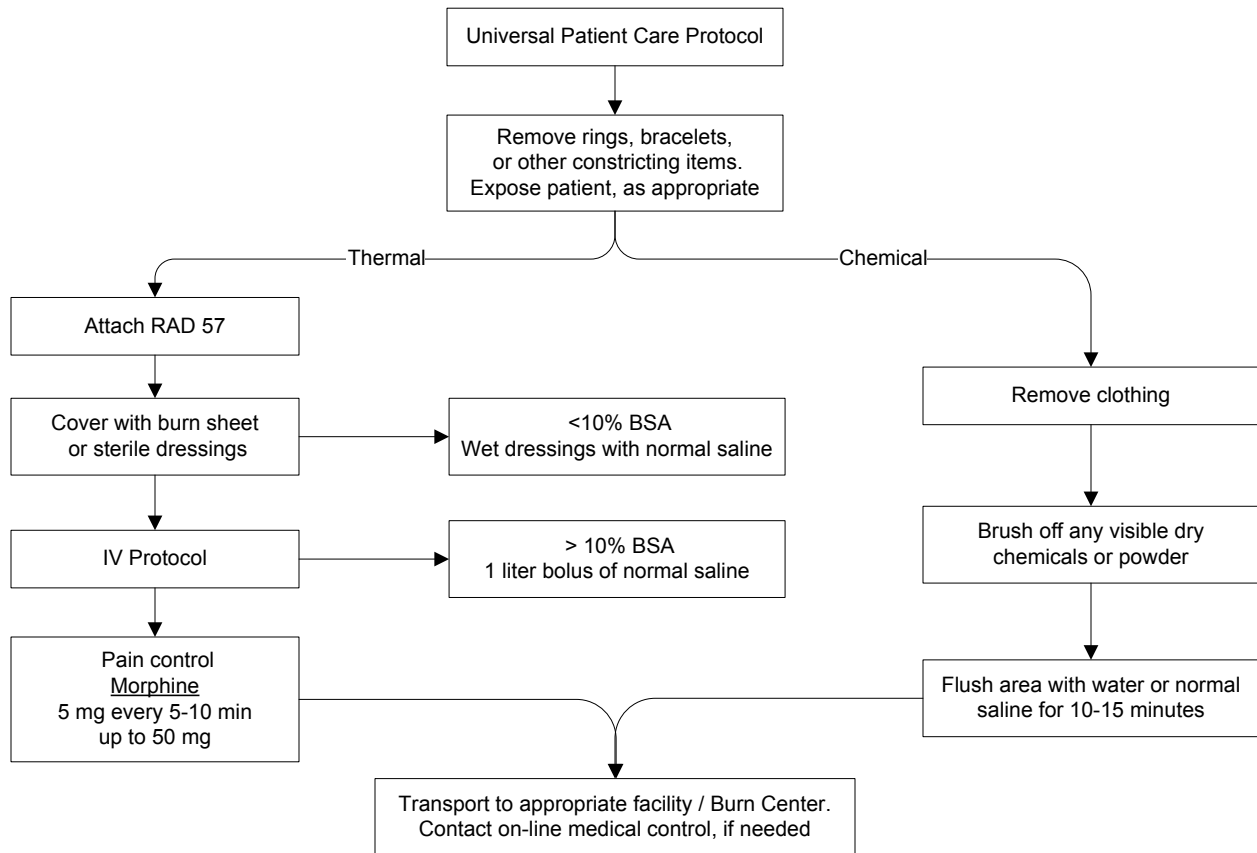
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Infant: < 1 year of age * Child: 1 to Puberty.
- * The majority of pediatric arrests are due to airway problems.
- * Most maternal medications pass through breast milk.
- * Hypoglycemia, severe dehydration and narcotic effects may produce bradycardia.
- * External transcutaneous pacing will require the use of appropriate sized pediatric pads, per the manufacturer's guidelines.
- * Minimum Atropine dose is 0.1 mg IV.
- * Ischemia, severe dehydration and narcotic effects may produce bradycardia.
- * All INTUBATED PATIENTS WILL UTILIZE CAPNOGRAPHY and it's use documented on the PCR.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Burns	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Past medical history * Past surgical history * Medications * Type of exposure (heat,gas,chemical) * Inhalation injury * Traumatic mechanism * Other trauma * Loss of consciousness 	<ul style="list-style-type: none"> * Burns, pain, swelling * Dizziness / loss of consciousness * Hypotension / shock * Airway compromise / respiratory distress * Singed facial or nasal hair * "Raspy" voice 	<ul style="list-style-type: none"> * Superficial (1⁰), red, painful * Partial thickness (2⁰), blistering * Full thickness (3⁰), painless and charred or leather like * Chemical * Thermal * Electrical * Radiation



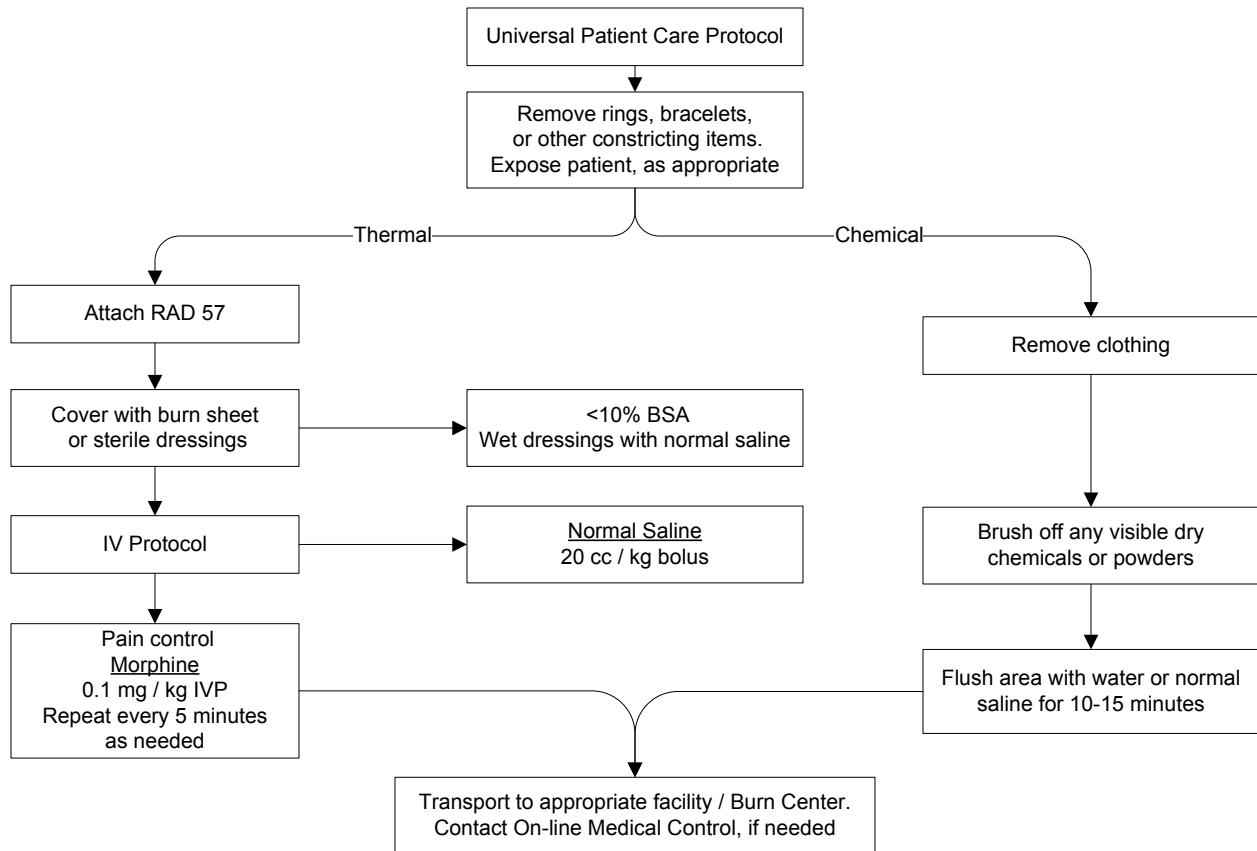
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Critical Burns:
 - : > 25% BSA
 - : 3⁰ burns > 10 % BSA
 - : 3⁰ burns to face, eyes, hands and feet
 - : electrical burns;
 - : respiratory burns;
 - : deep chemical burns;
 - : burns to geriatric patients or patients with chronic diseases
 - : burns associated with major trauma
- * Early intubation is required in significant inhalation injuries.
- * 100% oxygenation is necessary to treat potential carbon monoxide exposure.
- * Circumferential burns to extremities are dangerous due to potential vascular compromise due to soft tissue swelling.
- * Leave blisters intact.
- * Never apply ice or cool burns that involve > 10 % BSA due to secondary hypothermia.
- * Do not overlook the possibility of multi-systems trauma.
- * See appendix for Rule of Nine.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Burns Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Past medical history * Past surgical history * Medications * Type of exposure (heat,gas,chemical) * Inhalation injury * Traumatic mechanism * Other trauma * Loss of consciousness 	<ul style="list-style-type: none"> * Burns, pain, swelling * Dizziness / loss of consciousness * Hypotension / shock * Airway compromise / respiratory distress * Singed facial or nasal hair * "Raspy" voice 	<ul style="list-style-type: none"> * Superficial (1^o), red, painful * Partial thickness (2^o), blistering * Full thickness (3^o), painless and charred or leather like * Chemical * Thermal * Electrical * Radiation



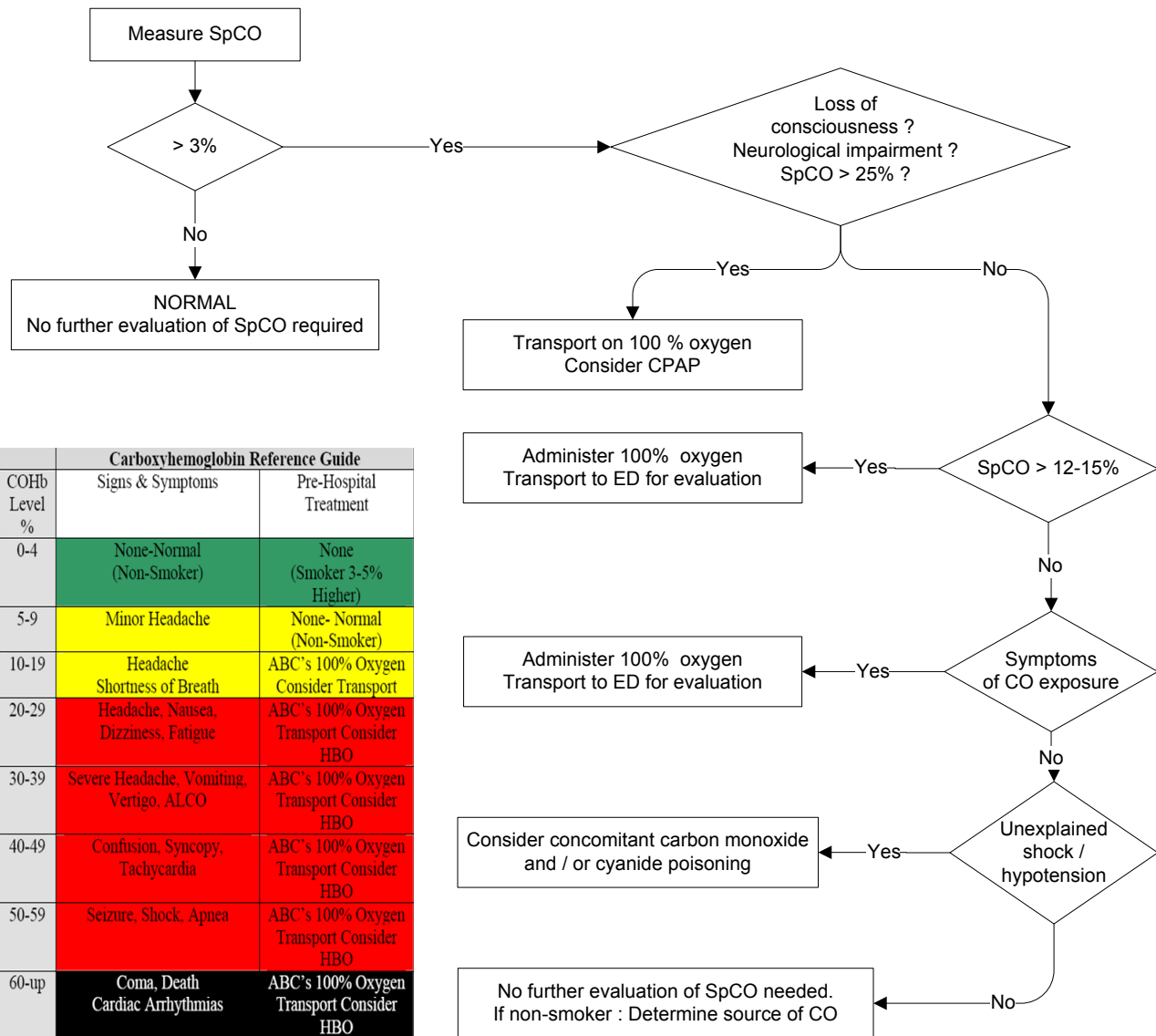
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Critical Burns:
 - : > 25% BSA
 - : 3^o burns > 10 % BSA
 - : 3^o burns to face, eyes, hands and feet
 - : electrical burns;
 - : respiratory burns;
 - : deep chemical burns;
 - : burns to geriatric patients or patients with chronic diseases
 - : burns associated with major trauma
- * Early intubation is required in significant inhalation injuries.
- * 100% oxygenation is necessary to treat potential carbon monoxide exposure.
- * Circumferential burns to extremities are dangerous due to potential vascular compromise due to soft tissue swelling.
- * Leave blisters intact.
- * Never apply ice or cool burns that involve > 10 % BSA due to secondary hypothermia.
- * Do not overlook the possibility of multi-systems trauma.
- * See appendix for Rule of Nines.
- * Do not overlook the possibility of child abuse in children who have sustained burn injuries.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Carbon Monoxide Exposure	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential (Life Threatening):
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Patients with respiratory insufficiency * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Malaise * Nausea / vomiting * Fatigue * Flu-like symptoms * Confusion * Headache * Syncope * Seizures * Gait disturbances 	<ul style="list-style-type: none"> * Flu * Food poisoning * CVA * Cardiac / MI * Seizure * Exposure to hazardous materials



Carboxyhemoglobin 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, Syncope, Tachycardia	ABC's 100% Oxygen Transport Consider HBO
50-59	Seizure, Shock, Apnea	ABC's 100% Oxygen Transport Consider HBO
60-up	Coma, Death Cardiac Arrhythmias	ABC's 100% Oxygen Transport Consider HBO

Footnotes:

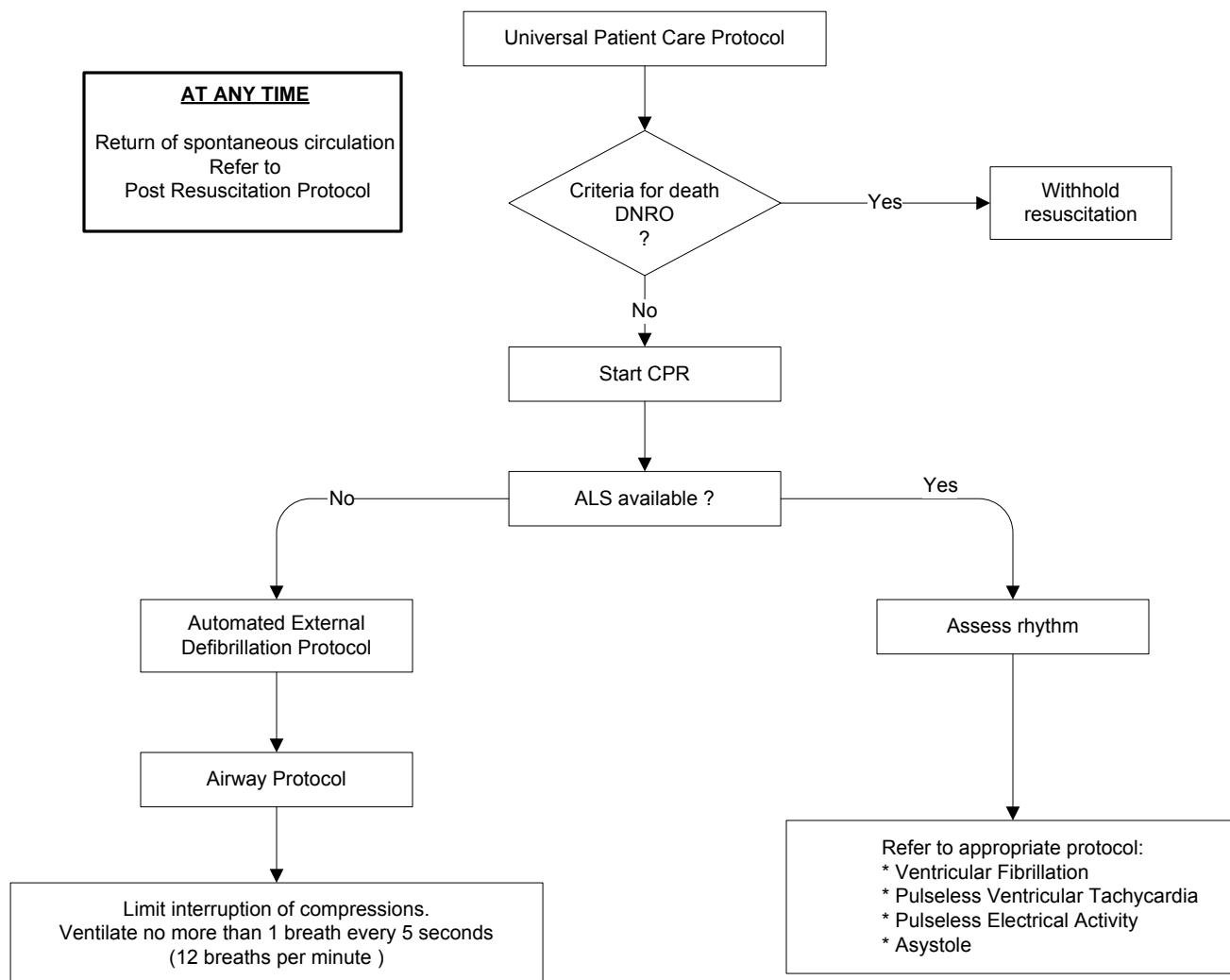
This protocol may be applied to adult patients engaged in firefighting and /or all hazard work groups associated with TFR

* Exam: mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.

* Personnel should report to rehab for evaluation after 45 minutes of activity(2 thirty minute or 1 sixty minute cylinder), or earlier if the firefighter or Incident Commander desires.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Cardiac Arrest	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History :	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Events leading to the arrest * Estimated downtime * Medications * Existence of terminal illness * Signs of lividity, rigor mortis * DNR or Living Will 	<ul style="list-style-type: none"> * Unresponsive * Apnea * Pulseless 	<ul style="list-style-type: none"> * Medical vs. Trauma * Ventricular Fibrillation vs. Pulseless Ventricular Tachycardia * Asystole * Pulseless Electrical Activity

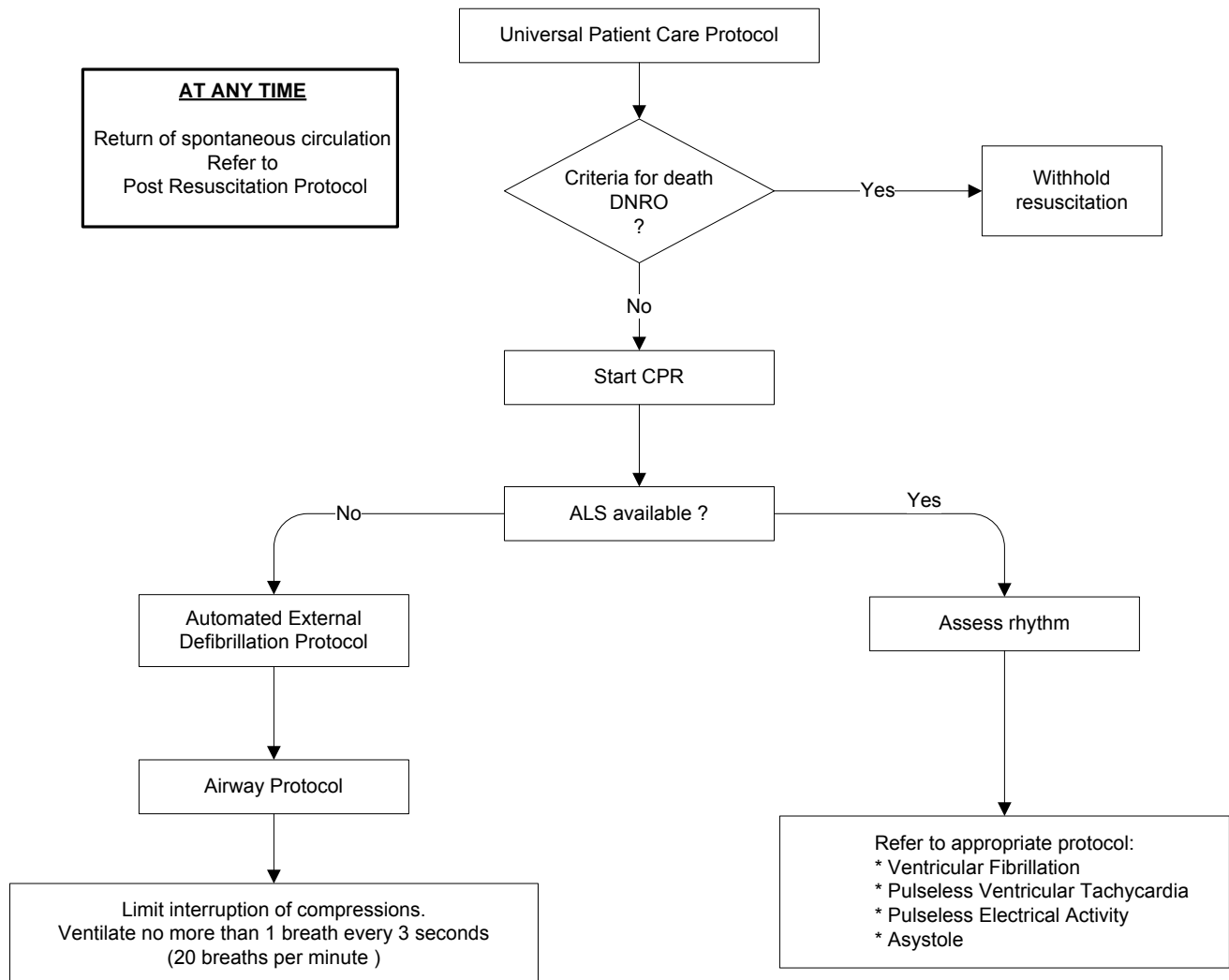


Footnotes:

- * Exam : ABC's, mental status.
- * Success is based upon proper training and execution. Procedures require space and patient access. Make room to work.
- * If witnessed arrest; administer precordial thump.
- * Reassess airway frequently, and with every patient move.
- * CAPNOGRAPHY WILL BE UTILIZED FOR ALL ARRESTS, WHEN AVAILABLE . WHEN NOT AVAILABLE, ETCO² MAY BE SUBSTITUTED. (i.e. ALS Engine)
- * Maternal Arrest- Treat the mother, per appropriate protocol, with rapid transport. Immediately notify the receiving facility.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Cardiac Arrest Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History :	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Events leading to the arrest * Estimated downtime * Medications * Existence of terminal illness * Signs of lividity, rigor mortis 	<ul style="list-style-type: none"> * Unresponsive * Apnea * Pulseless 	<ul style="list-style-type: none"> * Medical vs. Trauma * Ventricular Fibrillation vs Pulseless Ventricular Tachycardia * Asystole * Pulseless Electrical Activity



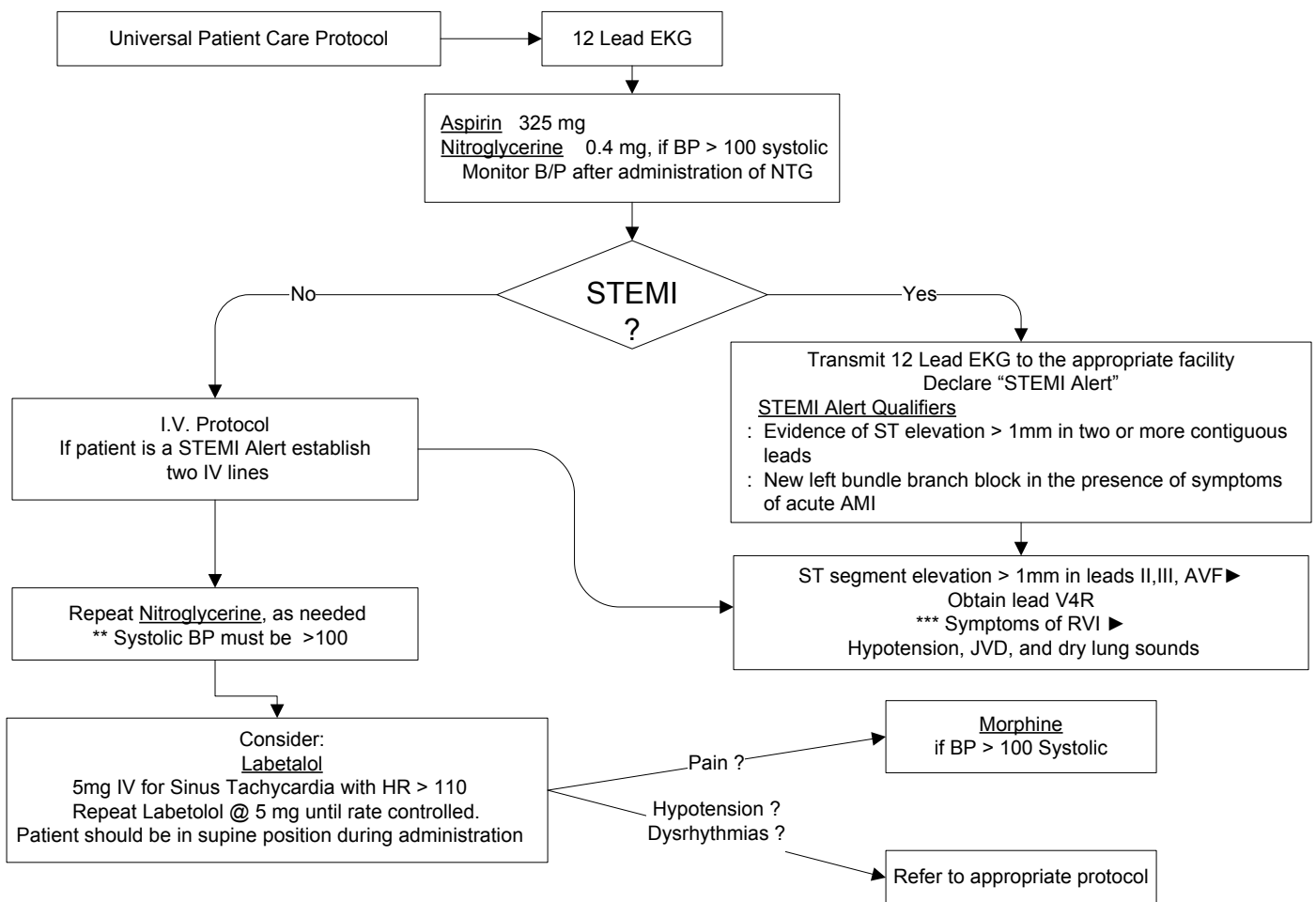
Footnotes:

- * Exam : ABC's, mental status.
- * Success is based upon proper training and execution. Procedures require space and patient access. Make room to work.
- * Reassess airway frequently, and with every patient move.
- * CAPNOGRAPHY WILL BE UTILIZED FOR ALL ARRESTS, WHEN AVAILABLE . WHEN NOT AVAILABLE, ETCO₂ MAY BE SUBSTITUTED. (i.e. ALS Engine)
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Chest Pain	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Gender * Medications * Past medical history (cardiac, diabetes) * Allergies (ASA, Morphine, Lidocaine) * Activity at onset of pain * Pain, location, intensity (0-10) * Duration 	<ul style="list-style-type: none"> * Pain ; pressure, aching, tightness * Location (substernal, epigastric, arm, jaw, neck, shoulder) * Radiation of pain * Pale, diaphoresis * Shortness of breath * Nausea, vomiting, dizziness * Non traumatic back/mid scapular pain * Geriatric patient with "general weakness" 	<ul style="list-style-type: none"> * Trauma vs. Medical * Angina vs. MI * Pericarditis * Pulmonary embolism * Asthma / COPD * Pneumothorax * Aortic dissection or aneurysm * Chest wall injury or pain * Pleural pain



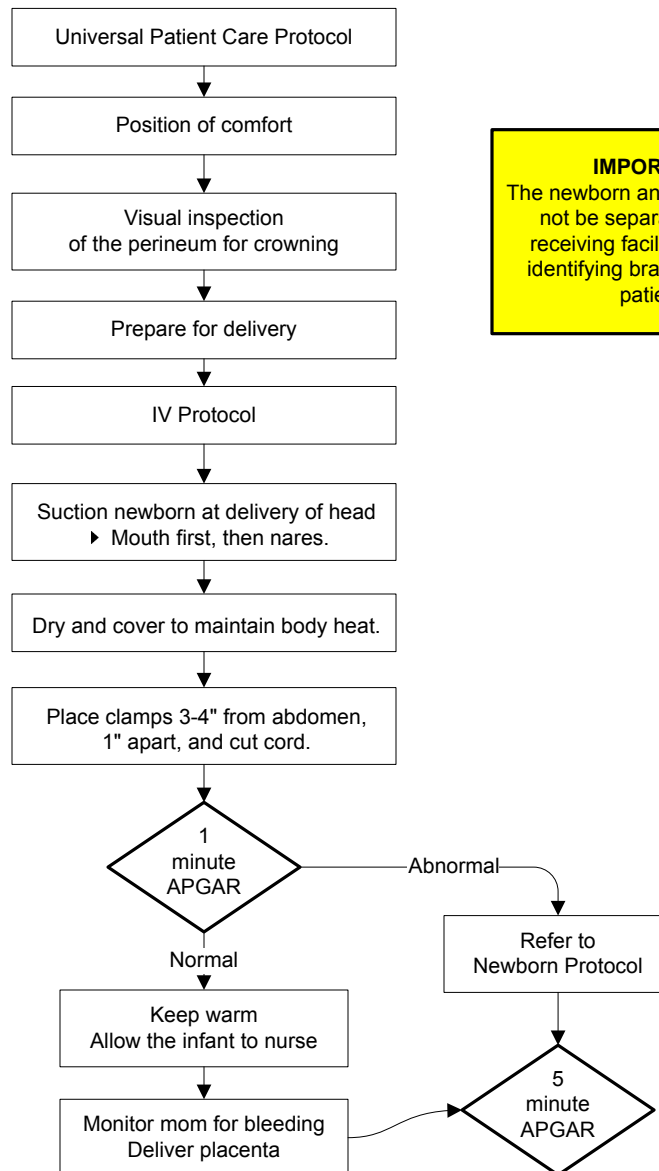
Footnotes:

- * Exam : ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Avoid nitroglycerine in any patient who has used Viagra or similar drugs in the past 24 hours, due to the potential for severe hypotension.
- * If the patient has taken nitroglycerine without relief; consider the potency of the medication.
- * Monitor for hypotension after administration of NTG and Morphine.
- * Nitroglycerine and Morphine may be repeated.
- * Diabetics and geriatric patients often have atypical pain or only generalized complaints.
- * A 12 lead EKG should be performed on any patient that has received an electrical injury, experienced an overdose of tricyclic anti-depressants or experienced a syncopal episode, for any reason.
- * Hypotension, in the setting of right ventricular infarct (RVI) should be treated with a 200-500 cc fluid bolus, to maintain BP @ 110 systolic.
- * Pressor agents may be appropriate. Nitroglycerine and Morphine should be used with great caution in the setting of RVI.
- * Transmit 12 lead to TFR QA if not a STEMI Alert.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Childbirth (Normal)	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Due date * Time contractions started/how often * Time / amount of any vaginal bleeding * Sensation of fetal activity * Past medical and delivery history * Medications 	<ul style="list-style-type: none"> * Spasmodic pain * Vaginal discharge or bleeding * Crowning or urge to "push" * Meconium * Rupture of membranes 	<ul style="list-style-type: none"> * Abnormal presentations <ul style="list-style-type: none"> : Buttock : Foot : Hand * Prolapsed cord * Placenta Previa * Abruptio Placenta



IMPORTANT:
The newborn and mother should not be separated until the receiving facility has placed identifying bracelets on both patients.

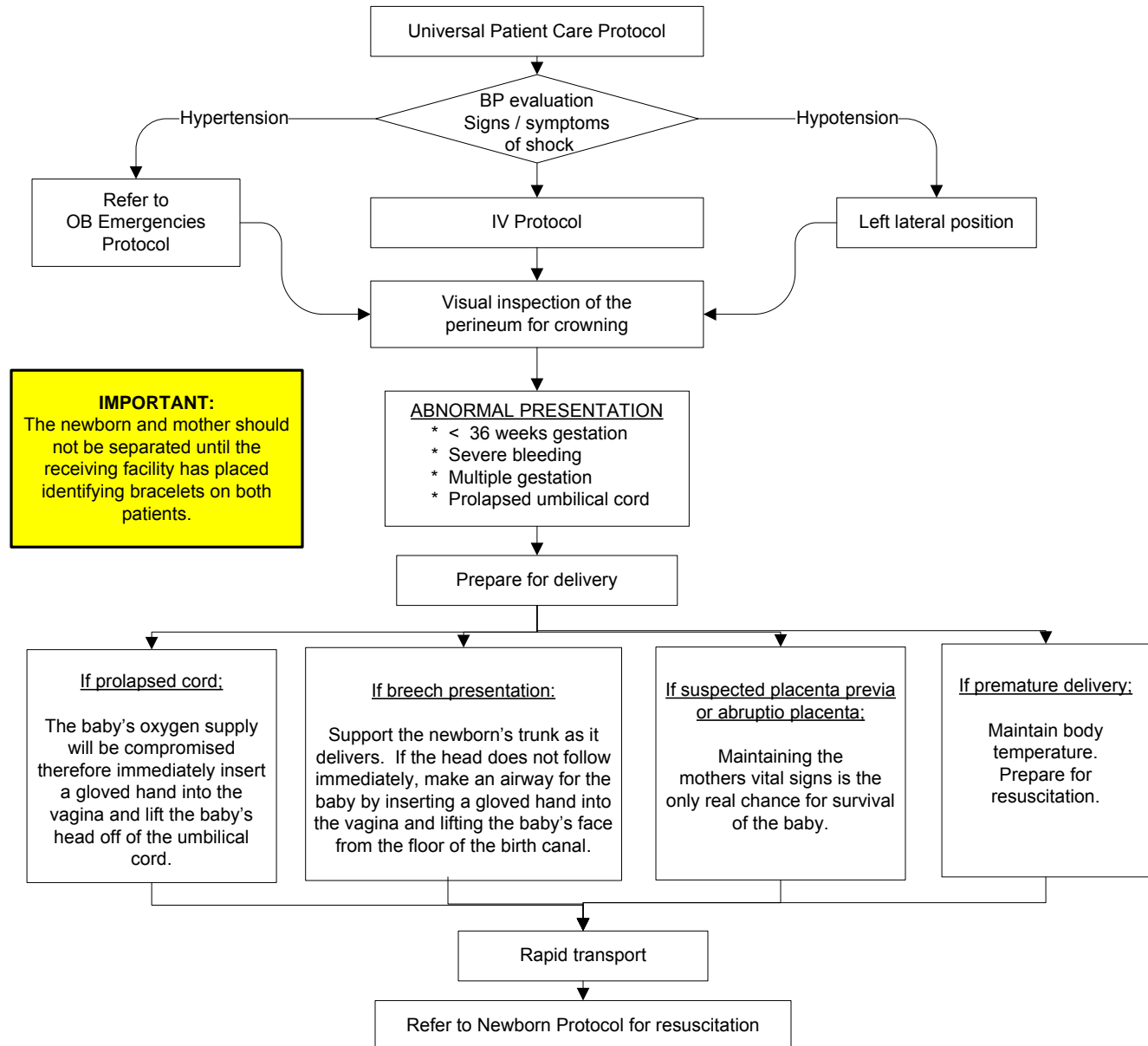
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Document all times (delivery, contraction, frequency, and length).
- * If maternal seizures occur, contact on-line medical control due to eclampsia.
- * After delivery, massaging the lower abdomen will promote uterine contraction and help to control post- partum bleeding.
- * In a pre-hospital delivery there must be a patient care report (PCR) for the mother AND the infant.
- * Record APGAR @ 1 minute and 5 minutes after delivery.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Childbirth (Emergency)	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Due date * Time contractions started/how often * Time / amount of any vaginal bleeding * Sensation of fetal activity * Past medical and delivery history * Medications 	<ul style="list-style-type: none"> * Spasmodic pain * Vaginal discharge or bleeding * Crowning or urge to "push" * Meconium * Rupture of membranes 	<ul style="list-style-type: none"> * Abnormal presentations <ul style="list-style-type: none"> : Buttock : Foot : Hand * Prolapsed cord * Placenta Previa * Abruptio Placenta



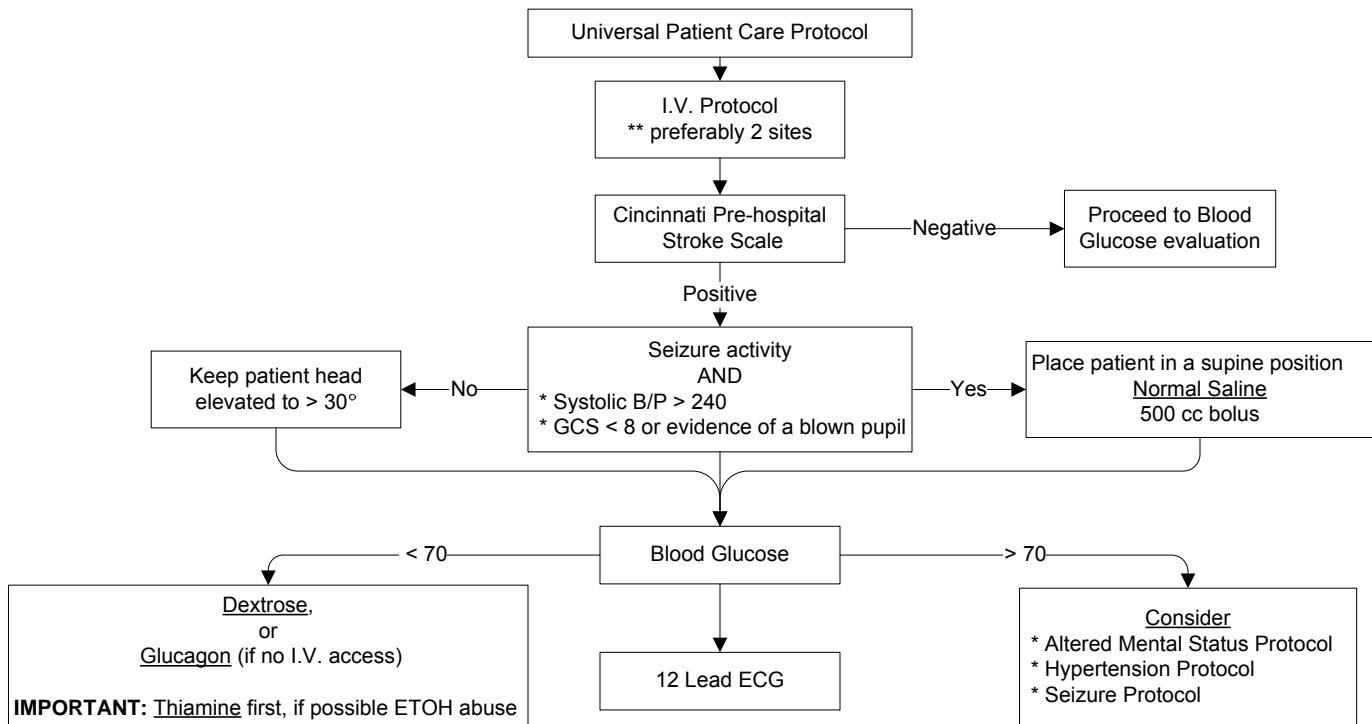
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Document all times (delivery, contraction, frequency, and length).
- * If maternal seizures occur, contact on-line medical control due to eclampsia.
- * After delivery, massaging the lower abdomen will promote uterine contraction and help to control post- partum bleeding.
- * In a pre-hospital delivery there must be a patient care report (PCR) for the mother AND the infant.
- * Record APGAR @ 1 min. and 5 min after birth.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	CVA	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Previous CVA, TIA * Previous cardiovascular surgery * Past medical history: diabetes, hypertension * Atrial fibrillation * Medications (blood thinners) * History of trauma 	<ul style="list-style-type: none"> * Altered mental status * Weakness / paralysis * Acute visual disturbances * Aphasia * Syncope * Vertigo / dizziness / vomiting * Headache / seizures * Respiratory pattern changes * Hypertension / hypotension 	<ul style="list-style-type: none"> * Refer to Altered Mental Status Protocol * TIA * Seizure * Hypoglycemia * Stroke (thrombotic, embolic, hemorrhagic) * Tumor * Trauma



Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Thrombolytic therapy may be possible with any acute stroke, with a duration of symptoms of less than 3 hours. Scene time should be ≤ 10 minutes
- * Onset of symptoms are defined as the last witnessed time patient was symptom free (i.e. awakening with stroke symptoms would be defined as an onset time of the previous night when patient was symptom free).
- * Be alert for airway problems (swallowing difficulty, vomiting). Administer O₂ LPM to all patients unless hypoxic. If intubation necessary, pre-medicate with Lidocaine to prevent increased ICP.
- * Hypoglycemia can present as a localized neurologic deficit, especially in the elderly.

Stroke Alert Criteria:

A "Stroke Alert" will be called on any patient that presents with stroke symptoms based on the Cincinnati Stroke Scale, with a known onset time of 4 hours or less. This includes suspected TIA patients whose signs and symptoms become transient after TFR arrival.

Known onset "three hours or less"

This patient will be transported as a "Stroke Alert", to the nearest facility capable of providing a CAT scan and IV thrombolytics. Transport units must verify that the intended receiving facility can provide the necessary treatment, or divert to one that can.

Known onset "greater than two but less than four hours"

This patient will be transported as a "Stroke Alert" to the nearest facility capable of intra-cerebral thrombolytics. Presently in the City of Tampa, these are St. Joseph's Hospital, TGH and UCH.

Onset time "Unknown or Questionable"

This patient requires transportation but does not meet "Stroke Alert" criteria.

Patients with suspected aneurysms OR when thrombolytics are potentially contraindicated

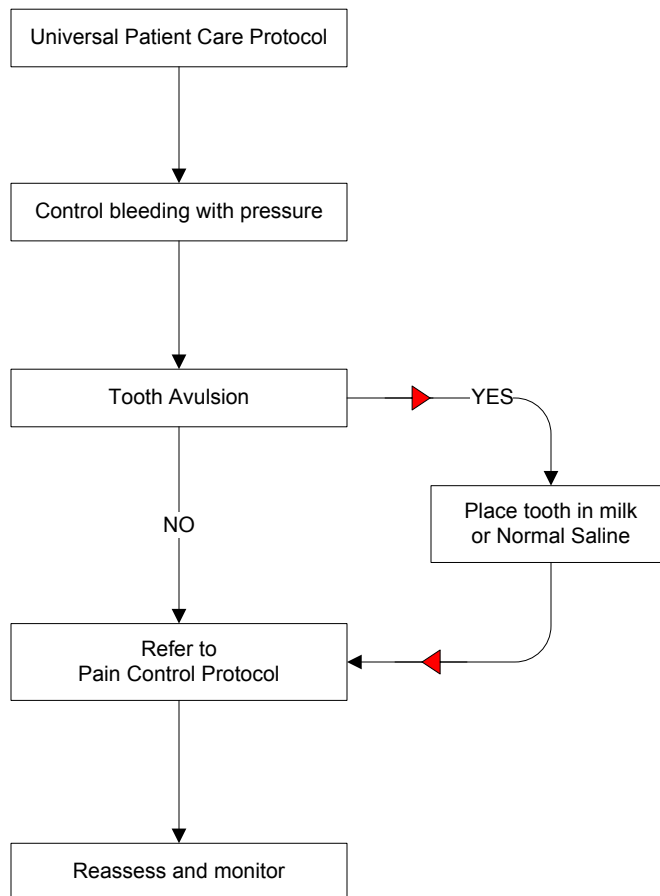
This patient will be transported as a "Stroke Alert" to the closest neurovascular / neurosurgical facility.

Exclusionary criteria for thrombolytics

Head trauma at onset; possible brain hemorrhage; intracranial surgery within prior 3 months; previous stroke; patients taking Warfarin / Coumadin; history of bleeding problems; major surgery within prior 14 days; serious trauma; recent AMI; seizures at onset.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Dental Emergencies	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

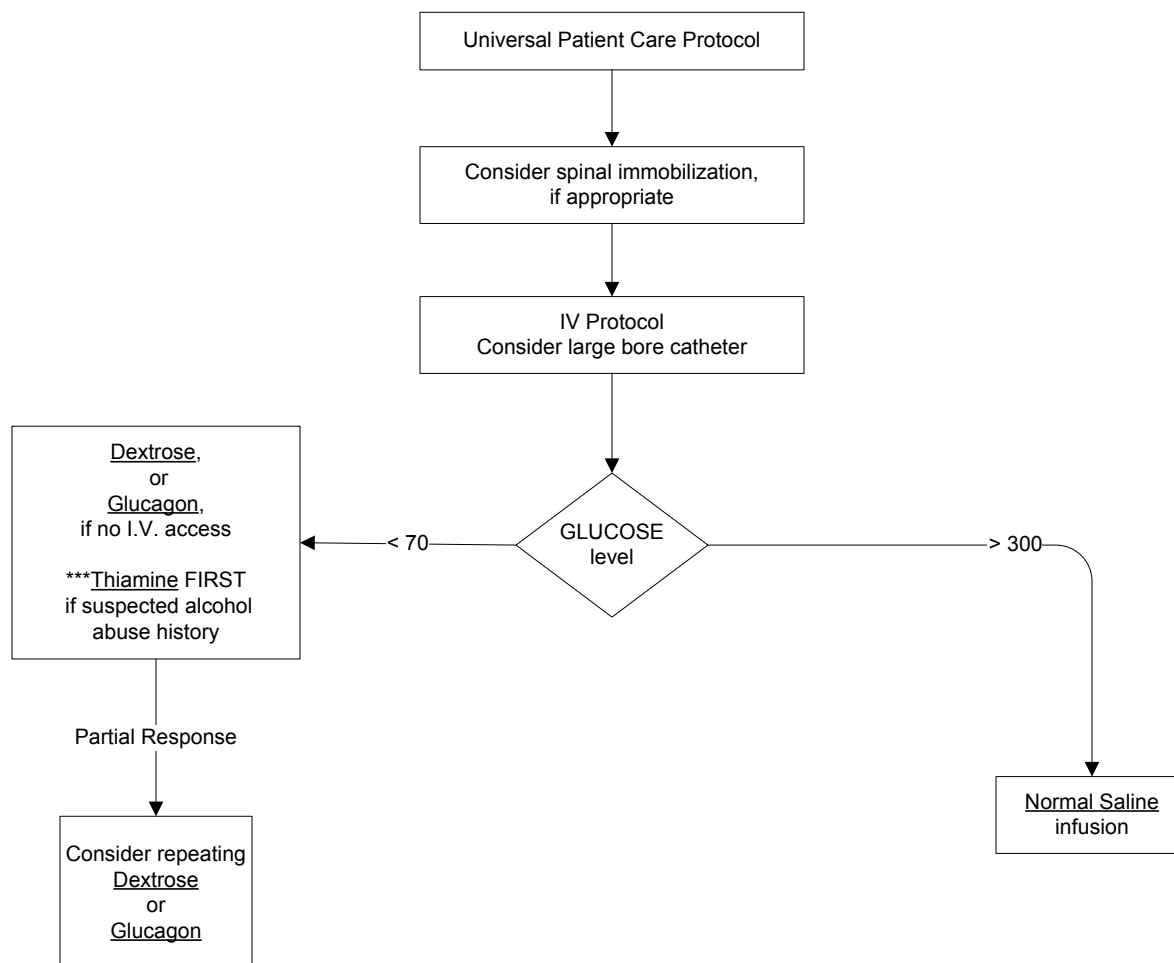
History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Past medical history * Medications * Onset of pain / injury * Trauma with missing tooth / teeth * Location of tooth * Whole vs. partial tooth injury 	<ul style="list-style-type: none"> * Bleeding * Pain * Fever * Swelling * Tooth missing or fractured 	<ul style="list-style-type: none"> * Decay * Infection * Fracture * Avulsion * Abscess * Facial cellulitis * Impacted wisdom tooth * TMJ Syndrome * Myocardial infarction



Footnotes:
<ul style="list-style-type: none"> * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological. * Significant soft tissue swelling to the face or oral cavity can represent cellulitis or abscess. * Scene and transport times should be minimized in complete tooth avulsions. Re-implantation is possible within 4 hours, if the tooth is properly cared for. * All tooth disorders typically need antibiotics, in addition to pain control. * Occasionally, cardiac chest pain can radiate to the jaw.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Diabetic Emergencies	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

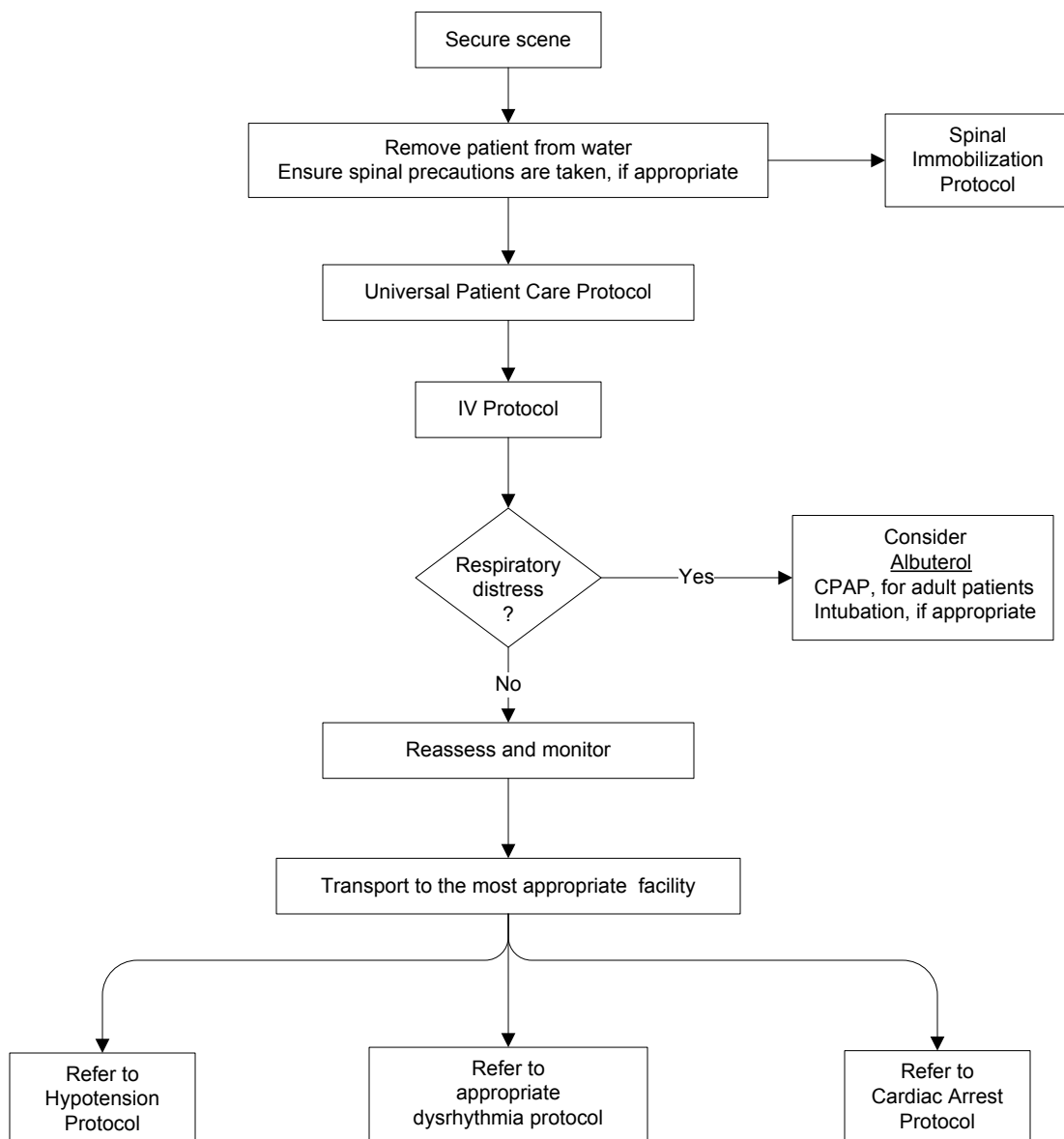
History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Known diabetic or Medic Alert tag * Drugs or drug paraphernalia * Past medical history * Medications * History of trauma <p>*** Contact TPD for illicit drug use or toxic ingestion.</p>	<ul style="list-style-type: none"> * Decreased mental status * Change in baseline mental status * Bizarre behavior * Hypoglycemia * Hyperglycemia 	<ul style="list-style-type: none"> * Head trauma * Cardiac (MI, CHF) * Infection * Thyroid (hyper or hypo) * Shock (septic, metabolic, traumatic) * Diabetes * Toxicologic * Acidosis/ alkosis * Environmental exposure * Pulmonary (hypoxia) * Electrolyte abnormality



Footnotes:
<ul style="list-style-type: none"> * Exam : ABC's, vital signs, mental status, skin neck, heart, lungs, abdomen, back, extremities, neurological. * Glucose levels: Low: < 70 mg/dl Normal: 70-120 mg/dl High: > 300 mg/dl * If in doubt, it is safer to assume hypoglycemia, than hyperglycemia. * Do not let the presence of alcohol ingestion confuse the clinical picture. Alcoholics frequently develop hypoglycemia. * Consider restraints if necessary for patient's and or personnel's protection per the restraint protocol.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Drowning / Near Drowning	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Submersion event regardless of depth * Possible history of trauma: (diving) * Duration of submersion * Temperature of water 	<ul style="list-style-type: none"> * Unresponsive or mental status changes * Abnormal or absent vital signs * Vomiting * Coughing * Increased respiratory difficulty 	<ul style="list-style-type: none"> * Trauma * Pre-existing medical problem * Pressure injury (diving ?) * Baro-trauma * Decompression sickness



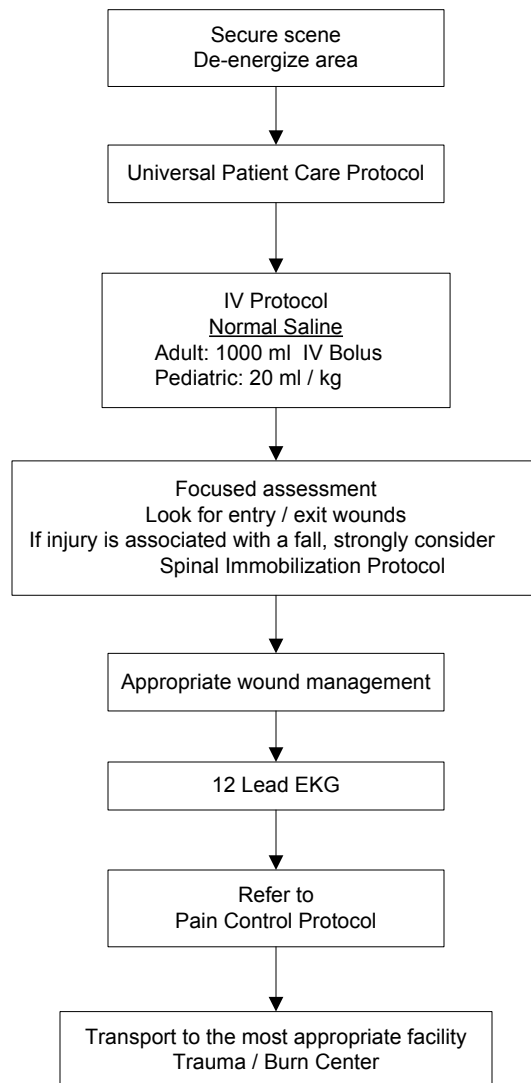
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Resuscitate ALL victims of cold water drowning, regardless of time.
- * Transport all victims for evaluation, due to potential effects which can manifest hours later.
- * Utilize capnography on all intubated patients and document it's use in the PCR.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Electrical Injuries	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Lightning or electrical exposure * Single or multiple trauma * Trauma, secondary to falling live wire or MVA into power pole with lines down * Duration of exposure * Voltage and length of exposure 	<ul style="list-style-type: none"> * Burns * Pain * Entry and exit wounds * Hypotension and shock * Cardiac arrest prior to EMS arrival 	<ul style="list-style-type: none"> * Cardiac arrest * Seizure * Burns (See Burn Protocol)



Footnotes:

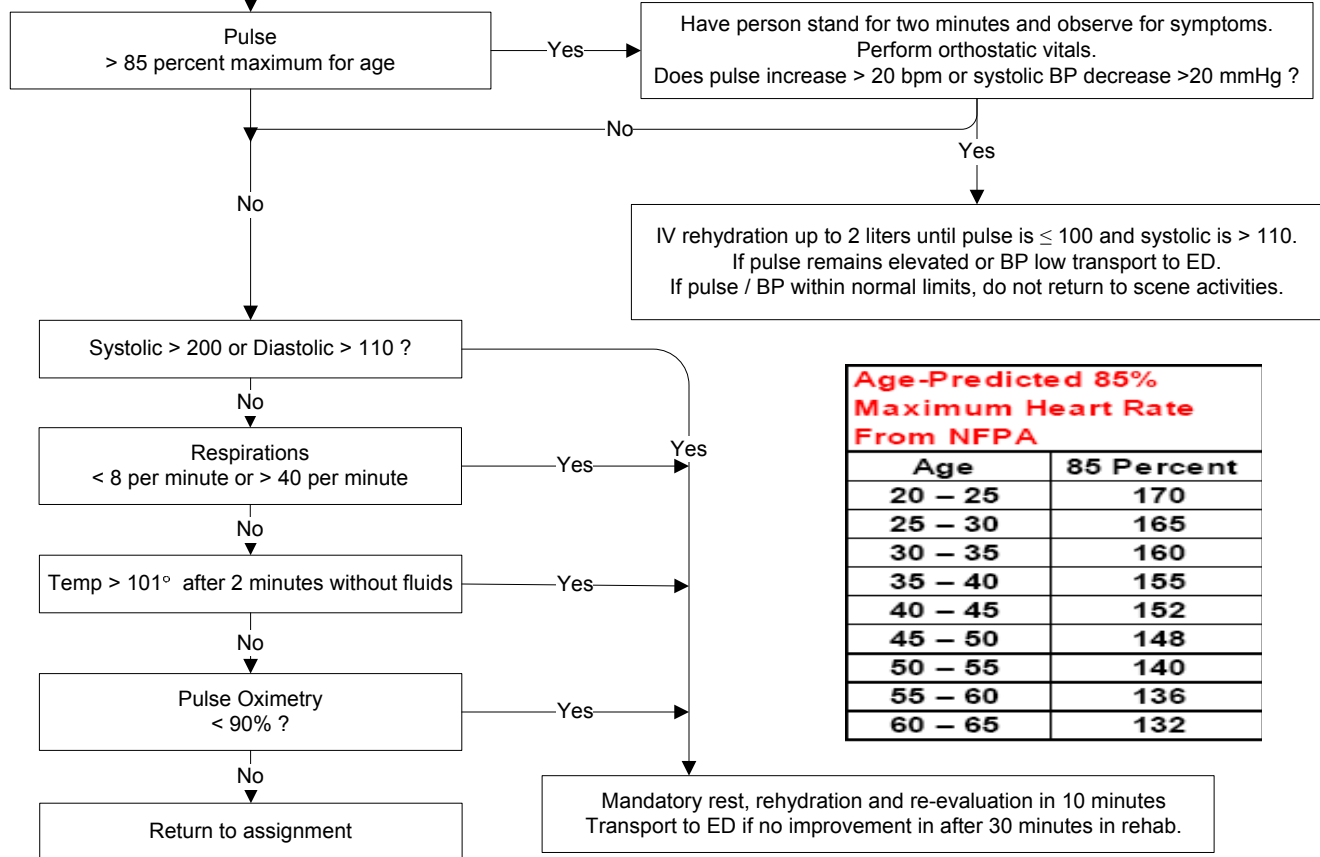
- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Ventricular fibrillation and asystole are the most common dysrhythmias.
- * Damage is often hidden with the most severe occurring inside the muscle, vessels and nerves.
- * In mass casualty incident, work victims in cardiac arrest secondary to electrical event, as it is likely they can be resuscitated.
- * Do not overlook other trauma (i.e. falls, blast injuries).
- * Lightning is a massive direct current (DC) shock most often leading to asystole.
- * In lightning injuries, most of the current will travel over the body surface producing flash burns.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Emergency Incident Rehabilitation	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential (Life Threatening):
* Strenuous physical activity at an emergency or training scene where exposure to heat or cold exist	* Signs of heat stress / fatigue * Hypotension * Chest pain * Respiratory distress * CO exposure	* Cardiac * Respiratory * Chemical exposure * Over exertion

Ensure removal of all PPE including bunker pants – pushed down on boots.
Rest, active / passive cooling and oral hydration
PROCEED AFTER 10 MINUTES



Age-Predicted 85% Maximum Heart Rate From NFA	
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

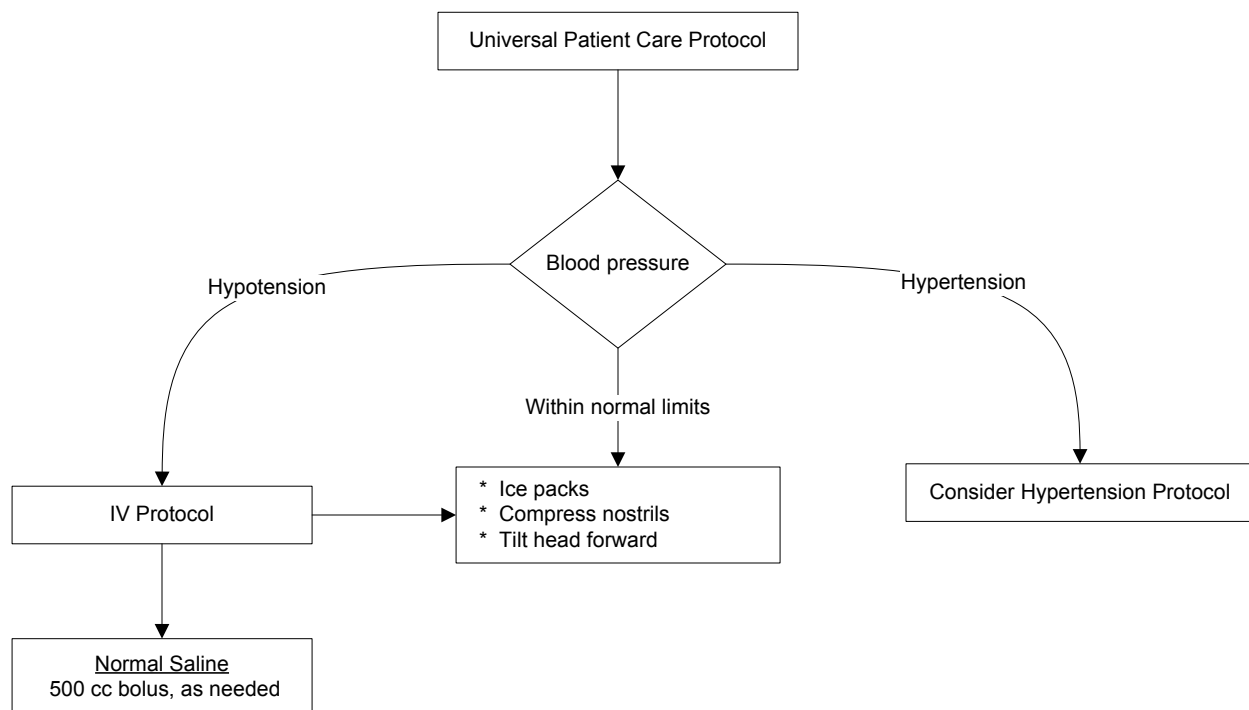
Footnotes:

This protocol may be applied to adult patients engaged in firefighting /all hazard work groups associated with TFR

- * Exam: mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Personnel should report to rehab for evaluation after 45 minutes (2 thirty minute or 1 sixty minute cylinder), or earlier if the firefighter or Incident Commander desires.
- * Any person complaining of shortness of breath, confusion , combativeness or headache will be treated with high flow oxygen and be transported to the hospital.
- * Automatic transport criteria:
 - * Chest pain
 - * Shortness of breath unresolved by 10 minutes on high flow O2
 - * Heart rhythm other than normal sinus rhythm or sinus tachycardia
 - * A syncopal episode, disorientation, or confusion
 - * Vital signs that have not returned to normal after 45 minutes of rest
 - * Inability to hold fluids down or an episode of vomiting
- * Evaluate for Carbon Monoxide exposure.
- * Cooling Techniques: Expose by full gear removal, utilize cooling fans, ambient evaporative cooling.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Epistaxis	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Past medical history * Medications (HTN, anti-coagulants) * Previous epistaxis * Trauma * Duration of bleeding * Quantity of bleeding 	<ul style="list-style-type: none"> * Bleeding from nasal passage * Pain * Nausea * Vomiting 	<ul style="list-style-type: none"> * Trauma * Infection (viral or sinusitis) * Allergic rhinitis * Lesions (polyps, ulcers) * Hypertension

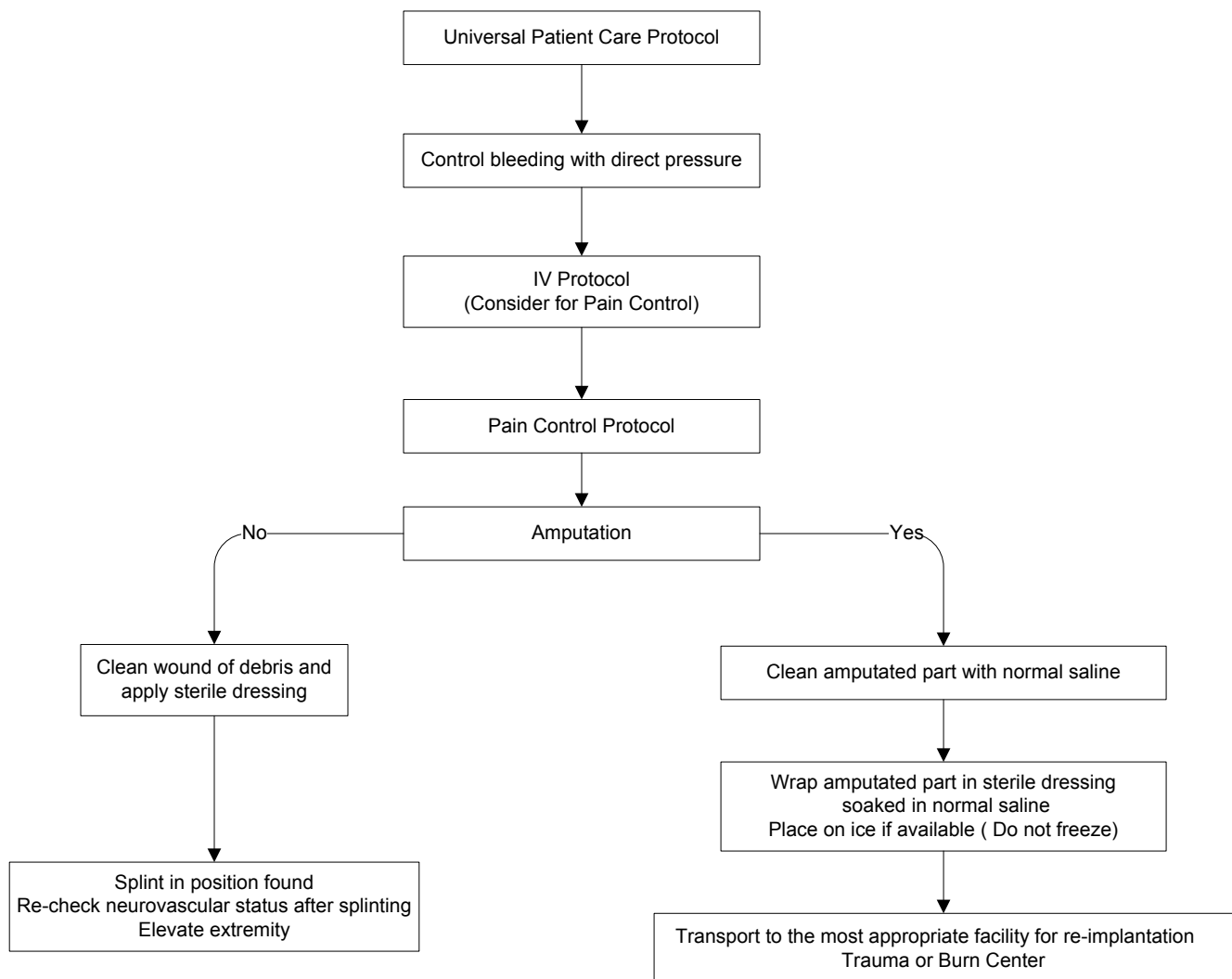


Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * It is very difficult to quantify the amount of blood loss with epistaxis.
- * Evaluate for posterior blood loss by examining the posterior pharynx.
- * Anticoagulants include aspirin, coumadin, non-steroidal, anti-inflammatory medications (ibuprophen), and many over the counter headache relief powders.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Extremity Trauma	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Type of Injury * Mechanism: crush vs. penetrating vs. amputation * Time of injury * Open vs. closed wound / fracture * Wound contamination * Age * Past medical history * Medications 	<ul style="list-style-type: none"> * Pain, swelling * Deformity * Altered sensation or motor function * Diminished pulse or capillary refill * Decreased extremity temperature 	<ul style="list-style-type: none"> * Abrasion * Contusion * Laceration * Sprain * Dislocation * Fracture * Amputation

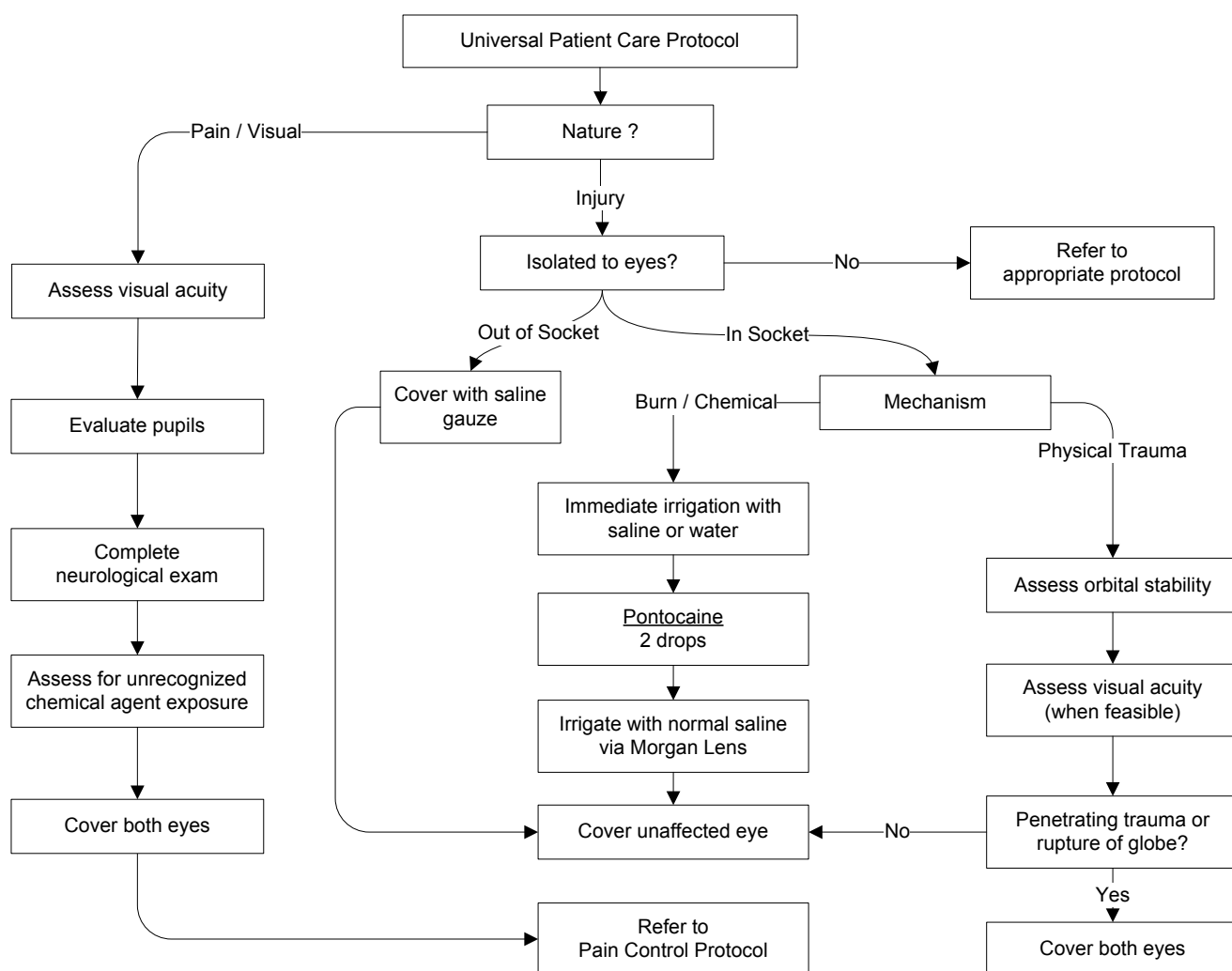


Footnotes:
<ul style="list-style-type: none"> * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological. * With amputations, time is critical. Transport and notify on-line medical control immediately. * Hip dislocations and knee and elbow fractures / dislocations have a high incidence of vascular compromise. * Urgently transport any injury with vascular compromise. * Blood loss may be concealed or not apparent with extremity injuries. * Lacerations must be elevated for repair within 6 hours from the time of injury.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Eye Injury or Complaint	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Time of injury / onset * Blunt / penetrating / chemical * Open vs. closed injury * Involved chemicals / MSDS * Wound contamination * Medical history * Tetanus status * Normal visual acuity * Medications 	<ul style="list-style-type: none"> * Pain, swelling, blood * Deformity, contusion * Visual deficit * Leaking aqueous / vitreous humor * Upwardly fixed eye * "Shooting" or "streaking" light * Visible contaminants * Rust ring * Lacrimation 	<ul style="list-style-type: none"> * Abrasion / laceration * Globe rupture * Retinal nerve damage / detachment * Chemical / thermal burn / "agent of terror" * Orbital fracture * Orbital Compartment Syndrome * Neurological event * Acute glaucoma * Retinal artery occlusion



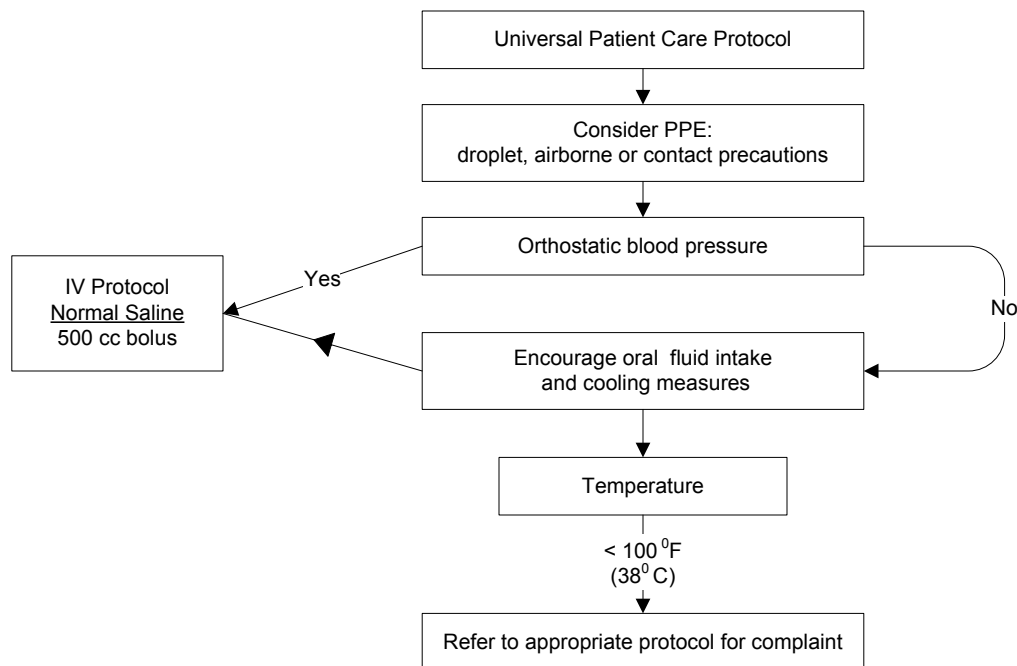
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Normal visual acuity can be present even with severe eye injury.
- * Remove contact lens whenever possible.
- * Any chemical or thermal burn to the face / eyes should raise suspicion of respiratory insult.
- * Orbital fractures raise concern of globe or nerve injury and need repeated assessments of visual status.
- * Always cover both eyes to prevent further injury.
- * Use shields, not pads, for physical trauma to eyes. Pads are OK for unaffected eye.
- * Do not remove impaled objects.
- * Suspected globe rupture or compartment syndromes require emergent in-facility intervention.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Fever	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Duration of fever * Severity of fever * Past medical history * Medications * Immune compromised (transplant, HIV, diabetes, cancer) * Environmental exposure * Last acetaminophen or ibuprofen 	<ul style="list-style-type: none"> * Warm * Flushed * Sweaty * Chills/Rigors 	<ul style="list-style-type: none"> * Infections / sepsis * Cancer / tumors / lymphomas * Medication reaction * Connective tissue disease * Arthritis * Vasculitis * Hyperthyroid * Heat stroke
	Associated Symptoms: <ul style="list-style-type: none"> * Myalgia * Abdominal pain * Chest pain * Mental status changes * Dysuria * Cough * Headache * Rash 	

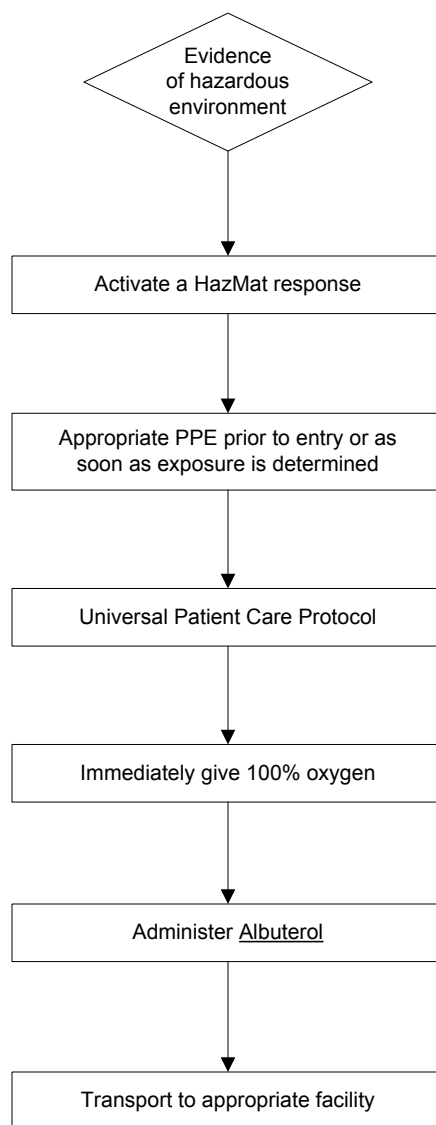


Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Febrile seizures are more likely in children with a history of febrile seizures and with a rapid elevation in temperature.
- * Temperature may be decreased by a combination of 4 methods:
 - Radiation: Heat loss to air (unwrap or remove clothing)
 - Evaporation: Heat loss through evaporation of sweat or liquid from the skin (tepid water bath to skin)
 - Convection: Heat loss through the movements of air currents (increase air movement to skin)
 - Conduction: Heat loss through the contact with solid substances (with heat stroke use cool packs)
- * Rehydration with fluids increases the patients ability to sweat and improves heat loss.
- * All patients should have drug allergies documented prior to administering pain medications.
- * Allergies to NSAID's (non-steroidal anti-inflammatory medications) are a contraindication to ibuprofen.
- * Patients with a history of liver disease should not receive Tylenol.
- * Droplet precautions: Standard PPE, plus a surgical mask, for providers who accompany patients in the back of the transport unit and a surgical mask or O₂ mask for the patient. This level of protection should be utilized when influenza, meningitis, mumps, streptococcal pharyngitis, and other illnesses spread via large particle droplets are suspected.
- * Airborne precautions: Standard PPE plus an N-95 mask for providers who accompany patients in the back of the transport unit, and a surgical mask or O₂ mask for the patient. This level of protection should be utilized when tuberculosis, measles, varicella, or other infections that are spread by droplets are suspected.
- * Contact precautions: Standard PPE plus utilization of a gown, change of gloves after every patient contact, and strict hand-washing precautions. This level of precaution is utilized when multi-drug resistant organisms (e.g., MRSA), scabies, or zoster (shingles), or other illnesses spread by contact are suspected.
- * All-hazards precautions: Standard PPE plus airborne precautions plus contact precautions. This level of precaution is utilized during the initial phases of an outbreak when the etiology of the infection is unknown or when the causative agent is found to be highly contagious (e.g., SARS).

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Bronchospasm Secondary to Toxic Inhalation	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Wheezing * Difficulty breathing 	<ul style="list-style-type: none"> * Exposure to hazardous materials

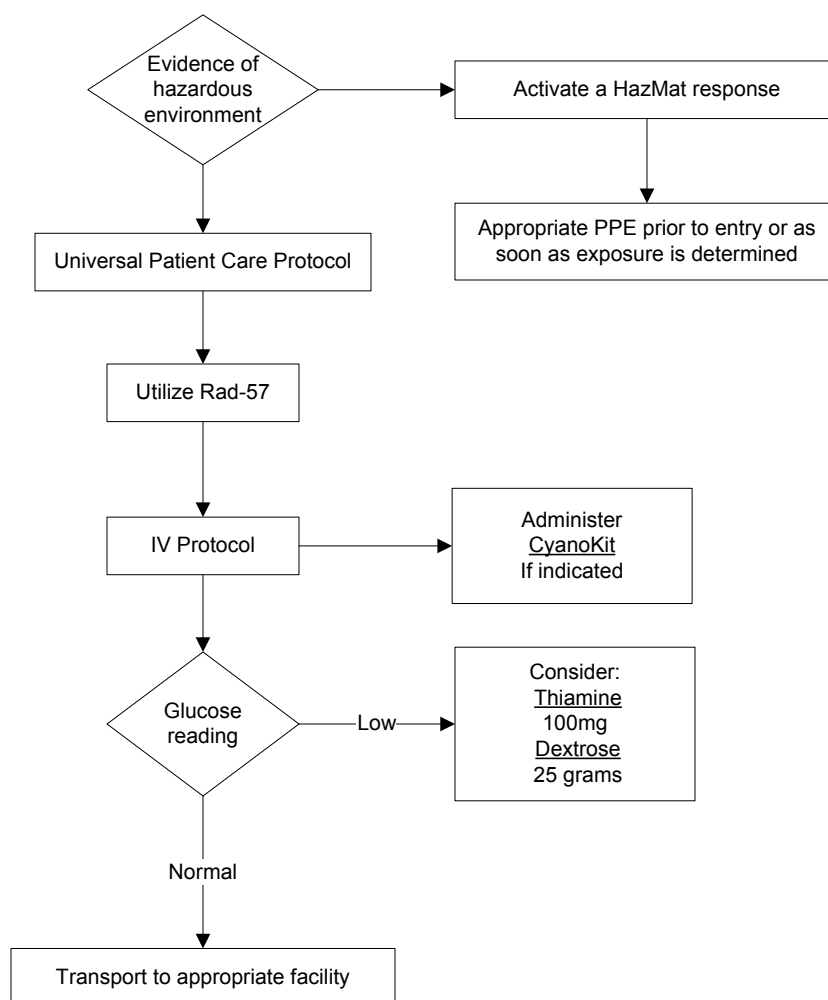


Footnotes:
<ul style="list-style-type: none"> * To adequately treat this condition both the bronchospasm and the inflammation must be addressed. * Wheezing due to exposure to chlorine or chloramines follow chlorine and chloramine protocol. * Wheezing due to exposure to fluorine or fluorine containing product follow Hydrofluoric Acid exposure protocol.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Carbon Monoxide Poisoning	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Patients with respiratory insufficiency * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Chest pain * Arrhythmias * Tachypnea * Slow and irregular respirations * Headache * Dizziness * Altered level of consciousness 	<ul style="list-style-type: none"> * Flu * Food poisoning * CVA * Cardiac / MI * Seizure * Exposure to hazardous materials



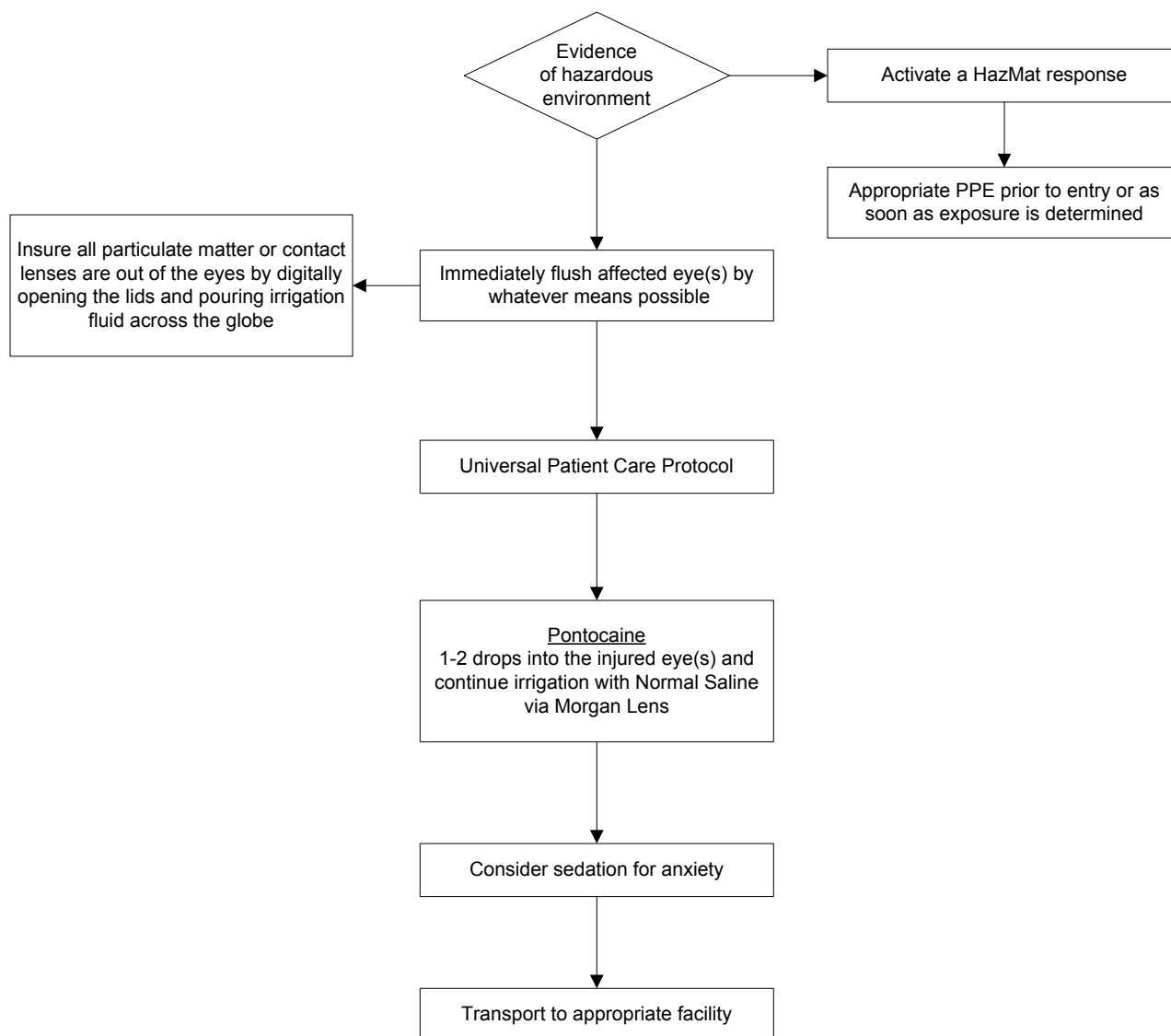
Footnotes:

- * Carbon monoxide is odorless, colorless, tasteless gas which converts hemoglobin into a non-oxygen carrying compound that causes chemical asphyxia.
- * Carbon monoxide poisoning should be considered in all cases of altered mental status, in the context of a Hazardous Materials response.
- * Pulse oximetry will be unreliable, usually indicating an incorrect, high reading.
- * Unconsciousness in the setting of smoke inhalation is probably due to mixed exposures including cyanide and acid gasses.
- * Transport to a facility with a hyperbaric chamber should be strongly considered.
- * The half life of carbon monoxide is - Room air: 4 - 6 hours; 100% oxygen: 60 - 90 minutes; Hyperbaric chamber: 20 -30 minutes.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Chemical Burns to Eyes	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Eye pain * Erythema 	<ul style="list-style-type: none"> * Exposure to hazardous materials



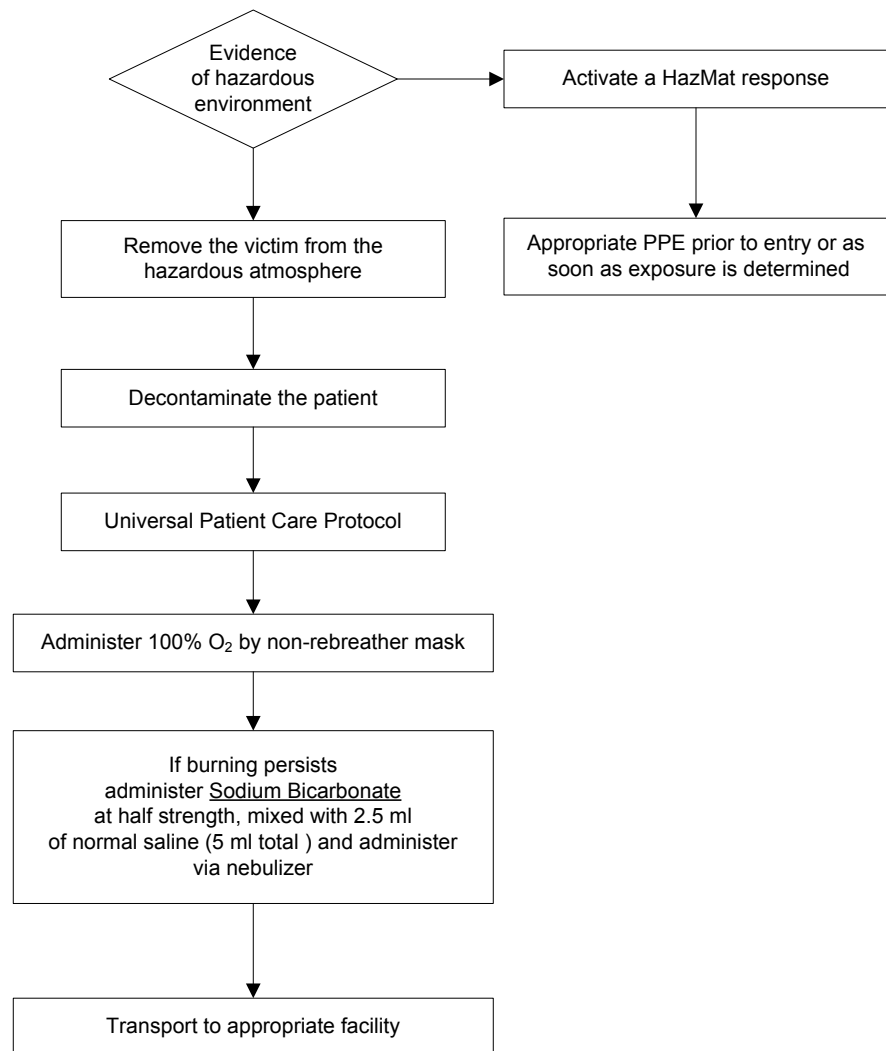
Footnotes:

- * Eye burns are almost always associated with contamination to other parts of the face or body.
- * Watch for water run-off from irrigation of eyes so other parts of the body do not become contaminated.
- * Insure all obvious particulate matter is removed.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Chlorine and Chloramine	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Wheezing * Difficulty breathing * Burning sensation to the upper airway * Hoarseness 	<ul style="list-style-type: none"> * Exposure to hazardous materials



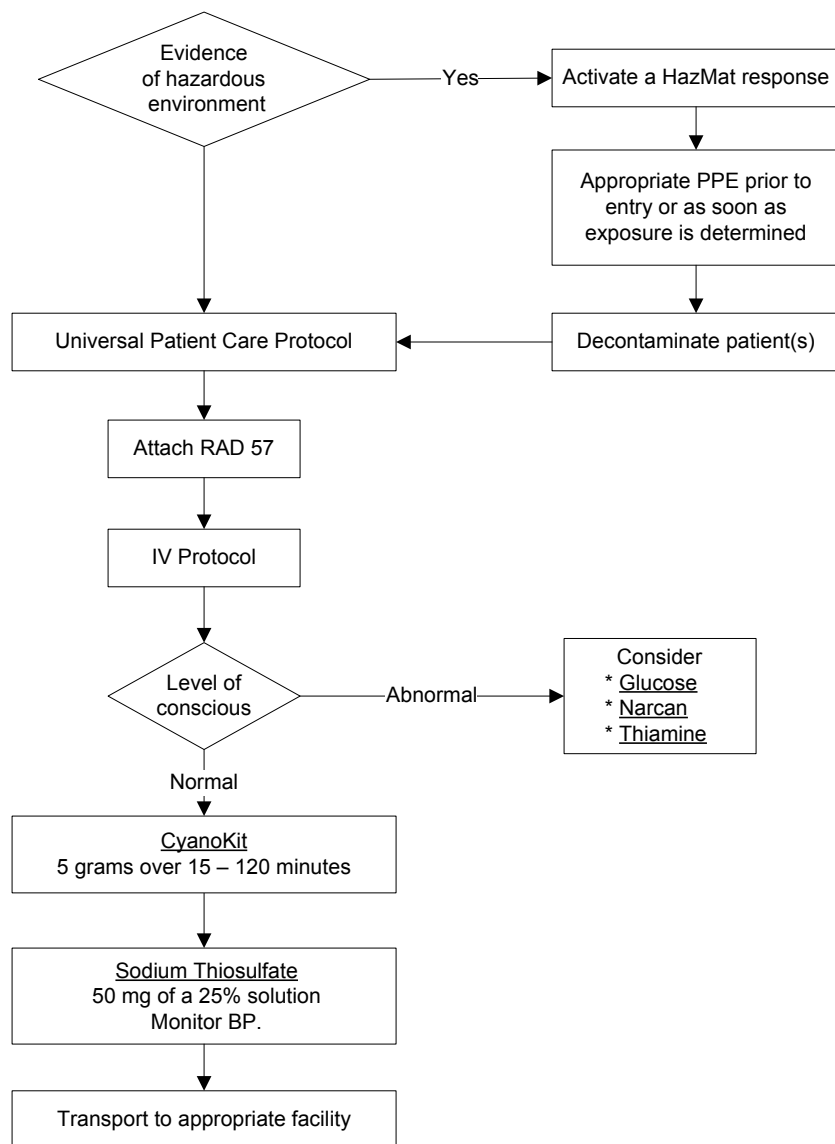
Footnotes:

- * Chloramine gas is produced by the mixture of household bleach and household ammonia.
- * Chloramine and Chlorine is an irritant that converts to hydrochloric acid in the lining of the upper airway.
- * Chloramine is toxic and flammable.
- * If available, administer 5 ml of sterile water by nebulizer.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Closed Space Fire	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential (Life Threatening):
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Patients with respiratory insufficiency * Post structure fire victim * Firefighters / emergency personnel engaged in an emergency scene 	<ul style="list-style-type: none"> * Victims of structure fires * Evidence of trauma or burns * Malaise * Soot in nose, mouth or oropharynx 	<ul style="list-style-type: none"> * Flu * Food poisoning * CVA * Cardiac / MI * Seizure * Exposure to hazardous materials



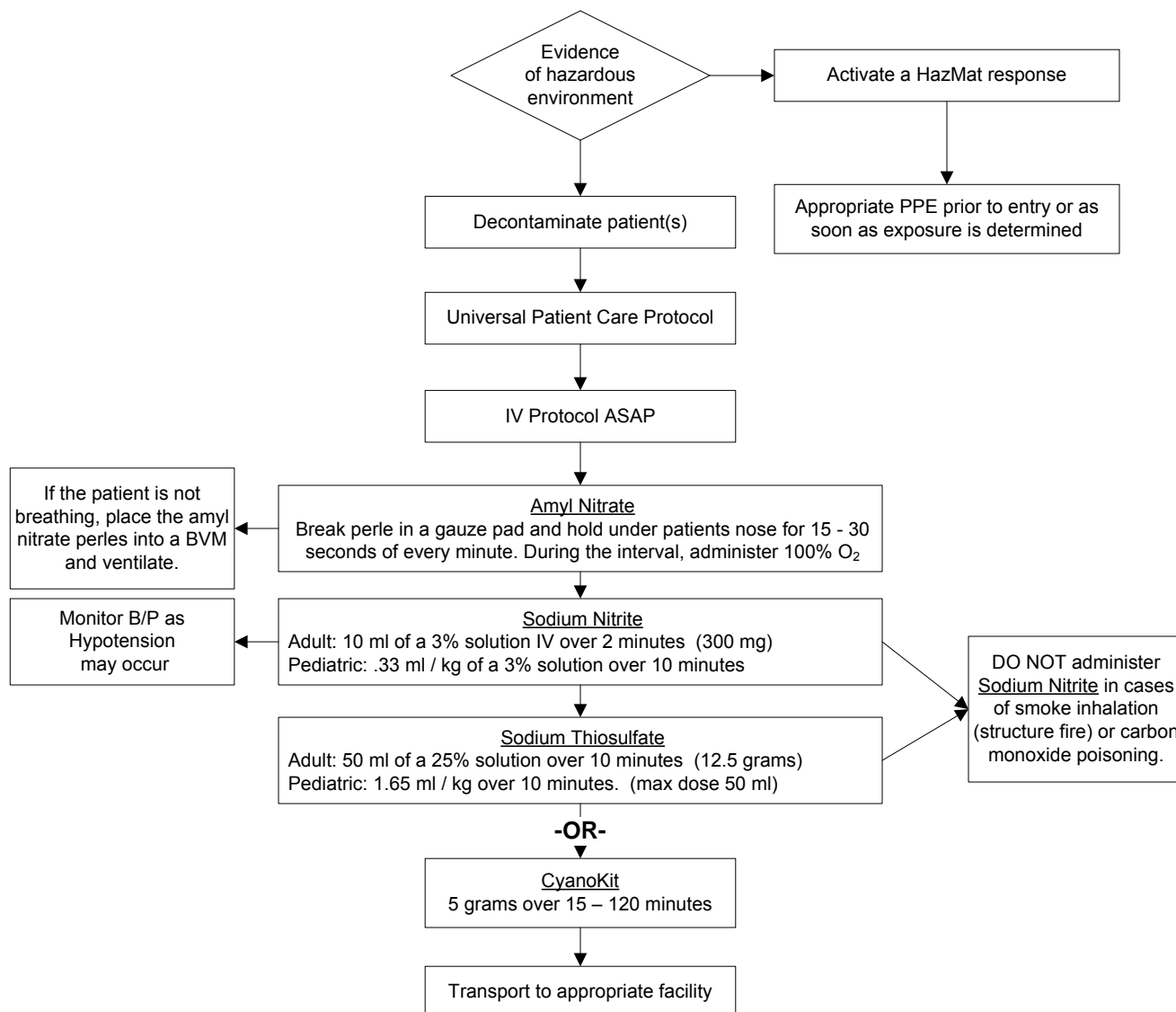
Footnotes:

- * Closed space fires produce many toxic substances, including cyanide, carbon monoxide and numerous respiratory irritating gasses.
- * Increasingly, cyanide has been recognized as a threat at the scene of a closed space fire and hazardous materials incidents.
- * CO in combination with Cyanide rapidly removes the ability of the blood to transport oxygen.
- * The mechanism of injury during a fire is three fold; thermal damage, pulmonary irritation, and chemical asphyxiation.
- * Anyone exposed from a close space fire should be considered to have inhalation chemical asphyxiation.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Cyanide Poisoning	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential (Life Threatening):
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Patients with respiratory insufficiency * Post structure fire victim * Firefighters / emergency personnel engaged in an emergency scene 	<ul style="list-style-type: none"> * Nausea / vomiting * Tachypnea * Tachycardia / bradycardia * Hypotension * Headache * Dizziness, weak, restlessness * Convulsions * Skin / eye irritation (hydrogen sulfide) * Pulmonary edema (hydrogen sulfide) 	<ul style="list-style-type: none"> * Flu * Food poisoning * CVA * Cardiac / MI * Seizure * Exposure to hazardous materials

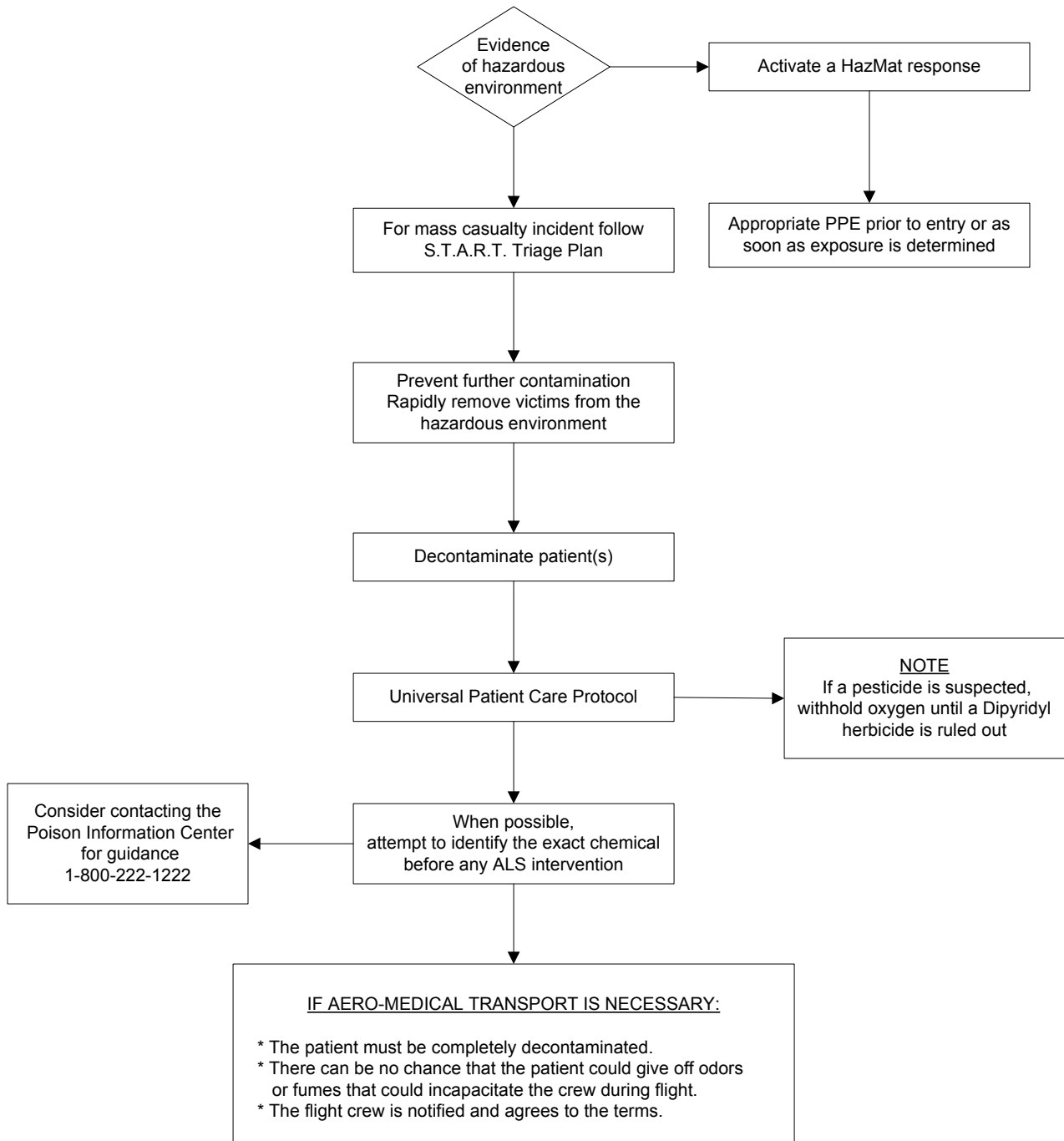


Footnotes:

- * Hydrogen cyanide is one of the most rapid acting poisons.
- * Only about 50% of the population can detect the bitter almond odor of hydrogen cyanide.
- * Hydrogen cyanide interferes with the uptake of oxygen into the cells, halting cellular respiration and causing chemical asphyxiation.
- * Pulse oximetry will be unreliable, usually indicating an incorrect, high reading.
- * Amyl nitrate is a temporizing measure only and may be bypassed once IV access is obtained. Do not allow this step to delay IV access.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials General Protocol	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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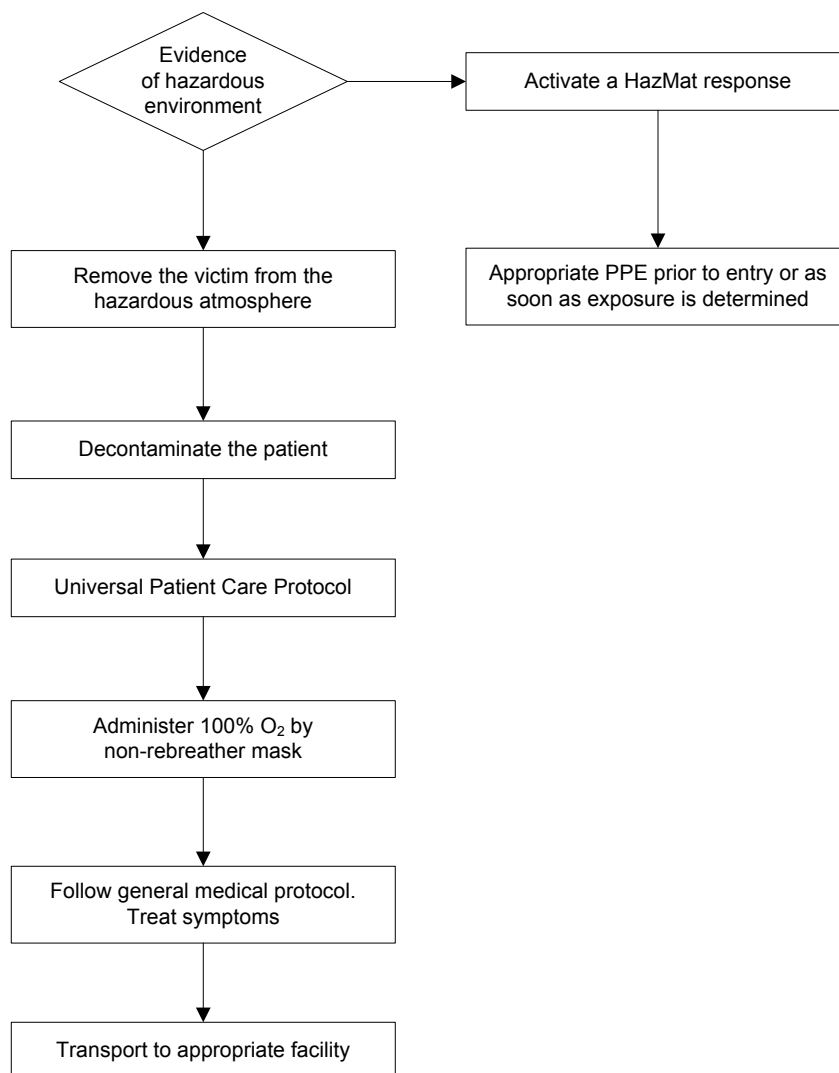


Footnotes:

- * Identify the type, quantity, and hazard potential of the materials involved, and relate it to the responding hazmat team, when possible.
- * Gross decontamination involves removal of all clothing, jewelry and personal items.
- * Specific chemical information can be obtained from onsite, written or computer generated data, state approved Poison Control Center, in conjunction with On-line medical control, or Medical guidance supplied by a base hospital certified as a Chemical Injury Treatment Center.
- * All exposures to hazardous materials require completion of a DWC-1, DA307, DA307A and a TFD257.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Halogenated Hydrocarbons	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Difficulty breathing * Altered level of conscious / unconscious * Coma * Death 	<ul style="list-style-type: none"> * Exposure to hazardous materials



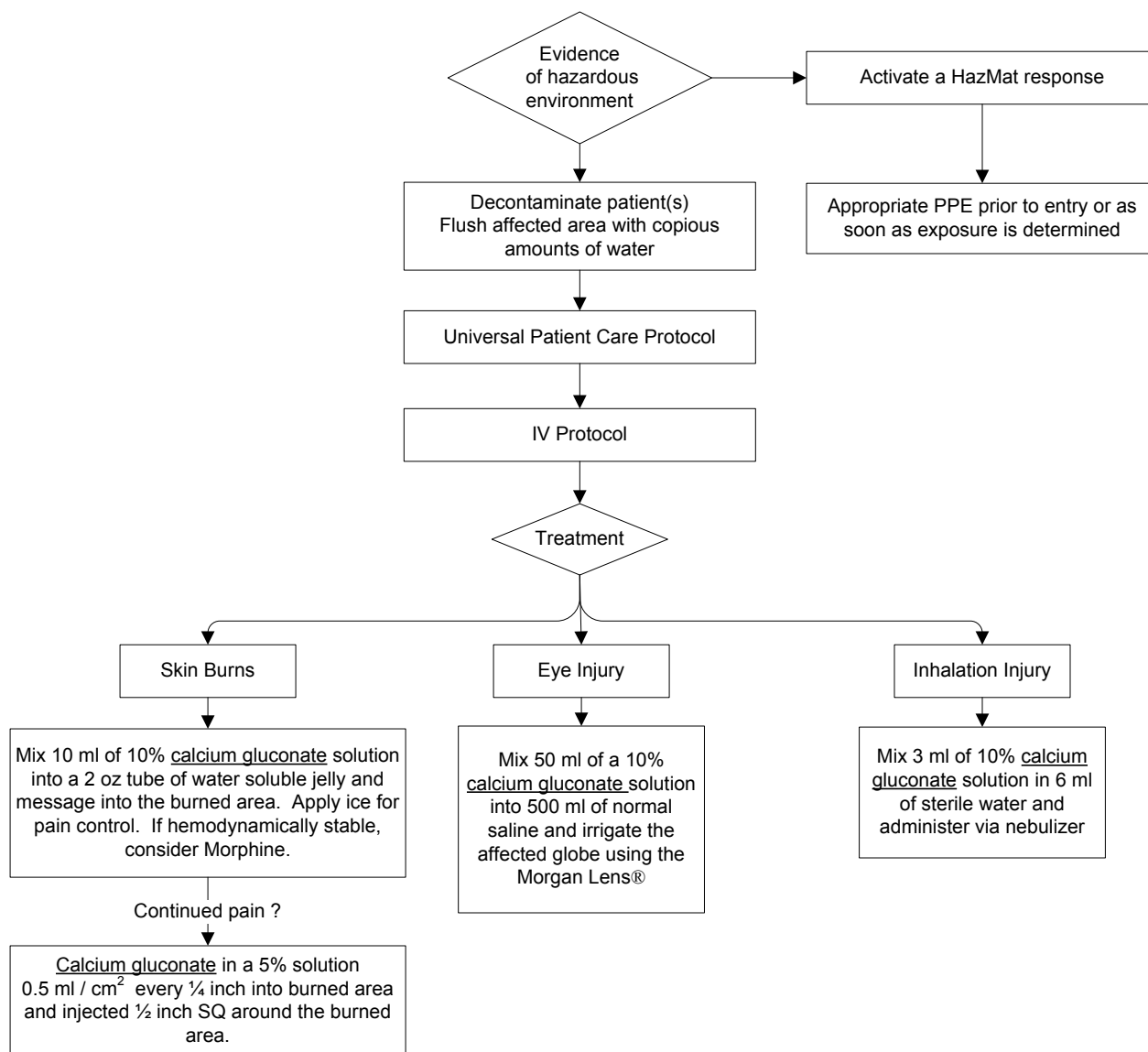
Footnotes:

- * Includes Chloroform and Chlorinated, Brominated hydrocarbons.
- * Inhalation of this chemical family sensitizes the myocardium to the effects of epinephrine and/or catecholamines.
- * Significant inhalation can depress the CNS, producing a anesthetic-like state with coma and death.
- * Since these agents can affect the CNS and sensitivity of the myocardium, Epinephrine should NOT BE ADMINISTERED as part of the resuscitation.
- * Lasix is contraindicated for non-cardiogenic pulmonary edema due to chemical injury to the alveoli.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Hydrofluoric Acid	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Erythema * Excruciating pain * Pulmonary edema * Cardiac dysrhythmias <ul style="list-style-type: none"> : Conduction disturbances : ST Segment abnormalities on EKG * Hypocalcemia * Hypomagnesemia * Tetany and seizures 	<ul style="list-style-type: none"> * Exposure to hazardous materials



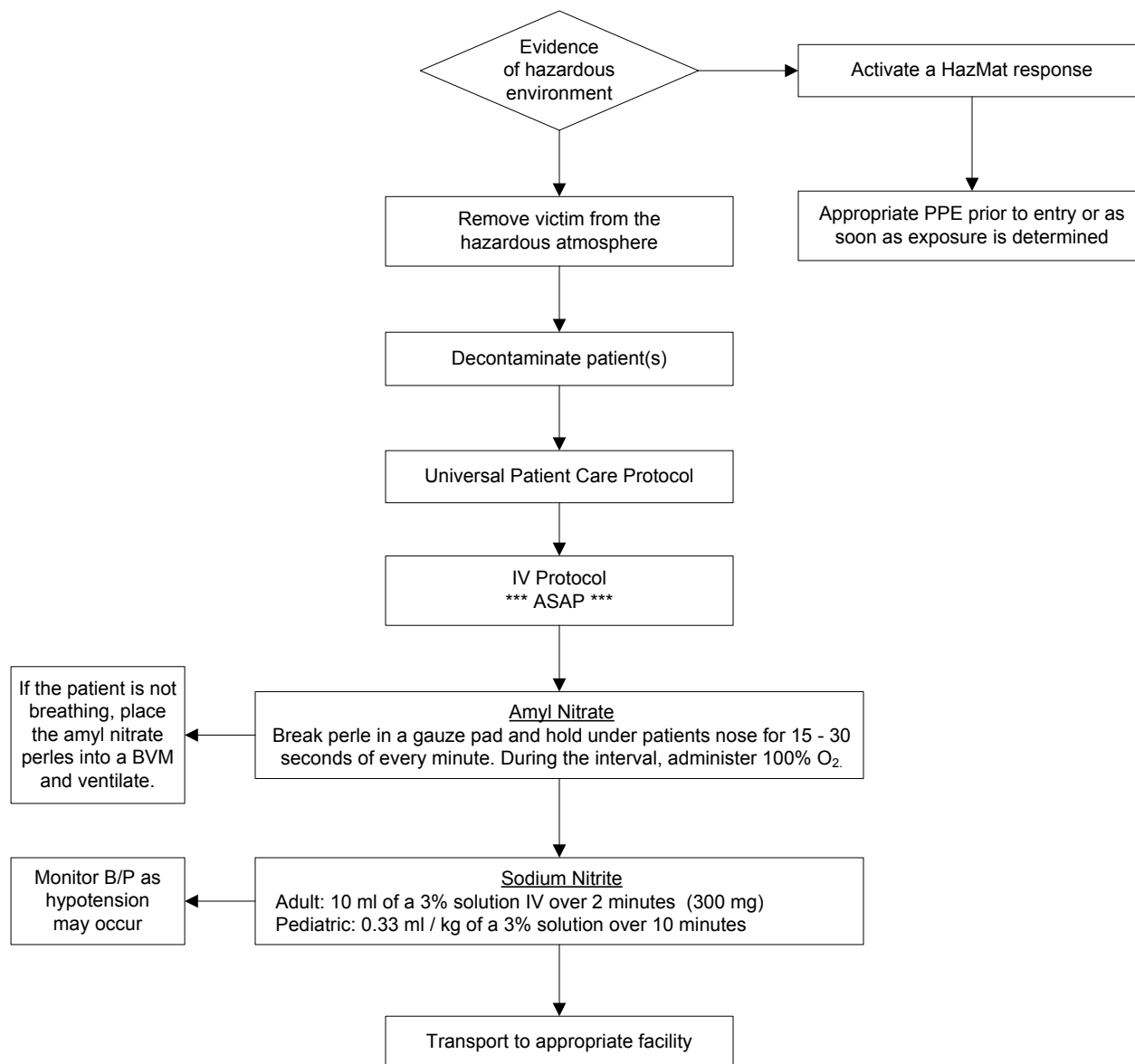
Footnotes:

- * Hydrofluoric acid is the strongest inorganic acid known.
- * Causes corrosive burns to the skin and underlying tissue.
- * Binds with the calcium and magnesium of the nerve pathways, bone and blood stream resulting in spontaneous depolarization producing excruciating pain and cardiac dysrhythmias, potentially leading to cardiac arrest.
- * Symptoms may take several hours to present.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Hydrogen Sulfide	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Patients with respiratory insufficiency * Post structure fire victim * Firefighters / emergency personnel engaged in an emergency scene 	<ul style="list-style-type: none"> * Nausea / vomiting * Tachypnea * Tachycardia / bradycardia * Hypotension * Headache * Dizziness, weak, restlessness * Convulsions * Skin / eye irritation (hydrogen sulfide) * Pulmonary edema (hydrogen sulfide) 	<ul style="list-style-type: none"> * Flu * Food poisoning * CVA * Cardiac / MI * Seizure * Exposure to hazardous materials

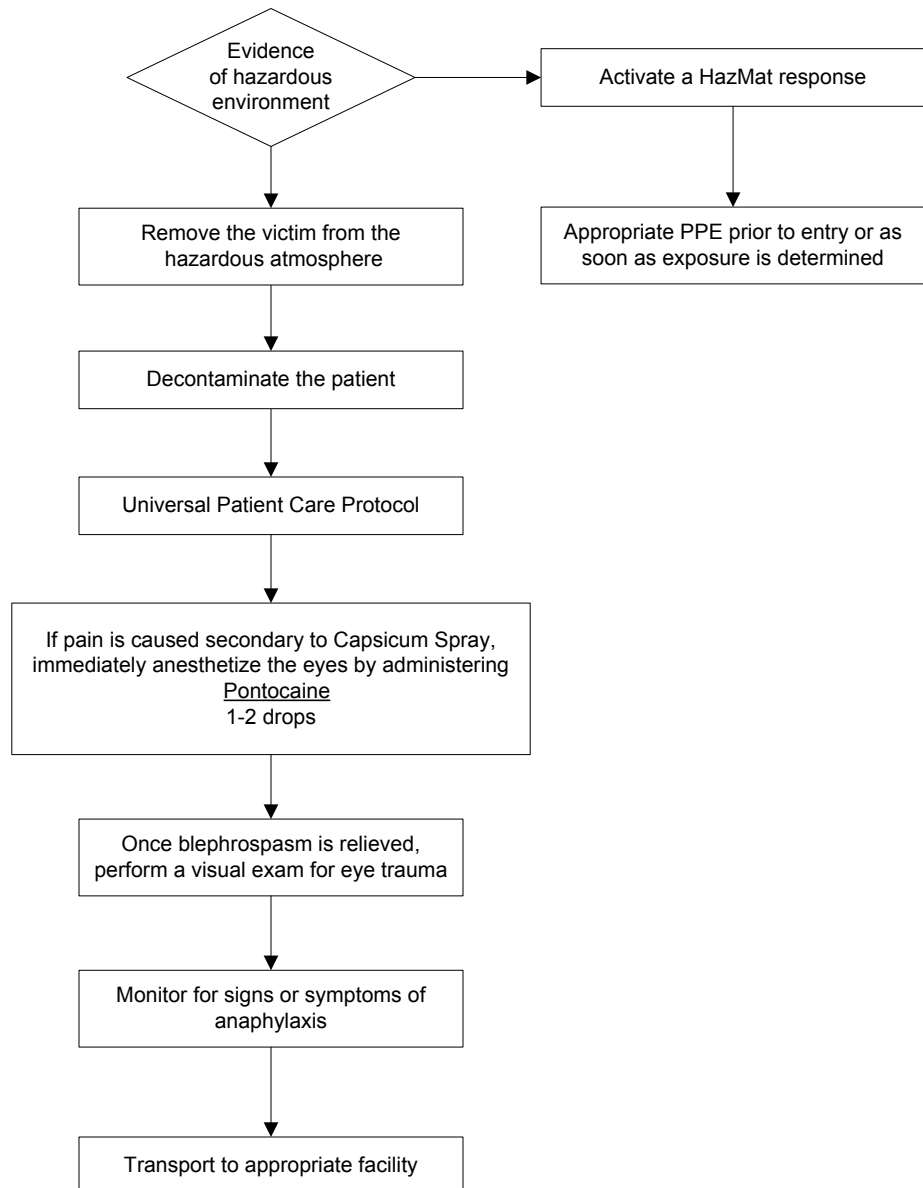


Footnotes:

- * Hydrogen sulfide has much the same clinical effects as cyanide.
- * Hydrogen sulfide has a characteristic "rotten egg" odor.
- * Hydrogen sulfide is heavier than air.
- * Pulse oximetry will be unreliable, usually indicating an incorrect, high reading.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Lacrimators	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Wheezing * Difficulty breathing * Burning sensation to the upper airway * Increased tear production * Blephrospasm * Severe burning of the eyes and nose * Congestion * Increased mucous production 	<ul style="list-style-type: none"> * Exposure to hazardous materials



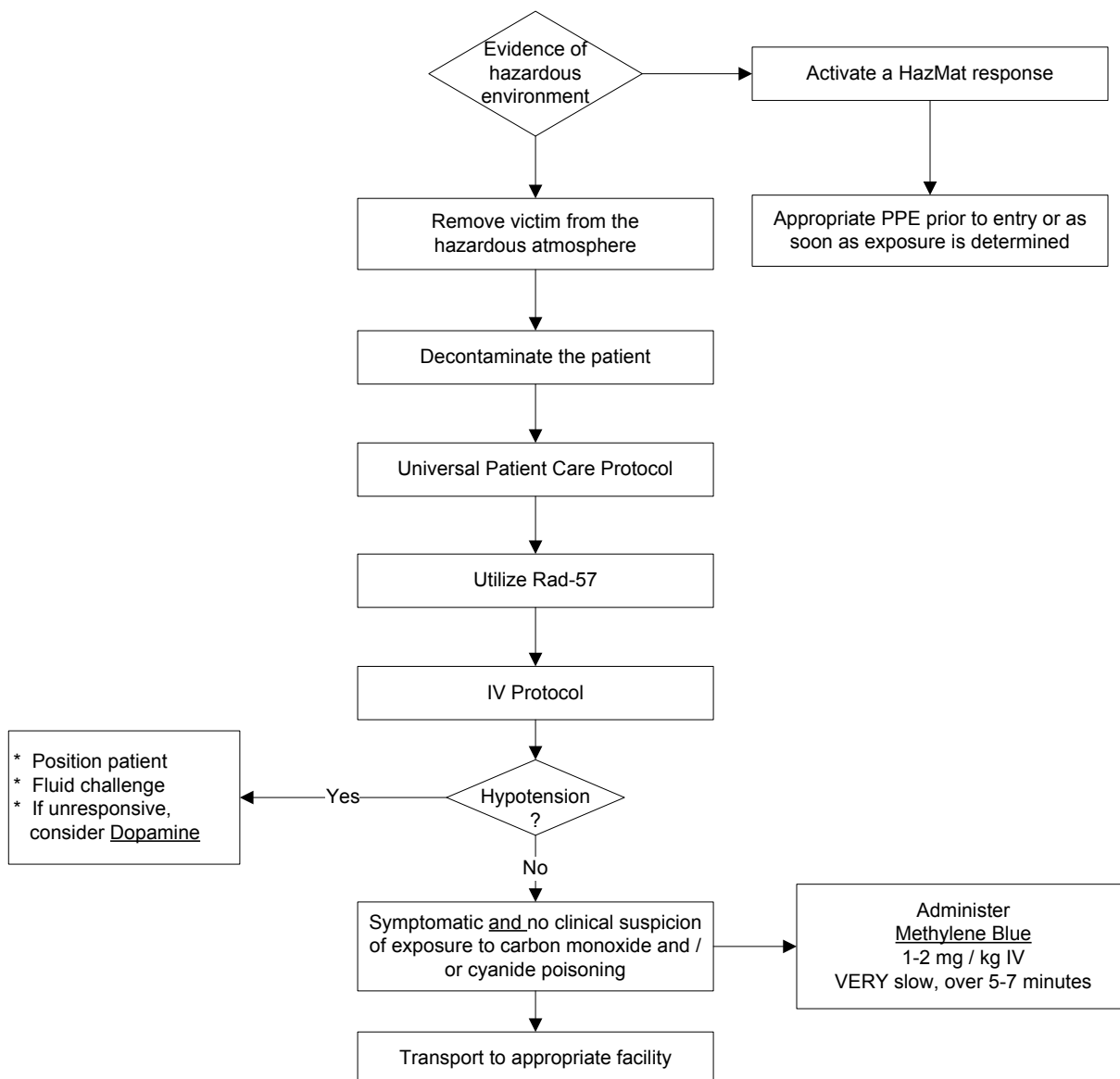
Footnotes:

- * Includes Oleoresin Capsicum (pepper spray) and other lacrimators.
- * Be prepared for anaphylactic reactions.
- * Lacrimators do not cause significant tissue damage and the treatment is aimed at relieving pain caused by nerve stimulation.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Methemoglobin Formers	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Patients with respiratory insufficiency * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Cyanosis * Headache * Nausea and vomiting * Tachycardia / Arrhythmias * Syncope * Dyspnea * Seizures * Coma / death * Unresponsive to oxygenation and good minute volume. 	<ul style="list-style-type: none"> * Flu * Food poisoning * CVA * Cardiac / MI * Seizure * Exposure to hazardous materials



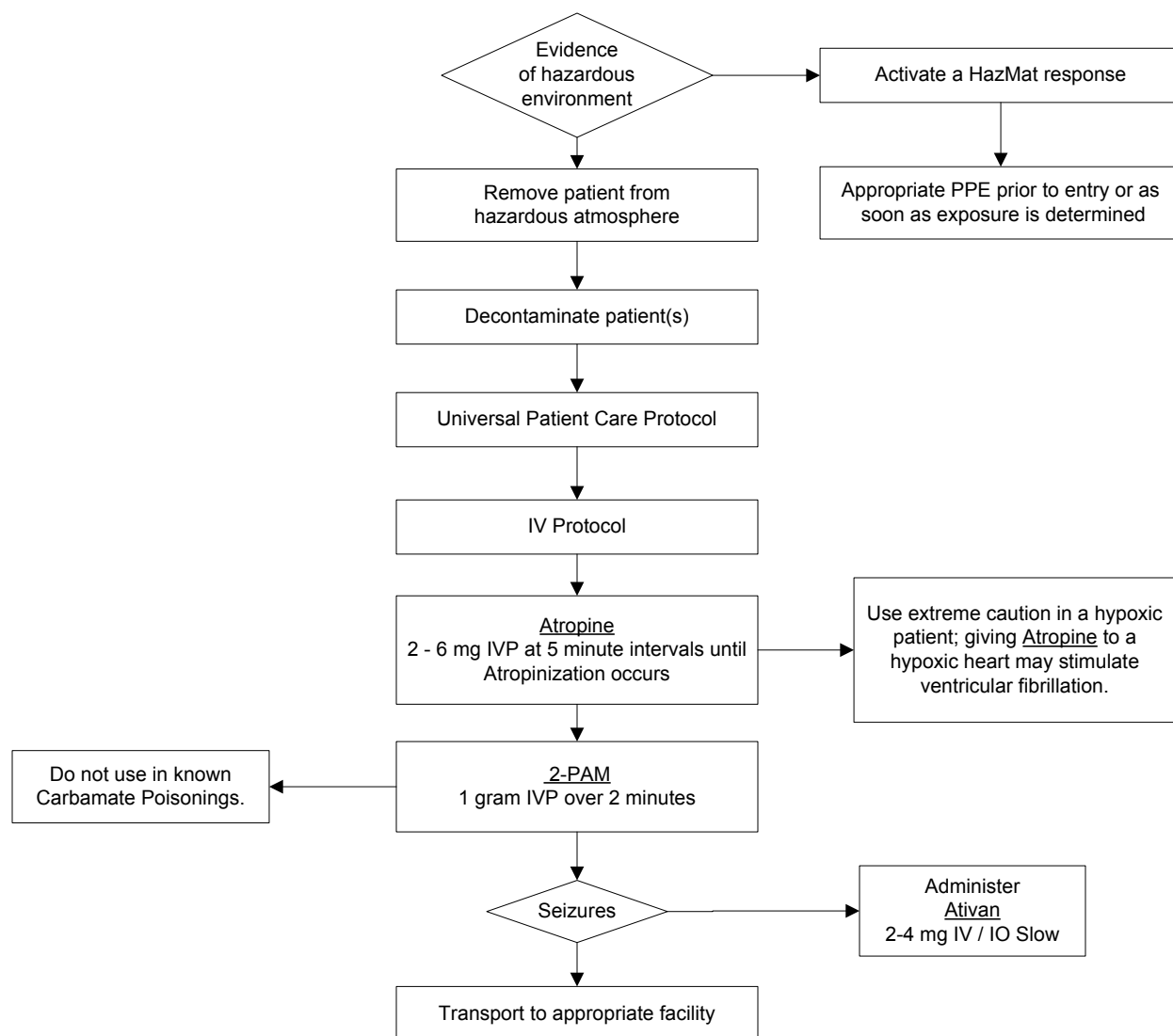
Footnotes:

- * Includes Aniline dyes, nitrites, nitrates, nitrobenzene and nitrogen dioxide.
- * Commonly found in fertilizers, paints, inks and dyes.
- * Changes hemoglobin into non-oxygen carrying "methemoglobin."
- * There may be a detectable change in blood color, from red to chocolate brown.
- * Pulse oximetry will be unreliable, usually indicating an incorrect, low reading.
- * Methylene blue may momentarily effect the pulse oximeter because of the opaqueness of the drug.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Organophosphate / Carbamate Pesticides	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Patients with respiratory insufficiency * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Muscle twitching, un-coordination * Headache, blurred vision * Nausea and vomiting * Bradycardia, may be preceded by tachycardia and hypertension * Abdominal cramps, diarrhea * Hypersecretion, AKA "SLUDGE" * Seizures, toxic psychosis * Coma / death * Wheezing, productive cough 	<ul style="list-style-type: none"> * Smoke inhalation * Heat related injury * Cardiac / MI * Seizure * Acute alcoholic episode * Exposure to hazardous materials

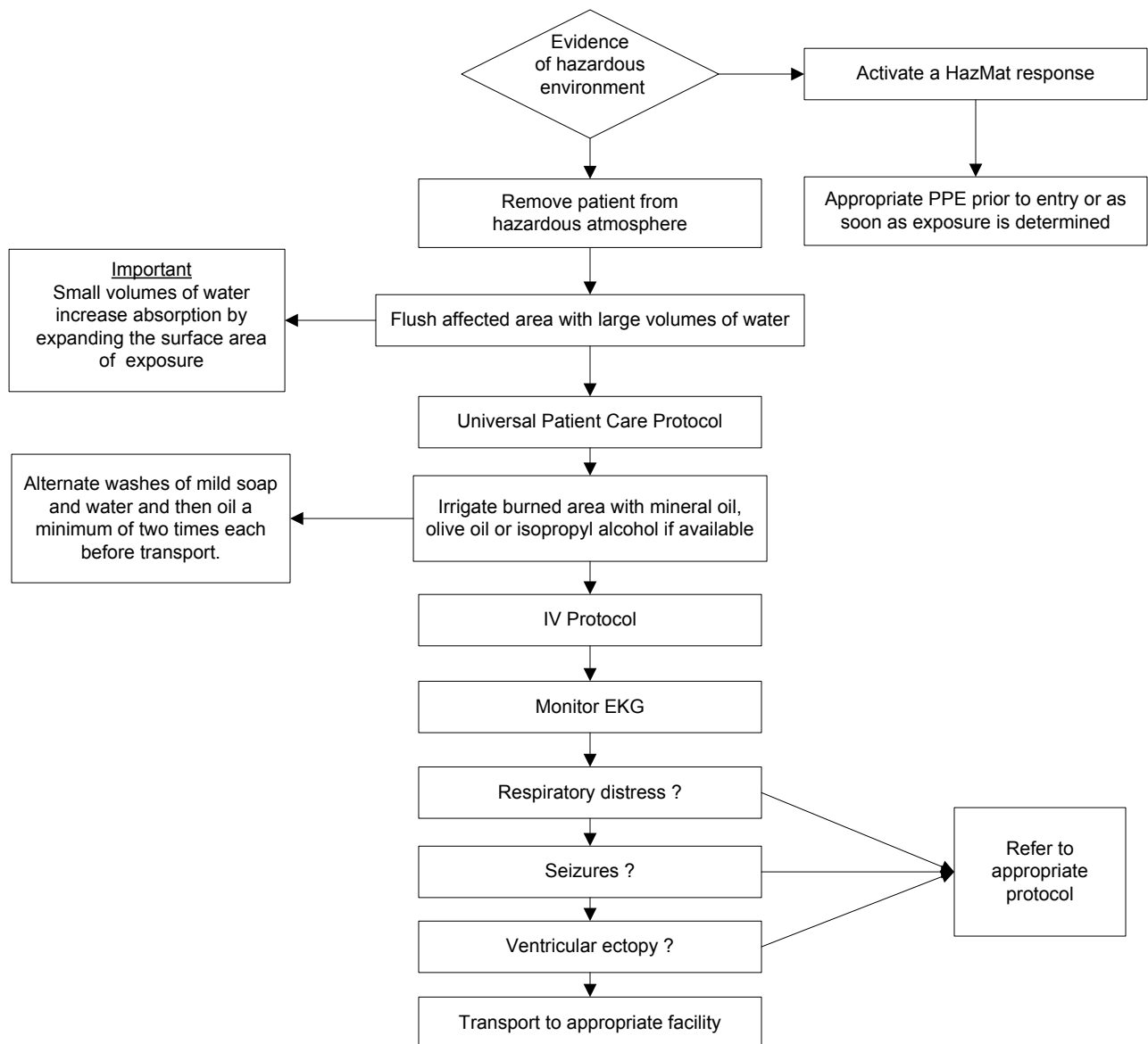


Footnotes:

- * The most common causes of pesticide poisoning are direct contact, vapors, run-off, and smoke from fire.
- * Pesticides can be lethal in a dose less than 5 mg.
- * Large quantities of pesticides have been known to cause paralysis of muscles in the head, neck, chest and limbs.
- * Conventional pulmonary edema treatment should not be used until the full potential of atropine has been reached.
- * Atropinization indicates the drying of mucous beds.
- * For severe cases, increase the atropine dose and shorten the wait between doses.
- * Remember there is no arbitrary end point in the atropine dose.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Phenols	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Hypotension * Tachycardia * Deep, heavy breathing with wheezes * Heavy sweating * Yellow skin and eyes * Cyanosis * Nausea / vomiting * Severe burns to mouth and pharynx * Convulsions / stupor * CNS depression with respiratory arrest 	<ul style="list-style-type: none"> * Exposure to hazardous materials

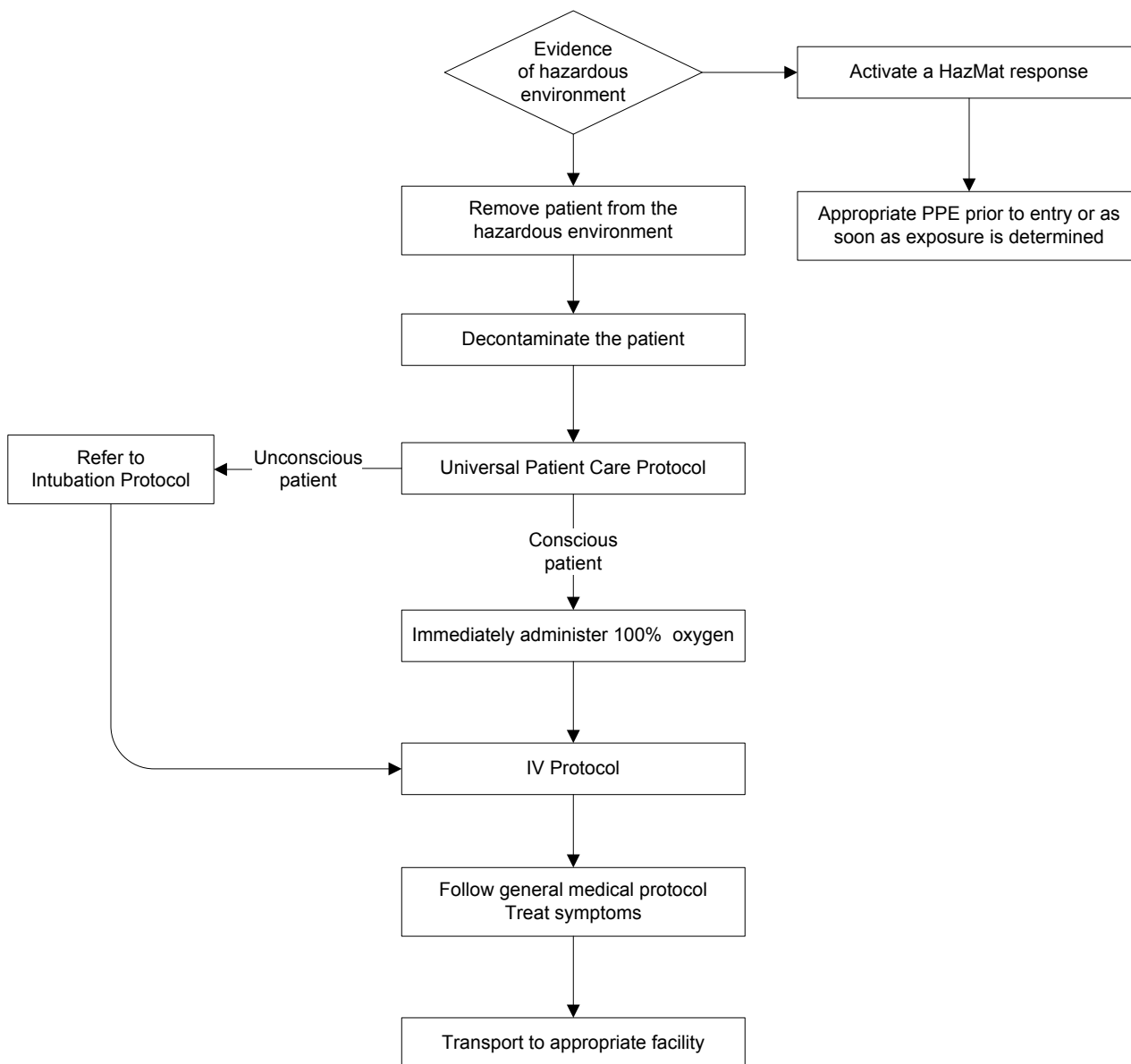


Footnotes:
<ul style="list-style-type: none"> * Known as Carbolic Acid. * Phenols are found in many household items used as disinfectants, germicides, antiseptics, and wood preservatives. * Causes coagulating necrosis of the skin. * Systemic effects are seen throughout the central nervous system, including CNS depression and respiratory arrest. * DO NOT INDUCE VOMITING.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Simple Asphyxiants	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Wheezing * Difficulty breathing 	<ul style="list-style-type: none"> * Exposure to hazardous materials



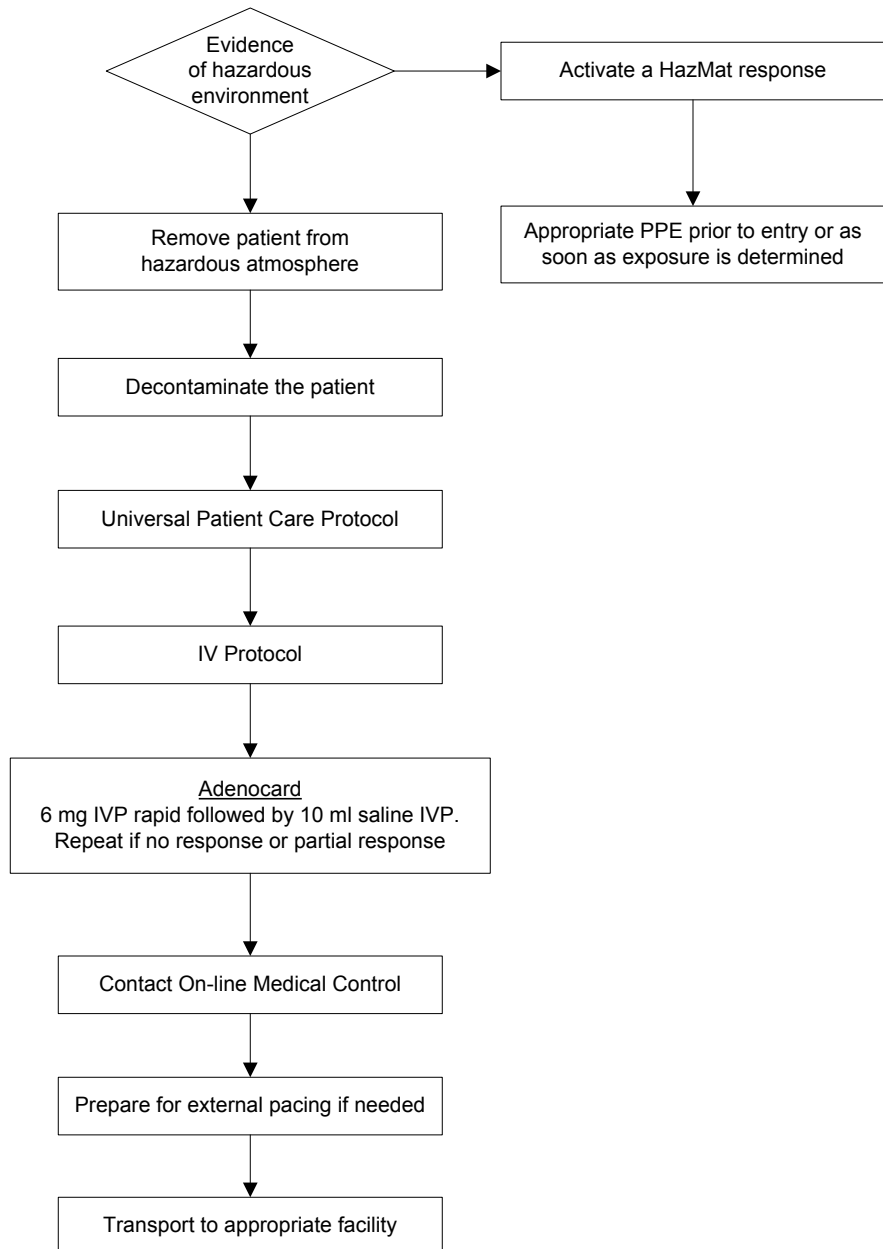
Footnotes:

- * Includes Methane, propane, carbon dioxide, and nitrogen gas.
- * Simple asphyxiants displace oxygen.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hazardous Materials Tachydysrhythmias	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential: (Life Threatening)
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant women * Psychiatric * Post structure fire victim * Firefighters / emergency personnel engaged in emergency scene operations 	<ul style="list-style-type: none"> * Supraventricular tachycardia * Difficulty breathing * Hypotension 	<ul style="list-style-type: none"> * Exposure to hazardous materials



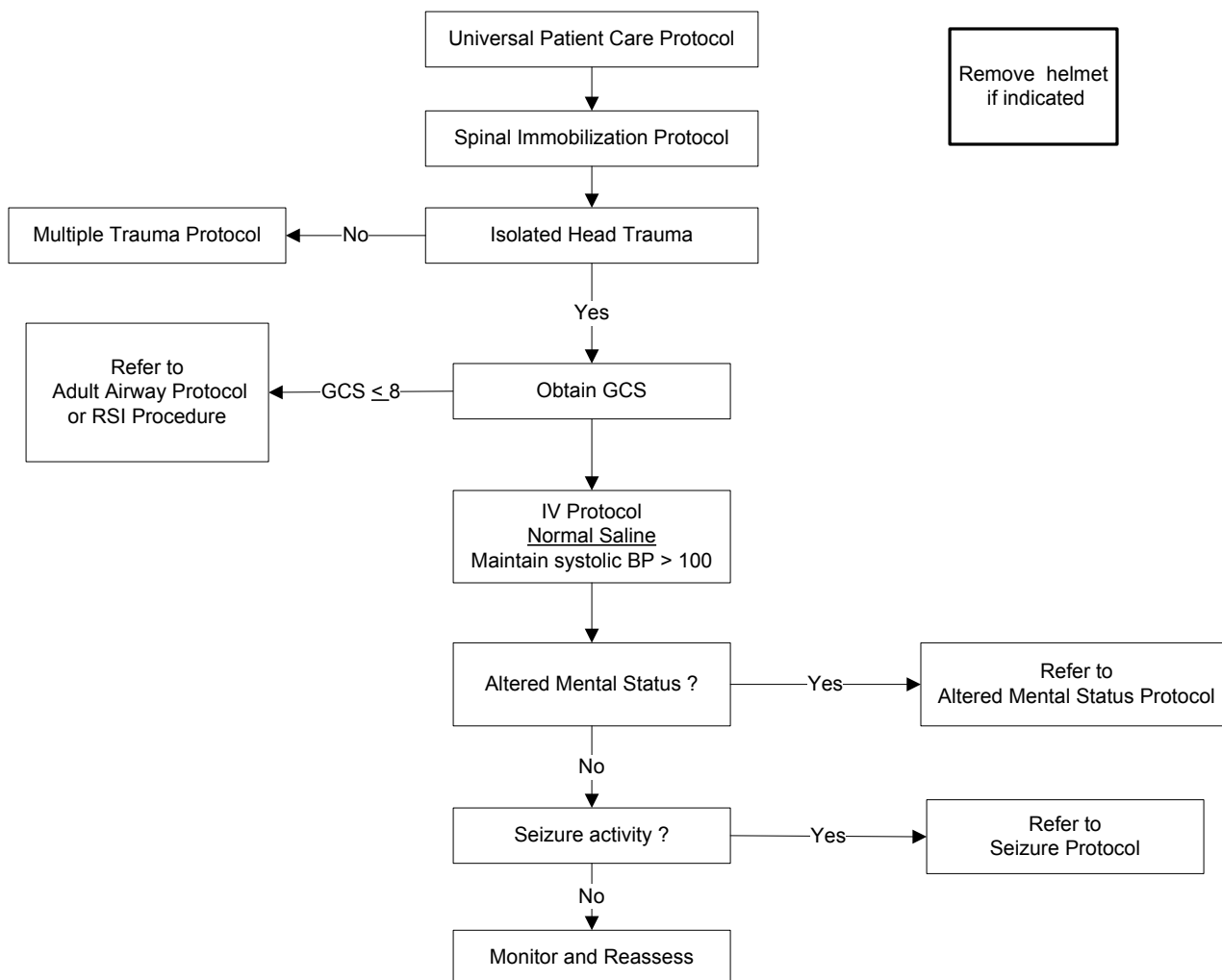
Footnotes:

* Supraventricular tachycardia due to myocardial sensitization to a toxic agent and or a central nervous system stimulant.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Head Trauma	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Time of Injury * Mechanism (blunt vs. penetrating) * Loss of consciousness * Bleeding * Past medical history / medications * Evidence of multi-trauma. * Helmet use or damage to helmet 	<ul style="list-style-type: none"> * Pain, swelling, bleeding * Altered mental status * Unconscious * Respiratory distress / failure * Vomiting * Major traumatic mechanism of Injury 	<ul style="list-style-type: none"> * Skull fracture * Brain injury (concussion, contusion, hemorrhage or laceration) * Epidural hematoma * Subdural hematoma * Subarachnoid hemorrhage * Spinal injury * Abuse



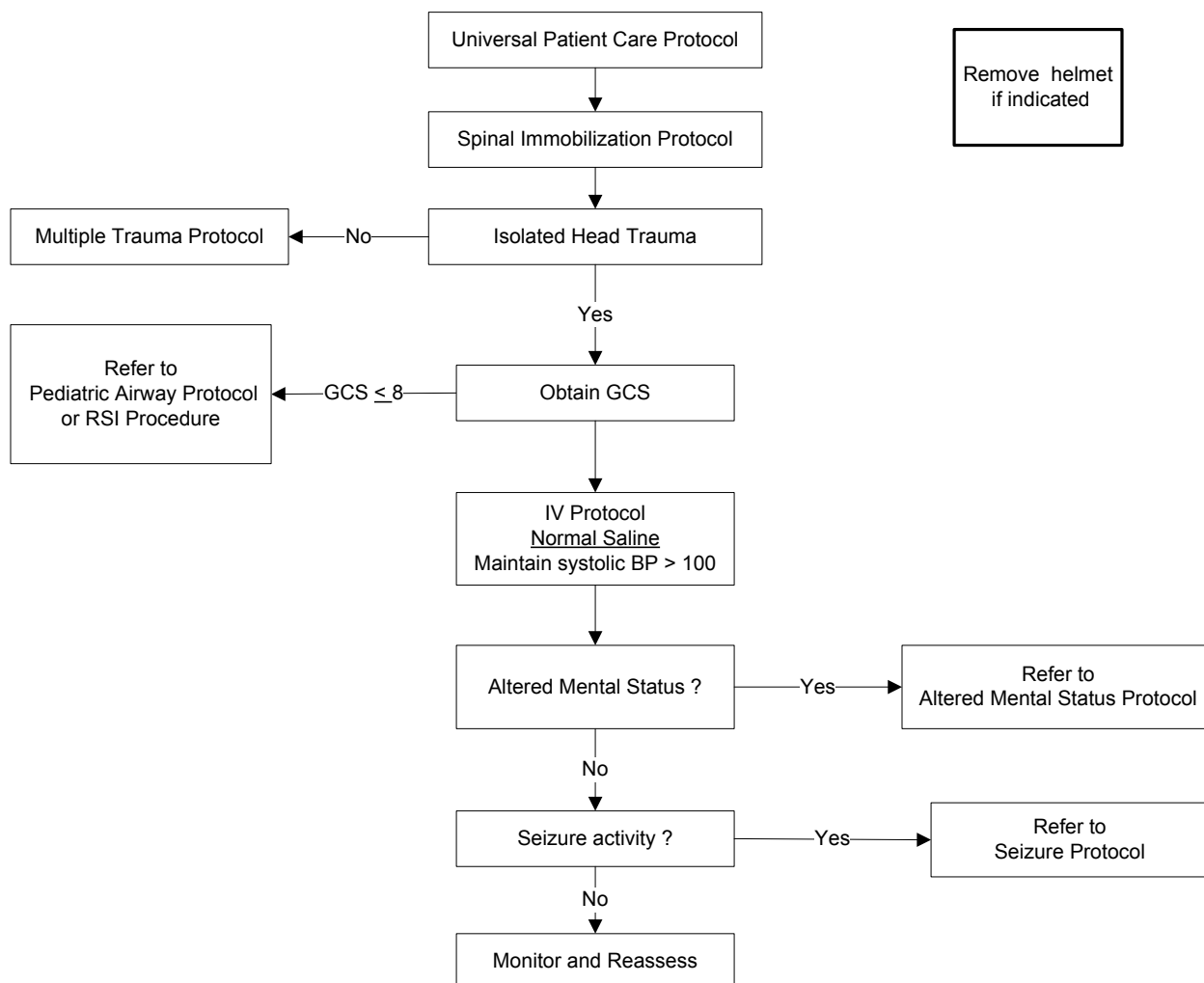
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * If GCS ≤ 12, consider rapid transport and or air transport. If GCS is ≤ 8, the patient should be intubated, using RSI if necessary.
- * ALL intubated patients will have capnography monitoring applied. Patients should not be hyperventilated. Capnography will be recorded and ventilations adjusted accordingly.
- * Increased intracranial pressure (ICP) may cause hypertension and bradycardia (Cushings Response).
- * The most important item to monitor and document is a change in the patients level of consciousness.
- * Consider restraints, if necessary, for the patient's and/or personnel's safety, per the Patient Restraint Protocol.
- * Concussions are periods of confusion or LOC associated with trauma which may have resolved by the time EMS arrives. Any prolonged confusion or mental status abnormality which does not return to normal or any documented loss of consciousness should be evaluated by a physician.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Head Trauma Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Time of Injury * Mechanism (blunt vs. penetrating) * Loss of consciousness * Bleeding * Past medical history / medications * Evidence of multi-trauma. * Helmet use or damage to helmet 	<ul style="list-style-type: none"> * Pain, swelling, bleeding * Altered mental status * Unconscious * Respiratory distress / failure * Vomiting * Major traumatic mechanism of Injury 	<ul style="list-style-type: none"> * Skull fracture * Brain injury (concussion, contusion, hemorrhage or laceration) * Epidural hematoma * Subdural hematoma * Subarachnoid hemorrhage * Spinal injury * Abuse



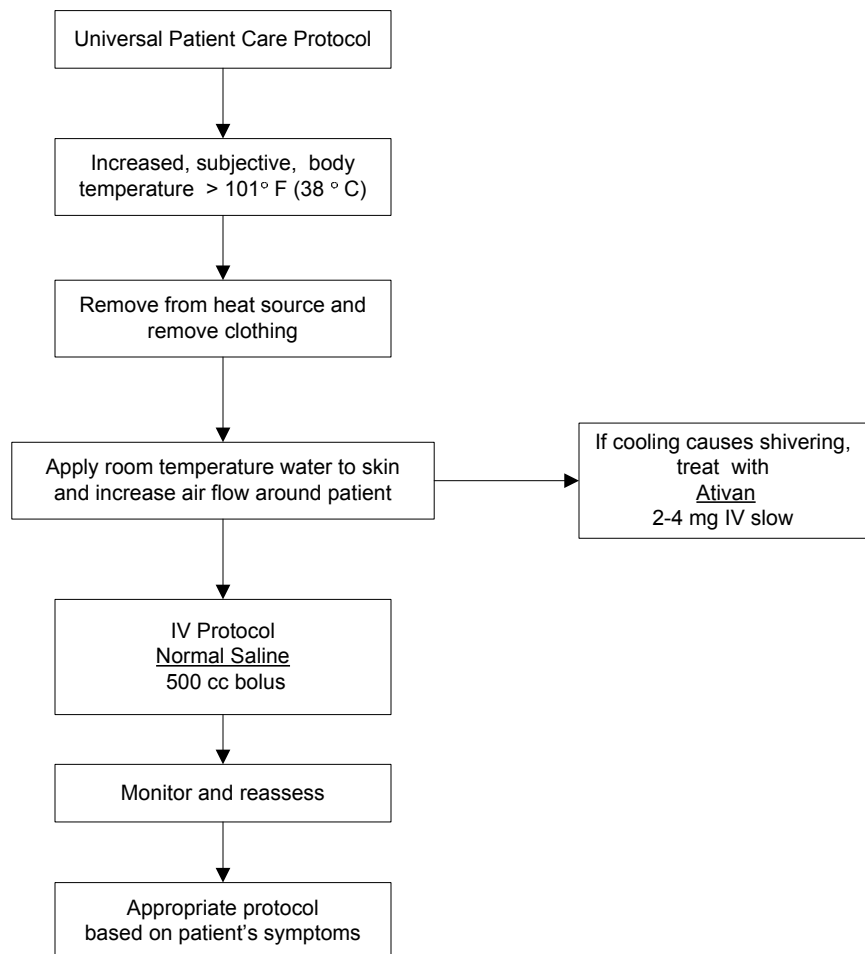
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * If GCS ≤ 12 , consider rapid transport and or air transport. If GCS is ≤ 8 , the patient should be intubated, using RSI if necessary.
- * ALL intubated patients will have capnography monitoring applied. Patients should not be hyperventilated. Capnography will be recorded and ventilations adjusted accordingly.
- * Increased intracranial pressure (ICP) may cause hypertension and bradycardia (Cushings Response).
- * The most important item to monitor and document is a change in the patients level of consciousness.
- * Consider restraints, if necessary, for the patient's and/or personnel's safety, per the Patient Restraint Protocol.
- * Concussions are periods of confusion or LOC associated with trauma which may have resolved by the time EMS arrives. Any prolonged confusion or mental status abnormality which does not return to normal or any documented loss of consciousness should be evaluated by a physician.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Heat Emergencies	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign/ Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Exposure to increased temperature and/or humidity * Past medical history / medication * Extreme exertion * Time and length of exposure * Poor oral intake of liquids or food * Fatigue and / or muscle cramping 	<ul style="list-style-type: none"> * Altered mental status or unconsciousness * Hot, dry or sweaty skin * Hypotension or shock * Seizures * Nausea 	<ul style="list-style-type: none"> * Fever (Infection) * Dehydration * Medications * Hyperthyroidism (Thyroid Storm) * Delirium Tremens (DT's) * Heat Cramps * Heat Exhaustion * Heat Stroke * CNS lesions or tumors



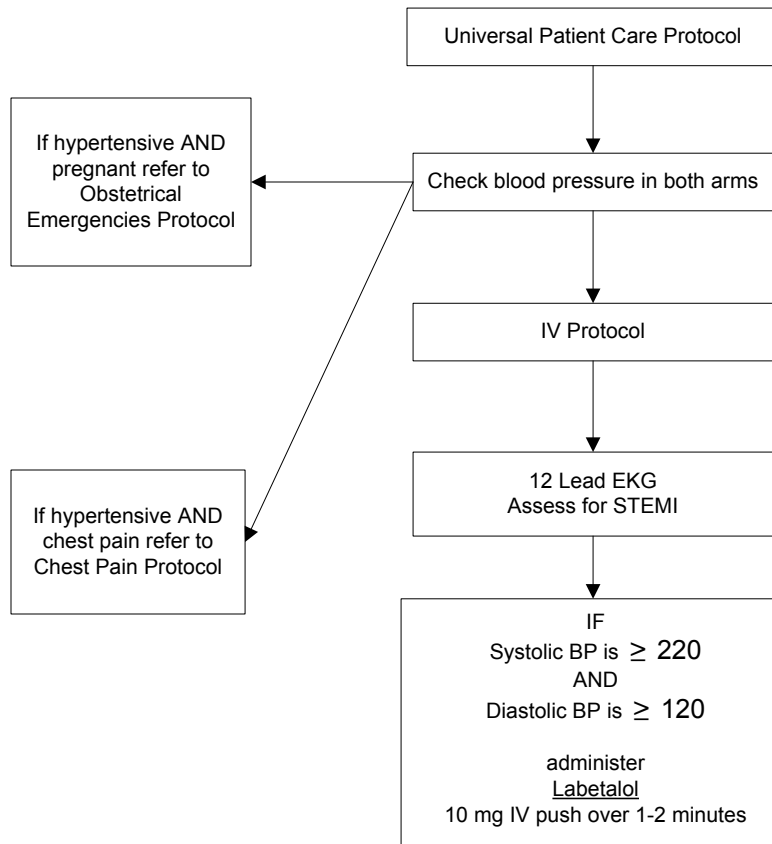
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * The young and aged are more prone to heat emergencies.
- * Predisposed by use of tricyclic antidepressants, phenothiazines, anticholinergic medications and alcohol.
- * Cocaine, Amphetamines and Salicylates may elevate body temperatures.
- * Sweating generally disappears as the body temperature rises above 104° F (40 °C)
- * Intense shivering may occur as the patient is cooled.
- * Heat Cramps: Benign muscle cramping secondary to dehydration and is not associated with an elevated temperature.
- * Heat Exhaustion: Dehydration, salt depletion, dizziness, fever, mental status changes, headache, cramping, nausea, and vomiting. Vital signs usually show tachycardia, hypotension, and elevated temperature.
- * Heat Stroke: Dehydration, tachycardia, hypotension, temperature > 104 F (40 °C) and an altered mental status.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hypertension	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Documented hypertension * Related diseases: diabetes, CVA, renal failure, cardiac. * Medications (compliant/non-compliant) * Viagra * Pregnancy 	<ul style="list-style-type: none"> * Systolic BP \geq 220 * Diastolic BP \geq 120 * Headache * Nosebleed * Blurred vision * Dizziness 	<ul style="list-style-type: none"> * Hypertensive encephalopathy * Primary CNS Injury: (Cushings Response = Bradycardia with hypertension) * Myocardial Infarction * Aortic Dissection (Aneurysm) * Pre-eclampsia / Eclampsia



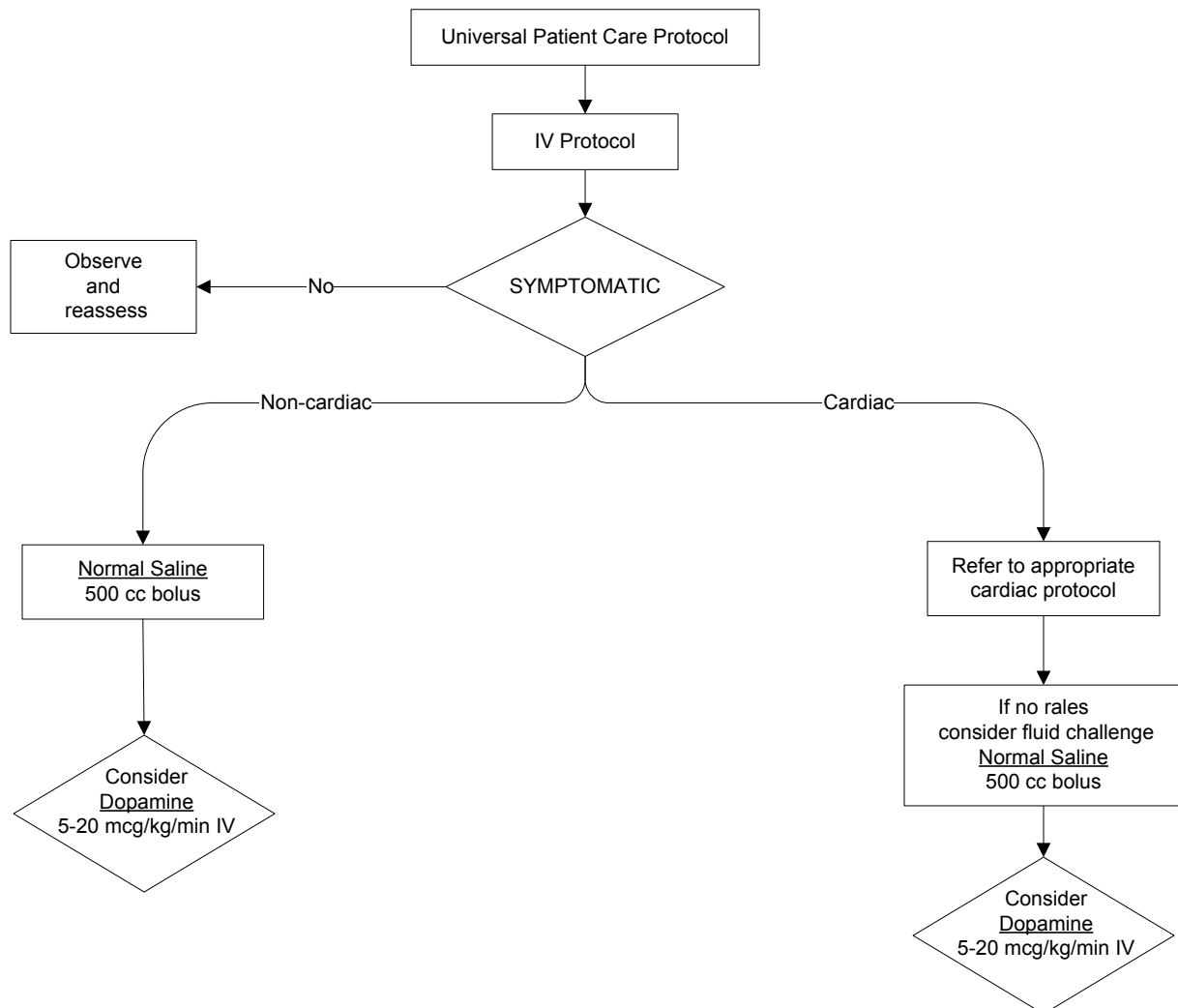
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Use caution when administering Nitroglycerin to any patient who has used Viagra in the past 24 hours, as there could be a precipitous drop in blood pressure.
- * Never treat blood pressure based on one set of vital signs. Check blood pressure in both arms.
- * Nitroglycerine may be given to patients that have an elevated diastolic blood pressure \geq 110 and are symptomatic with chest pain.
- * Symptomatic hypertension is typically revealed through end organ damage to the cardiac, CNS, or renal system.
- * All symptomatic patients with hypertension should be transported with head elevated.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hypotension / Shock (Non-Trauma) Adult	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Blood Loss- vaginal or gastrointestinal, AAA, ectopic pregnancy * Fluid loss – vomiting, diarrhea, fever, dehydration * Infection * Cardiac ischemia (MI, CHF) * Medications * Allergic reaction * Pregnancy 	<ul style="list-style-type: none"> * Restlessness, confusion * Weakness, dizziness * Weak, rapid, pulse * Pale, cool, clammy skin * Delayed capillary refill * Hypotension * “Coffee ground” emesis * Tarry stools 	<ul style="list-style-type: none"> * Shock: <ul style="list-style-type: none"> : Hypotension : Cardiogenic : Septic : Neurogenic : Anaphylactic * Ectopic pregnancy * Dysrhythmias * Pulmonary embolus * Tension pneumothorax * Medication effect / overdose * Vasovagal * Physiologic



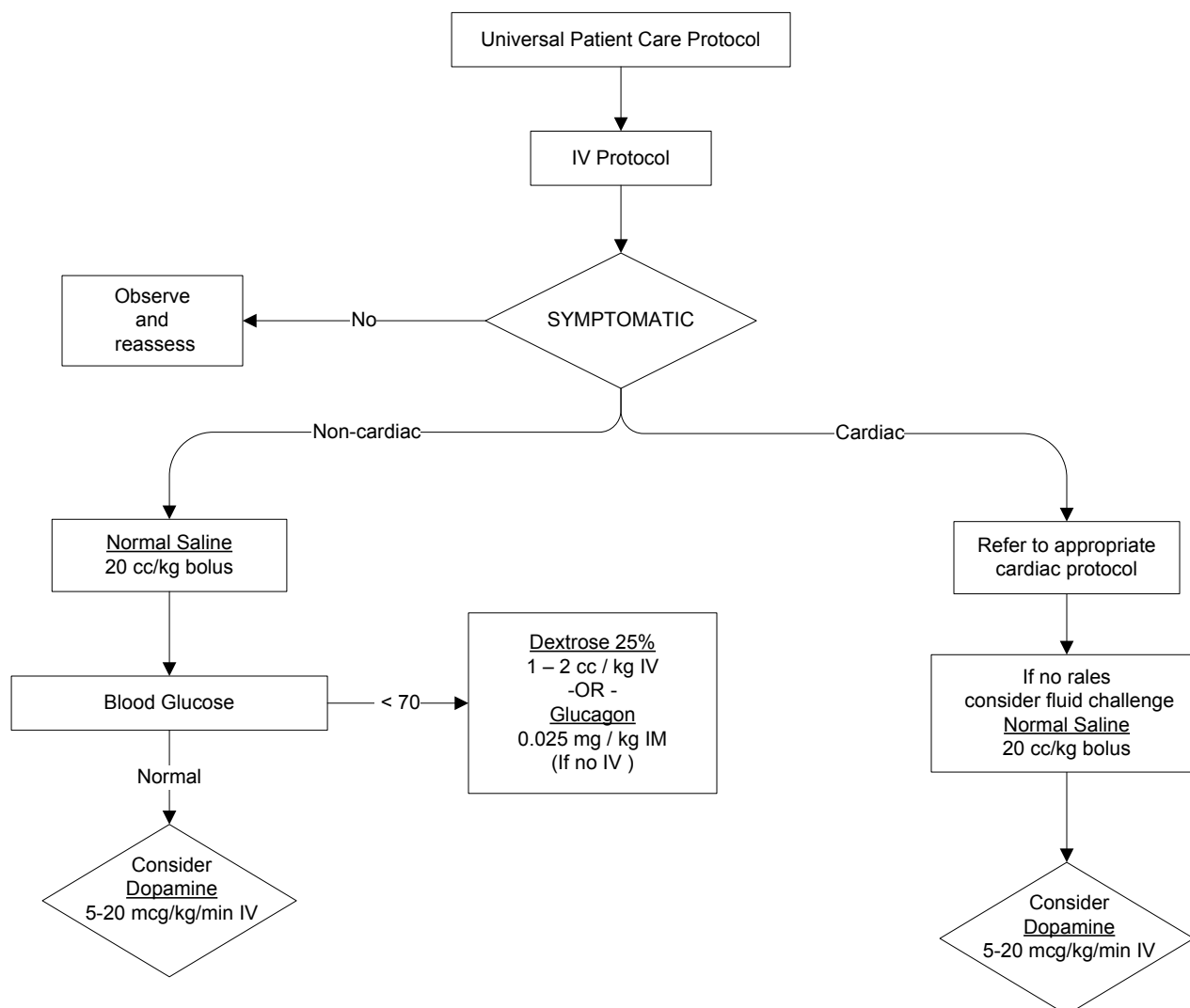
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Hypotension can be defined as a systolic blood pressure less than 100 mmHg.
- * Consider performing orthostatic vital signs on patients in non-trauma situations if suspected blood or fluid loss.
- * Consider all possible causes of shock and treat per appropriate protocol.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hypotension / Shock (Non-Trauma) Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Blood Loss * Fluid loss – vomiting, diarrhea, fever, dehydration * Infection * Medications * Allergic reaction 	<ul style="list-style-type: none"> * Restlessness, confusion * Weakness, dizziness * Weak, rapid, pulse * Pale, cool, clammy skin * Delayed capillary refill * Hypotension 	<ul style="list-style-type: none"> * Dehydration <ul style="list-style-type: none"> : Vomiting : Diarrhea : Fever : Infection * Congenital heart disease * Medication or toxic



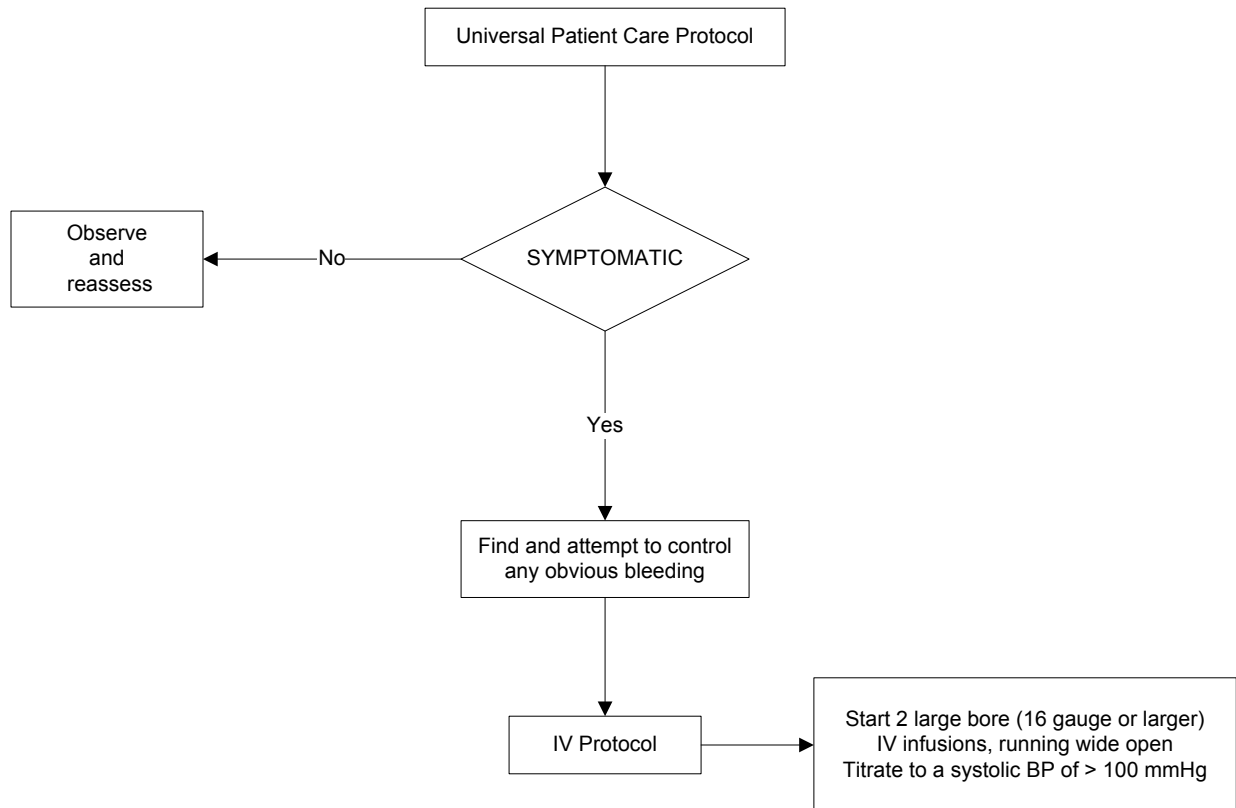
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Consider all possible causes of shock and treat per appropriate protocol.
- * Most maternal medications pass through breast milk to the infant, i.e. benzodiazepines, narcotics
- * Maximum dose of Dextrose 25 = 25 cc per dose.
- * Maximum dose of Glucagon = 1 mg.
- * Decreasing heart rate is a sign of impending arrest.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hypotension / Shock Trauma	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Current or recent history of injury 	<ul style="list-style-type: none"> * Restlessness, confusion * Weakness, dizziness * Weak, rapid, pulse * Pale, cool, clammy skin * Delayed capillary refill * Thirst * Hypotension 	<ul style="list-style-type: none"> * Shock: <ul style="list-style-type: none"> : Hypotension : Cardiogenic : Septic : Neurogenic : Anaphylactic * Ectopic pregnancy * Dysrhythmias * Pulmonary embolus * Tension pneumothorax * Medication effect / overdose * Vasovagal * Physiologic



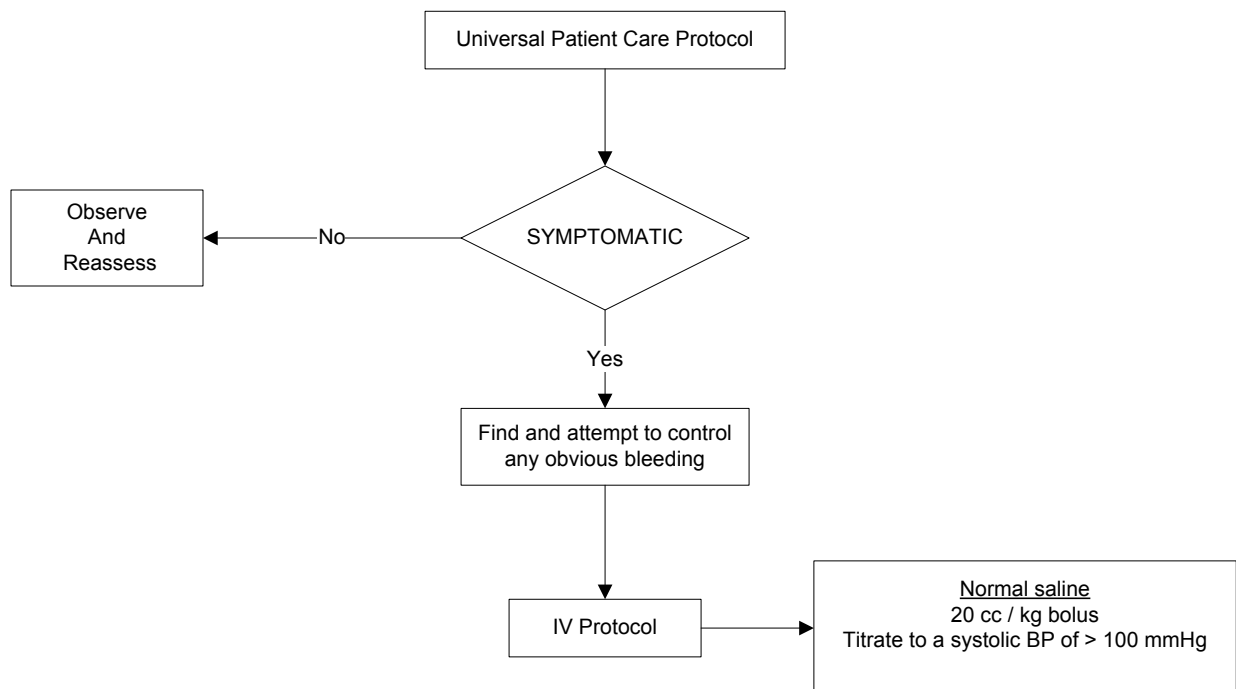
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Hypotension can be defined as a systolic blood pressure less than 100 mmHg.
- * Consider all possible causes of shock and treat per appropriate protocol.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hypotension / Shock (Trauma) Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Current or recent history of injury 	<ul style="list-style-type: none"> * Restlessness, confusion * Weakness, dizziness * Weak, rapid, pulse * Pale, cool, clammy skin * Delayed capillary refill * Thirst * Hypotension 	<ul style="list-style-type: none"> * Trauma * Infection * Dehydration <ul style="list-style-type: none"> : Vomiting : Diarrhea : Fever : Infection * Congenital heart disease * Medication or toxin



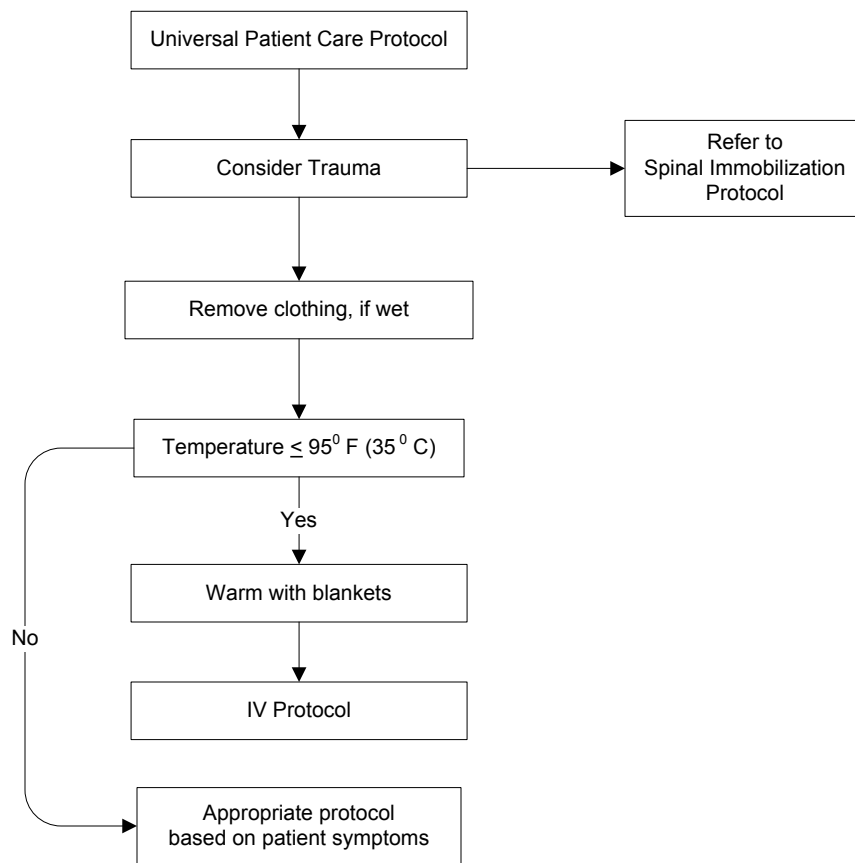
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Hypotension can be defined as a systolic blood pressure less than 100 mmHg.
- * Consider all possible causes of shock and treat per appropriate protocol.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Hypothermia	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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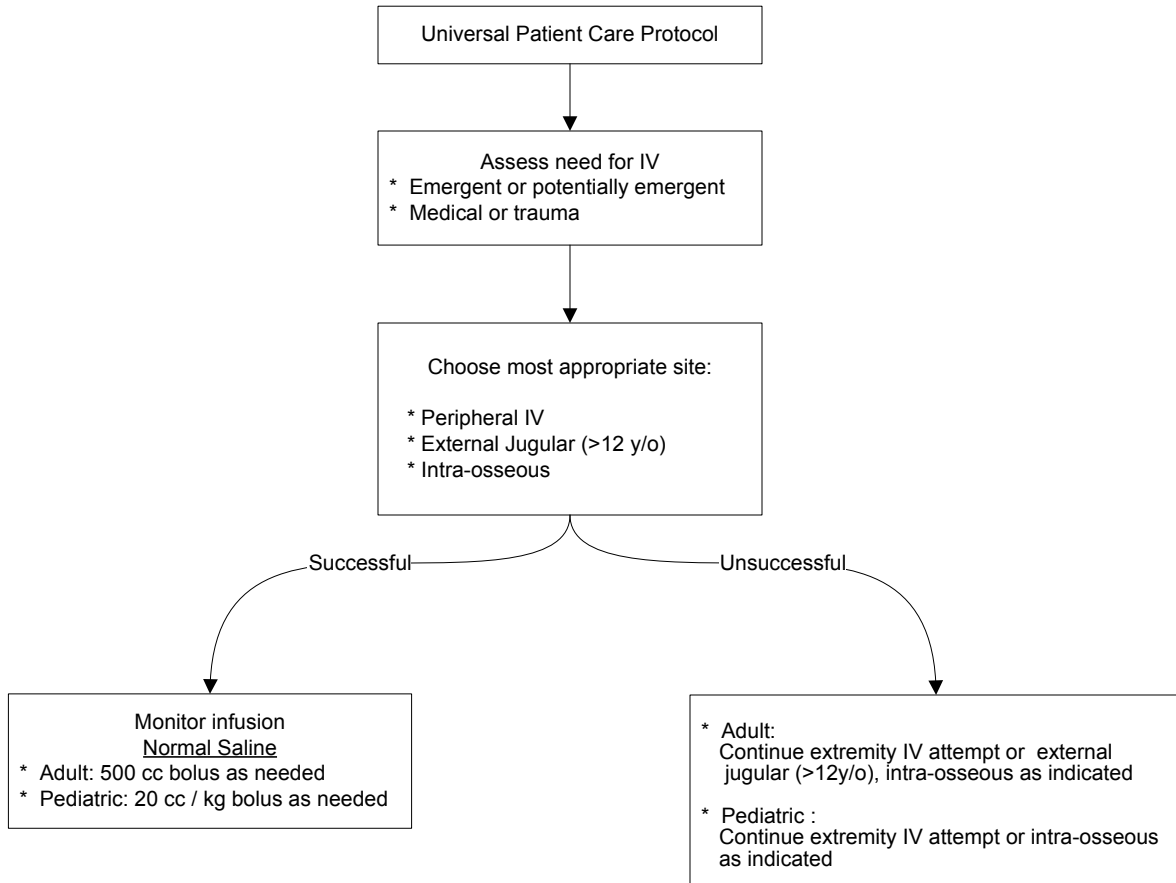
History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history / medications * Exposure to environment, even in normal conditions * Exposure to extreme cold * Extremes of age * Drug use: alcohol, barbituates * Wet / submerged in water * Infections / sepsis * Length of exposure 	<ul style="list-style-type: none"> * Cold / clammy * Shivering * Mental status changes * Extremity pain or sensory abnormality * Bradycardia * Hypotension or shock 	<ul style="list-style-type: none"> * Sepsis * Environmental exposure * Hypoglycemia * CNS dysfunction * Stroke * Head injury * Spinal cord injury



Footnotes:

- * NO PATIENT IS DEAD UNTIL THEY ARE WARM AND DEAD.
- * Handle very gently, rough handling can precipitate ventricular fibrillation.
- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Hypothermia is defined as core temperature $\leq 95^{\circ}\text{F}$ (35°C)
- * Shivering stops below 90°F (32°C)
- * Extremes of age are more susceptible (i.e. young and old)
- * With temperatures less than 88°F (31°C) ventricular fibrillation is common cause of death. Handling patients gently may prevent this. Hypothermia induced ventricular fibrillation rarely responds to defibrillation.
- * Hypothermia may produce severe hypotension.
- * If available, hot packs should be placed in the armpit and groin areas. Care should be taken not to place the packs directly against the patients skin.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Intravenous Therapy	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director



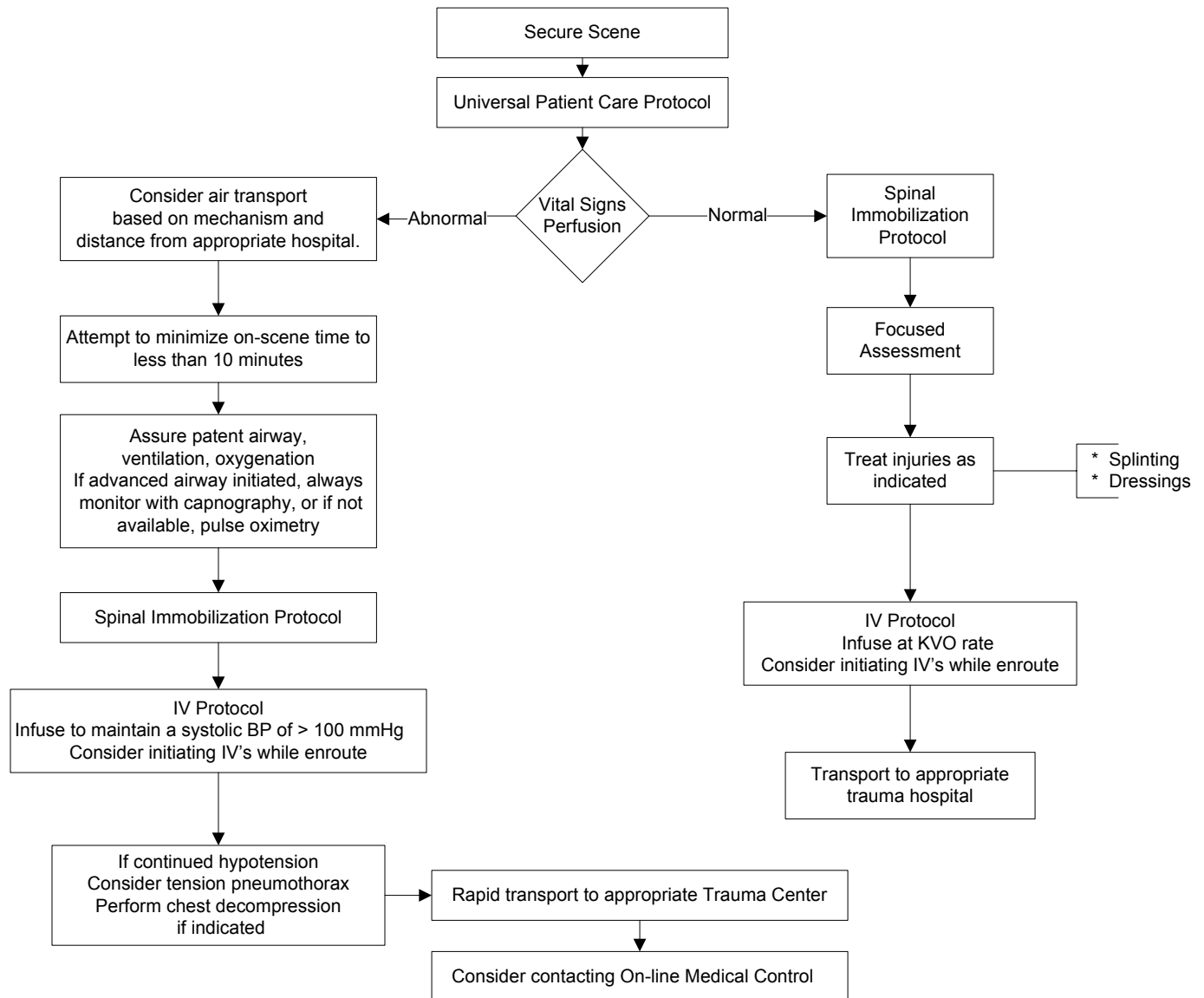
Footnotes:

- * External jugular (> 12 y/o of age).
- * Refer to I.O. Procedural Protocol for indications.
- * Any pre-hospital fluids or medications approved for IV use, may be given through intra-osseous access.
- * In the setting of cardiac arrest, any appropriate, pre-existing, dialysis shunt, external central venous catheter may be used. Any venous catheter which has been used prior to EMS arrival may be used.
- * In post -mastectomy patients, avoid IV blood draw, injection, or blood pressure in the affected side.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Multiple System Trauma	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential (Life Threatening):
<ul style="list-style-type: none"> * Time and mechanism of the Injury * Damage to structure or vehicle * Location in structure or vehicle * Others injured or dead * Speed and details of incident * Restraints / protective equipment * Past medical history / medications * Blast/ bomb incident / pressurization event 	<ul style="list-style-type: none"> * Pain, swelling * Deformity, lesions, bleeding * Altered mental status / unconscious * Hypotension / shock * Arrest 	<ul style="list-style-type: none"> * Chest: tension pneumothorax, flail chest, pericardial tamponade, open chest wound, hemothorax * Intra-abdominal bleeding * Pelvis / femur fracture * Spinal fracture / cord injury * Head injury (See Head Injury Protocol) * Extremity fracture / dislocation * HEENT (Airway Obstruction) * Hypothermia



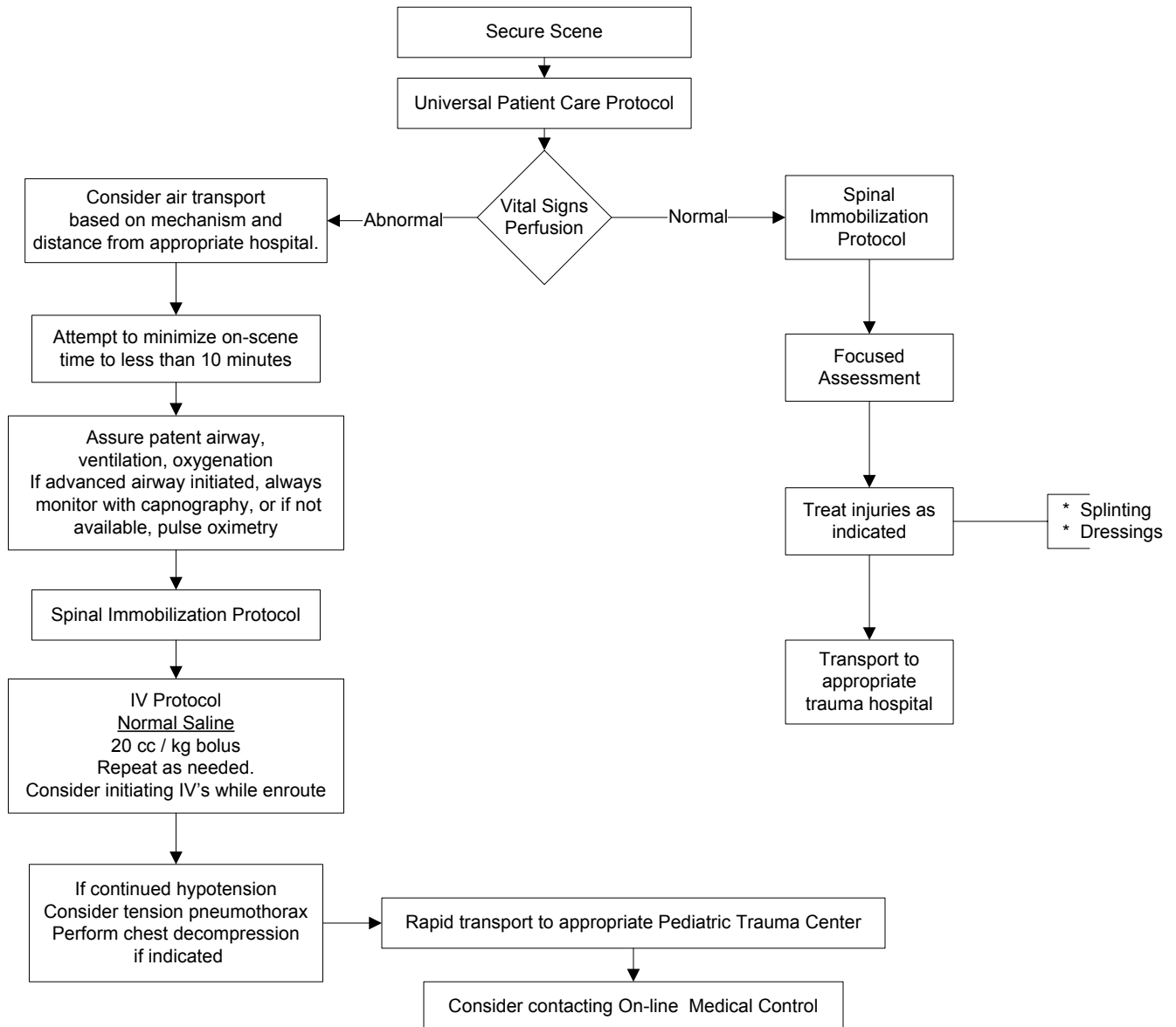
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Mechanism is the most reliable indicator of serious injury.
- * In prolonged extrications or serious trauma, consider air transportation for reduced transport times and the ability to give blood.
- * Utilize Trauma Score Card.
- * Follow Non-Trauma Alert Elder Gray-Area Criteria in the Hillsborough County UTP.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Multiple System Trauma Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential (Life Threatening):
<ul style="list-style-type: none"> * Time and mechanism of the Injury * Damage to structure or vehicle * Location in structure or vehicle * Others injured or dead * Speed and details of incident * Restraints / protective equipment * Past medical history / medications * Blast/ bomb incident / pressurization event 	<ul style="list-style-type: none"> * Pain, swelling * Deformity, lesions, bleeding * Altered mental status / unconscious * Hypotension / shock * Arrest 	<ul style="list-style-type: none"> * Chest: tension pneumothorax, flail chest, pericardial tamponade, open chest wound, hemothorax * Intra-abdominal bleeding * Pelvis / femur fracture * Spinal fracture / cord injury * Head injury (See Head Injury Protocol) * Extremity fracture / dislocation * HEENT (Airway Obstruction) * Hypothermia



Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Mechanism is the most reliable indicator of serious injury.
- * In prolonged extrications or serious trauma, consider air transportation for reduced transport times and the ability to give blood.
- * Utilize Trauma Score Card.
- * Refer to weight-based resuscitation tape for detailed information.

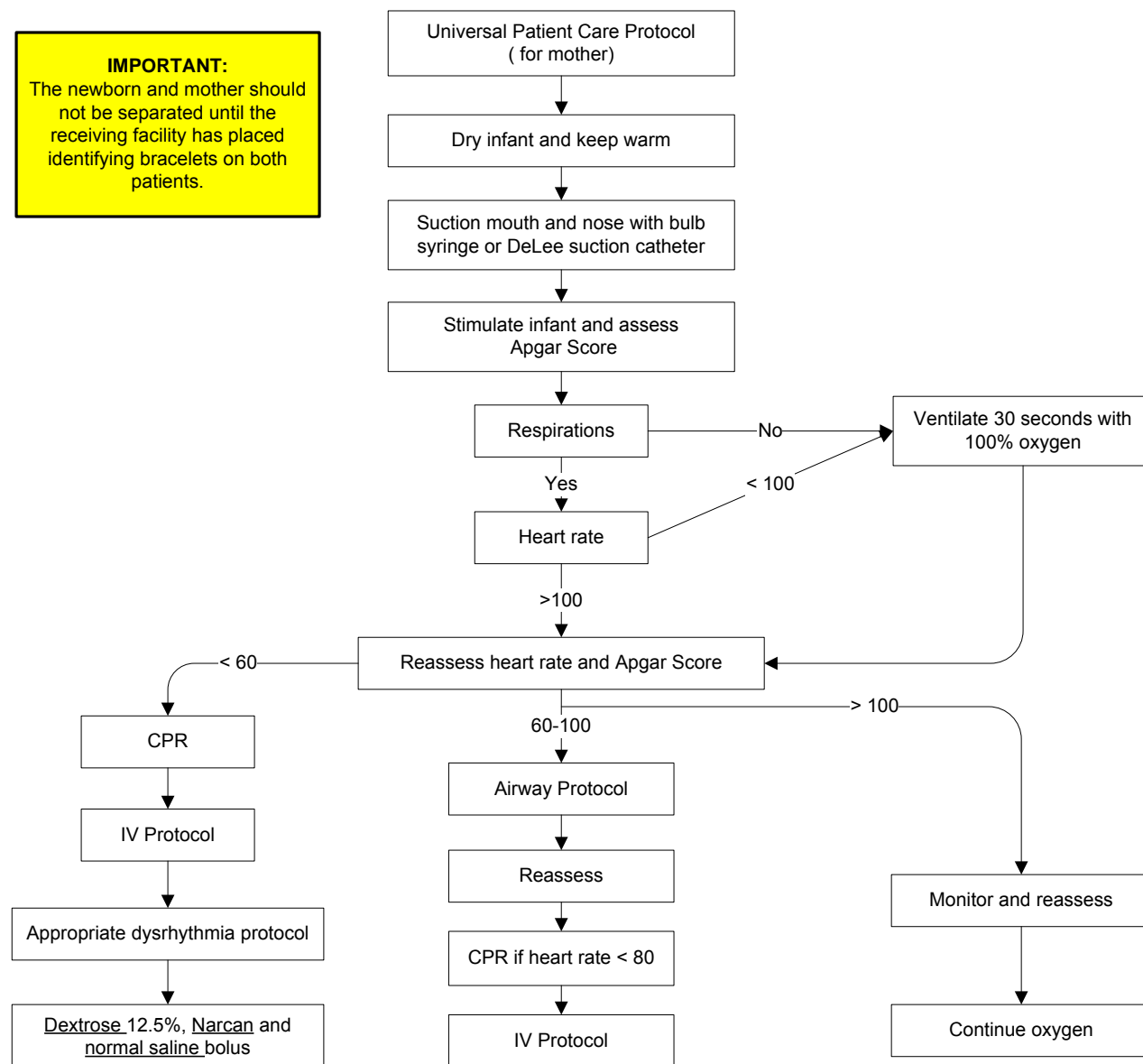
TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Neonatal Resuscitation	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Due date and gestational age * Twin pregnancy * Meconium staining during delivery * Delivery difficulties * Congenital disease * Medications (maternal and infant) 	<ul style="list-style-type: none"> * Respiratory distress * Peripheral cyanosis or mottling (normal) * Central cyanosis (abnormal) * Altered level of responsiveness * Bradycardia 	<ul style="list-style-type: none"> * Airway failure, secretions, respiratory drive * Infection * Maternal medication effect * Hypovolemia * Hypoglycemia * Congenital heart disease * Hypothermia

IMPORTANT:

The newborn and mother should not be separated until the receiving facility has placed identifying bracelets on both patients.



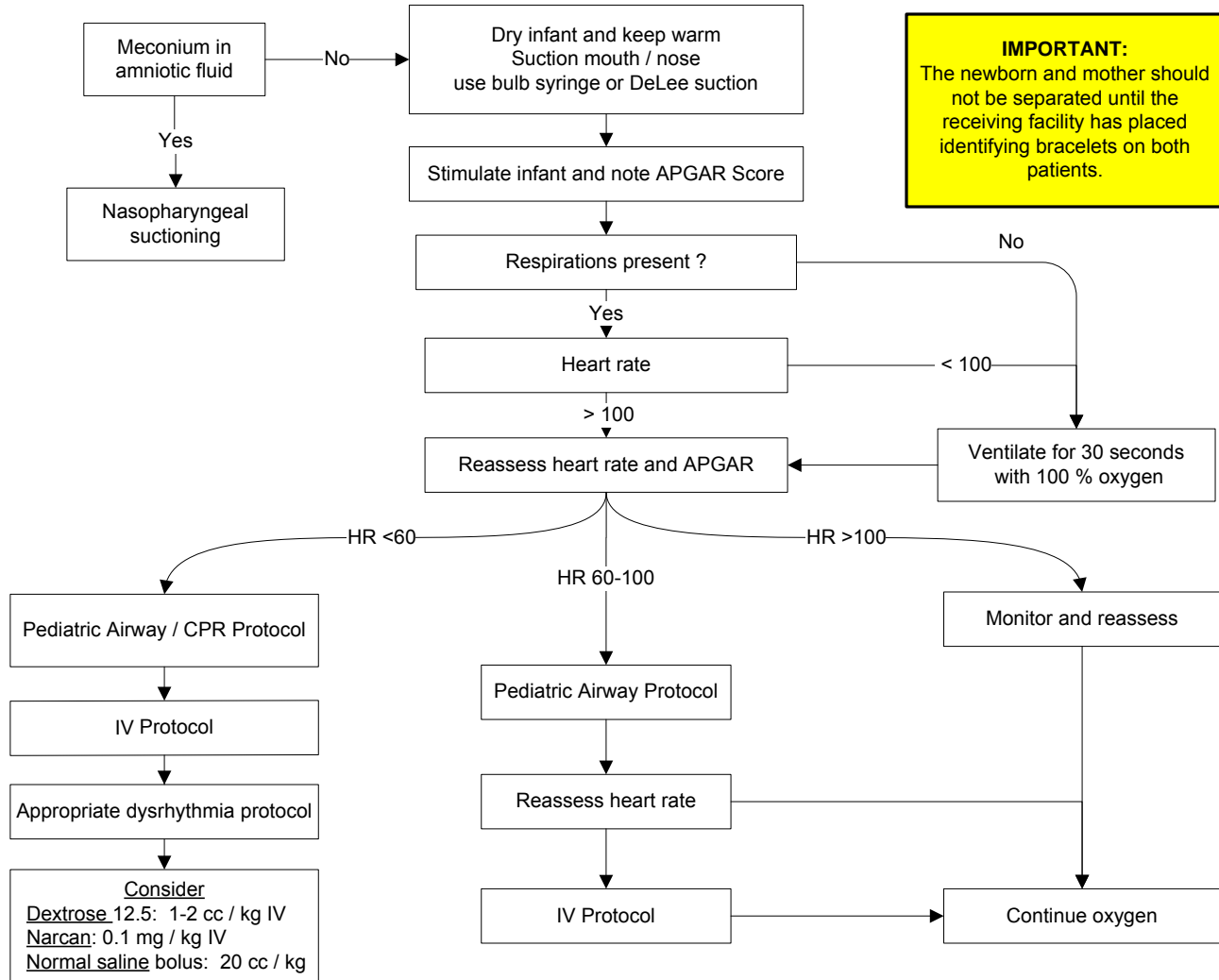
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Maternal sedation or narcotics will sedate infant (Narcan effective).
- * With prolonged resuscitation, consider hypoglycemia.
- * Document 1 and 5 minute APGAR scores.
- * Refer to weight-based resuscitation tape for detailed information.
- * For childbirth situations there must be a Patient Care Report (PCR) for the mother AND the infant.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Newborn Resuscitation	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential :
<ul style="list-style-type: none"> * Due date and gestational age * Multiple gestation * Meconium * Delivery difficulty * Congenital disease * Medications (maternal) * Maternal risk factors <ul style="list-style-type: none"> : substance abuse : smoking 	<ul style="list-style-type: none"> * Respiratory distress * Peripheral cyanosis / mottling (normal) * Central cyanosis (abnormal) * Altered level of responsiveness * Bradycardia 	<ul style="list-style-type: none"> * Airway failure <ul style="list-style-type: none"> : secretions : respiratory drive * Infection * Maternal medication effect * Hypovolemia * Hypoglycemia * Congenital heart disease * Hypothermia



Footnotes:

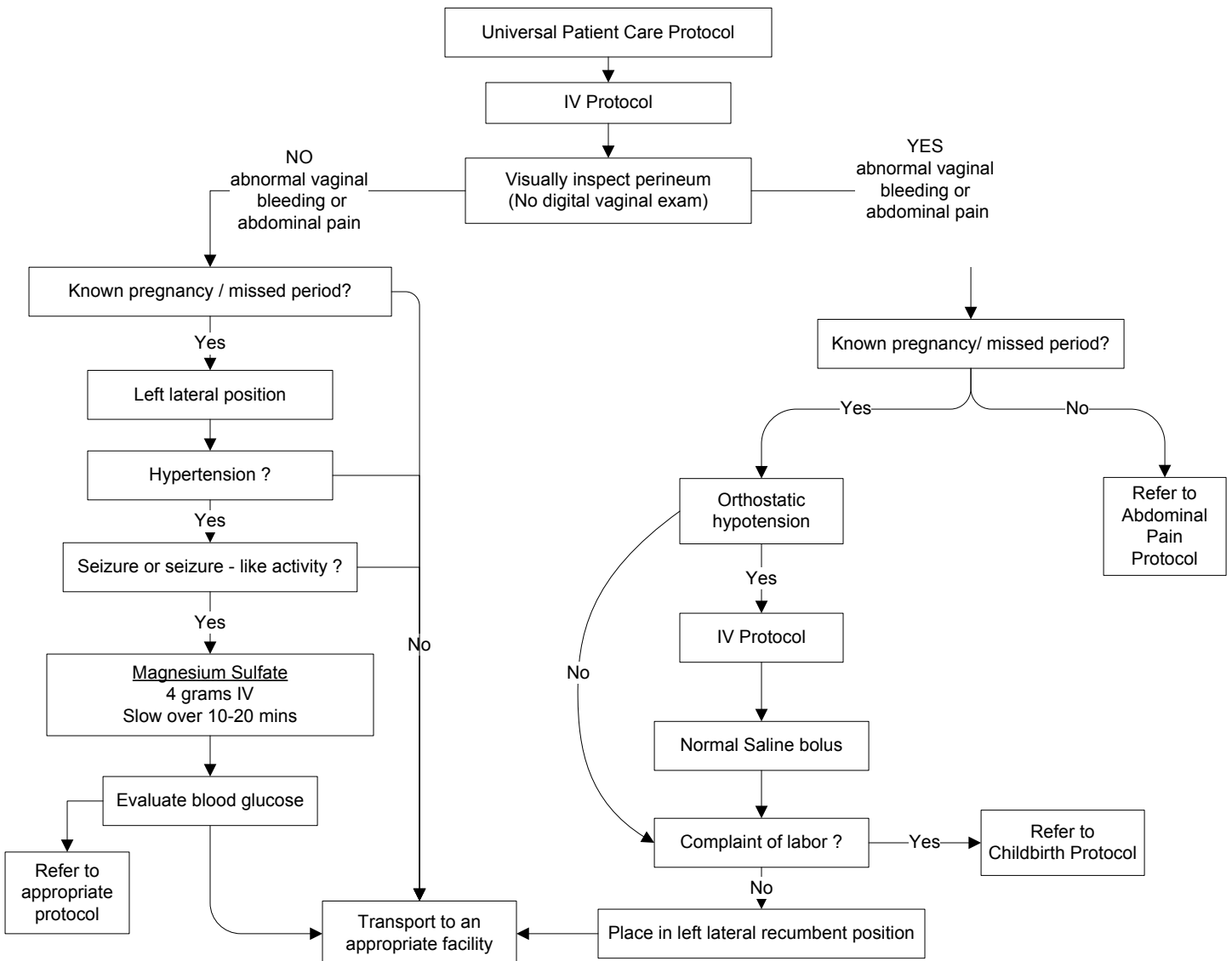
- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Maternal sedation or narcotics will sedate the newborn. (Narcan effective but may precipitate seizures)
- * Consider hypoglycemia in the newborn, especially with a prolonged resuscitation.
- * Dextrose 12.5= D50 diluted to ¼ strength (1ml D50 with 3ml saline).
- * Document 1 and 5 minute APGAR scores and transmit the information to the receiving facility.
- * Refer to weight-based resuscitation tape for detailed information.
- * **A PCR must be completed for both the mother and the infant.**

APGAR SCORE	0	1	2
Appearance	Blue centrally	Blue extremities	Pink
Pulse	0	<100	>100
Grimace	None	Grimace	Pulls Away
Activity	Absent	Arm/leg flexed	Active movement
Respirations	Absent	Slow	Crying, good

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Obstetrical Emergencies	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history * Hypertension medication * Prenatal care * Prior pregnancies / births: Gravida / Para 	<ul style="list-style-type: none"> * Vaginal bleeding * Abdominal pain * Seizures * Hypertension * Severe headache * Visual changes * Edema of the hands and face 	<ul style="list-style-type: none"> * Pre-eclampsia/ eclampsia * Placenta Previa * Abruptio Placenta * Spontaneous abortion



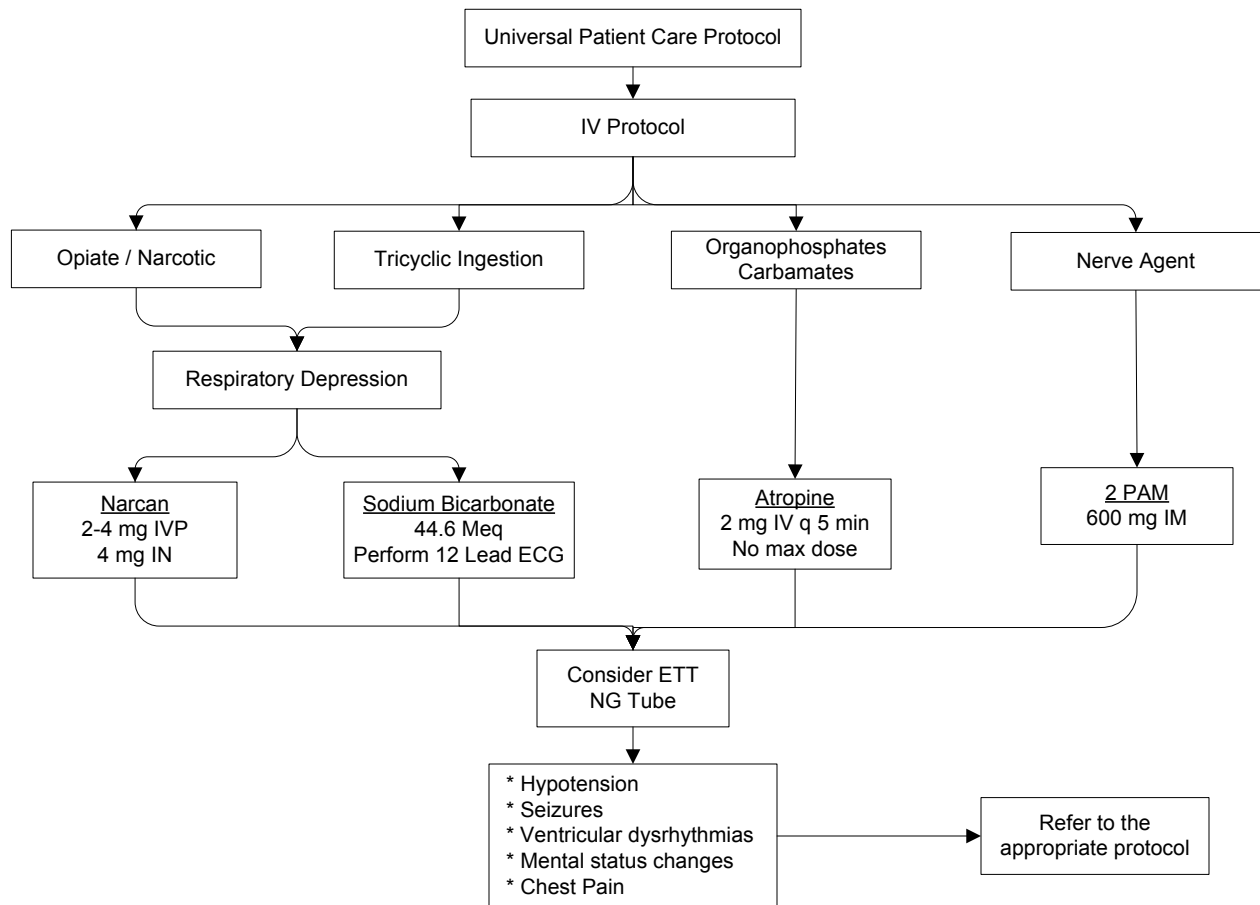
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Severe headache, vision changes, or right-upper-quadrant abdominal pain may indicate pre-eclampsia.
- * In the setting of pregnancy, hypertension is defined as a BP greater than 140 systolic or greater than 90 diastolic, or a relative increase of 30 systolic and 20 diastolic from the patient's normal (pre-pregnancy) blood pressure.
- * Maintain patient in a left lateral position to minimize risk of Supine Hypotension Syndrome.
- * Ask patient to quantify bleeding (i.e. number of pads used per hour).
- * Any pregnant patient involved in a MVC should be seen immediately, by a physician, for evaluation and fetal monitoring.
- * Magnesium administration may cause hypotension and decreased respiratory drive . Use with caution.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Overdose / Toxic Ingestion	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Ingestion or suspected ingestion of a potentially toxic substance * Substance ingested, route, quantity * Time of ingestion * Reason, (suicidal, accidental, criminal) * Available medications in home * Past medical history, medications 	<ul style="list-style-type: none"> * Mental status changes * Hypotension / hypertension * Decreased respiratory rate * Tachycardia, dysrhythmias * Seizures * Excessive secretions 	<ul style="list-style-type: none"> * Tricyclic antidepressants * Acetaminophen (Tylenol) * Depressants * Stimulants * Anticholinergic * Cardiac medications * Solvents, alcohols, cleaning agents * Insecticides (Organophosphates)



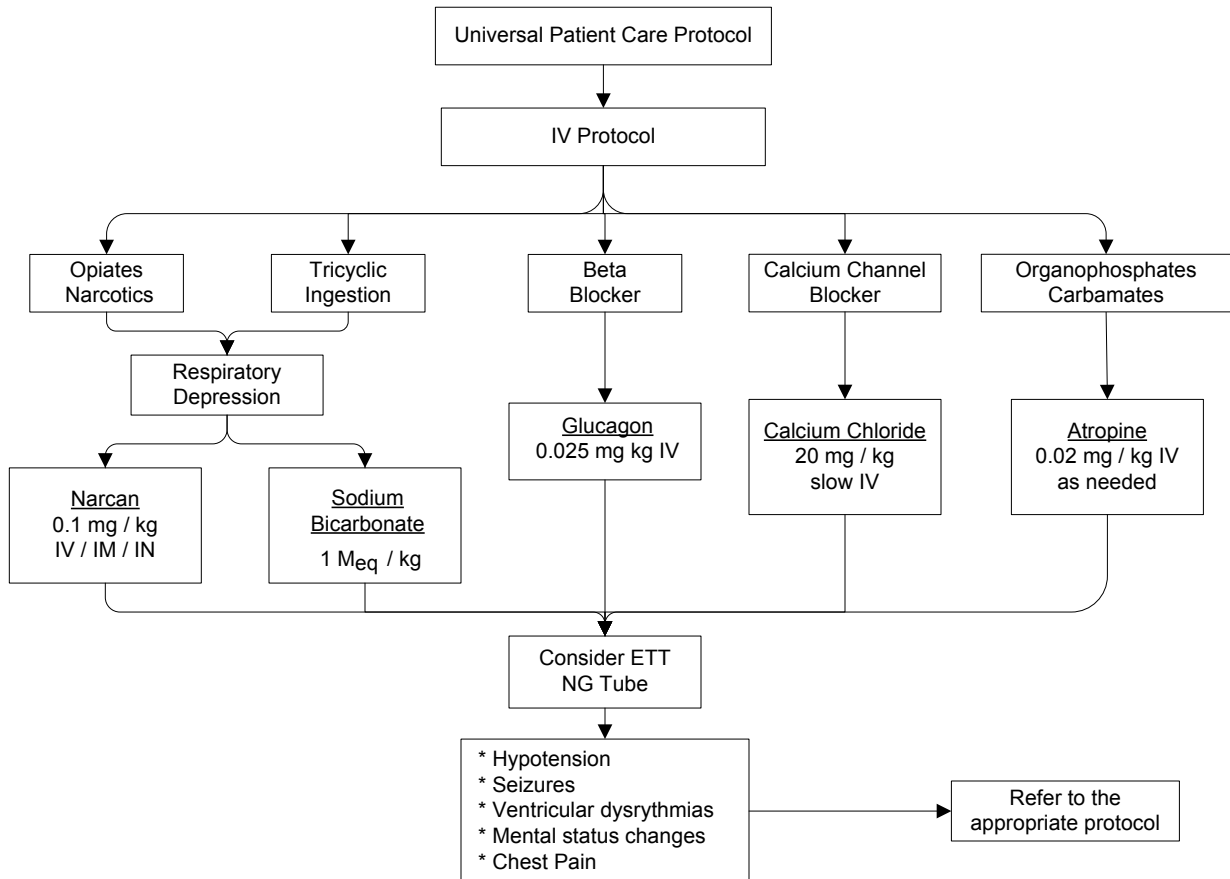
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Do rely on patient history of ingestion, especially in suicide attempts.
- * Bring bottles, contents, and emesis, if possible to the ER.
- * Tricyclic: 4 major areas of toxicity: seizures, dysrhythmias, hypotension, and decreased mental status or coma. There is usually a rapid progression from alert mental status to death.
- * **Acetaminophen:** Initially normal or nausea / vomiting. If not detected and treated, causes irreversible liver failure.
- * **Depressants:** Decreased HR, BP, temperature, and respirations; non-specific pupils.
- * **Stimulants:** Increased HR, BP, and temperature; dilated pupils; seizures.
- * **Anti-cholinergics:** Increased HR and temperature; dilated pupils; mental status changes.
- * **Cardiac Medications:** Dysrhythmias; mental status and BP changes.
- * **Solvents:** Nausea; vomiting; mental status changes.
- * **Insecticides:** Increased or decreased HR; increased secretions; nausea; vomiting; diarrhea; pinpoint pupils.
- * **Caustics:** If burns are mild, the person may be encouraged to begin drinking milk or water to dilute the liquid in the stomach. Drinking can begin at home or on the way to the hospital. DO NOT ENCOURAGE VOMITING.
- * Consider restraints if necessary for the protection of patient and / or personnel, per the Patient Restraint Procedure.
- * MARK 1 kits contain 2 mg of Atropine and 600 mg of 2 PAM, in an auto-injector, for self administration or patient care.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Overdose / Toxic Ingestion Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs / Symptoms:	Differential:
<ul style="list-style-type: none"> * Ingestion or suspected ingestion of a potentially toxic substance * Substance ingested, route, quantity * Time of ingestion * Reason, (suicidal, accidental, criminal) * Available medications in home * Past medical history, medications 	<ul style="list-style-type: none"> * Mental status changes * Hypotension / hypertension * Decreased respiratory rate * Tachycardia, dysrhythmias * Seizures * Excessive secretions 	<ul style="list-style-type: none"> * Tricyclic antidepressants * Acetaminophen (Tylenol) * Depressants * Stimulants * Anticholinergic * Cardiac medications * Solvents, alcohols, cleaning agents * Insecticides (organophosphates)

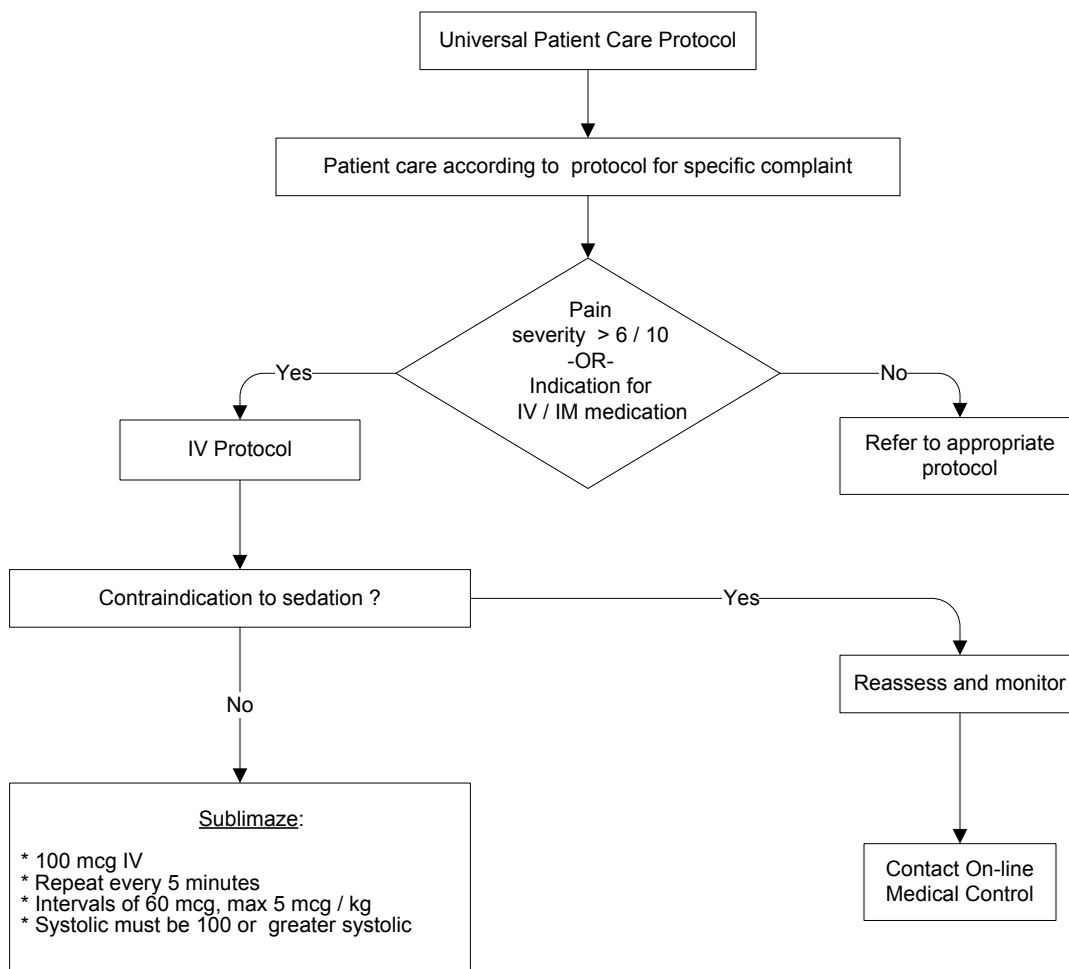


Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Do rely on patient history of ingestion, especially in suicide attempts.
- * Bring bottles, contents, and emesis, if possible to the ER.
- * **Tricyclic:** 4 major areas of toxicity: seizures, dysrhythmias, hypotension, and decreased mental status or coma. There is usually a rapid progression from alert mental status to death.
- * **Acetaminophen:** Initially normal or nausea / vomiting. If not detected and treated, causes irreversible liver failure.
- * **Depressants:** Decreased HR, BP, temperature, and respirations; non-specific pupils.
- * **Stimulants:** Increased HR, BP, and temperature; dilated pupils; seizures.
- * **Anti-cholinergics:** Increased HR and temperature; dilated pupils; mental status changes.
- * **Cardiac Medications:** Dysrhythmias; mental status and BP changes.
- * **Solvents:** Nausea; vomiting; mental status changes.
- * **Insecticides:** Increased or decreased HR; increased secretions; nausea; vomiting; diarrhea; pinpoint pupils.
- * **Caustics:** If burns are mild, the person may be encouraged to begin drinking milk or water to dilute the liquid in the stomach. Drinking can begin at home or on the way to the hospital. **DO NOT ENCOURAGE VOMITING.**
- * Consider restraints if necessary for the protection of patient and / or personnel, per the Patient Restraint Procedure.
- * Consider contacting TGH Poison Control Center at 813-242-4444.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Pain Control	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Location * Duration * Severity (1-10) * Past medical history * Medications * Drug allergies 	<ul style="list-style-type: none"> * Severity (pain scale) * Quality (sharp, dull, etc.) * Radiation * Relation to movement – respiration * Increased with palpation of area 	<ul style="list-style-type: none"> * Per the specific protocol * Musculoskeletal * Visceral (abdominal) * Cardiac * Pleural / respiratory * Neurologic * Renal (colic)

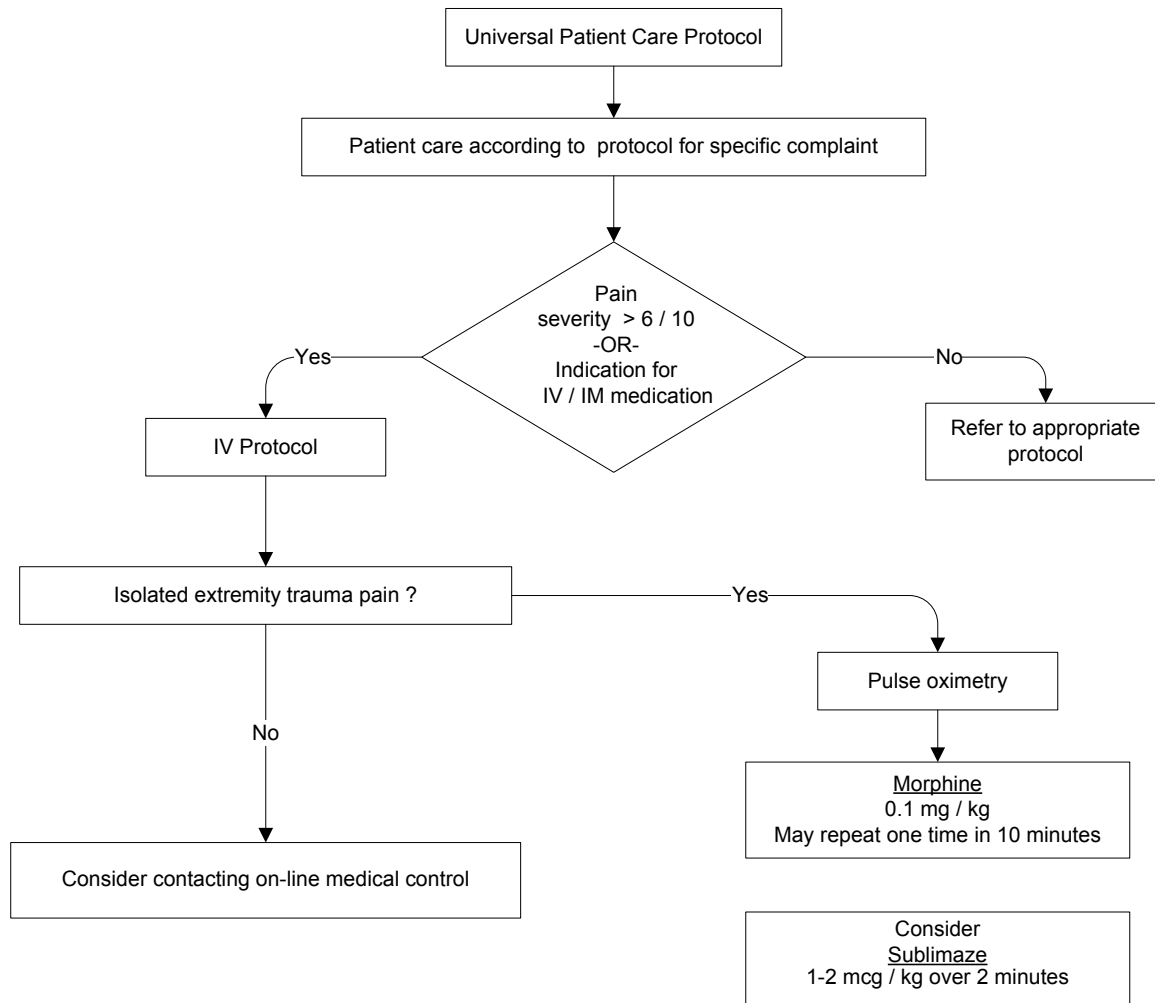


Footnotes:
<ul style="list-style-type: none"> * Exam: Vitals, mental status, area of pain, neurological. * Vital signs should be obtained before, 10 minutes after, and at disposition with all pain medications. * Contraindications to <u>Sublimaze</u> use alone (without RSI) include head injury, respiratory distress, or severe COPD. * <u>Morphine</u> is not to be administered to Trauma Alert patients <u>with</u> potential abdominal injuries. * All patients should have drug allergies documented prior to medications. * Pain severity (0-10) should be recorded pre and post IV or IM medication delivery and at disposition. * If applicable, consider Palliative Care Directive.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Pain Control Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Location * Duration * Severity (1-10) * Past medical history * Medications * Drug allergies 	<ul style="list-style-type: none"> * Severity (pain scale) * Quality (sharp, dull, etc.) * Radiation * Relation to movement – respiration * Increased with palpation of area 	<ul style="list-style-type: none"> * Per the specific protocol * Musculoskeletal * Visceral (abdominal) * Cardiac * Pleural / respiratory * Neurologic * Renal (colic)

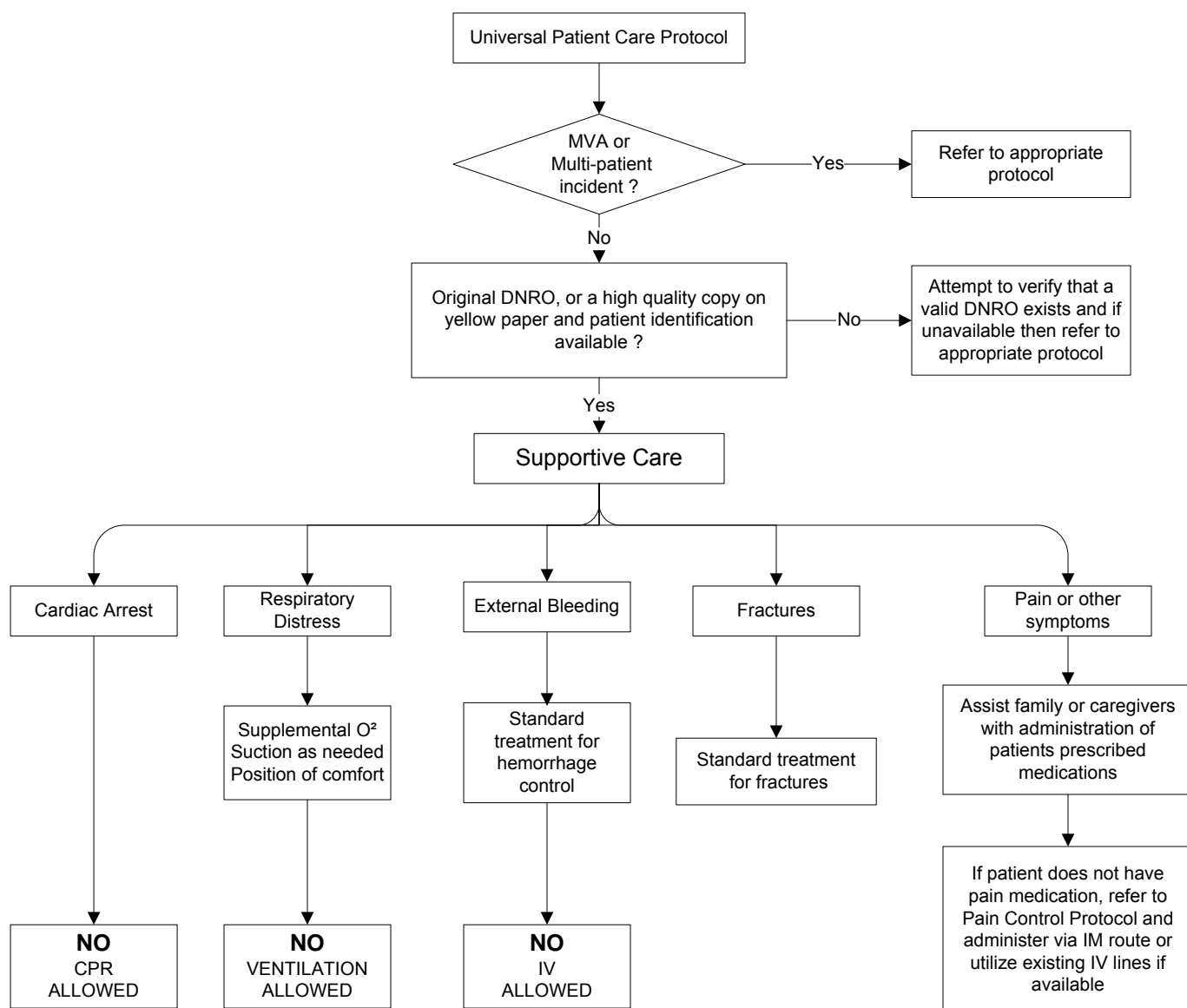


Footnotes:

- * Exam: Vitals, mental status, area of pain, neurological
- * Vital signs should be obtained before, 10 min. post and at disposition with all pain medications
- * Contraindications to Morphine use include hypotension, head injury, respiratory distress, or severe COPD
- * All patients should have drug allergies documented prior to medications.
- * Pain severity (0-10) should be recorded pre and post IV or IM medication delivery and at disposition
- * All patients who receive IM or IV medications must be observed for drug reactions.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Palliative Care	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

History:	Signs and/ Symptoms:	Differential:
* Pain or serious illness: Cancer Cardiac disease Respiratory disease Kidney failure AIDS Amyotropic Lateral Schlerosis (ALS)	* Pain * Shortness of breath * Fatigue * Nausea	* There is no differential for palliative care as it is not a disease process * Palliative care is the relief of pain, symptoms and stress of serious illness. * Palliative care is different than Hospice care.



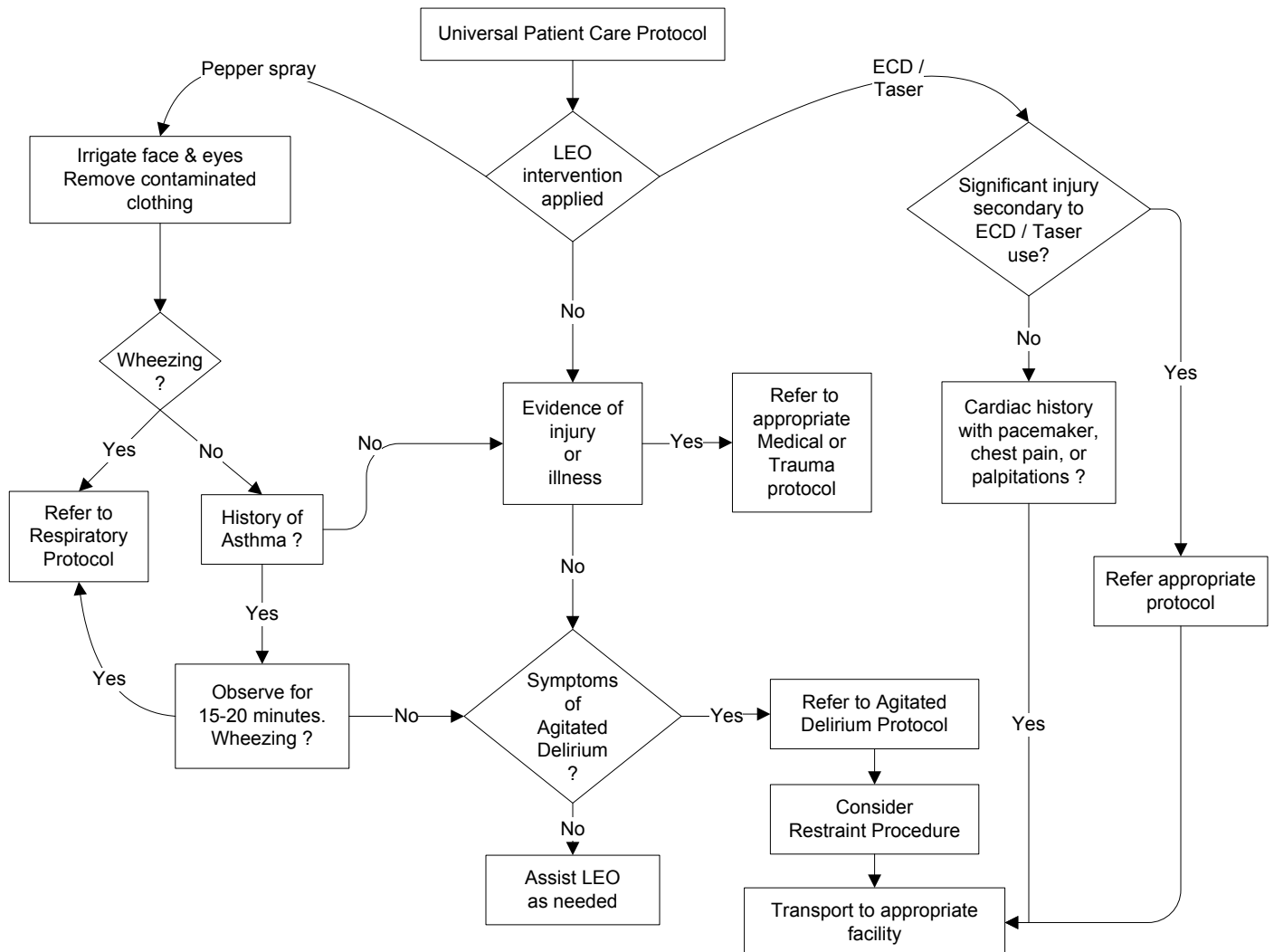
FOOTNOTES:

- * When pain medications are administered for patient comfort, the patient may still refuse transportation. Make sure that the Patient Refusal Form is signed and witnessed.
- * A Living Will or other legal document which identifies the patient's desire to withhold CPR or ALS treatment may be honored with the approval of on-line medical control in conjunction with the patient's family and /or family physician.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Police Custody	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential :
<ul style="list-style-type: none"> * Time and mechanism of the injury * Traumatic injury * Psychiatric illness / medication * Substance abuse / overdose * Suspected cocaine, amphetamine or hallucinogenic drug use * Cardiac history * Asthma history * Application of an electronic control device (ECD/ Taser) 	<ul style="list-style-type: none"> * External signs of trauma * Anxiety, agitation, confusion * Shortness of breath, wheezing * Altered mental status * Intoxication / substance abuse 	<ul style="list-style-type: none"> * Agitated Delirium secondary to psychiatric illness * Agitated Delirium secondary to substance abuse * Traumatic injury * Closed head injury * Asthma exacerbation * Cardiac dysrhythmia



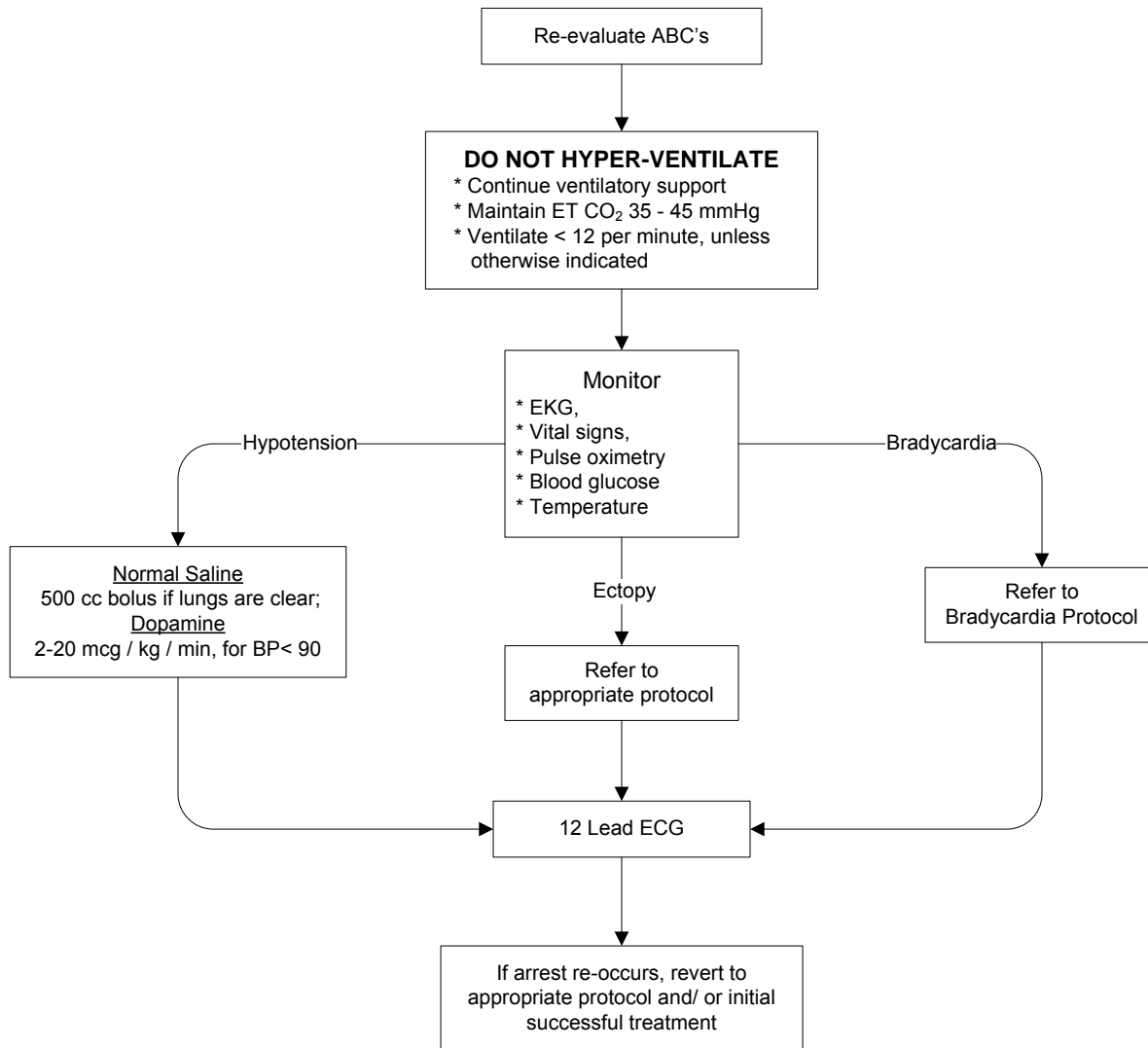
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological
- * Patients in custody should be transported to the hospital with the officer accompanying the crew
- * If an asthmatic patient is treated after being sprayed with pepper spray, and released to a LEO, all parties should be advised that if difficulty in breathing re-occurs they should seek immediate medical attention.
- * If there is any doubt about the cause of a patient's alteration in mental status, transport the patient to the most appropriate facility for evaluation.
- * Maintain a high index of suspicion for "positional asphyxia" and be prepared to respond.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Post Resuscitation: Return of Spontaneous Circulation	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History;	Signs and Symptoms:	Differential:
* Cardiac arrest * Respiratory arrest	* Return of pulse	* Continue to address specific differentials associated with the original dysrhythmias



Footnotes:

- * Most patients immediately post resuscitation will require ventilatory assistance.
- * Most post-resuscitation deaths occur during the first 24 hours.
- * During post-resuscitation care, optimize hemodynamic, respiratory, and neurologic support; identify and treat reversible causes of arrest; and monitor temperature and consider treatment for disturbances of temperature regulation and metabolism.
- * Strict glucose control should be maintained during post-resuscitation.
- * Hyperventilation may cause increased airway pressures leading to an increase in cerebral venous and intracranial pressures. Increases in cerebral venous pressure can decrease cerebral blood flow and increase brain ischemia.
- * Patient's resuscitated, following out-of-hospital cardiac arrest, documented significant early but reversible myocardial dysfunction and low cardiac output, followed by later vasodilation.
- * It is indicated to continue an infusion of an antiarrhythmic drug that was associated with ROSC.
- * Because hyperthermia and seizures increase oxygen requirements of the brain, both should be promptly controlled.
- * ALL INTUBATED PATIENTS WILL UTILIZE CAPNOGRAPHY, and its use documented on the PCR.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Pulmonary Edema	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history * Cardiac History: <ul style="list-style-type: none"> : past MI : Congestive heart failure * Medications (Digoxin, Lasix) * Viagra 	<ul style="list-style-type: none"> * Respiratory depression * Apprehension * Jugular vein distention * Pink, frothy sputum * Peripheral edema * Diaphoresis * Hypotension, shock * Chest pain 	<ul style="list-style-type: none"> * Myocardial infarction * Congestive heart failure * Asthma * Anaphylaxis * Aspiration * COPD * Pleural effusion * Pneumonia * Pulmonary embolus * Pericardial tamponade

CPAP INCLUSION CRITERIA

Respiratory Distress
(2 or more of the following)

- * Pulmonary edema
- * Retractions of accessory muscles
- * Respiratory rate > 25/min
- * Pa O₂ < 92%

INDICATIONS FOR CPAP

- * Acute/Chronic CHF
- * Adult Near Drowning
- * Adult non-cardiac pulmonary edema (poisoning/chemical exposure)

PATIENTS EXCLUDED

- * Respiratory / cardiac arrest
- * B/P < 90 mmHg
- * Unresponsive to speech
- * Inability to maintain patent airway
- * Major trauma
- * Pneumothorax
- * Vomiting or active GI bleeding

Universal Patient Care Protocol

12 Lead EKG

IV Protocol

Nitroglycerin
0.04 mg sublingual
every 5 minutes

Morphine
2 mg IVP, Slow

Consider
Lasix
40 mg IVP

Reassess and monitor

As soon as pulmonary edema is identified and patient meets inclusion criteria, establish CPAP

- * Facemask @10 cm H₂O
- * Titrate to maintain PaO₂ >94%

If needed, administer Morphine
2 mg every 5 minutes up to 10 mg
Maintain a systolic blood pressure > 100

Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Avoid nitroglycerin in patients who have used Viagra or similar drugs in the past 24 hrs. due to potential for severe hypotension .
- * If a patient has taken nitroglycerin without relief, consider the potency of the medication.
- * Contraindications to Morphine include severe COPD and respiratory distress. Monitor the patient closely.
- * Consider myocardial infarction in all of these patients.
- * In the hypotensive patient, consider a pressor agent.
- * Diabetics and geriatric patients often have atypical pain, or generalized complaints.
- * Place the patient in a position of comfort to maximize their breathing effort.
- * RSI may be a consideration for some patients.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Pulseless Electrical Activity	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history * Medications * Events leading to the arrest * End stage renal disease * Estimated downtime * Suspected overdose: tricyclics, digitalis, beta-blockers, calcium channel blockers * DNR or Living Will 	<ul style="list-style-type: none"> * Pulseless * Apnea * No electrical activity on EKG 	<ul style="list-style-type: none"> * Myocardial infarction, cardiac tamponade * Drug overdose: tricyclics, digitalis, beta blockers, calcium channel blockers. * Tension pneumothorax * Pulmonary embolus * Hypovolemia (trauma or medical) * Hypothermia * Hypoxia * Acidosis * Hyperkalemia

IF / WHEN
return of spontaneous
circulation, refer to
Post Resuscitation Protocol

Universal Patient Care Protocol

Cardiac Arrest Protocol

I.V. Protocol

Epinephrine

1 mg IV / IO

Repeat every 3 – 5 minutes

* May replace 1st or 2nd dose with:

Vasopressin

40 IU IV

For slow rate consider

Atropine

1 mg IV / IO

May repeat every 3 – 5 minutes up to 3mg

Continue CPR and Epinephrine
Consider correctable causes

Correctable Causes

- * Acidosis
- * Hypovolemia
- * Hypothermia
- * Hypoglycemia
- * Hyperkalemia
- * Overdose
 - : Narcotics
 - : Tricyclic antidepressants
 - : Calcium channel blockers
 - : Beta blockers
- * Tension pneumothorax

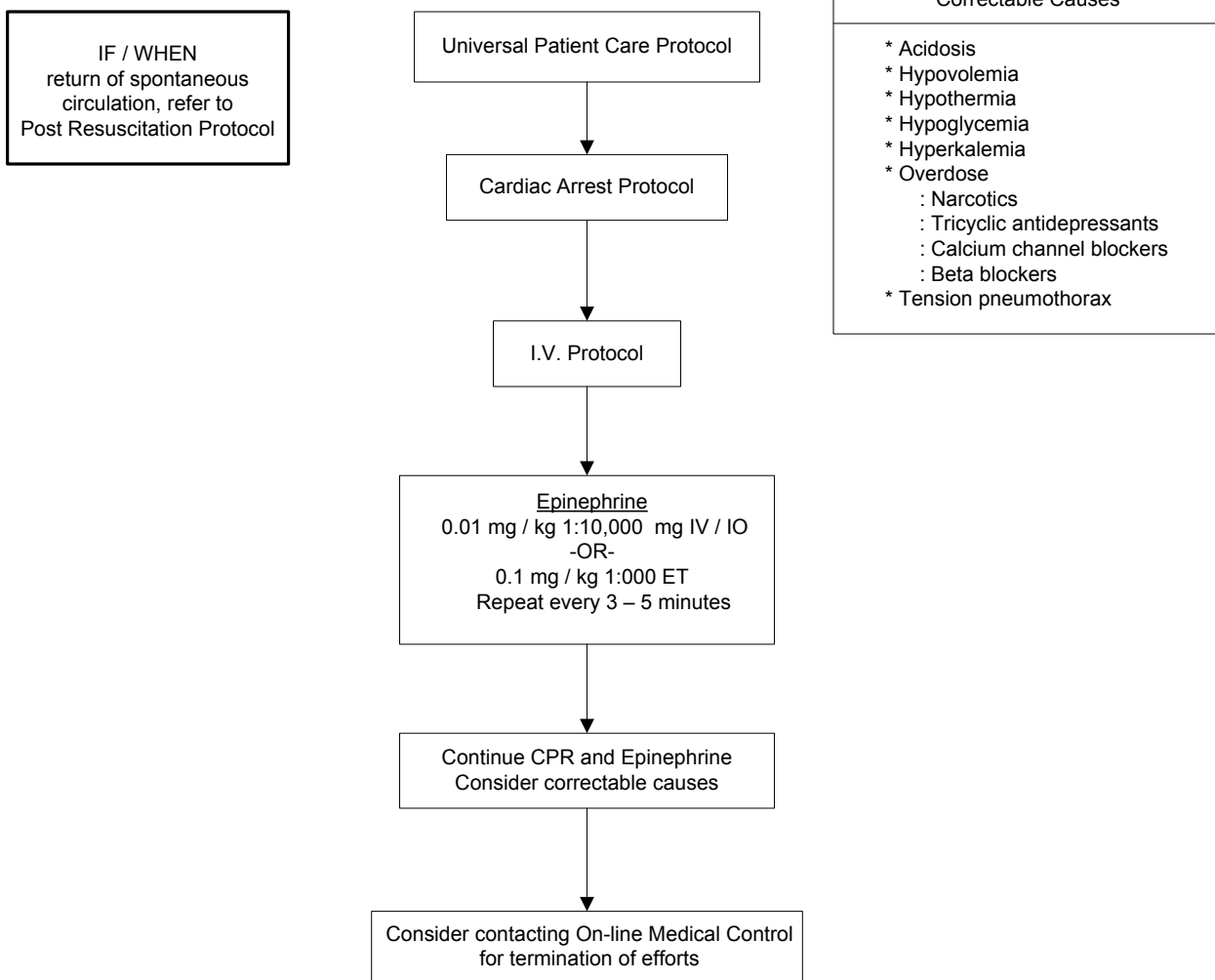
Footnotes:

- * Exam ABC's, mental status.
- * Avoid hyperventilation.
- * ALL INTUBATED PATIENTS MUST HAVE CAPNOGRAPHY IN PLACE, and its use documented on the PCR.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Pulseless Electrical Activity Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history * Medications * Events leading to the arrest * Estimated downtime * Suspected hypothermia * Suspected overdose 	<ul style="list-style-type: none"> * Pulseless * Apnea * No electrical activity on EKG 	<ul style="list-style-type: none"> * Respiratory failure: FBAO, secretions, infection, hypoxia * Congenital heart disease * Medical or Trauma * Toxin or medication * Hypoglycemia * Acidosis * Hypothermia * Device (lead) error * Death



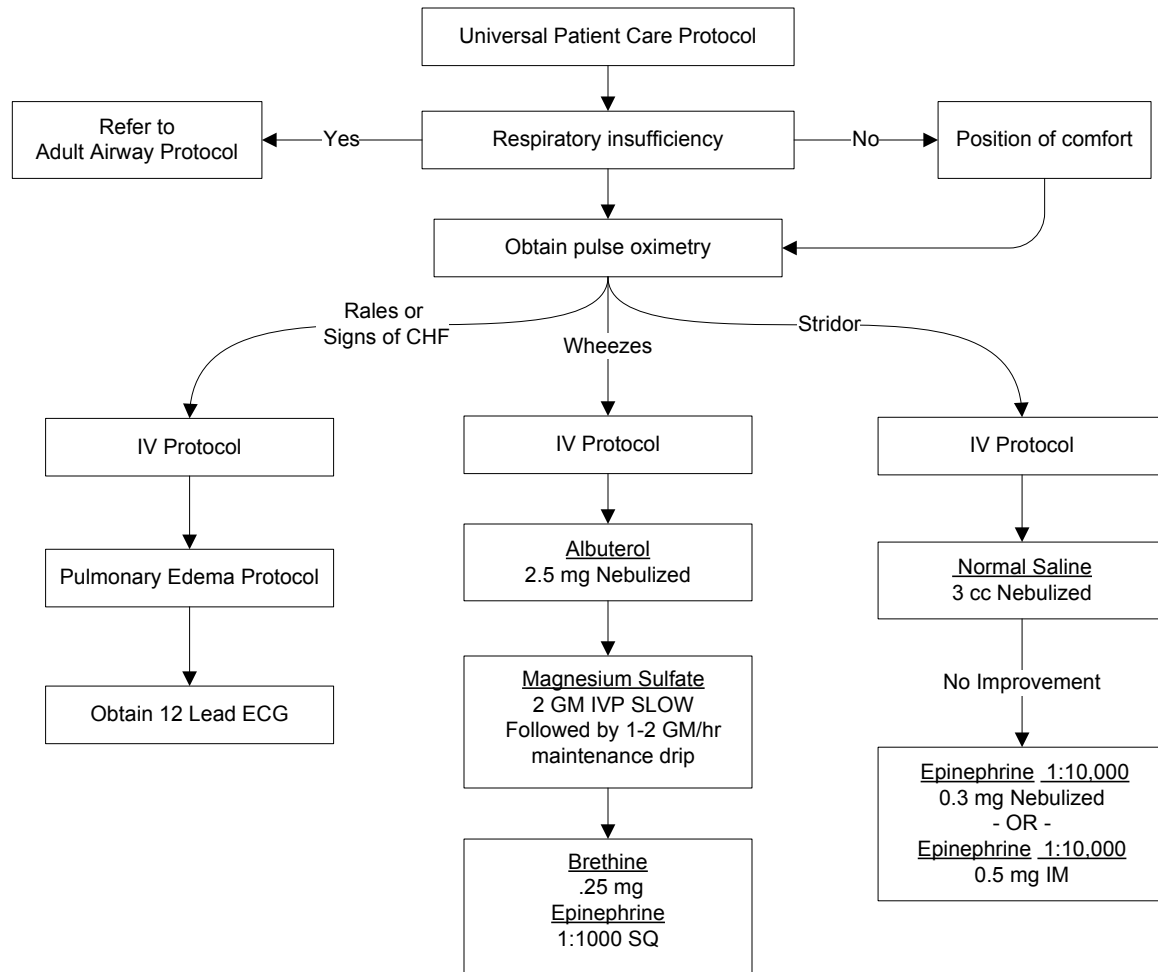
Footnotes:

- * Exam ABC's, vital signs, mental status, skin, neck, heart, lungs, back, extremities, neurological.
- * Always confirm asystole in more than one lead.
- * Avoid hyperventilation.
- * Airway is the most important intervention.
- * In order to be successful in pediatric arrests, a cause must be identified and corrected.
- * ALL INTUBATED PATIENTS MUST HAVE CAPNOGRAPHY IN PLACE, and it's use documented on the PCR.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Respiratory Distress	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Asthma * COPD * Chronic bronchitis * Emphysema * CHF * Toxic exposure, smoke inhalation * Home oxygen, nebulizer * Medications (theophylline, steroids, inhalers) 	<ul style="list-style-type: none"> * Shortness of breath * "Pursed lip" breathing * Decreased ability to speak * Increased respiratory rate and effort * Wheezing, rhonchi * Use of accessory muscles * Fever, cough * Tachycardia 	<ul style="list-style-type: none"> * Asthma * Anaphylaxis * Aspiration * COPD (emphysema, bronchitis) * Pneumonia * Pulmonary embolus * Pneumothorax * Cardiac (MI or CHF) * Pericardial tamponade * Hyperventilation * Inhaled toxin (carbon monoxide)



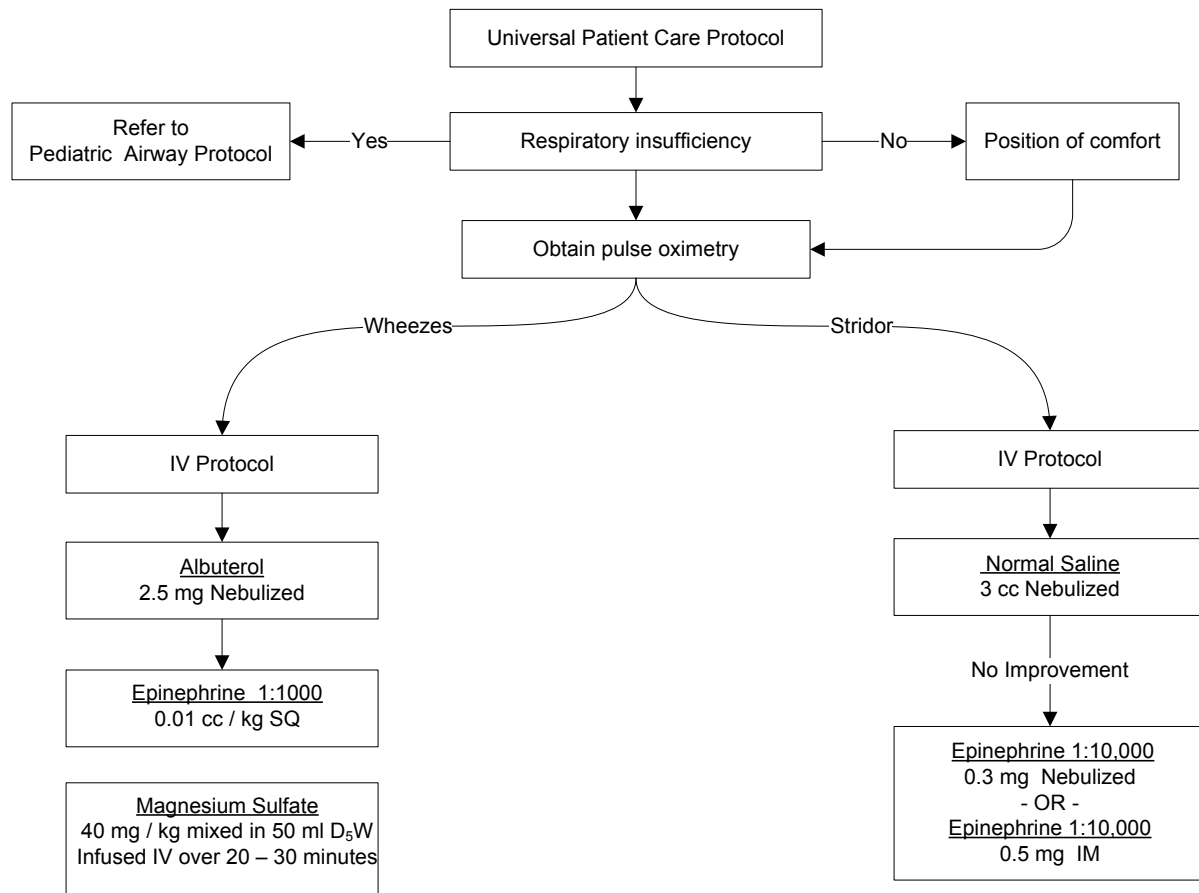
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Pulse oximetry should be monitored continuously, if available.
- * **Status Asthmaticus:** A severe, prolonged asthma attack, unresponsive to therapy, considered potentially life threatening.
- * Caution should be used in administering epinephrine in patients who are > 35 years of age, have a history of cardiac disease, or if the patients heart rate is above 150 BPM. Epinephrine may precipitate cardiac ischemia.
- * A "silent chest" with respiratory distress is a pre-respiratory arrest sign.
- * The use of CPAP is contraindicated in asthma patients.
- * All INTUBATED PATIENTS WILL UTILIZE CAPNOGRAPHY and its use documented on the PCR.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Respiratory Distress Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Asthma * COPD * Chronic bronchitis * Emphysema * CHF * Toxic exposure, smoke inhalation * Home oxygen, nebulizer * Medications (theophylline, steroids, inhalers) 	<ul style="list-style-type: none"> * Shortness of breath * "Pursed lip" breathing * Decreased ability to speak * Increased respiratory rate and effort * Wheezing, rhonchi * Use of accessory muscles * Fever, cough * Tachycardia 	<ul style="list-style-type: none"> * Asthma * Anaphylaxis * Aspiration * COPD (emphysema, bronchitis) * Pneumonia * Pulmonary embolus * Pneumothorax * Cardiac (MI or CHF) * Pericardial tamponade * Hyperventilation * Inhaled toxin (carbon monoxide)



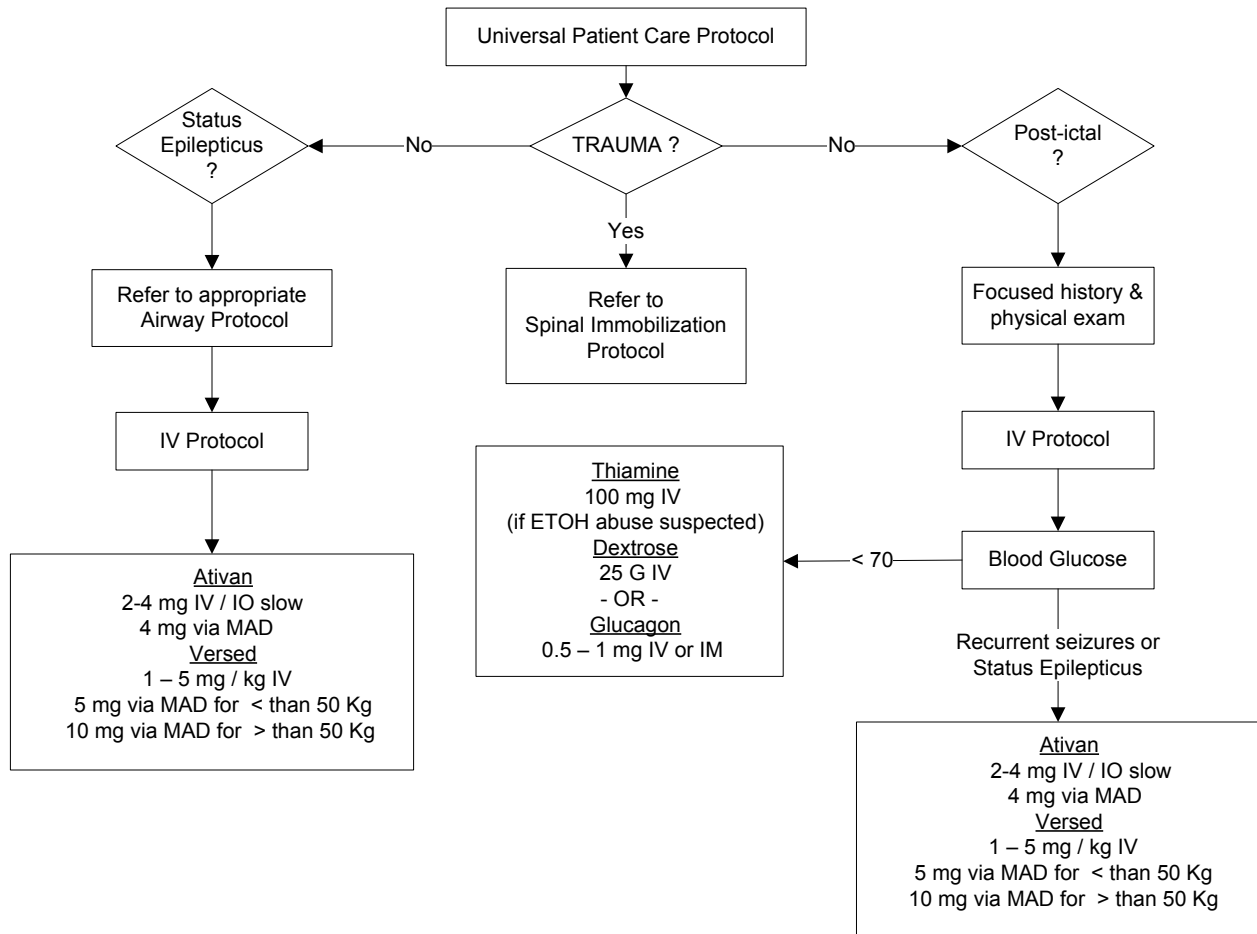
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Pulse oximetry should be monitored continuously, if available.
- * **Status Asthmaticus:** A severe, prolonged asthma attack, unresponsive to therapy, considered potentially life threatening.
- * Caution should be used in administering epinephrine in patients who are > 35 years of age, have a history of cardiac disease, or if the patients heart rate is above 150 BPM. Epinephrine may precipitate cardiac ischemia.
- * A "silent chest" with respiratory distress is a pre-respiratory arrest sign.
- * The use of CPAP is contraindicated in asthma patients.
- * All INTUBATED PATIENTS WILL UTILIZE CAPNOGRAPHY and its use documented on the PCR.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Seizure	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Reported / witnessed seizure activity * Previous seizure activity * Medic alert tag information * Seizure medications * History of trauma * History of diabetes * History of pregnancy 	<ul style="list-style-type: none"> * Decreased mental status * Somnolence * Incontinence * Observed seizure activity * Evidence of trauma 	<ul style="list-style-type: none"> * CNS (head trauma) * Tumor * Metabolic * Hypoxia * Electrolyte abnormality * Hepatic or renal failure * Drugs or drug abuse * Medication non-compliance * Infection * Fever * Eclampsia



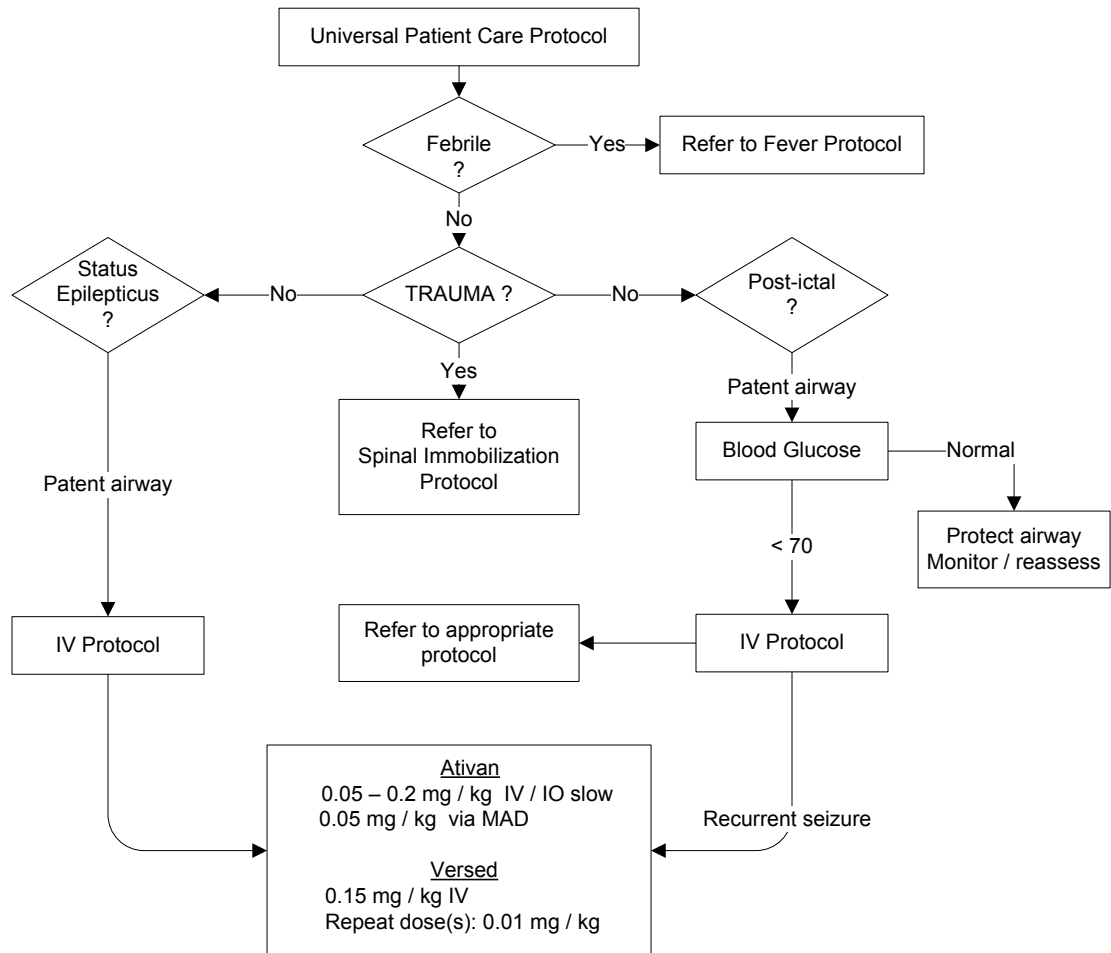
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Status Epilepticus: Defined as two or more successive seizures without a period of consciousness or recovery. This is a true emergency requiring rapid airway control, treatment and transport.
- * Grand Mal Seizure: Generalized seizure associated with a loss of consciousness, incontinence, and probable tongue trauma.
- * Petit Mal Seizure: Focal seizure which effects only a part of the body and is not usually associated with a loss of consciousness.
- * Jacksonian Seizure: Seizure which starts as a focal seizure and become generalized.
- * Be prepared for airway problems and continued seizures.
- * Assess possibility of occult trauma and substance abuse.
- * Be prepared to assist ventilations if Versed is used.
- * Notify On-line Medical Control of any seizure in a pregnant patient due to the possibility of eclampsia / pre-eclampsia.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Seizure Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Reported / witnessed seizure activity * Previous seizure activity * Medic alert tag information * Seizure medications * History of trauma * History of diabetes 	<ul style="list-style-type: none"> * Decreased mental status * Somnolence * Incontinence * Observed seizure activity * Evidence of trauma 	<ul style="list-style-type: none"> * CNS (head trauma) * Tumor * Metabolic * Hypoxia * Electrolyte abnormality * Hepatic or renal failure * Drugs or drug abuse * Medication non-compliance * Infection * Fever



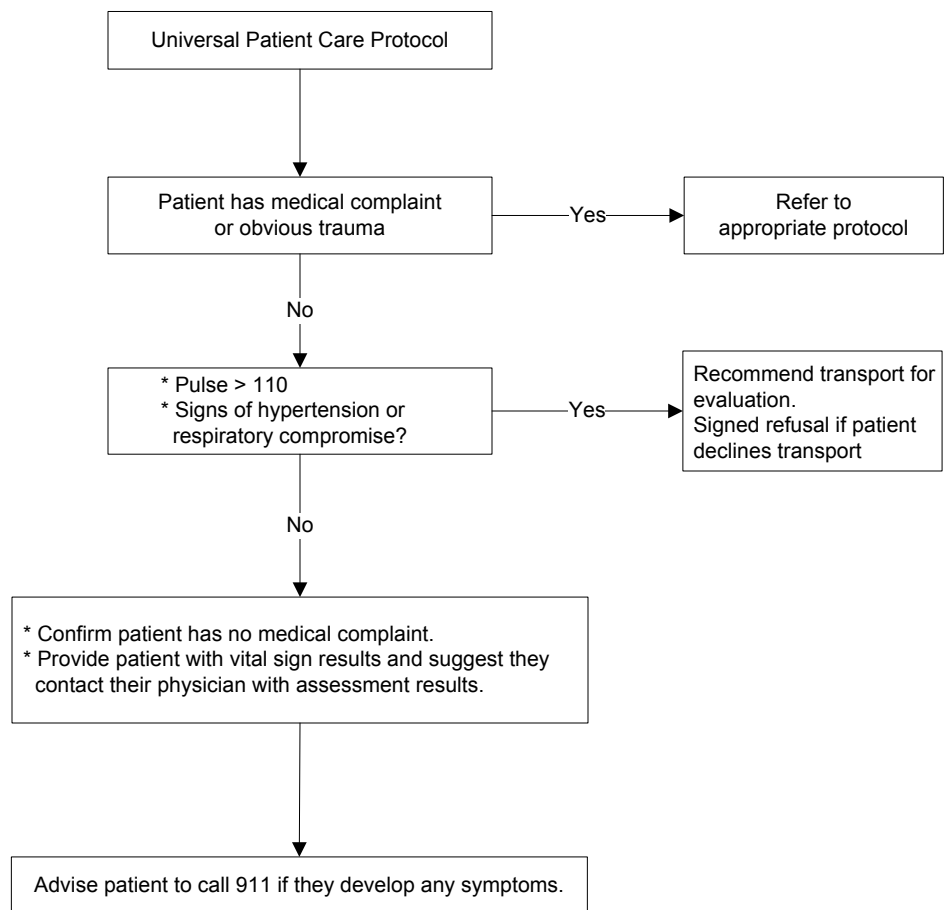
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * **Status Epilepticus:** Defined as two or more successive seizures without a period of consciousness or recovery. This is a true emergency requiring rapid airway control, treatment and transport.
- * **Grand Mal Seizure:** Generalized seizure associated with a loss of consciousness, incontinence, and probable tongue trauma.
- * **Petit Mal Seizure:** Focal seizure which effects only a part of the body and is not usually associated with a loss of consciousness.
- * **Jacksonian Seizure:** Seizure which starts as a focal seizure and become generalized.
- * Be prepared for airway problems and continued seizures.
- * Assess possibility of occult trauma and substance abuse.
- * Be prepared to assist ventilations if **Versed** is used.
- * Notify On-line Medical Control of any seizure in a pregnant patient due to the possibility of eclampsia / pre-eclampsia.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Service Rendered Patient Evaluation	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Patient requesting "blood pressure check" * Requests to "assist invalid" * Other situations in which patient does not have a medical complaint or obvious injury 	<ul style="list-style-type: none"> * Assess for medical issue * For patients with hypertension, evaluate for chest pain, shortness of breath, and/or neurologic changes * For assist invalid calls, evaluate for syncope, chest pain, trauma from the fall, or inability to ambulate. 	<ul style="list-style-type: none"> * Hypertensive urgency * Hypertensive emergency * Syncope * Cardiac ischemia * Cardiac dysrhythmia * Fracture * Head trauma



Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Patients who are denying more severe symptoms may initially present for a "routine check." Confirm with the patient, at least twice, that they have no medical complaints.
- * All persons who request service shall have an ePCR completed.
- * For patients in this category, the ePCR may be brief but must include vital signs and documentation of the lack of a medical complaint. Additionally, patients with a potential mechanism for trauma should have a trauma exam completed.

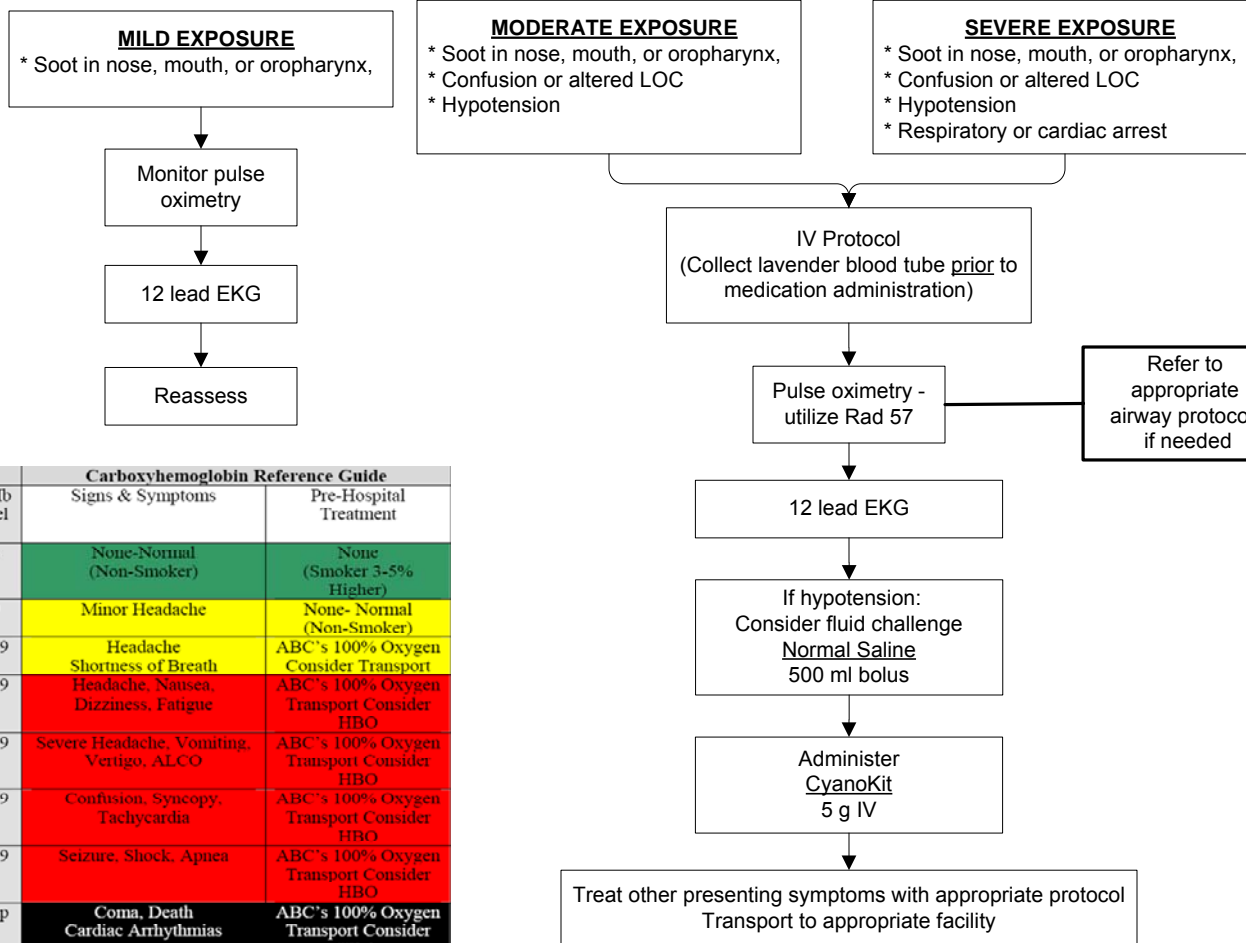
TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Smoke Inhalation	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History / At Risk Patients:	Sign and Symptoms:	Differential (Life Threatening):
<ul style="list-style-type: none"> * Children * Elderly * Cardiac history * Pregnant females * Patient with respiratory insufficiency * Victims of structure fires * Firefighters / emergency personnel engaged in fire scene operations 	<ul style="list-style-type: none"> * Victims of structure fires * Evidence of trauma or burns * Malaise * Soot in nose, mouth or oropharynx 	<ul style="list-style-type: none"> * Exposure to hazardous materials

Universal Patient Care Protocol
(Utilize spinal precautions if appropriate)

Measure SpCO
For suspected Carbon Monoxide (CO), Cyanide (CN), or combined exposure



Carboxyhemoglobin 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, Syncope, Tachycardia	ABC's 100% Oxygen Transport Consider HBO
50-59	Seizure, Shock, Apnea	ABC's 100% Oxygen Transport Consider HBO
60-up	Coma, Death Cardiac Arrhythmias	ABC's 100% Oxygen Transport Consider HBO

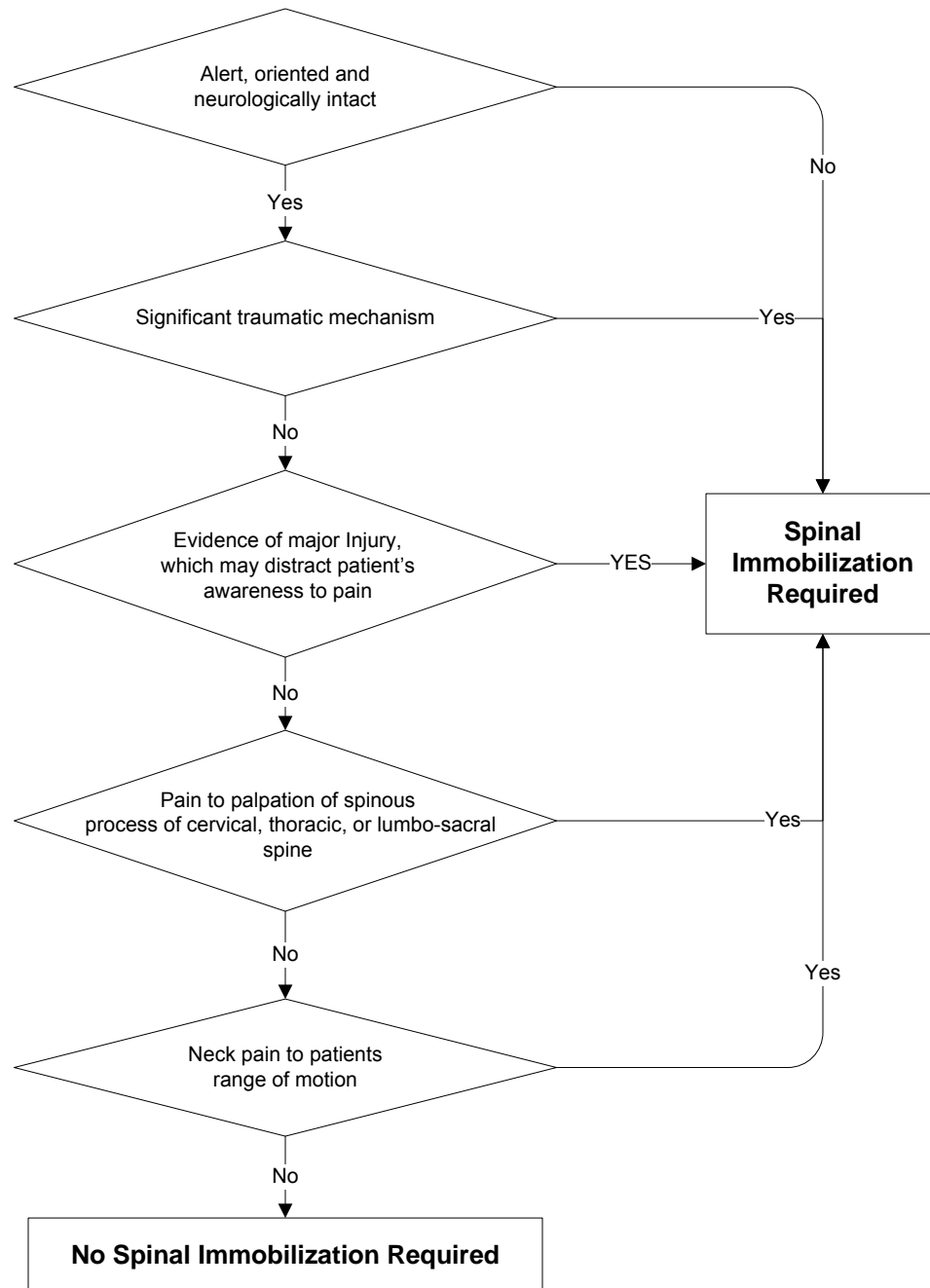
Footnotes:

This protocol may be applied all hazard work groups associated with TFR or any adult patient exposed to the by-products of fire.

* Exam: ABC's, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.

* 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.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Spinal Immobilization	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director



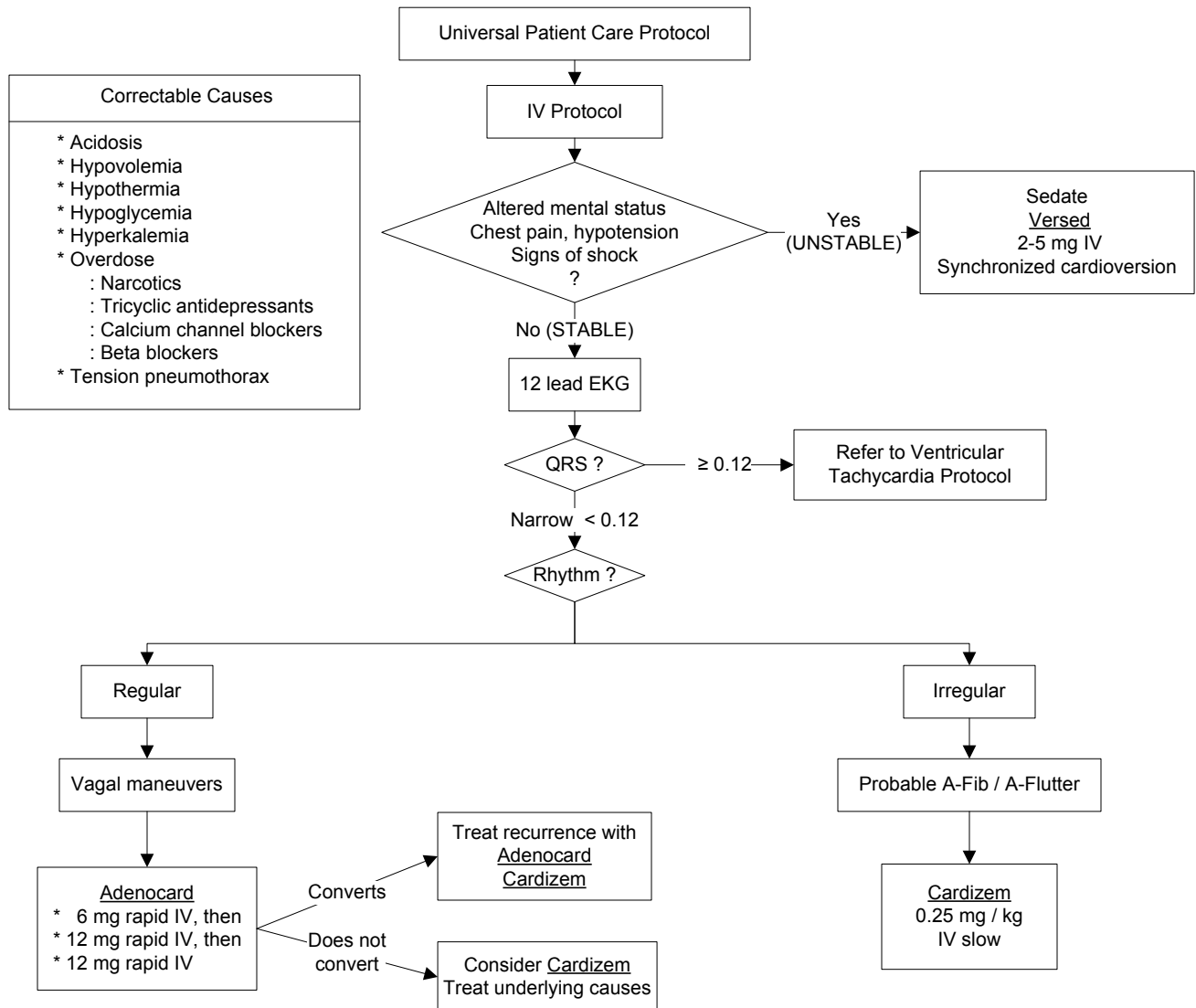
Footnotes:

- * **The decision to NOT implement spinal immobilization in a patient is the responsibility of the paramedic.**
- * Exam ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Patient must be oriented to person, place, situation and time.
- * Significant mechanism of trauma includes windshield spider, dash deformity, ejection, rollover, and space invasion of greater than 1 foot.
- * Patient's range of motion should not be assisted. The patient should touch their chin to their chest, extend their neck (look up), and turn the head side to side (shoulder to shoulder) without pain.
- * Major injuries which may distract a patient's awareness to pain include pelvic fracture, femur fracture, extensive burns, or soft tissue injuries, acute abdomen, or significant chest injury.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Supraventricular Tachycardia	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Medications <ul style="list-style-type: none"> : Aminophylline : Decongestants : Thyroid supplements, diet pills, : Digoxin * Diet (caffeine, chocolate) * Past medical history * History of palpitations * Syncope / near syncope 	<ul style="list-style-type: none"> * Heart rate > 150 / min * Dizziness * Chest pain * Shortness of breath * Potential presenting rhythm <ul style="list-style-type: none"> : Sinus Tachycardia : Atrial Fibrillation / Flutter : Multifocal Atrial Tachycardia 	<ul style="list-style-type: none"> * Heart disease (WPW, vascular) * Sick Sinus Syndrome, MI * Medical: fever, pulmonary embolus, hyperthyroidism, electrolyte imbalance * Hypoxia * Hypovolemia or anemia * Drug effect / Ooerdose * Exertion, pain, emotional distress



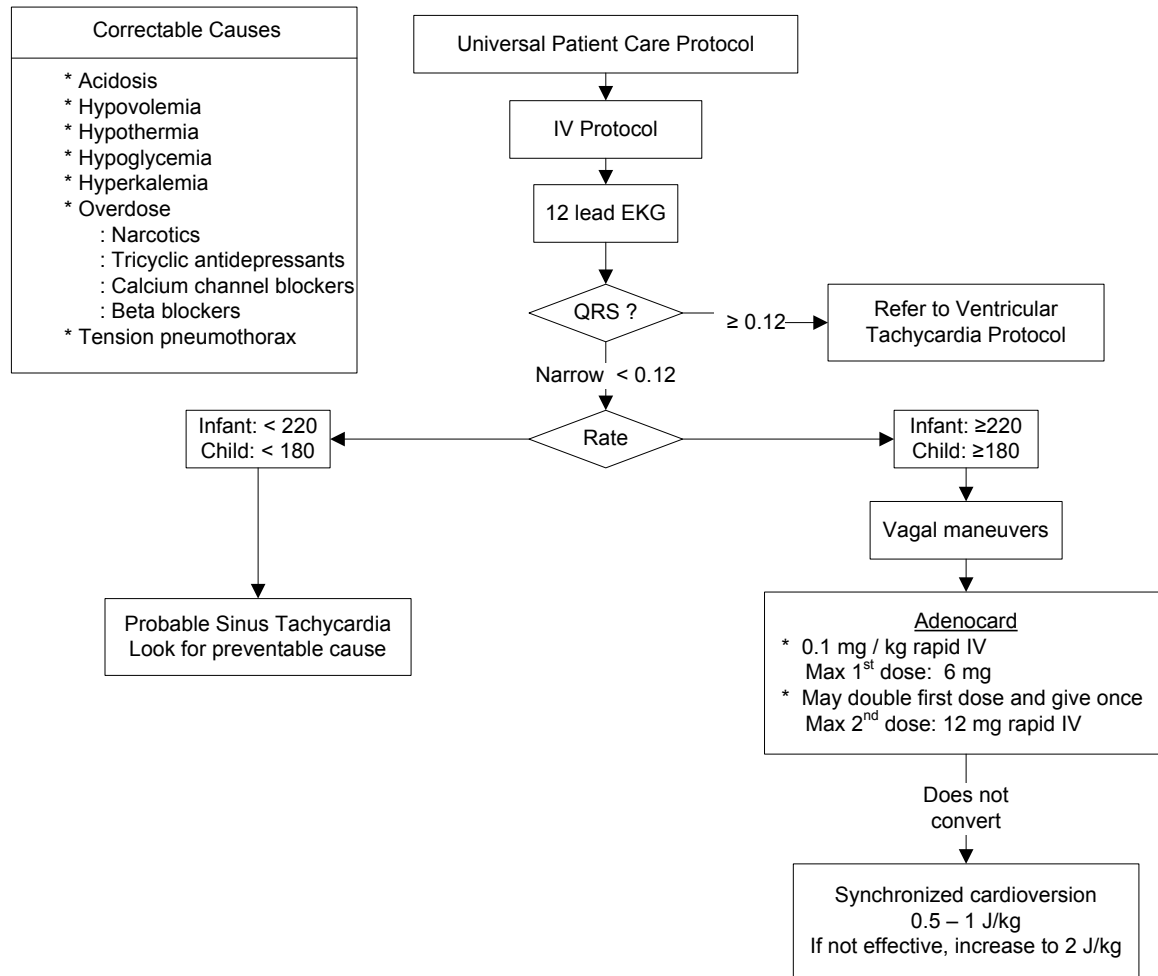
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * If patient has a history of or EKG reveals WPW then DO NOT administer Cardizem.
- * Monitor for hypotension after Cardizem administration.
- * Adenocard may not be effective in identifiable atrial flutter / fibrillation, yet not harmful.
- * Monitor for hypotension and respiratory depression after administration of Versed.
- * Document all therapeutic interventions and rhythm changes with EKG strips.
- * Do not allow IV access to delay treatment in the unstable patient.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Supraventricular Tachycardia Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history * Medications or toxic ingestion (diet pills, Aminophylline, thyroid supplements, decongestants, Digoxin) * Drugs (nicotine, cocaine) * Congenital heart disease * Respiratory distress * Syncope or near syncope 	<ul style="list-style-type: none"> * Heart rate: Child > 180 Infant > 220 * Pale or cyanosis * Diaphoresis * Tachypnea * Vomiting * Hypotension * Altered level of consciousness * Pulmonary congestion * Syncope 	<ul style="list-style-type: none"> * Heart disease (congenital) * Medication / toxin / drugs * Trauma * Tension pneumothorax * Hypo / hyperthermia * Hypovolemia or anemia * Electrolyte imbalance * Anxiety / pain / emotional stress * Fever / infection / sepsis * Hypoglycemia * Hypoxia, pulmonary embolus



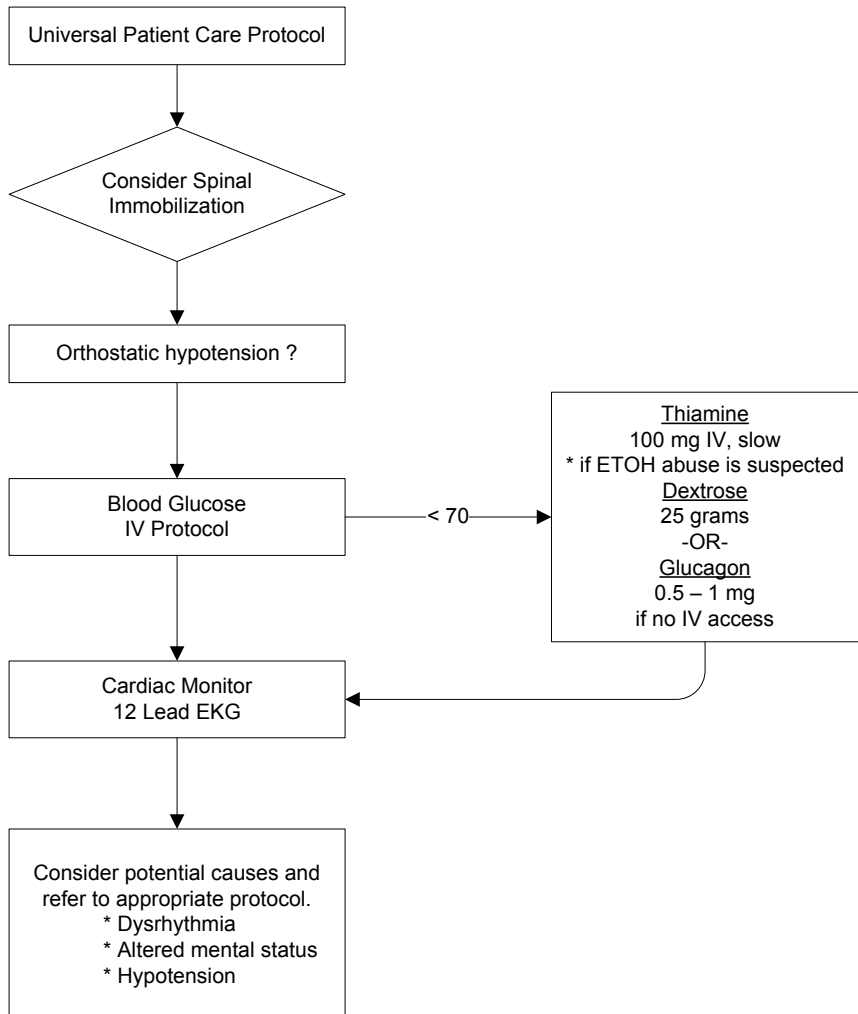
Footnotes:

- * Exam: mental status, skin, neck, lung, heart, abdomen, back, extremities, neurological.
- * Carefully evaluate the rhythm to determine sinus tachycardia, supraventricular tachycardia, or ventricular tachycardia.
- * Separating the child from the caregiver may worsen the child's clinical condition.
- * Pediatric paddles should be used in children < 10 kg or Broselow - Luten color "Purple"
- * If Versed is used, monitor for respiratory depression and hypotension associated.
- * Continuous pulse oximetry is required for all patients with SVT, if available.
- * Document all therapeutic interventions and rhythm changes with EKG strips.
- * As a rule of thumb, the maximum sinus tachycardia rate is 220 – the patient's age, in years.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Syncope	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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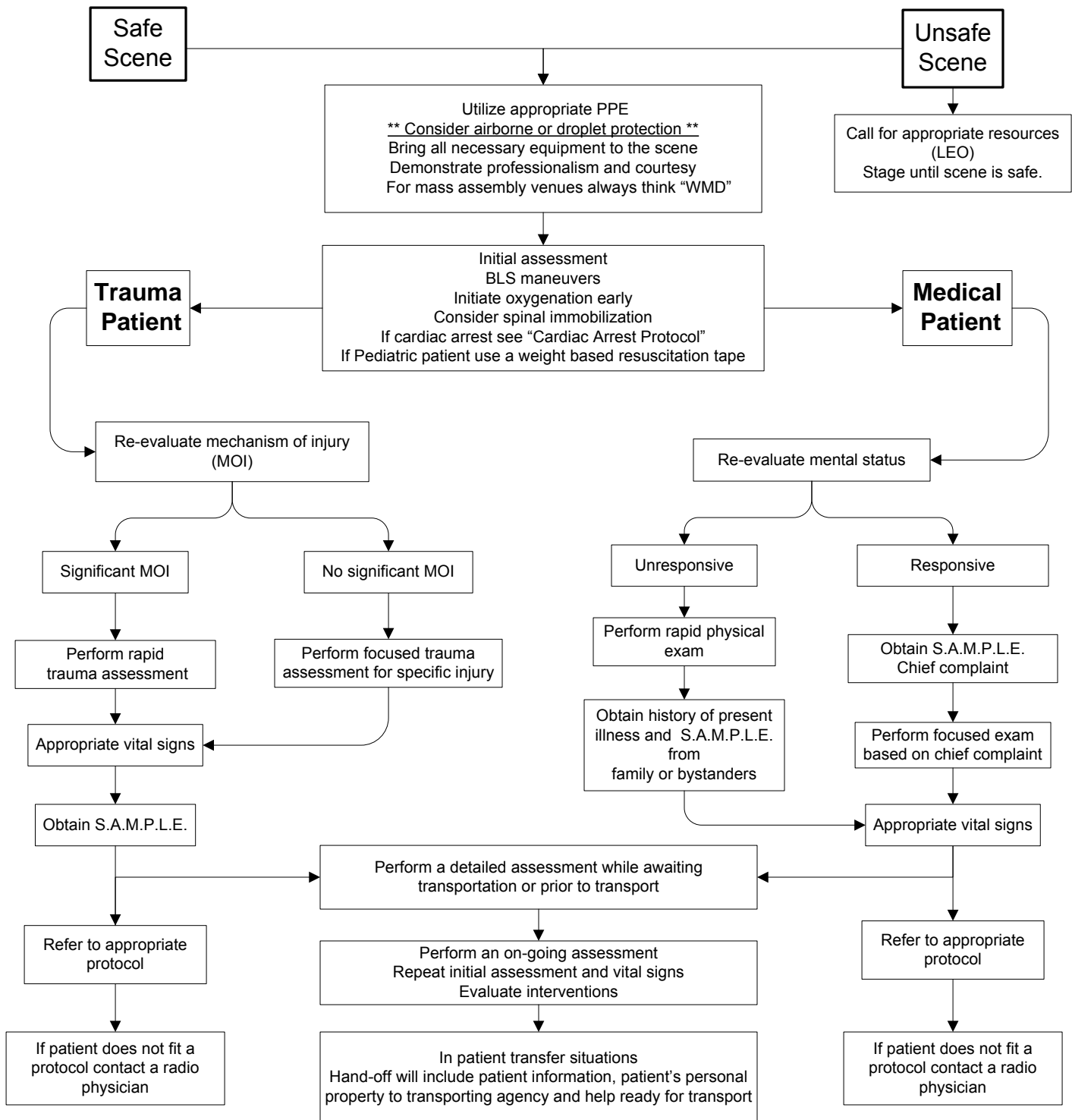
History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history * Cardiac history * Medications * Occult blood loss: GI bleeding * Females: LMP, vaginal bleeding, ectopic pregnancy * Fluid loss: nausea, vomiting, diarrhea 	<ul style="list-style-type: none"> * Loss of consciousness with recovery * Lightheadedness, dizziness * Palpitations, slow or rapid pulse * Pulse irregularity * Hypotension 	<ul style="list-style-type: none"> * Vasovagal * Orthostatic hypotension * Cardiac syncope * Micturition / Defecation Syncope * Psychiatric * CVA * Hypoglycemia * Seizure * Shock (See Shock Protocol) * Toxicologic (Alcoholic) * Medication effect (hypo / hypertension)



Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Assess for signs and symptoms of trauma if associated with questionable fall, with syncope.
- * Consider dysrhythmias, GI bleed, ectopic pregnancy, and seizure as possible cause of syncope.
- * Over 25% of geriatric syncope is cardiac dysrhythmia based.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
TREATMENT PROTOCOL	REVISION DATE	Universal Patient Care Protocol	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director



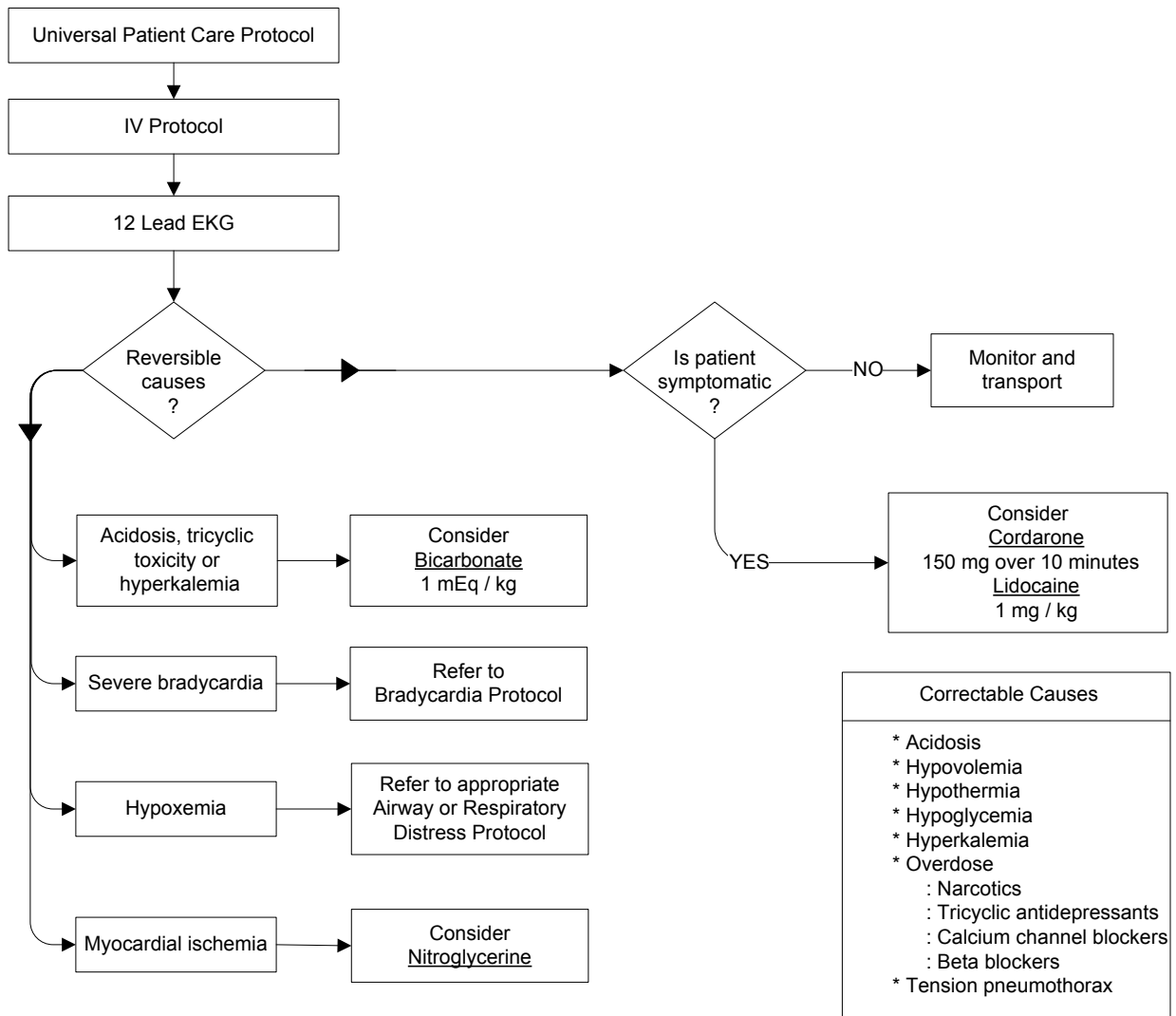
Footnotes:

- * 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 every patient include LOC, BP, pulse, and respirations, including temperature and blood glucose if appropriate.
- * Evaluate 12 lead EKG when appropriate, especially patients \geq to 35 years of age, and females, diabetics, and the elderly with non-specific cardiac complaints.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Ventricular Ectopy	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Medications: Aminophylline, Digoxin, decongestants, thyroid supplements, diet pills * Diet: caffeine, chocolate * Drugs: nicotine, Cocaine * Allergies: Lidocaine, Novacaine * Past medical history * History of palpitations * Syncope / near syncope 	<ul style="list-style-type: none"> * Syncope * Symptoms of MI, chest pain, DIB * EKG * Ventricular tachycardia * Ventricular ectopy * Multi-formed PVC's > 8/min * Heart Block (2nd or 3rd degree) 	<ul style="list-style-type: none"> * Cardiac * Bradycardia * Myocardial infarction * Atrial fibrillation * CHF * Digoxin toxicity * Pulmonary hypoxia * COPD * Pulmonary embolus * Endocrine; thyroid, diabetes * Metabolic: Hypo / hyperkalemia * Drugs (See History)



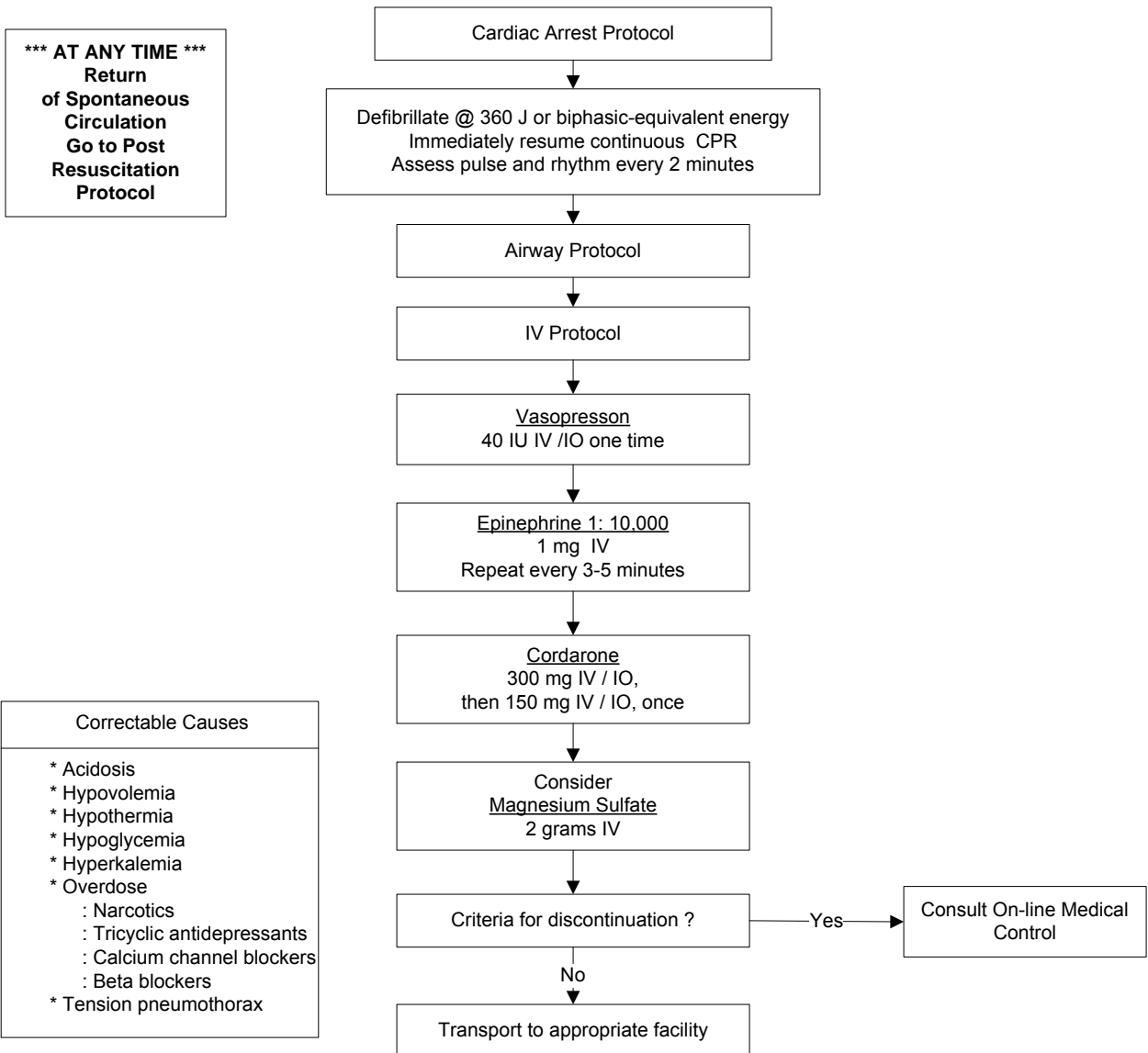
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological
- * Symptomatic includes chest pain, respiratory distress, syncope and hypotension
- * Consider the underlying heart rate if PVC's are suppressed
- * The use of Lidocaine can worsen bradycardia and may lead to asystole and death
- * Lidocaine dosage requires adjustment for patients ≥ 75 years of age

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Ventricular Fibrillation Pulseless Ventricular Tachycardia	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Estimated down time * Past medical history / medications * Events leading to the arrest * Renal failure / dialysis * DNR or Living Will 	<ul style="list-style-type: none"> * Unresponsive, apneic, pulseless * Ventricular fibrillation or pulseless ventricular tachycardia 	<ul style="list-style-type: none"> * Asystole * Artifact * Device failure (Lead or Pad) * Drugs



Footnotes:

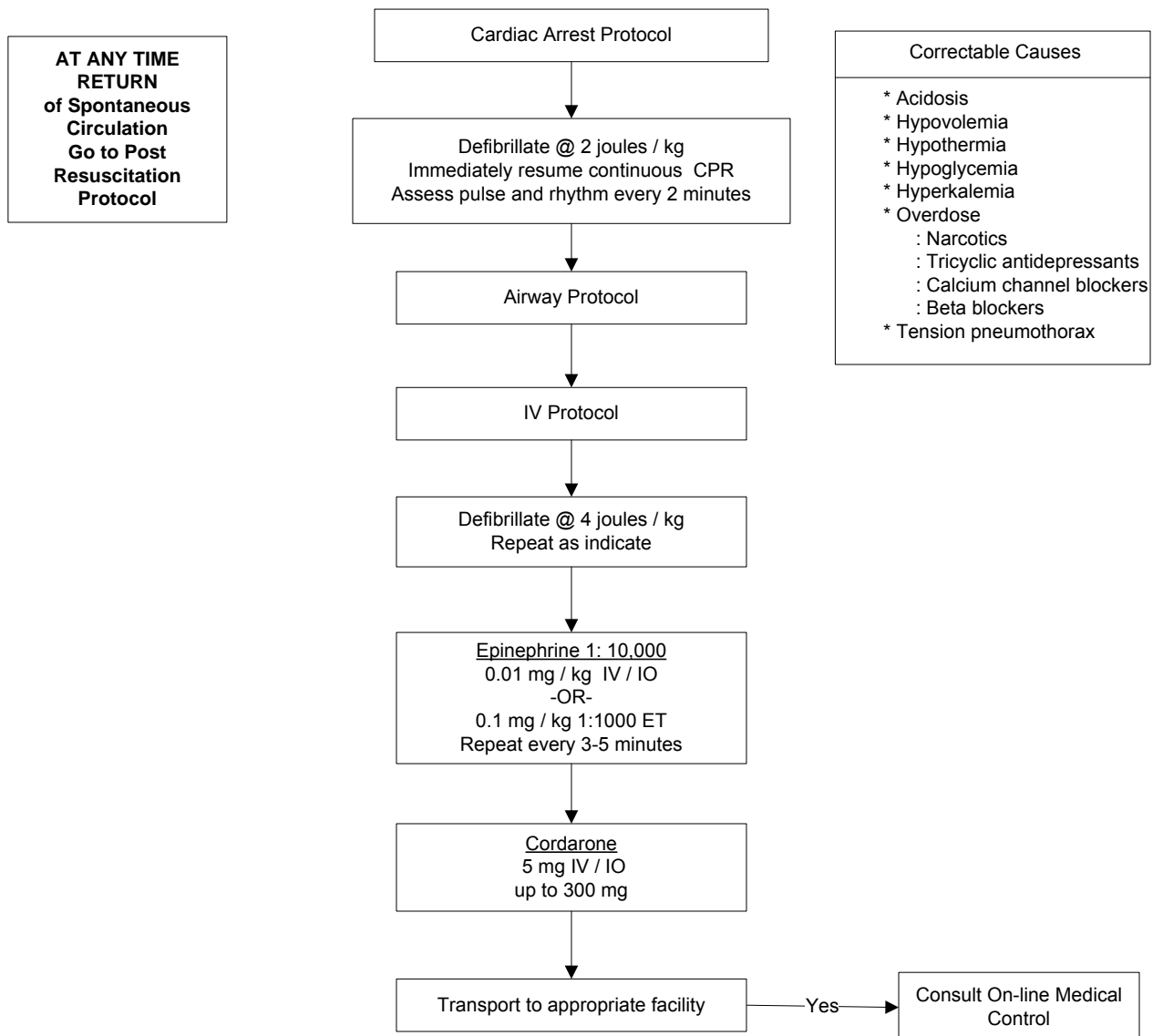
The timing of drug delivery is less important than is the need to minimize interruptions in chest compressions.

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * For adult, out-of-hospital arrest, not witnessed by EMS, rescuers may administer two minutes of CPR prior to a rhythm check or defibrillation.
- * Reassess endotracheal tube placement after every move.
- * If defibrillation is successful and patient re-arrests, return to previously successful energy setting.
- * For V-fib, use a single shock followed by immediate CPR for two minutes, beginning with compressions.
- * Administer Calcium if hyperkalemia is suspected (noted in renal failure patients).
- * Defibrillation takes precedence over all treatment once it is available.
- * All INTUBATED PATIENTS WILL UTILIZE CAPNOGRAPHY and it use documented on the PCR.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Ventricular Fibrillation Pulseless Ventricular Tachycardia Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Estimated down time * Past medical history / medications * Events leading to the arrest * Renal failure / dialysis * DNR or Living Will 	<ul style="list-style-type: none"> * Unresponsive, apneic, pulseless * Ventricular fibrillation or pulseless ventricular tachycardia 	<ul style="list-style-type: none"> * Asystole * Artifact * Device failure (Lead or Pad) * Drugs



Footnotes:

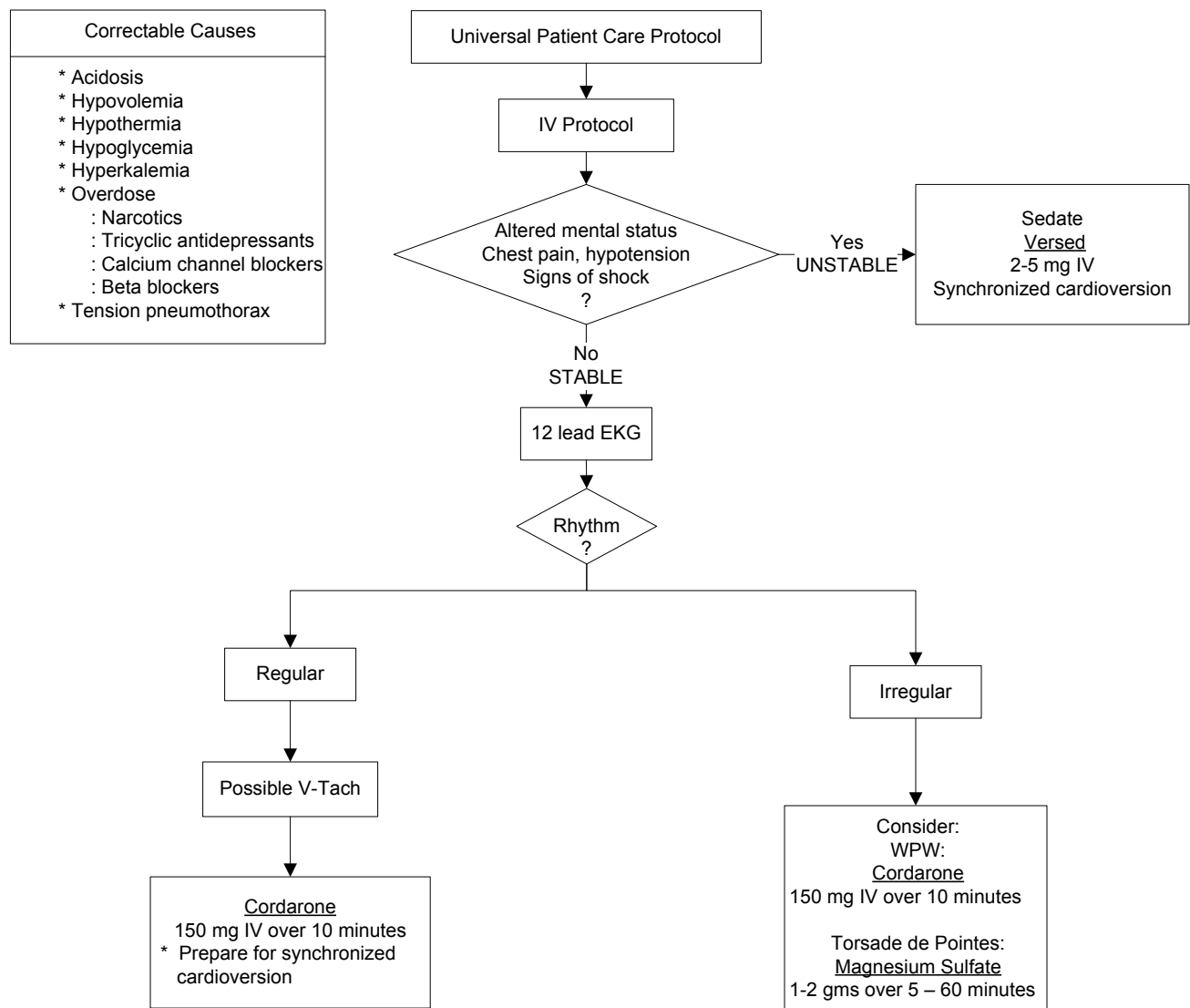
The timing of drug delivery is less important than is the need to minimize interruptions in chest compressions.

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Reassess endotracheal tube placement after every move.
- * If defibrillation is successful and patient re-arrests, return to previously successful energy setting
- * For V-fib, use a single shock followed by immediate CPR for two minutes, beginning with compressions.
- * Defibrillation takes precedence over all treatment once it is available
- * All INTUBATED PATIENTS WILL UTILIZE CAPNOGRAPHY and it use documented on the PCR
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Ventricular Tachycardia	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history * Syncope / near syncope * Palpitations * Pacemaker 	<ul style="list-style-type: none"> * Ventricular tachycardia * Conscious, rapid pulse * Chest pain, DIB * Dizziness * Rate usually 150-180 bpm for sustained V-Tach * QRS > 0.12 Sec 	<ul style="list-style-type: none"> * Asystole * Artifact * Device failure (Lead or PAD)



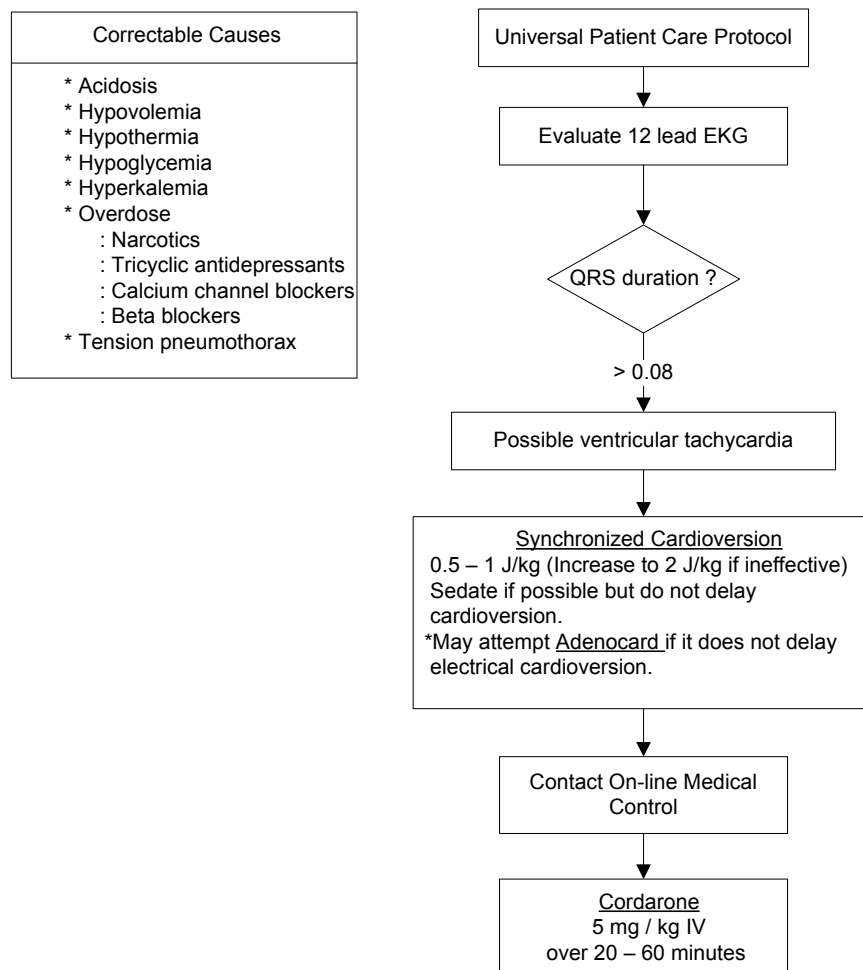
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological
- * Polymorphic V-Tac (Torsades de Points) may benefit from the administration of Magnesium Sulfate 2 grams IV
- * If presumed hyperkalemia (renal failure, dialysis) the patient may benefit from 1 amp of Sodium Bicarbonate
- * All INTUBATED PATIENTS WILL UTILIZE CAPNOGRAPHY and its use documented on the PCR

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Ventricular Tachycardia Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Sign and Symptoms:	Differential:
<ul style="list-style-type: none"> * Past medical history * Medications or toxic ingestion (diet pills, Aminophylline, thyroid supplements, decongestants, Digoxin) * Drugs (nicotine, cocaine) * Congenital heart disease * Respiratory distress * Syncope or near syncope 	<ul style="list-style-type: none"> * Heart rate: Child > 180 Infant > 220 * Pale or cyanosis * Diaphoresis * Tachypnea * Vomiting * Hypotension * Altered level of consciousness * Pulmonary congestion * Syncope 	<ul style="list-style-type: none"> * Heart disease (congenital) * Medication / toxin / drugs * Trauma * Tension pneumothorax * Hypo / hyperthermia * Hypovolemia or anemia * Electrolyte imbalance * Anxiety / pain / emotional stress * Fever / infection / sepsis * Hypoglycemia * Hypoxia, pulmonary embolus



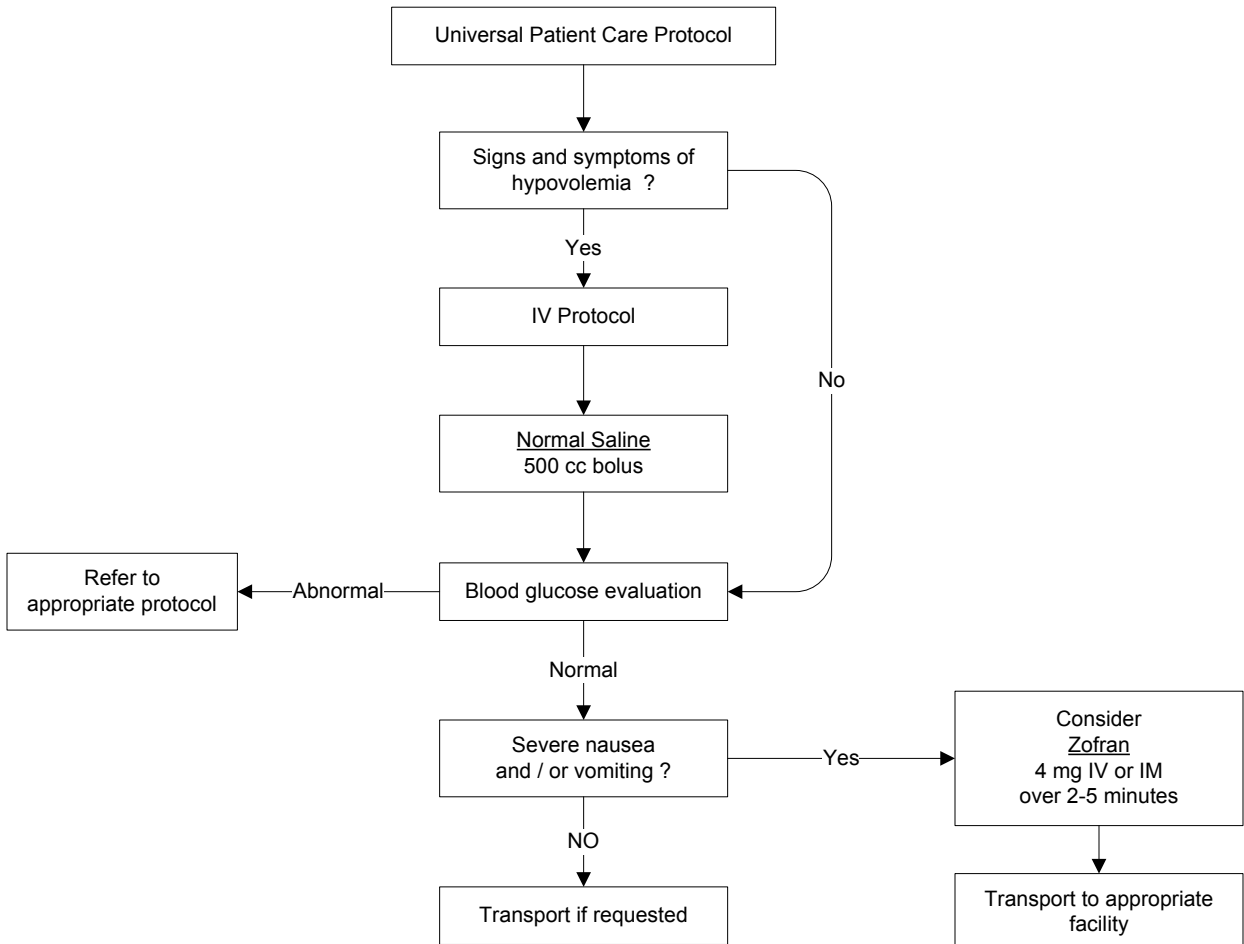
Footnotes:

- * Exam: mental status, skin, neck, lung, heart, abdomen, back, extremities, neurological.
- * Carefully evaluate the rhythm to determine sinus tachycardia, supraventricular tachycardia, or ventricular tachycardia.
- * Separating the child from the caregiver may worsen the child's clinical condition.
- * Pediatric paddles should be used in children < 10 kg or Broselow - Luten color "Purple"
- * If Versed is used, monitor for respiratory depression and hypotension associated.
- * Continuous pulse oximetry is required for all patients with SVT, if available.
- * Document all therapeutic interventions and rhythm changes with EKG strips.
- * As a rule of thumb, the maximum sinus tachycardia rate is 220 – the patient's age, in years.
- * Refer to weight-based resuscitation tape for detailed information.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

TREATMENT PROTOCOL	REVISION DATE	Vomiting and Diarrhea	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Time of last meal * Last bowel movement * Emesis * Improvement or worsening with food or activity * Duration of problem * Other sick family / friends * Past medical history * Past surgical history * Medications * Menstrual history (Pregnancy) 	<ul style="list-style-type: none"> * Pain and character of pain (constant, intermittent, sharp, dull, etc.) * Distention * Constipation * Diarrhea * Anorexia * Radiation 	<ul style="list-style-type: none"> * CNS: increased pressure, headache, stroke, lesions, trauma or hemorrhage * Myocardial infarction * Drugs ; NSAID's, antibiotics, narcotics, chemotherapy * GI or renal disorders * Diabetic Ketoacidosis * Gynecologic disease (Ovarian cyst, PID) * Infections: pneumonia, influenza * Electrolyte abnormalities * Food or toxins * Medication or substance abuse * Pregnancy * Psychologic
	Associated Symptoms: <ul style="list-style-type: none"> * Attempt to localize the source* Fever, headache, blurred vision, malaise weakness	



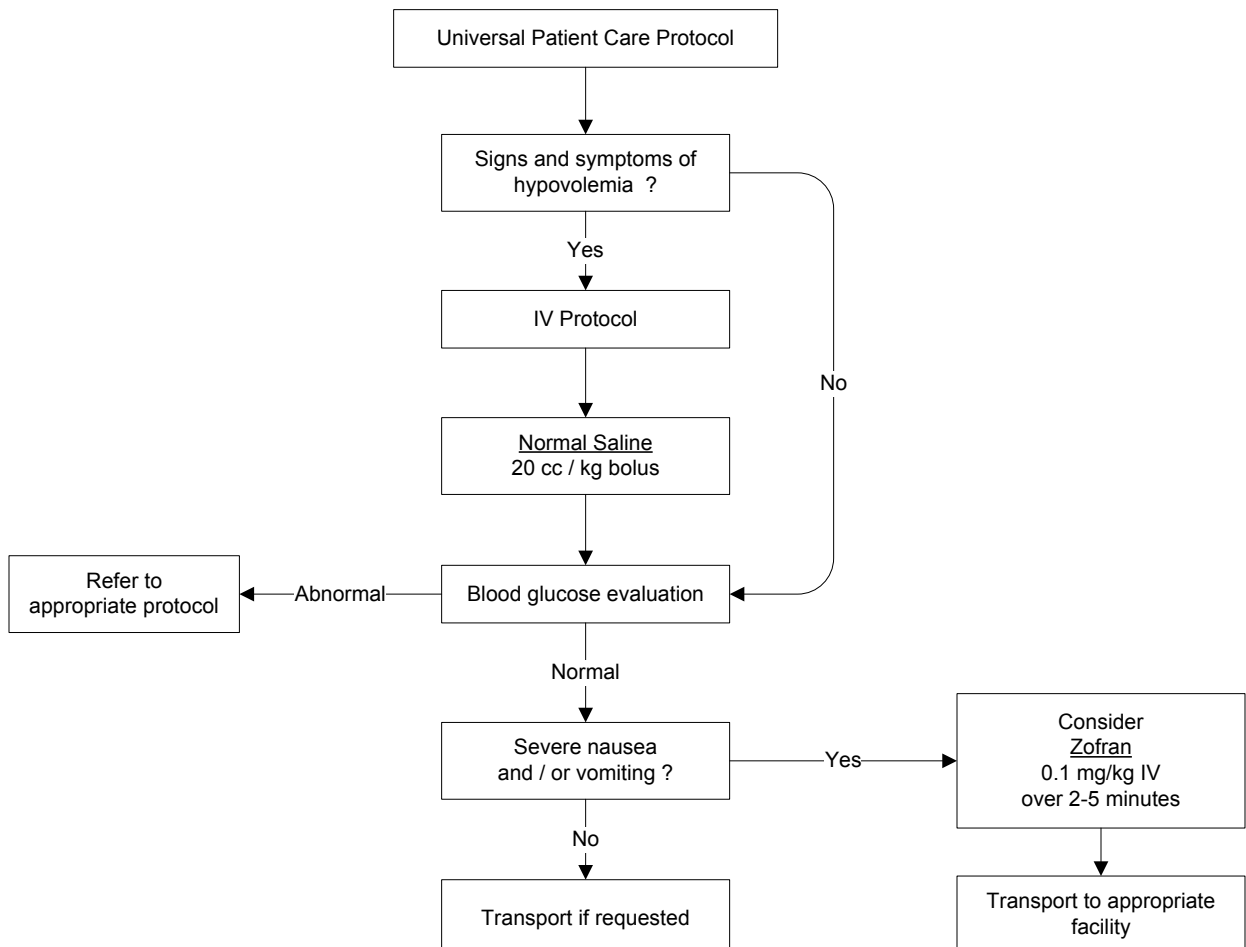
Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Diabetic patients should have a glucose evaluation documented.
- * If no transport indicated or patient refuses, encourage them to increase their intake of liquids.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

MEDICAL PROTOCOL	REVISION DATE	Vomiting and Diarrhea Pediatric	ISSUED 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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History:	Signs and Symptoms:	Differential:
<ul style="list-style-type: none"> * Age * Time of last meal * Last bowel movement * Emesis * Improvement or worsening with food or activity * Duration of problem * Other sick family / friends * Past medical history * Past surgical history * Medications 	<ul style="list-style-type: none"> * Pain and character of pain (constant, intermittent, sharp, dull, etc.) * Distention * Constipation * Diarrhea * Anorexia * Radiation 	<ul style="list-style-type: none"> * CNS: increased pressure, headache, stroke, lesions, trauma or hemorrhage * Myocardial infarction * Drugs ; NSAID's, antibiotics, narcotics, chemotherapy * GI or renal disorders * Diabetic Ketoacidosis * Gynecologic disease (Ovarian cyst, PID) * Infections: pneumonia, influenza * Electrolyte abnormalities * Food or toxins * Medication or substance abuse * Psychologic
	Associated Symptoms: <ul style="list-style-type: none"> * Attempt to localize the source* Fever, headache, blurred vision, malaise weakness 	



Footnotes:

- * Exam: ABC's, vital signs, mental status, skin, neck, heart, lungs, abdomen, back, extremities, neurological.
- * Diabetic patients should have a glucose evaluation documented.
- * If no transport indicated or patient refuses, encourage them to increase their intake of liquids.
- * Refer to weight-based resuscitation tape for detailed information.

Tampa Fire Rescue

Medical Protocol

PROCEDURE PROTOCOL

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	12 Lead EKG	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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, a-traumatic, left arm or jaw pain
- shortness of breath
- abdominal pain (especially epigastric in nature, and in females)
- unexplained diaphoresis, nausea or vomiting
- a-traumatic back or mid-scapular pain
- geriatric or diabetic patient complaining of general weakness
- suspicion of cardiac event
- syncope or near- syncope

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 pre-cordial 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.
 - STEMI Alert Qualifiers
 - Evidence of ST elevation > 1mm in two or more contiguous leads.
 - New left bundle branch block in the presence of symptoms of AMI.
- ☐ Declare a "STEMI Alert" if applicable.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	12 Lead EKG	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- ☐ Transmit a 12 lead tracing:
 - to the receiving facility, if a STEMI Alert is declared.
 - to TFR QA Officer, if not a STEMI Alert.
- ☐ Leave the pre-cordial leads in place, on arrival at the Emergency Department, for reference.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	12 Lead EKG Transmission	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Policy

When possible, all 12 lead EKG's obtained during patient care should be transmitted to the receiving emergency facility.

Purpose

To simplify the process of transmitting 12 lead EKG's, before, during and even after a transport has occurred.

Procedure

Connecting Units:

- ☐ Power on both units.
- ☐ Touch **"Zoll Data Relay"** on the tablet desktop, which activates the Bluetooth function. Allow this to find / connect with the defibrillator.
- ☐ Touch **"Summary"** on the monitor then immediately touch **"Data Relay On"** to find the tablet and initiate the link.
 - A blue asterisk in the upper left corner of the monitor will "bounce" until the units are linked.
- ☐ The tablet screen will change and show **"Found Zoll ***** defibrillator, would you like to use it?"** Select **"Yes"**.
 - Two blue asterisks will be visible in the upper left corner of the monitor to indicate the units are linked.

Transmitting data:

- ☐ Input patient information, including patient name and incident number, on the tablet using the touch screen or keyboard.
- ☐ Select destination for the 12 lead EKG.
- ☐ Highlight the 12 lead EKG for your patient and then choose **"Send Selected"**.
- ☐ The screen will change from **"Undelivered"** to **"Delivered"**.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	12 Lead EKG Transmission	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Sending a stored 12 lead EKG:

A stored 12 Lead EKG can be sent at any time after the event, as long as it has not been deleted.

- ☐ Select “**12 lead EKG**”.
- ☐ Select “**Patient Information**”.
- ☐ Select “**Patient Record**”.
- ☐ Highlight the record you wish to send.
- ☐ Select “**Transmit**”.
- ☐ Select “**Dial Phone Number**”.
- ☐ This will send the 12 lead EKG to the tablet and will show as “**Undelivered 12L**”.
- ☐ Select destination for the 12 lead EKG.
- ☐ Input patient information, including patient name and incident number, on the tablet using the touch screen.
- ☐ Highlight the 12 lead EKG for your patient and then choose “**Send Selected**”.
- ☐ The screen will change from “**Undelivered**” to “**Delivered**”.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Auto-Vent	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Indications

- The patient that requires supplemental positive pressure ventilation.
- The patient with profound hypoxia, which is evidenced by a patient:
 - who is in respiratory or cardiac arrest.
 - who is non-responsive to verbal stimuli and able to tolerate endotracheal intubation.
 - with severely limited air exchange upon auscultation.
 - with cyanosis, confusion, or restlessness.
- To secure an airway against possible obstruction.
- For safety in altered mental status.
- To manage ventilation in severe head injury, where increased intracranial pressure is suspected.
- To decrease the work of breathing in circumstances of shock or chronic respiratory failure.

Contraindications

- Patients under 70 pounds mean body weight (i.e. infants)
- Patients unable to tolerate unsynchronized positive pressure ventilation.

Procedure

- ☐ Secure an airway and verify its patency with approved means (i.e. pulse oximetry, capnography, end-tidal CO₂ detector)
- ☐ Set "RATE" of ventilation
 - Adults: 12 times per minute
 - Children over 70 pounds: 12 to 15 per minute
- ☐ Set "VOLUME" at
 - 10 cc / kg for normal ventilation
 - 15 cc / kg for hyperventilation
- ☐ Connect to oxygen source and listen for operation.
- ☐ Connect to disposable one - way patient valve and then to airway and auscultate for ventilation sounds in all lung fields.
- ☐ Observe for symmetrical chest wall movement. Monitor SaO₂.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Auto-Vent	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Troubleshooting

Audible alarm:

- Immediately auscultate chest for bilateral air exchange and epigastrium for absence of ventilation sounds.
- Check the ETT for correct placement, blockage, kinks and cuff inflation.
- Check disposable one way ventilator valve for foreign material or obstruction.
- Confirm gas movement by occluding the patient valve.
- Check hose assembly, from valve to module, for kinks.

De-saturation detected on pulse oximeter

- Verify all of the above with regards to gas exchange.
- Check volume and rate settings.
- Check oxygen supply source, lines and regulator.
- If unable to promptly (< 30 seconds) resolve suspected failure, discontinue use of the Auto-vent and manually ventilate the patient using a BVM delivering 100% O₂. Recheck bilateral breath sounds during ventilation.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Capnography Waveform Interpretation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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):

- ⇒ $\uparrow \text{RR} = \downarrow \text{CO}_2 = \text{HYPER-ventilation (ETCO}_2 < 35) \rightarrow \text{respiratory alkalosis}$
- ⇒ $\downarrow \text{RR} = \uparrow \text{CO}_2 = \text{HYPO-ventilation (ETCO}_2 > 45) \rightarrow \text{respiratory acidosis}$

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 predictor

“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 $\text{CO}_2 = 0$; $\text{ETCO}_2 = 35\text{-}45\text{mmHg}$
Management: Monitor

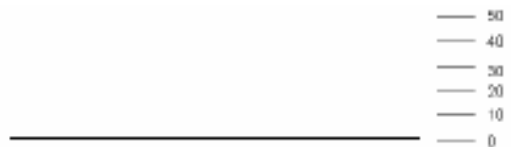


TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Capnography Waveform Interpretation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

DISLODGED ETT: Loss of waveform, loss of ETCO₂
Management: Replace ETT



ESOPHAGEAL INTUBATION: Absence of waveform, absence of detectable ETCO₂
Management: Re-intubate



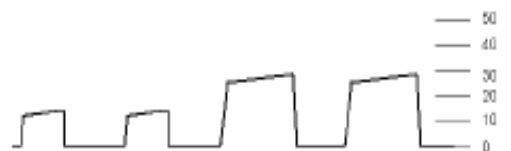
CPR: “Square box” waveform baseline CO₂ = 0; ETCO₂ = 10-15 mmHg (possibly higher) with adequate CPR
Management: Change rescuers if ETCO₂ drops < 10



“SHARKFIN” with / without prolonged expiration = Bronchospasms (asthma, COPD, allergic rxn):
Management: Bronchodilators (Albuterol or terbutaline, epinephrine)

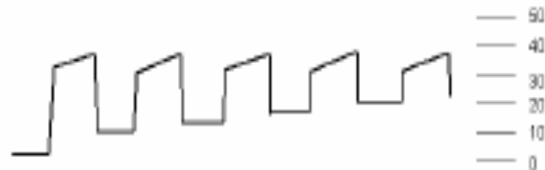


Return of Spontaneous Circulation (ROSC): As in CPR, but ETCO₂ rises above 10-15 mmHg
Management: Check for a pulse, pressor agent may be appropriate



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Capnography Waveform Interpretation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

RISING BASELINE: Patient is re-breathing CO₂
Management: Check equipment for adequate oxygen inflow. Allow intubated patient more time to exhale



HYPOVENTILATION: ↓RR; Prolonged waveform; baseline CO₂ = 0; ETCO₂ >45 mmHg
Management: Assist ventilations or intubate if needed



HYPERVENTILATION: ↑RR, shortened waveform; baseline ETCO₂ = 0 ETCO₂ <35 mmHg
Management: Assessment if conscious, ↓assisted ventilation rate if unconscious / intubated. Important exceptions: Severe metabolic acidosis (DKA, sepsis, salicylate poisoning, acute renal failure, methanol ingestion, tricyclic overdose) will cause tachypnea (↑RR), but ETCO₂ will be HIGH.
***In other words if RR is high, but ETCO₂ is also high consider the above diagnosis. This is NOT normal!*



PATIENT BREATHING AROUND ETT: Angled, sloping downstroke on waveform
Adult: Broken cuff or tube is too small.
Pediatric: Tube is too small.



:

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Chest Decompression	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Indications

The presence of worsening airway compromise, due to increasing intra-thoracic pressure.

Contraindications

Given the need, there are no known absolute contraindications.

Procedure

- ☐ Identify a puncture site:
 - 2nd inter-costal space on affected side, in the mid-clavicular line (strongly preferred).
 - 4th inter-costal space on affected side, in anterior axillary line. (Optional site)
- ☐ Prepare skin at the puncture site with betadine or alcohol.
- ☐ Insert a 14 gauge, 2" (minimum length) angiocath over the top of the inferior rib, perpendicular to the skin (remove any debris or tissue which may occlude the lumen of the catheter / needle assembly).
- ☐ Listen for a rush of air. If present, the diagnosis of tension pneumothorax and proper needle placement is confirmed.
- ☐ Remove the needle from the catheter (even if escape of air not heard); secure catheter in place.
- ☐ Establish a water seal.
 - Attach the hub of the catheter to IV or O₂ tubing; place the free end in a container of normal saline or sterile water, secured below the level of the patient's chest. Or, as an alternate method, use a one-way valve attached to the hub of the angiocath.
- ☐ If air re-accumulates, perform a second needle thoracentesis on the same side.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Continuous Positive Airway Pressure	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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

- Hypoxemia
- History of CHF
- Respiratory distress with at least 2 of the following:
 - Retractions or accessory muscle use
 - Respiratory rate greater than 25
 - SAO₂ less than 95%
- Exam consistent with pulmonary edema
 - Bi-basilar rales
 - Diffuse rales

Contraindications

- Respiratory and / or cardiac arrest
- Penetrating chest trauma
- Severe hypotension (SBP<90)
- Persistent nausea / vomiting or active GI bleed.
- Ventilatory failure, i.e. elevated PCO₂ with pH <7.23 (COPD patients)
- Questionable ability to protect airway, i.e. stroke, obtunded, etc.
- Obvious signs or symptoms of infection

Procedure

- ☐ Pre-assemble necessary equipment.
- ☐ Explain the procedure to the patient to alleviate anxiety.
- ☐ Test the equipment prior to placing it on the patient.
- ☐ Ensure the **ON / OFF** valve is in the **OFF** position.
- ☐ Ensure the **FLOW ADJUSTMENT** valve is open completely and the O₂ adjustment valve is set to deliver the lowest flow rate.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Continuous Positive Airway Pressure	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- ☐ Turn the **ON / OFF** valve to the **ON** position.
- ☐ 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.
- ☐ Watch the **PEEP** valve and ensure that it remains open during inspiration.
- ☐ Decrease the **flow adjustment** valve until there is slight continuous flow from the **PEEP** valve during inspiration.
- ☐ Monitor the patient's condition including respiratory rate, mental status, and FIO₂ titrated to a SaO₂ of 94% or greater.
 - If the patient's condition is improving, continue to monitor.
 - If the patient's condition is not improving, increase the O₂ adjustment valve in ½ turn every 2 minutes to a SaO₂ of 100%.
 - If the patient's condition deteriorates despite an increase of the O₂ adjustment valve, discontinue the CPAP device and prepare for endotracheal intubation.

Document

- PEEP level
- FiO₂
- Patient tolerance
- Effects / adverse reactions

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Endotracheal Intubation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Indications

Any patient with a Glasgow Coma Score of 8 or less, whose level of consciousness cannot be improved by either natural recuperation (i.e. post seizure state) or by medication (i.e. Narcan.)

Contraindications

Given the need, there are no known absolute contraindications.

Procedure

Select the route of intubation as either oral or nasal.

NOTE: Patient must have spontaneous respirations for nasal intubation to be considered

Oral-tracheal intubation:

- ☐ 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% O₂ via BVM, prior to intubation attempt.
- ☐ Consider pre-medication with Lidocaine at 1 mg/kg (not to exceed 100 mg) if increasing ICP is suspected.
- ☐ 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.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Endotracheal Intubation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- End tidal CO₂ detector: Color change should be yellow in a patient who is perfusing. A patient, who is not perfusing, as in cardio-pulmonary arrest, may not show a color change.
 - An ETCO₂ detector will retain appropriate color changing ability for approximately 2 hours, unless it becomes wet with vomit or other secretions.
- Initiate capnography.
- Record color change of ETCO₂ detector and re-auscultate lung fields after any patient movement.
- ☐ If you hear stomach gurgling, no chest wall movement, or inappropriate color changes on the ETCO₂ detector:
 - cease ventilation
 - prepare suction
 - remove the tube
 - re-oxygenate
 - attempt to re-intubate
- ☐ Ventilate the patient via ETT, using a BVM delivering 100% O₂. Consider application of the Auto-vent for prolonged ventilation.
 - If intubation attempt is unsuccessful after 30 seconds, re-oxygenate prior to a second attempt.
 - Intubation attempts should be limited to TWO (2) per rescuer.
 - If unsuccessful, alternate means of airway control such as BVM, LMA or cricothyrotomy, should be considered.

Nasal-tracheal intubation:

- NOTE**
- Use caution in patient's with hypertension, on anti-coagulant medications or who have a history of septal surgeries, due to the possibility of significant hemorrhage.
- ☐ Have airway supplies, including suction and cricothyrotomy equipment, 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. Consider RSI if indicated.
 - ☐ Hyper-oxygenate the patient with 100% O₂ via BVM prior to intubation attempt.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Endotracheal Intubation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- ☐ Local anesthesia can be achieved by the placement of a nasal-pharyngeal airway (nasal trumpet) coated with viscous Lidocaine jelly, into the selected nare, 3-5 minutes prior to intubation.
- ☐ Coat the external nare and the tip of the endotracheal tube with viscous Lidocaine jelly.
- ☐ Insert the tube with the curve along the floor of the nose. Endotrol® tubes are helpful in controlling the position of the tip of the tube; a stylet *cannot* be used. As the tube enters the pharynx, the patient is likely to cough or gag. Suction must be ready for use.
- ☐ Listen for patients breathing and / or vocalizations; feel for air emanating from the proximal end of the tube.
 - The vocal cords are farthest apart upon inspiration, so at that time, advance tube quickly through cords.
 - Success is noted by an absence of further vocalizations and continued airflow through the tube.
- ☐ Inflate the distal cuff.
 - If possible, confirm tube placement with direct laryngoscopy.
- ☐ Attach ETCO₂ detector and monitor for appropriate color change.
- ☐ 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.
 - EtCO₂ monitors should remain in place and be monitored during transport.
- ☐ Ventilate the patient via ETT using a BVM, delivering 100% O₂. Consider application of the Auto-vent for prolonged ventilation.

NOTE If intubation attempt is unsuccessful after 30 seconds, re-oxygenate prior to a second attempt.

NOTE Intubation attempts should be limited to no more than 3 attempts.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Endotracheal Intubation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

NOTE If unsuccessful, alternate means of airway control such as BVM, LMA or cricothyrotomy, should be considered.

Intubation of the trauma patient:

- ☐ Consider use of Sublimaze or Versed per RSI protocol when airway management is required for agitated or combative patients.
- ☐ Consider pre-medication with Atropine or Lidocaine for bradycardia or increasing ICP.
- ☐ Maintain spinal motion restriction during procedure per ITLS standards.
- ☐ If a patient, with known or suspected trauma, vomits during airway procedures (or whenever immobilized), turn AS A UNIT, on one side, and suction the oral cavity. Maintain spinal motion restriction throughout the maneuver.

Confirmation of correct airway placement

Regardless of the method used to secure an airway, confirmation of endotracheal tube position is mandatory. Confirmation techniques include, but are not limited to:

- Visualization of tube placement by direct laryngoscopy.
- Confirmation of the tube markings, with the front teeth.
- Look for moisture condensation on the inside of the tracheal tube with exhalation.
- Auscultation of breath sounds using the 5 point auscultation method.
 - left and right anterior
 - left and right mid-axillary
 - over the epigastrium.
- Utilization of a TFR approved end tidal CO₂ detector.
- Application of capnography.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Endotracheal Intubation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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
 - FEP device
 - esophageal detection device
 - oxygen saturation
 - chest rise
 - ventilatory compliance
 - how the patient “looks”
- ☐ Depth of insertion and how the tube is secured.
- ☐ Who performed the procedure?
- ☐ Manual in line spinal motion restriction 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
 - Initial ABG's, if available

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	EZ-IO Intraosseous Infusion System	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Policy

The EZ-IO® is not intended for prophylactic use.

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:

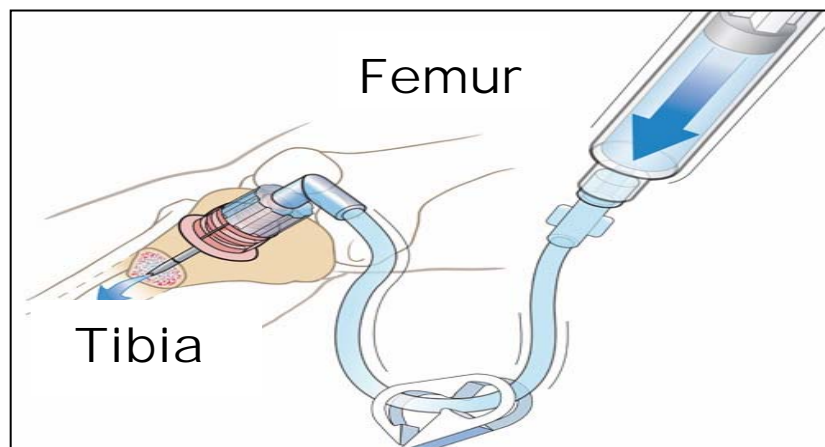
- Cardiac arrest.
- Respiratory compromise. (SaO2 \leq 80%, rate less than 10 or greater than 40)
- Hemodynamic instability. (systolic blood pressure <90)
- Profound hypovolemia with altered mental status.

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.

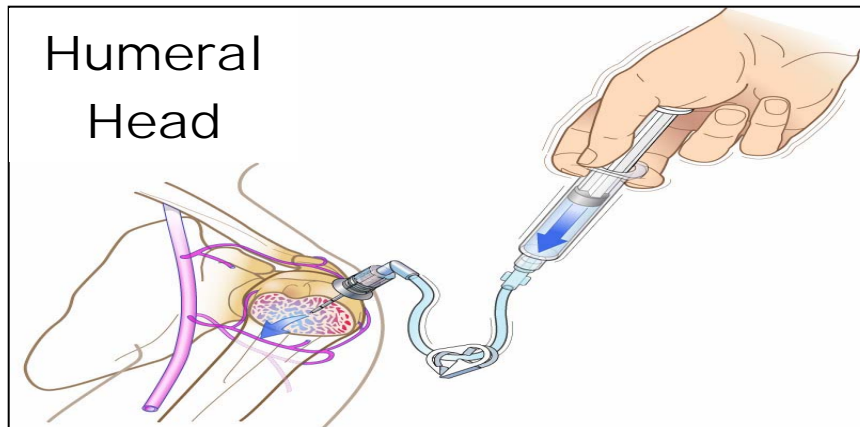
Procedure

- ☐ Locate appropriate site.
 - Tibia: 1 cm inferior and medial to the anterior tibial tuberosity on the flat anterior medial surface of the tibia.



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	EZ-IO Intraosseous Infusion System	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- Humeral head: (Alternate site for patients ≥ 40 kg.) 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

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	EZ-IO Intraosseous Infusion System	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- ☐ 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	Intravenous Catheterization	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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. Draw blood samples for blood glucose readings or for hospital use, as appropriate.
- ☐ 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 cannulation of the vein has been confirmed, insert the saline lock and flush with 3 ml of saline.
- ☐ Follow each medication administration with a saline flush.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	IV Fluid Administration	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Fluid Selection

D₅W:

This hypotonic fluid causes loss of intravascular volume into the interstitial space, called "Third Spacing". As such, D₅W is a poor choice for volume replacement.

NOTE: Used as a diluent for Nipride infusion only.

Normal Saline:

Unlike D₅W, normal saline is a good volume expander and is the best multi-purpose fluid for use on any patient.

NOTE: Normal saline should be used cautiously in the patient with the potential for volume overload.

Fluid Administration

- If a saline lock has been established as a means of initiating IV access, continuous fluid infusion to maintain patency, is not required.
- Unless otherwise specified, IV fluid therapy initiated by TFR personnel should run at 10 cc / hour or "to keep open" (TKO) unless medication administration dictates a calculated rate of infusion.
- Any IV that has been established prior to the arrival of TFR will be maintained, without change, unless patient status dictates a different fluid or flow rate. TFR will evaluate medication flow rates for accuracy.

Determination of maintenance rate

- In adults, maintenance fluids can be estimated to be 125-150 cc/hour.
- In pediatric patients (or adults where greater specificity is desired), daily fluid requirements are calculated as follows:
 - 1st 10 kg = 100 cc / kg / day
 - 2nd 10 kg = 50 cc / kg / day
 - Each additional kg = 25 cc / kg / day
- Maintenance rate is derived by taking daily maintenance fluids and dividing by 24.
- Patients who require urgent fluid resuscitation should have fluids infused using pressure devices and large bore trauma tubing whenever possible.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Laryngeal Mask Airway (LMA)	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.
- does not protect patients from the consequences of regurgitation and aspiration.

Contraindications

The LMA should not be used on any patient with a gag reflex.

Side Effects

sore throat
aspiration

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

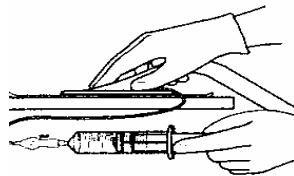
☐ Visual inspection

- Do not use if the LMA appears damaged in any way.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Laryngeal Mask Airway (LMA)	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

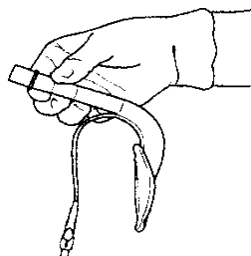
☐ Inflation Test

- 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.



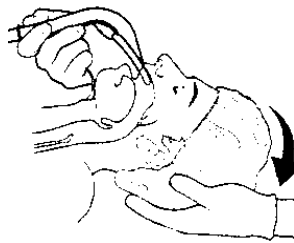
Insertion

- ☐ 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”.
- ☐ 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.

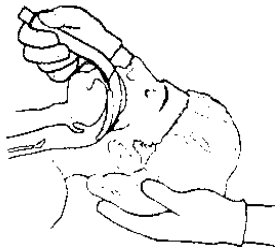


TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Laryngeal Mask Airway (LMA)	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

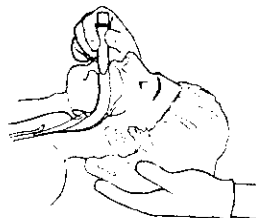
- ☐ Place your free hand under the patient's head. Insert the tip of the LMA, pressing upwards against the hard palate, flattening the cuff against it.



- ☐ 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.



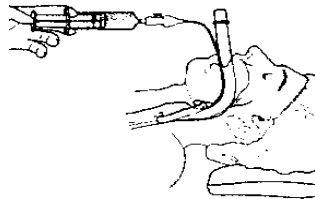
TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Laryngeal Mask Airway (LMA)	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- ☐ 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.
- ☐ 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. Catherine Carrubba Medical Director

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.

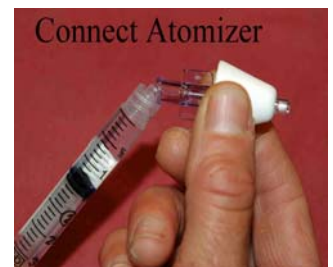
Description

- 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	Morgan® Lens	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 Pontocaine 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.



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Morgan® Lens	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 while the lens is 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. Catherine Carrubba Medical Director

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.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Nasogastric / Orogastric Tube	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 suction 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/H₂O 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. Catherine Carrubba Medical Director

Indications

Transcutaneous pacing is indicated as a temporizing measure for treatment of symptomatic bradycardias, including sinus bradycardias and atrio-ventricular (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**:
 - Patients with electro-cardiographic evidence of organized cardiac activity (pulses and blood pressure present):
 - set pacer rate at 20-30 bpm above the patient's intrinsic rate.
 - Patients without electro-cardiographic evidence of organized cardiac activity:
 - set pacer at rate of 70-90 bpm.
- ☐ 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.
 - Patients with electro-cardiographic evidence of organized cardiac activity (pulses and blood pressure present):
 - 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.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Trans-cutaneous External Pacemaker	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- Patients without electro-cardiographic evidence of organized cardiac activity:
 - set pacer at highest amperage and maintain.
- ☐ 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	QuickTrach® Emergency Cricothyrotomy Device	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Policy

The QuickTrach® Emergency Cricothyrotomy 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 Cricothyrotomy Device is not specifically designed for use in pediatric patients and therefore is relatively contraindicated unless approved by on-line medical control.

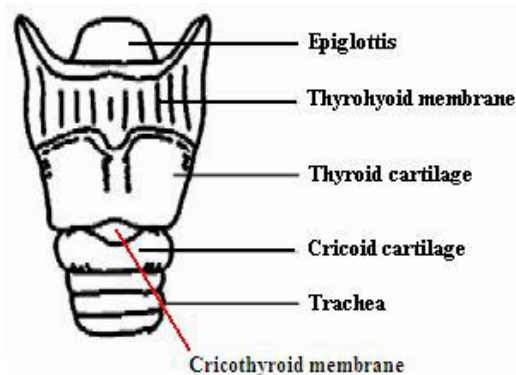
Procedure

- ☐ 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.

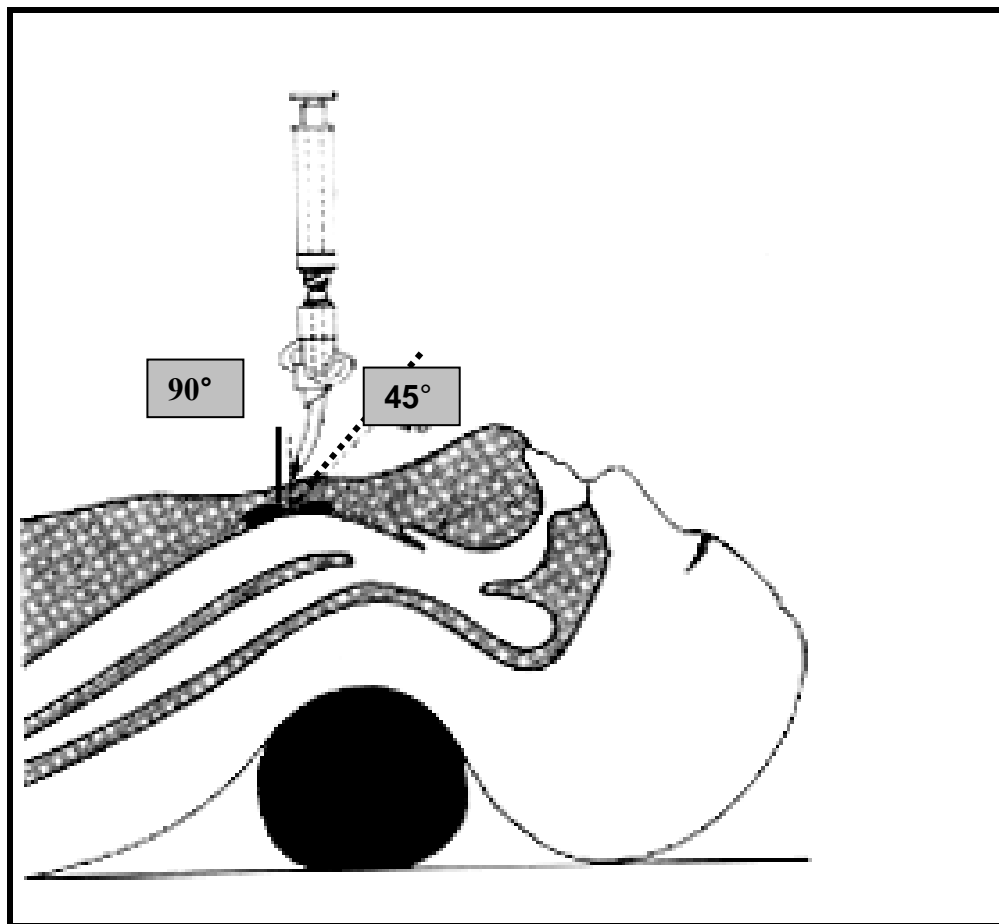


TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	QuickTrach® Emergency Cricothyrotomy Device	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.

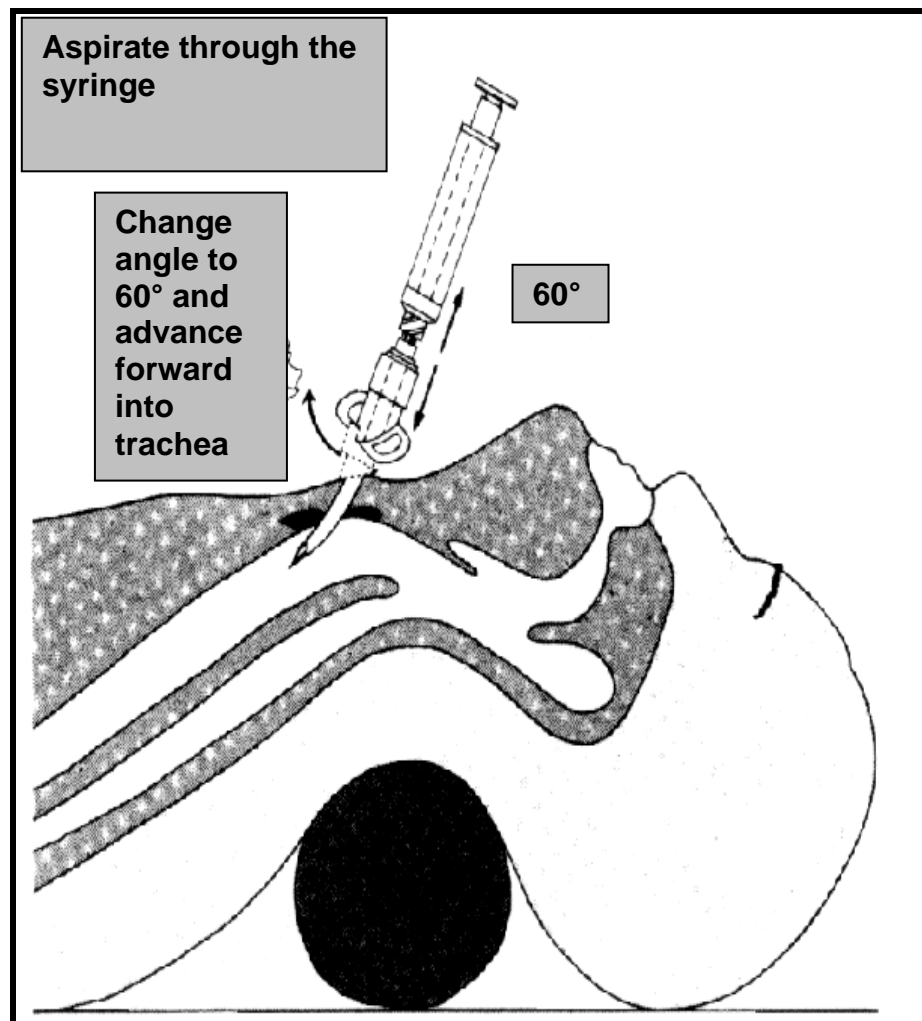


TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	QuickTrach® Emergency Cricothyrotomy Device	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.



TAMPA FIRE RESCUE MEDICAL PROTOCOL

PROCEDURE
PROTOCOL

REVISION
DATE

QuickTrach® Emergency
Cricothyrotomy Device

ISSUE DATE
9-2009

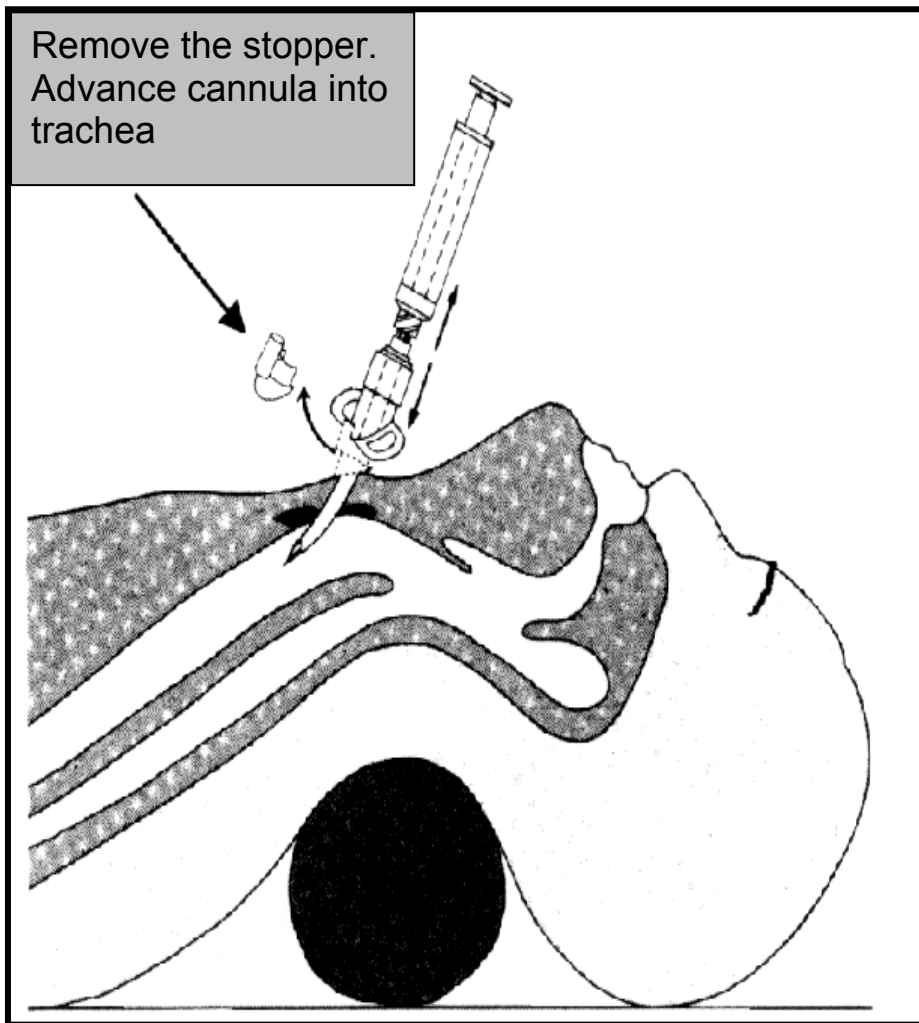
APPROVED
Dr. Catherine Carrubba
Medical Director

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.

Remove the stopper.
Advance cannula into
trachea



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	QuickTrach® Emergency Cricothyrotomy Device	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Step Five

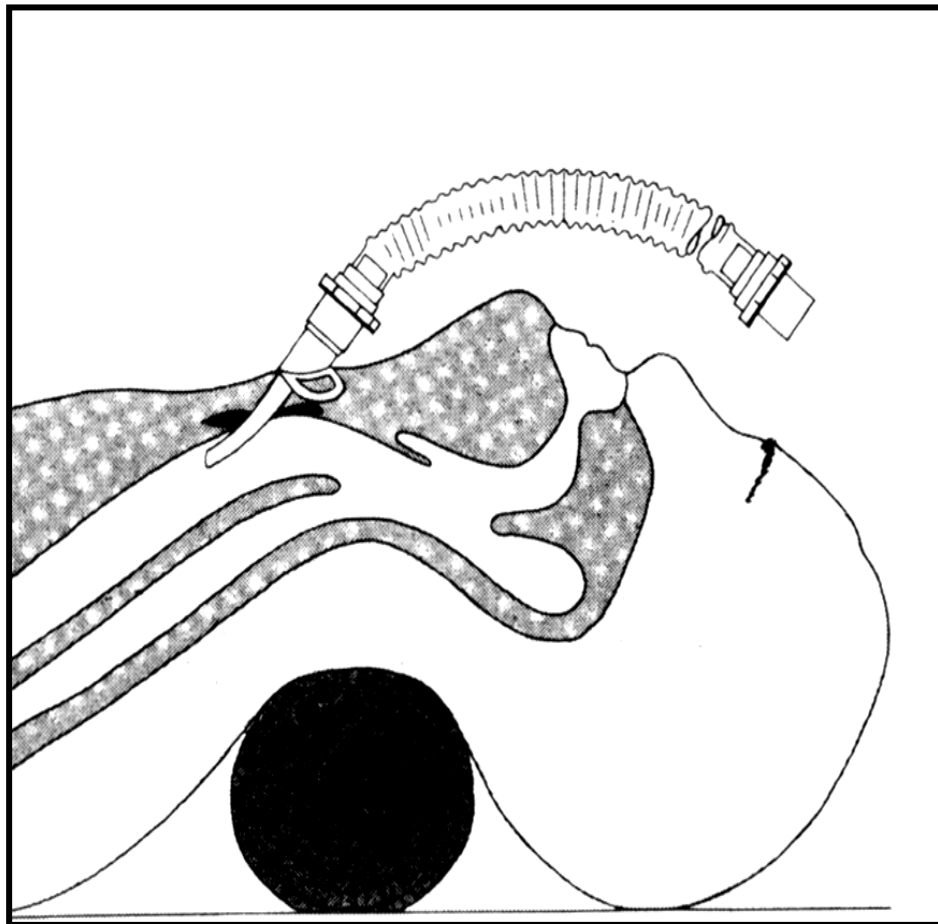
Hold the needle and the syringe firmly and slide only the plastic cannula along the needle into the trachea until the flange rests on the neck.

- 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: Remember to continuously check the security and placement of the device for effectiveness.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Rapid Sequence Intubation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Indications

- Patients with potential or actual airway compromise due to a depressed sensorium (GCS of 8 or less) or whose combativeness threatens the airway, spinal cord stability or transport safety.
- Patients who demonstrate a high probability of airway compromise during transport (i.e. smoke inhalation, severe facial trauma with bleeding, or a decreased ability to protect the airway).
- Patients that may require ventilatory assistance or airway protection.

Equipment

- BVM with O₂ reservoir and CO₂ detector.
- Appropriate equipment for endotracheal intubation. (See Endotracheal Intubation Procedure)
- Appropriate equipment for emergency cricothyrotomy (See QuickTrach Procedure)
- LMA of appropriate size.
- Suction equipment.
- RSI medications.

Procedure:

- ☐ Ensure all equipment necessary for intubation is prepared in advance.
 - A TFR approved emergency escape airway (LMA) should be immediately available in the event that the intubation attempts fail.

NOTE Cricothyrotomy, as an emergency airway, should be reserved for instances where all other interventions fail.

- ☐ Connect the patient to the cardiac monitor, pulse oximetry and NIBP if available.
- ☐ Pre-oxygenate with high flow oxygen via non-re-breather mask.

NOTE: Do not manually ventilate the patient unless respiratory effort is ineffective, as this may result in gastric distention with the potential to cause vomiting and / or aspiration.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Rapid Sequence Intubation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- ☐ If increasing ICP or cardiac ischemia is suspected, pre-medicate the patient with Lidocaine. (1mg/kg IV, not to exceed 100 mg)
 - Patients less than 10 years of age should not receive Lidocaine.
 - Pre-medicate the child less than 10 years of age with Atropine, 0.01 mg/kg, rapid IV push.
- ☐ To facilitate intubation in a patient WITH a suspected cervical injury:
 - Consider removal of the cervical collar while maintaining manual stabilization.
- ☐ To facilitate intubation in a patient WITHOUT a suspected cervical injury:
 - Consider use of cricoid pressure (Sellick Maneuver)
- ☐ Administer Amideate.
 - Adult dose: 0.3 mg / kg over 30 – 60 seconds
 - If Amideate is contraindicated, administer the appropriate dose of Sublimaze or Versed.

NOTE: The duration of action of Amideate is only 5 minutes

- ☐ Administer Anectine.

NOTE: Norcuron should be considered, INSTEAD of Anectine, in patient's with penetrating eye injuries, history of glaucoma or malignant hyperthermia.

Adult:

- IV push: 1.0 - 1.5 mg/kg
- Deep IM: 2.5 - 5 mg/kg

Pediatric:

- IV push: 1.0 – 1.5 mg/kg
- Deep IM: 2.5 mg/kg

- ☐ After fasciculation stops and/or respiratory effort ceases or decreases, attempt to intubate the patient.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Rapid Sequence Intubation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- If unable to intubate during the first 20 seconds, stop and ventilate the patient with BVM for 30-60 seconds and attempt to intubate.
 - If endotracheal intubation fails and the patient cannot be effectively ventilated using a BVM, consider using an LMA, or as a last resort, performing a cricothyrotomy.
- ☐ Once intubation is successful:
- confirm tube placement using lung sounds and end-tidal CO₂ detector .
 - secure the ET tube.
 - capnography monitoring is required for all intubated patients .
 - SAO₂ and capnography should be recorded frequently during transport.
- ☐ If bradycardia occurs during the intubation attempt:
- temporarily halt the procedure and hyperventilate with 100% oxygen
 - If bradycardia continues, in spite of adequate SaO₂, administer Atropine:
 - Adult : 0.5 mg IV,
 - Pediatric: 0.01 mg / kg.
- ☐ If indicated, re-apply the cervical collar and complete the spinal immobilization process.
- ☐ For long-term PARALYSIS during transport, to maintain airway control, administer:
- Norcuron
 - Adult: 0.1 mg/kg
 - Pediatric: 0.1 mg/kg
- NOTE:** Sedation must be used along with Norcuron.
- ☐ For long-term SEDATION administer BOTH:
- Sublimaze
 - Adult: 100 - 250 mcg
 - Pediatric: 3 - 6 mcg / kg up to 100mcg
- AND**
- Versed
 - Adult:
 - ✓ 1 - 5 mg IV.
 - ✓ can be repeated every 5 minutes.
 - ✓ total dose not to exceed 5 mg.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Rapid Sequence Intubation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- Pediatric: <6mos
 - ✓ 0.1mg/kg IV.
 - ✓ May repeat dose at 3 minutes if needed.
- Pediatric: 6mos - 5yrs
 - ✓ 0.05-0.1 mg/kg IV
 - ✓ May repeat using 0.05 mg/kg after 3 minutes.
 - ✓ Total dose not to exceed 6 mg cumulative.
- Pediatric: 6yrs - 12yrs
 - ✓ 0.025-0.05 mg/kg IV.
 - ✓ May repeat dose in 3 minutes if necessary, to a maximum of 10 mg cumulative.

Complications

Anectine:

- May cause vomiting during paralysis of the glottis muscles.
- May cause bradycardia, PVC's, and ventricular fibrillation.
- Causes muscle fasciculation.
- Anectine is associated with increased intra-ocular pressure.
- May cause Malignant Hyperthermia.
 - Malignant Hyperthermia frequently presents as intractable spasm of the jaw muscles, which may progress to generalized rigidity, increased oxygen demand, tachycardia and tachypnea.
 - Successful outcome depends on recognition of early signs such as jaw spasm or generalized rigidity.
 - Treatment includes discontinuation of the anesthesia, attention to increased oxygen consumption, and support of circulation.

Versed:

- May cause:
 - hypotension
 - amnesia
 - respiratory depression
 - nausea and vomiting

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Rapid Sequence Intubation	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Amidate:

- May cause:
 - vomiting
 - respiratory depression
 - hypotension
 - transient pain at injection site
 - transient skeletal muscle spasms / twitching (myoclonus)

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Spinal Immobilization	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Policy

The decision NOT to implement spinal immobilization is the responsibility of the highest medically trained person on scene.

Appropriate spinal motion restriction, per ITLS standards, requires C-spine control with a cervical collar and straps across shoulders, pelvis, and straps across legs at the knees. The hands should be secured if the patient is uncooperative or unable to maintain them in a safe position

Indications

Spinal immobilization must be performed in:

- Patients with head, facial, or cervical trauma
- Patients with decreased or altered levels of consciousness of unknown etiology.
- Patients with suspected deceleration injuries (auto or bicycle accidents, falls from any height, etc.).
- Patients with complaints of neck and/or back pain after trauma.
- Patients with significant mechanism of injury, subjective complaints, or objective findings suggestive of neck or back injury.

Procedure

The person at the head of the patient will maintain control of all activity.

If patient found in sitting position:

- ☐ Apply appropriate size cervical collar and maintain manual control of the head until it has been secured to the chosen extrication device.
- ☐ Place Kendrick Extrication Device (KED) or short spine board behind the patient; secure torso to the device, followed by the head.
- ☐ Extract patient from vehicle or seat; recline on backboard. Secure patient to backboard, and then place lateral head supports.

NOTE If the scene is unsafe or the patients' condition is unstable, perform the Rapid Extrication procedure, per ITLS standards.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Spinal Immobilization	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

If patient found standing or ambulatory:

- ☐ Apply appropriate size cervical collar and maintain manual control of the head until it has been secured to the stabilization device.
- ☐ Recline patient as a unit onto backboard using the "Standing Takedown" method; secure patient to backboard and then place lateral head supports.

If the patient found in a supine position:

- ☐ place the stabilization device alongside patient.
- ☐ roll the patient, as a unit, away from the stabilization device and then slide it under the patient.
- ☐ gently lower the patient as a unit, onto the stabilization device, positioning the patient at the center of the device, when possible.
- ☐ secure the torso, followed by the head, to the stabilization device, following ITLS guidelines

If the patient found lying in a left or right lateral position:

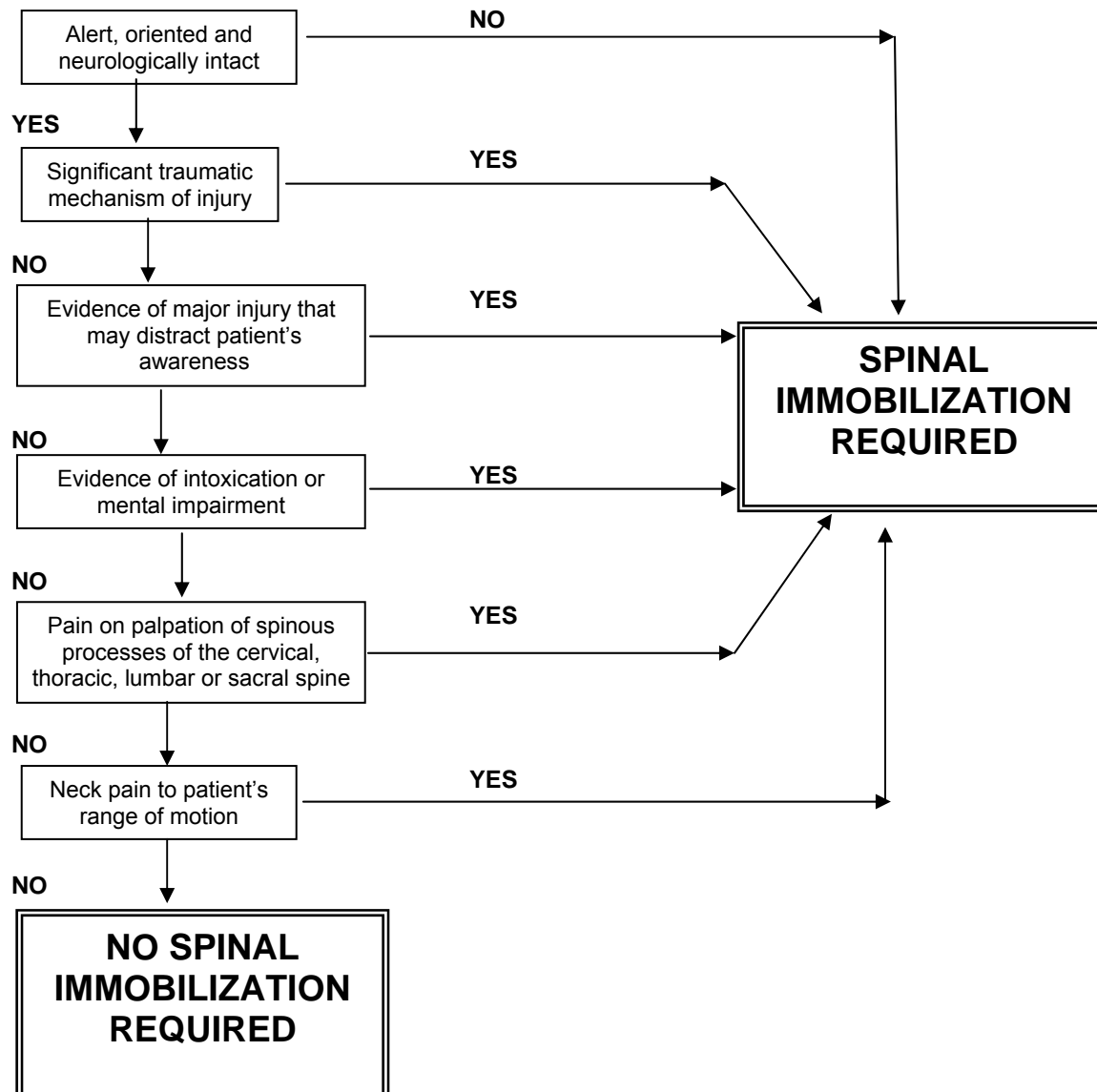
- ☐ place the stabilization device alongside the patients back.
- ☐ gently lower the patient as a unit, onto the stabilization device, positioning the patient at the center of the device, when possible.
- ☐ secure the torso, followed by the head, to the stabilization device, following ITLS guidelines.

If the patient found lying prone:

- ☐ place the stabilization device alongside patient.
- ☐ gently lower the patient as a unit, onto the stabilization device, positioning the patient at the center of the device, when possible.
- ☐ secure the torso, followed by the head, to the stabilization device, following ITLS guidelines.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Spinal Immobilization	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Spinal Immobilization Exclusionary Rule



NOTE Significant mechanism of injury includes windshield spider, dash deformity, ejection, rollover and space intrusion of >1 foot.

NOTE Patient's range of motion should not be assisted. The patient should be able to touch their chin to their chest, extend their neck (look up) and turn side to side (shoulder to shoulder) without pain.

NOTE Major injuries that may distract a patient's awareness to pain include pelvic fracture, femur fracture, extensive burns or soft tissue injury, acute abdomen, or significant chest injury.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Surgical Cricothyrotomy	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Indications

The only indication for surgical cricothyrotomy is the inability to secure an airway by any other non- invasive method.

Contraindications

- Acute laryngeal disorders which cause distortion of landmarks
- Children under age 10
- Tracheal injury or obstruction below the level of the cricothyroid membrane

Complications

- hemorrhage
- infection, cellulitis, tracheitis
- pneumonia
- false passage resulting in pneumo-mediastinum or pneumothorax
- sub-glottic stenosis
- tracheal or esophageal injury
- tube dislodgment
- mucous plug (common when using non-humidified oxygen)
- apnea or cardiac arrest

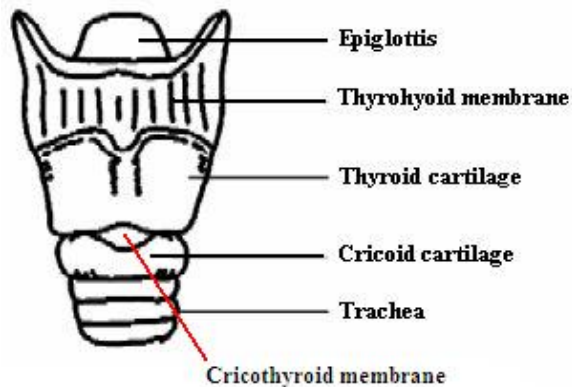
Equipment

- Sterile gloves
- Eye protection/ face shield
- Suction equipment
- Provodine-iodine antiseptic swabs
- #11 scalpel blade
- Sterile 4x4 gauze pads
- Two 6 inch curved hemostats
- 6.5 mm endotracheal tube - shortened in length, to include pilot balloon for a cuff
- 10cc syringe
- BVM
- Oxygen
- Adhesive tape

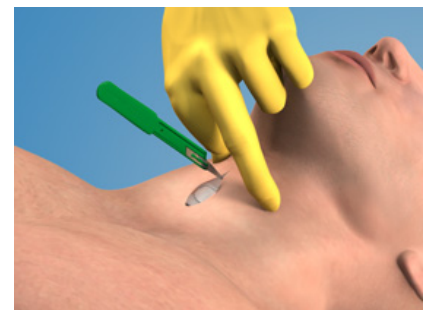
TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Surgical Cricothyrotomy	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Procedure

- ☐ Utilize universal precautions, especially face and eye protection.
- ☐ Place the patient in a supine position; immobilize if necessary.
- ☐ Attempt ventilation with a BVM while preparing for procedure.
- ☐ Disinfect the entire anterior neck with antiseptic swabs, utilizing sterile procedures when possible.
- ☐ Locate the thyroid notch, cricothyroid membrane, and the sternal notch.



- ☐ Stabilize the thyroid cartilage with the left (or non-dominant) hand.
 - This is the most important step. If you lose the midline, the anatomy will be distorted and you may find yourself in the musculature and or vasculature on either side.
 - Make a vertical skin incision, at least 2 cm long, over the lower half of the cricothyroid membrane.
 - Try to cut through the skin and the subcutaneous tissue in one clean stroke.
 - There is potential for severe bleeding from the incision.



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE	Surgical Cricothyrotomy	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- ☐ Locate the cricothyroid membrane with your index finger.
 - Carefully make a transverse incision over the lower part of the membrane.
- ☐ Insert the closed tips of the curved hemostat into the incision and open the hemostat to enlarge the opening.
 - If the patient is breathing spontaneously, secretions, blood and air will spray out of the opening.
 - PROTECT YOUR FACE.
- ☐ Insert the shortened ET tube into the opening, ensuring that the cuff passes into the trachea.
- ☐ Inflate the distal cuff and ventilate the patient.
- ☐ Insure proper tube placement utilizing the “5 Point” auscultation method and observe for chest wall movement. Attach ETCO₂ detector and monitor for appropriate color change.
- ☐ Secure tube with tape or tube holder.



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PROCEDURE PROTOCOL	REVISION DATE		ISSUE DATE	APPROVED Dr. Catherine Carrubba Medical Director

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Tampa Fire Rescue

Medical Protocol

DIRECTIVES

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
DIRECTIVES	REVISION DATE	Bariatric Patient Transport	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 one 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				
DIRECTIVE	REVISION DATE	Emergency Response “Upgrade” for Basic Life Support (Ambulances)	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 60 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 patient will be evaluated and the OIC will request a transport unit if needed.
- If BLS is 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 wait for the BLS unit.

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:

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
DIRECTIVE	REVISION DATE	Emergency Response "Upgrade" for Basic Life Support (Ambulances)	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

- 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 lightening
 - 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				
DIRECTIVES	REVISION DATE	ECD / Taser® Policy	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 patient's 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.

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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.

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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

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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.

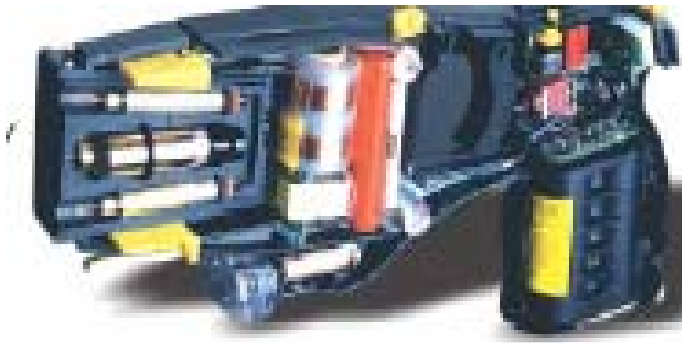
Summary

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.

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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				
DIRECTIVES	REVISION DATE	Transportation of TFR Personnel	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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

Inter-facility Transfers

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.

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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.

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

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Tampa Fire Rescue

Medical Protocol

PHARMACOLOGY

TAMPA FIRE RESCUE MEDICAL PROTOCOL

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DRUG NAME	INDICATIONS	ADULT DOSAGE	PEDIATRIC DOSAGE
Adenocard Adenosine	❖ PSVT (including WPW Syndrome)	6 mg RAPID IVP ❖ Repeat dose of 12 mg rapid IVP if needed, after 2-3 minutes. ❖ Can give an additional 12 mg IVP if no response in 2-3 minutes from the previous dose. NOTE: Should be given in a free flowing IV, in a large vein.	0.1 mg/kg RAPID IVP or IO ❖ Max first dose 6 mg ❖ If no response, double the original dose and repeat once in three minutes. Max second dose 12 mg
Albuterol Albuterol Sulfate	❖ Bronchospasm secondary to asthma COPD.	2.5 – 5.0 mg in 3 to 6 ml of normal saline ❖ Via nebulizer ❖ May be repeated if no adverse effects are present and symptoms persist.	Same as Adult Dose
Amidate Etomidate	❖ Induction of general anesthesia prior to attempting RSI	0.3 mg/kg IVP over 30-60 seconds	NOT INDICATED
Anectine Succinylcholine Chloride	❖ Skeletal muscle paralysis for airway management	1.0 – 1.5 mg/kg IVP or 2.5 - 4 mg/kg, deep IM injection ❖ Total dose not to exceed 150 mg	1.0 – 1.5 mg/kg IVP or 2.5 mg/kg, deep IM injection Total dose not to exceed 50 mg.
Aspirin	❖ M.I. patients ❖ Unstable angina Cardiac related chest pain	324 mg (chewable) PO	NOT INDICATED
Ativan Lorazepam	❖ Continuous or multiple seizures ❖ Shivering or seizure activity associated with hyperthermia ❖ Pre-medication prior to cardioversion ❖ Acute anxiety (non-trauma alert.) ❖ Muscle relaxant	>18 years of age <u>Seizure activity:</u> 2- 4 mg IV or IO, SLOW push, (2 mg/min) 4 mg via MAD ❖ may be repeated after 10-15 minute <u>Sedation</u> 0.05 mg/kg IVP <u>Anxiety:</u> 0.05 mg/kg up to 4mg total	<18 years of age <u>Seizure activity:</u> 0.05 - 0.2 mg/kg IV or IO, SLOW push 0.05 mg/kg via MAD ❖ up to 1.0 mg total dose

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DRUG NAME	INDICATIONS	ADULT DOSAGE	PEDIATRIC DOSAGE
Atropine	<ul style="list-style-type: none"> ❖ Symptomatic bradycardia ❖ Adult asystole ❖ Organophosphate poisoning ❖ Pre-medication for RSI in pediatrics patients 	<p>0.5 - 1.0 mg IVP, RAPID</p> <ul style="list-style-type: none"> ❖ May be repeated every 3 - 5 minutes. ❖ Maximum dose is 0.04mg/kg 	<p><u>Bradycardia</u> 0.02 mg/kg IVP / IO</p> <p><u>RSI</u> 0.01 mg / kg</p> <ul style="list-style-type: none"> ❖ Minimum dose 0.1 mg ❖ Maximum single dose of 0.5 mg in children and 1.0 mg in adolescents.
Benadryl Diphenhydramine Hydrochloride	<ul style="list-style-type: none"> ❖ Anaphylaxis ❖ Extrapyramidal reaction to phenothiazine medications ❖ Mild to moderate allergic reactions 	25-50 mg IM or IVP	1-2 mg/kg IVP, SLOW
Brethine Terbutaline Sulfate	<ul style="list-style-type: none"> ❖ Asthma and reversible airway obstruction associated with bronchitis and emphysema 	0.25 mg SQ	NOT INDICATED
Calcium Chloride	<ul style="list-style-type: none"> ❖ Hypocalcemia ❖ Hyperkalemia ❖ Calcium channel blocker toxicity ❖ Magnesium Sulfate overdose 	<p>10ml of 10% solution IVP, SLOW</p> <ul style="list-style-type: none"> ❖ over 2 minutes 	<p>0.2– 0.25 ml/kg of 10% solution IVP, SLOW</p> <ul style="list-style-type: none"> ❖ over 2 minutes
Calcium Gluconate	<ul style="list-style-type: none"> ❖ Used to counteract the effects of Hydrofluoric Acid 	See Hazardous Materials-Hydrofluoric Acid Protocol for dosing.	Same as Adult Dose
Cardizem Diltiazem	<ul style="list-style-type: none"> ❖ Management of supraventricular tachycardia ❖ Atrial flutter or fibrillation 	<p>0.25 mg/kg IVP, over one minute</p> <ul style="list-style-type: none"> ❖ May be repeated in 15 min at 0.35 mg/kg if needed. ❖ May follow with infusion at 10 mg/hr rate 	NOT INDICATED
Cordarone Amiodarone	<ul style="list-style-type: none"> ❖ Shock - refractory V-Fib. ❖ Shock - refractory pulseless V-Tach. ❖ Hemodynamically unstable V-Tach 	<p><u>VF/ pulseless VT</u> 300 mg IVP</p> <ul style="list-style-type: none"> ❖ If refractory, consider repeat dose of 150 mg IVP in 3-5 minutes 	<p><u>VF/ pulseless VT</u> 5 mg / kg IV / IO</p> <ul style="list-style-type: none"> ❖ Repeat up to 15 mg/kg ❖ Max dose 300 mg

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DRUG NAME	INDICATIONS	ADULT DOSAGE	PEDIATRIC DOSAGE
Cordarone (cont)	<ul style="list-style-type: none"> ❖ Control of hemodynamically stable VT ❖ Adjunct to electrical cardioversion of SVT and PSVT ❖ Significant ventricular ectopy 	<p><u>Ventricular ectopy, VT with a pulse and unstable PSVT</u> 150 mg SLOW IV over 10 minutes.</p> <p>NOTE: Mix 3ml (150mg) in 100ml D5W and infuse over 10 minutes.</p> <p>NOTE: Follow IVP with immediate 20-30 ml flush</p>	
CyanoKit Hydroxycobalamin Injection	<ul style="list-style-type: none"> ❖ Known or suspected cyanide poisoning 	<p>5 grams (2 vials)</p> <ul style="list-style-type: none"> ❖ Infuse over 15 minutes (7½ minutes per vial) ❖ Do not shake 	NOT INDICATED
Dextrose 50%	<ul style="list-style-type: none"> ❖ Hypoglycemia ❖ Altered levels of consciousness ❖ Coma / seizure of unknown etiology 	12.5 –25 grams IV SLOW	<p>0.5-1 gm/kg of D25 IV SLOW or IO</p> <p>NOTE: Must dilute D50 1:1 with NS to achieve D25</p>
Dopamine Hcl	<ul style="list-style-type: none"> ❖ Cardiogenic shock ❖ CHF ❖ Hypotension 	<p><u>Dopaminergic:</u> 2-4 mcg/kg/min</p> <p><u>Beta-adrenergic:</u> 5-10 mcg/kg/min</p> <p><u>Alpha-adrenergic:</u> 10-20 mcg/kg/min</p>	Same as Adult Dose
Epinephrine	<ul style="list-style-type: none"> ❖ Asystole ❖ V-fib ❖ Pulseless v-tach ❖ PEA ❖ Acute bronchospasm from asthma or COPD ❖ Anaphylaxis 	<p><u>Cardiac arrest:</u> 1 mg IV push every 3-5 minutes</p> <p><u>Anaphylaxis:</u> 0.3 to 0.5 cc of 1:1000 SQ</p> <p><u>Bronchospasm secondary to asthma or COPD:</u> 0.3 to 0.5 cc of 1:1000 SQ</p>	<p><u>Cardiac arrest:</u> 0.01 mg/kg 1:10,000 IV/IO every 3-5 minutes</p> <p><u>Anaphylaxis:</u> 0.01cc/kg SQ</p> <p><u>Bronchospasm secondary to asthma or COPD:</u> 0.01 cc/kg of 1:1000 SQ</p>

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DRUG NAME	INDICATIONS	ADULT DOSAGE	PEDIATRIC DOSAGE
Glucagon	❖ Hypoglycemia	0.5 to 1.0 mg IV / IM ❖ Can be repeated up to two times if no response, after 5-20 minutes.	0.025 mg/kg IV / IM, up to maximum of 1.0 mg per dose ❖ Can be repeated up to two times if no response, after 5-20 minutes
Haldol	❖ Treatment of Schizophrenia	2 – 5 mg IM	NOT INDICATED
Isoptin Verapamil	❖ Narrow complex PSVT ❖ Atrial fibrillation and flutter with rapid ventricular response rates	2.5 – 5.0 mg IVP over 2 minutes ❖ May be repeated at 5-10 mg doses every 15-30 minutes to a total dose of 20mg	NOT INDICATED
Labetalol	❖ Hypertension ❖ Sinus tachycardia w/chest pain NOTE: May be used in presence of CVA symptoms	<u>Hypertension</u> 10.0 mg IVP over 1-2 minutes ❖ May be repeated in 10 minutes, if needed. <u>Sinus Tachycardia:</u> 5 mg IVP over 1-2 minutes ❖ Total dose may be repeated in 5 minutes if no adverse response and patient is still in sinus tach	NOT INDICATED
Lasix Furosemide	❖ Pulmonary and peripheral edema ❖ CHF ❖ Hypertension	0.5 – 1 mg/kg IVP, SLOW	Same as Adult Dose
Lidocaine Hydrochloride	❖ V-fib ❖ V-tach ❖ Malignant PVC's ❖ Pre-medication for RSI, when indicated. ❖ Broncho-spasmodic pulmonary disorders	<u>Cardiac Arrest</u> 1.0 - 1.5 mg/kg IV push <u>Refractory VF/VT</u> Additional 0.5 - 0.75 mg/kg over 3 - 5 minutes to a max dose of 3 mg/kg ❖ Follow with infusion of 2 - 4 mg/min <u>Non-Cardiac and Geriatric dose</u> 1 mg/kg IVP not to exceed 100 mg	<u>Cardiac Arrest</u> 1mg/kg IVP or IO ❖ Follow with maintenance infusion of 20- 50 mcg/kg/min

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DRUG NAME	INDICATIONS	ADULT DOSAGE	PEDIATRIC DOSAGE
Magnesium Sulfate	<ul style="list-style-type: none"> ❖ Eclampsia or pre-eclampsia ❖ Cardiac dysrhythmias ❖ Bronchospasm secondary to COPD ❖ Status asthmaticus 	<p><u>Eclampsia:</u> 4 grams IV, SLOW, over 1-2 minutes</p> <p>❖ Follow with a 1-2 gram/hour continuous infusion</p> <p><u>Pre-eclampsia:</u> 4 grams in 500 ml D5W infused over 1 hour.</p> <p><u>Intractable V-Tach</u> 1-2 grams, IVP, SLOW</p> <p><u>Bronchospasm:</u> 2 grams in 50 ml of D5W infused over 10-20 minutes</p>	<p><u>Bronchospasm:</u> 40 mg/kg mixed in 50 ml of D5W infused over 20-30 minutes</p> <p><u>Torsade de pointes</u> 25 – 50 mg/kg IV / IO over 10 – 20 minutes</p> <p>❖ Max dose 2 grams</p>
Methylene Blue	<ul style="list-style-type: none"> ❖ Drug induced methemoglobinemia. 	1 – 2 mg / kg, SLOW	Same as Adult Dose
Morphine Sulfate	<ul style="list-style-type: none"> ❖ Cardiac chest pain ❖ Pulmonary edema ❖ Pain control 	<p>2 – 10 mg IVP, SLOW, in 2mg increments.</p> <p>Can be given IM.</p>	<p>0.1 mg/kg IVP SLOW</p> <p>❖ Can be given IO.</p>
Narcan Naloxone	<ul style="list-style-type: none"> ❖ Acute CNS depression from opiate overdose ❖ Altered LOC of unknown etiology 	0.4 – 2.0 mg IV, IM, SQ or ET	0.1 mg/kg IV, IO, IM, SQ or ET
Nipride Nitroprusside Sodium	<ul style="list-style-type: none"> ❖ Acute hypertensive crisis 	0.5 -10.0 mcg/kg/min, IV infusion	NOT INDICATED
Nitroglycerine	<ul style="list-style-type: none"> ❖ Ischemic chest pain ❖ Hypertension ❖ CHF 	<p>0.4 mg metered spray, sublingual</p> <p>❖ May be repeated x 3 after 3 – 5 minutes</p>	NOT INDICATED

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DRUG NAME	INDICATIONS	ADULT DOSAGE	PEDIATRIC DOSAGE
Norcuron Vecuronium Bromide	<ul style="list-style-type: none"> ❖ Induction of skeletal muscle paralysis ❖ Long term paralysis during transport 	<p style="text-align: center;">0.1 mg/kg IVP</p>	<p style="text-align: center;">Same as Adult Dose</p>
Pontocaine Tetracaine Hydrochloride	<ul style="list-style-type: none"> ❖ Local ophthalmic anesthetic 	<p style="text-align: center;">1-2 drops in the affected eye</p> <ul style="list-style-type: none"> ❖ Use prior to insertion of Morgan Lens. 	<p style="text-align: center;">NOT INDICATED</p>
Sodium Bicarbonate	<ul style="list-style-type: none"> ❖ Metabolic acidosis ❖ Tricyclic antidepressant overdose ❖ Hyperkalemia 	<p style="text-align: center;">1.0 mEq/kg IVP</p> <ul style="list-style-type: none"> ❖ May be repeated after 10 minutes at 0.5 mEq/kg 	<p style="text-align: center;">Same as Adult Dose</p> <ul style="list-style-type: none"> ❖ Repeat dose guided by ABG's only. <p style="text-align: center;">Neonates: Should use half strength solution</p>
Sublimaze Fentanyl Citrate	<ul style="list-style-type: none"> ❖ Intubation in combative trauma patients ❖ Sedate violent or agitated patients ❖ Pain control 	<p style="text-align: center;"><u>For Sedation:</u> 50 - 100 mcg IVP/ IM SLOW, over 1-2 minutes</p> <p style="text-align: center;"><u>For Pain:</u> 50 to 100 mcg IV/IM, SLOW</p> <ul style="list-style-type: none"> ❖ Repeat until pain is controlled, or until a total of 250 mcg have been given. ❖ May repeat total dose in 30 minutes, if necessary. <p style="text-align: center;"><u>To assist intubation:</u> 100 – 250 mcg, IVP, SLOW, over 1 minute</p>	<p style="text-align: center;"><u>For Sedation:</u> 1-2 mcg/kg IVP, SLOW, over 1-2 minutes</p> <ul style="list-style-type: none"> ❖ Do not exceed 100 mcg. <p style="text-align: center;"><u>For Pain:</u> 1-2 mcg/kg IVP, SLOW or IM.</p> <ul style="list-style-type: none"> ❖ May repeat once after 5 – 10 minutes at 0.5 -1.0 mcg/kg ❖ Total dosing may be repeated in 30 minutes, if necessary. <p style="text-align: center;"><u>To assist intubation:</u> 3-6 mcg/kg IVP, SLOW, over 1 minute</p> <ul style="list-style-type: none"> ❖ May deliver up to 100 mcg

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DRUG NAME	INDICATIONS	ADULT DOSAGE	PEDIATRIC DOSAGE
Thiamine Hydrochloride	<ul style="list-style-type: none"> ❖ Decreased LOC of unknown etiology ❖ Moderate to severe hypothermia ❖ Hypoglycemia secondary to ETOH abuse 	100 mg IVP, over 2 minutes	NOT INDICATED
Vasopressin	<ul style="list-style-type: none"> ❖ Shock-refractory v-fib ❖ Septic shock 	40 U IVP, single dose (one time only) <ul style="list-style-type: none"> ❖ IO and ET route if IV unavailable. 	NOT INDICATED
Versed Midazolam	<ul style="list-style-type: none"> ❖ Sedation for RSI ❖ Seizures 	<p><u>Healthy adults</u> 1- 5 mg IVP, titrate to effect</p> <ul style="list-style-type: none"> ❖ Total dose can be repeated every 5 minutes, not to exceed 5mg. ❖ IM route as a last resort <p><u>Chronically ill or >60 YOA:</u> 0.30 – 0.35 mg IVP</p> <ul style="list-style-type: none"> ❖ can be repeated every 5 minutes, not to exceed 3.5mg total dose 	<p><u>For Status Epilepticus:</u> <u>2mos - 12 yrs</u> 0.15 mg/kg IVP, titrate to effect</p> <ul style="list-style-type: none"> ❖ Administer 0.01 mg/kg every 5 minutes, as needed for effect <p><u>For Procedural Sedation:</u> <u><6mos:</u> 0.1 mg/kg IVP</p> <ul style="list-style-type: none"> ❖ May repeat every 3 minutes if necessary <p><u>6mos. to 5yrs:</u> 0.05-0.1 mg/kg IVP</p> <ul style="list-style-type: none"> ❖ Repeat in 3 minutes, if needed, at 0.05mg/kg, to a maximum of 6 mg cumulative dose <p><u>6yrs to 12yrs:</u> 0.025-0.05 mg/kg IVP</p> <ul style="list-style-type: none"> ❖ Repeat in 3 minutes if needed, to a maximum of 10 mg cumulative dose. <p><u>Over 12yrs.</u> Use Adult Dose</p>

TAMPA FIRE RESCUE MEDICAL PROTOCOL

PHARM PROTOCOL	REVISION DATE	Pharmacology Index	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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DRUG NAME	INDICATIONS	ADULT DOSAGE	PEDIATRIC DOSAGE
Zofran Ondansetron	❖ Prevention of nausea and vomiting	4 mg IVP or IM over (at least)30 seconds, and preferably over 2-5 minutes.	<u>2 yrs - 12 yrs- <40 kg:</u> 0.1 mg/kg IVP over (at least) 30 seconds and preferably over 2-5 min. <u>2 yrs - 12 yrs- >40 kg:</u> 4 mg IVP over (at least) 30 seconds and preferably over 2-5 min.
2-PAM Pralidoxamine Chloride	❖ Anti-cholinesterase overdose	600mg IM ❖ Dose may be repeated	<div style="border: 1px solid black; padding: 2px; text-align: center;">NOT INDICATED</div>

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	2 PAM Pralidoxmine Chloride	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

2 PAM reactivates cholinesterase. It slows the “aging” process of phosphorylated cholinesterase to a non-reactable form and detoxifies certain organo-phosphates by direct chemical action. 2 PAM has its most critical effect in relieving paralysis of the muscles of respiration. Because 2 PAM is less effective in relieving depression of the respiratory center, Atropine is always required concomitantly to block the effect of accumulated acetylcholine at this site.

INDICATIONS

- anti-cholinesterase overdose

CONTRAINDICATIONS

- hypersensitivity to the drug
- myasthenia gravis
- impaired renal function.
- SHOULD NOT BE USED IN PEDIATRIC PATIENTS

SIDE EFFECTS

laryngospasms	muscle spasms
muscle rigidity	transient neuromuscular blockade.
blurred vision	diplopia
dizziness	headache
drowsiness	nausea
tachycardia	hypertension
weakness	

DOSAGE AND ADMINISTRATION

Adult:

- 600 mg IM
- Dose may be repeated

NOTE:

- Not indicated for intoxication by pesticides of the carbamate class, i.e. Carbaryl (Sevin) or Propoxur (Baygon).

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Adenocard (Adenosine)	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Adenocard 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 PSVT (including those associated with Wolfe-Parkinson-White Syndrome)

CONTRAINDICATIONS

- second or third degree AV blocks
- atrial flutter
- atrial fibrillation
- ventricular tachycardia
- hypersensitivity to this medication

PRECAUTIONS

- May cause broncho-constriction in patients with asthma

SIDE EFFECTS

facial flushing	headache
dyspnea	vertigo
nausea	chest pain
palpitations	hypotension
parasthesia	metallic taste

DOSAGE AND ADMINISTRATION

Adult:

- 6 mg rapidly IVP
- Repeat dose of 12 mg rapidly IVP if no conversion after 2-3 minutes
- Can administer an additional 12 mg IVP if no response in 2-3 minutes from the previous dose

Pediatric:

- 0.1mg/kg IV or IO push
- If no response, double the original dose and repeat once in three minutes

Note:

- Should be administered in a free flowing IV in a large vein

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Albuterol	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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

- 2.5 – 5.0 mg in 3 – 6 ml normal saline solution, via nebulizer, with O₂ set to 6 liter/min
- May be repeated if no adverse effects are present and symptoms persist

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Amidate (Etomidate)	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Amidate 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 10 years 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:

- 0.3 mg/kg IV over 30-60 seconds
- 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	Anectine Succinylcholine Chloride	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Anectine 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 with GCS of 8 or less.
- 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 Norcuron.)

SIDE EFFECTS

hypotension
tachycardia
hypertension
cardiac arrest
ventricular dysrhythmias
bradycardia, especially with a repeat dose and in children under 5 years old
increased intracranial, intraocular and intragastric pressure
hyperkalemia (may worsen after administration)
malignant hyperthermia (rare but life threatening complication)

DOSAGE AND ADMINISTRATION

Adult:

- 1.0 – 1.5 mg/kg IV push; deep IM injection of 2.5 - 4 mg/kg; total dose not to exceed 150 mg

Pediatric:

- 1.0 – 1.5 mg/kg IV push; deep IM injection of 2.5 mg/kg, total dose not to exceed 50 mg

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
- The IV route is preferred, but deep IM injection may be used in children, and in patients without vascular access

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Aspirin	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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	Ativan Lorazepam	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Ativan is a benzodiazepine with anti-anxiety, sedative and anti-convulsant effects. Ativan interacts with the (gamma)-aminobutyric acid (GABA)-benzodiazepine receptor complex. This interaction is presumed to be responsible for Ativan's mechanism of action. Ativan exhibits relatively high and specific affinity for its recognition site but does not displace GABA. Attachment to the specific binding site enhances the affinity of GABA for its receptor site on the same receptor complex.

INDICATIONS

- treatment of continuous or multiple seizures
- shivering or seizure activity associated with hyperthermia
- pre-medication prior to cardioversion
- relief of acute anxiety, excluding trauma alert patients
- muscle relaxant

CONTRAINDICATIONS

- hypersensitivity to benzodiazepines or its vehicle (polyethylene glycol, propylene glycol and benzyl alcohol)
- patients with known acute narrow-angle glaucoma
- patients with sleep apnea syndrome
- COPD

SIDE EFFECTS

respiratory depression	dizziness
drowsiness or confusion	headache
orthostatic hypotension	ECG changes or tachycardia

DOSAGE AND ADMINISTRATION

Seizure activity:

Adult (>18 years of age)

- 2-4 mg IV or IO SLOW (2 mg/min)
- 4 mg via MAD
- May be repeated after 10-15 minute

Pediatric (<18 years of age)

- 0.05 - 0.2 mg / kg, IV or IO slow, up to 1.0mg total dose diluted 1:1 in NS or D5W
- 0.05 mg / kg (estimated body weight) via MAD

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Ativan Lorazepam	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Sedation prior to cardioversion and pacing:

Adult

- 0.05 mg/kg IV push

Anxiety:

Adult

- 0.05 mg/kg up to 4 mg total

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Atropine	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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
- asystole
- organophosphate poisoning
- pre-medication for R.S.I. intubation in pediatrics patients

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

Use caution in patients with MI history or myocardial ischemia due to increased myocardial oxygen consumption

DOSAGE AND ADMINISTRATION

Adults:

- 0.5 - 1.0 mg IV push, rapidly
- May be repeated every 3 - 5 minutes
- Maximum dose is 0.04 mg/kg

Pediatric:

- 0.02 mg/kg IV push with maximum single dose of 0.5 mg in children and 1.0 mg in adolescents
- Minimum dose 0.1 mg. (Doses of less than 0.1 mg have been associated with paradoxical bradycardia)

Note:

- Atropine may be given via E.T. tube, at 2 - 2.5 times the IV dose
- Organophosphate poisoning may require large doses (>5 - 10 mg) for symptom relief

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Benadryl Diphenhydramine Hydrochloride	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Benadryl 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:

- 25-50 mg, IM or IV

Pediatric:

- 1-2 mg/kg, IV slow

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Brethine Terbutaline Sulfate	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Brethine exhibits beta-adrenergic receptor stimulating effects. Studies have shown its relative preference for beta-2 receptors, which are located in the smooth muscle of the bronchioles. Terbutaline works by relieving bronchospasm in acute and chronic airway disease, while exerting minimal effect on the cardiovascular system. Patients with asthma or COPD may have a form of terbutaline on hand for home use. Brethine has proven to be effective when administered to patients over 44 years of age that exhibit severe respiratory impairment or distress due to asthma or COPD. In such patients it does not exert the cardiovascular side effects commonly seen with epinephrine administration.

INDICATIONS

- Bronchial asthma and reversible airway obstruction associated with bronchitis and emphysema.

CONTRAINDICATIONS

- children under age 12
- tachycardia due to digitalis intoxication
- hypertension

PRECAUTIONS

- patients with history of diabetes
- patients with seizure disorders
- cardiac patients with history of significant dysrhythmias

SIDE EFFECTS

tachycardia	palpitations
nervousness	dizziness
tremors	nausea and vomiting

DOSAGE AND ADMINISTRATION

Adult:

- 0.25 mg via subcutaneous injection

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Calcium Chloride	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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 (questionable value)

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	hypotension
peripheral vasodilation	tissue sloughing (following accidental IM administration or secondary to extravasation of medication)

DOSAGE AND ADMINISTRATION

Hyperkalemia:

Adult:

- 10 ml of 10% solution, slow IV push (over 2 minutes)

Pediatric:

- 0.2 – 0.25 ml/kg of 10% solution, slow IV push (over 2 minutes)

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Calcium Gluconate	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Calcium gluconate is a mineral that is found naturally in foods. Calcium is necessary for normal body function, especially bone formation and maintenance. Calcium can also bind to other minerals (such as phosphate) and aid in their removal from the body.

INDICATIONS

Calcium gluconate mixed with water soluble gel is used as a treatment for hydrofluoric acid exposure / contamination. The theory behind this is that as the calcium is massaged into the tissue it will complex with the fluoride anion and precipitate out as a salt thus preventing the fluoride from scavenging all of the body's needed calcium stores. It further prevents the fluoride anion from exerting its directly toxic effects on cellular processes.

SIDE EFFECTS

None, given the need

CONTRAINDICATIONS

None, given the need

DOSAGE AND ADMINISTRATION

Skin burns:

Mix 10 ml of 10% calcium gluconate solution into a 2 oz tube of water soluble gel and message into the burned area.

Eye injury:

Mix 50 ml of a 10% calcium gluconate solution into 500 ml of normal saline and irrigate the affected globe using the Morgan Lens®

Inhalation injury:

Mix 3 ml of a 10% calcium gluconate solution in 6 ml of sterile water and administer via nebulizer.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Cardizem Diltiazem	ISSUE DATE 9-2009	APPROVED Dr. Medical Director Catherine Carrubba

ACTION

Cardizem 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
- Sick Sinus Syndrome
- 2nd or 3rd degree AV block
- hypotension (<90 mmHg systolic)
- recent myocardial infarction
- pulmonary congestion

PRECAUTIONS

- patients with renal or hepatic insufficiency
- geriatric patients
- pregnancy, lactation or children
- history of serious ventricular dysrhythmias
- congestive heart failure

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:

- 0.25 mg/kg IV over one minute
- May be repeated in 15 min at 0.35 mg/kg if initial dose is ineffective
- May follow with an infusion at 10 mg/hr rate
- Onset of effects in 2 - 5 minutes with peak effects in 2 - 4 hours

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Cordarone Amiodarone	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Cordarone 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). It's potassium channel blockage results in slowing of conduction and prolonged refractoriness at the AV node. Its vasodilatory effects 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 push (6ml, 2 vials) followed by an immediate 20-30 ml flush
- If refractory, consider a repeat dose in 3-5 minutes, of 150 mg IV push in (3 ml, 1 vial) followed by an immediate 20-30 ml flush

Ventricular ectopy:

- For V Tach with pulse and unstable PSVT administer 150 mg slow IV over 10 minutes. (Mix 3 ml (150 mg) in 100 ml D5W)

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Cordarone Amiodarone	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Pediatric:

Cardiac Arrest - VF / pulseless VT

- 5 mg/kg, IV / IO
- Repeat up to 15 mg/kg
- Max dose 300 mg

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	REV	CyanoKit® Hydroxycobalamin Injection	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Cyanide is an extremely toxic poison. Specifically cyanide binds with cytochrome a³ in the mitochondria. Inhibition of cytochrome a³ prevents the cell from using oxygen and forces anaerobic metabolism, cellular hypoxia and metabolic acidosis. The action of the Cyanokit 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 itself from;
- 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

Adult:

- Starting Dose 5 grams (2 vials)
 - Add 100 ml .09 NS to vial using transfer spike. Fill to line. Keep vial in upright position.
1. **Mix-** Rock or rotate vial for 30 seconds to mix solution. **Do not shake.**
 2. **Infuse First Vial.** Use vented IV tubing to hang and infuse over 7.5 minutes
 3. **Infuse 2nd vial.** Repeat steps 1 & 2 before second infusion.

HOW SUPPLIED: Two (2.5) g powdered vials to be reconstituted

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Dextrose	ISSUE DATE 9-2009	APPROVED Dr. Medical Director Catherine Carrubba

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.
- Can precipitate severe neurological impairment (Wernicke's Syndrome) when administered to patients exhibiting hypoglycemia secondary to alcohol abuse. *(These patients should be treated with IV Thiamine prior to administration of Dextrose)*

SIDE EFFECTS

warm, painful burning sensation from administration of the medication
thrombo-phlebitis and sclerosis of the vein may occur

DOSAGE AND ADMINISTRATION

Adult:

- 12.5 –25 grams IV slow

Pediatric:

- 0.5-1 gm/kg of D25W IV, slow (must dilute D50W 1:1 with NSS to achieve D25W)

NOTE: Dextrose is not approved for oral administration; therefore it is to be given IV only.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Dopamine Hydrochloride	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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

- cardiogenic shock
- congestive heart failure
- hypotensive states which do not respond to volume replacement

CONTRAINDICATIONS

- tachy-dysrhythmias
- patients receiving Oxycontin
- 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.

SIDE EFFECTS

hypertension	tachy-dysrhythmias (dose related)
headache	nausea and vomiting

DOSAGE AND ADMINISTRATION:

Adult:

Infusion rate 2-20 mcg/kg/min

- Dopaminergic: 2-4 mcg/kg/min
- Beta-adrenergic: 5-10 mcg/kg/min
- Alpha-adrenergic: 10-20 mcg/kg/min

Pediatric:

Same as above.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Epinephrine	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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; asystole, v-fib, pulseless v-tach, and PEA
- 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:

- 1 mg IV push every 3-5 minutes
- Can be given via ET tube at 2 - 2.5 times the normal dose

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Epinephrine	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Anaphylaxis:

Adult:

- 0.3 to 0.5 cc of 1:1000 via subcutaneous injection

Pediatric:

- 0.01 cc/kg via subcutaneous injection

Bronchospasm secondary to asthma or COPD:

Adult:

- 0.3 to 0.5 cc of 1:1000 via subcutaneous injection

Pediatric:

- 0.01 cc/kg of 1:1000 via subcutaneous injection

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Glucagon	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Glucagon increases blood glucose by stimulating glycogenolysis in the liver, inhibiting conversion of circulating glucose to glycogen and stimulating gluconeogenesis.

INDICATIONS

- Hypoglycemia (when vascular access is delayed or impossible)

CONTRAINDICATIONS

- known hypersensitivity
- patients with pheochromocytoma

PRECAUTIONS

- patients with cardiovascular disease, due to its positive inotropic and positive chronotropic actions
- patients with known hepatic or renal insufficiency

SIDE EFFECTS

nausea and vomiting	sudden, transient hypertension
tachycardia	decreased gastric motility

DOSAGE AND ADMINISTRATION

Adult:

- 0.5 to 1.0 mg

Pediatric:

- 0.025 mg/kg, up to a maximum of 1.0 mg per dose
- Can be given IV or IM, (SQ not recommended)

NOTE:

- If no response after 5-20 minutes, can be repeated up to two additional doses
- The half life of Glucagon is 3-6 minutes

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Haldol Haloperidol	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Haldol is the first of the butyrophenone series of antipsychotics. The precise action has not been clearly established.

INDICATIONS

For prompt control of the acutely agitated schizophrenic patient with moderately severe to severe symptoms.

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
- Parkinson's

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 haldol may lower the convulsive threshold.
- Known hypersensitivity.
- Haldol is capable of potentiating the effects of CNS depressants such as alcohol, opiates, and anesthetics.

DOSAGE AND ADMINISTRATION

Adult:

- 2 –5 mg IM

Pediatric:

Safety and effectiveness in pediatric patients have not been established.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Isoptin Verapamil	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Isoptin is a calcium channel blocker, which inhibits the influx of calcium across cell membranes of cardiac and vascular muscle cells. This usually results in decreased AV conduction, decreased atrial automaticity and prolongs AV nodal refractory period. It also results in dilated coronary and systemic arteries and depresses myocardial contractility.

INDICATIONS

Isoptin should be given *only* to patients with narrow-complex reentry SVT or arrhythmias known with certainty to be of supraventricular origin. It should not be given to patients with impaired ventricular function or heart failure.

CONTRAINDICATIONS

- hypotension
- sinus bradycardia
- high-degree AV block
- Sick Sinus Syndrome
- severe CHF
- cardiogenic shock
- wide complex tachycardia.
- Wolf-Parkinson-White disease
- patients receiving IV beta blockers

PRECAUTIONS

- patients with CHF.
- renal failure or hepatic insufficiency.
- Do not use Isoptin in infants because it may cause refractory hypotension and cardiac arrest , and use with caution in children because it may cause hypotension and myocardial depression.

SIDE EFFECTS

bradycardia	hypotension
AV block	headache
peripheral edema	vertigo, nausea and vomiting

DOSAGE AND ADMINISTRATION

Adult:

- 2.5 – 5 mg IV bolus over 2 minutes
- May be repeated at 5-10 mg doses every 15-30 minutes to a total dose of 20 mg

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Labetalol	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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

- hypertension (≥ 220 / ≥ 120 mmHg)
- may be used in presence of CVA symptoms
- sinus tachycardia (heart rate >110) and chest pain

CONTRAINDICATIONS

- hypersensitivity to the medication
- asthma
- high degree AV block
- cardiogenic shock
- bradycardia
- hypotension

PRECAUTIONS

- heart failure
- hepatic disease
- diabetes

SIDE / ADVERSE EFFECTS

postural hypotension
diaphoresis
vertigo, nausea and vomiting

DOSAGE AND ADMINISTRATION

Adult:

Hypertension

- 10 mg IVP over 1-2 minutes
- May be repeated in 10 minutes, if no change in blood pressure

Sinus Tachycardia

- 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.
- Maximum effect occurs usually within five (5) 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	Lasix Furosemide	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Lasix is a potent diuretic which inhibits re-absorption of sodium and chloride in the proximal tubule and the Loop of Henle. It is used primarily for its diuretic and anti-hypertensive properties. It increases renal excretion of water, sodium chloride, magnesium and calcium. It also causes vasodilatation, which in turn, reduces preload.

INDICATIONS

- pulmonary and peripheral edema
- congestive heart failure
- hypertension

CONTRAINDICATIONS

- hypovolemia
- hypokalemia
- anuria
- patients with severe electrolyte depletion
- hypersensitivity

PRECAUTIONS

- hepatic disease
- oliguria
- electrolyte imbalances

SIDE EFFECTS

hypotension	hypokalemia
hyponatremia	hypochloremia
hypoglycemia	weakness and vertigo
transient deafness	EKG changes, chest pain

DOSAGE AND ADMINISTRATION

Adult and pediatric:

- 0.5 – 1 mg/kg, administered IV, slow

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Lidocaine Hydrochloride	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Lidocaine is an anti-dysrhythmia agent used to suppress ventricular dysrhythmias. It raises the fibrillation threshold in the ventricles and decreases conduction through ischemic tissue without adversely affecting normal conduction. It does not affect AV conduction or atrial myocardium therefore it has no use in supraventricular dysrhythmias.

INDICATIONS

- ventricular dysrhythmias (v-fib, v-tach and malignant PVC's)
- pre-medication for RSI , especially when increased ICP or cardiac ischemia may be expected
- bronchospasmodic pulmonary disorders

CONTRAINDICATIONS

- high degree AV blocks
- hypersensitivity to "caine" family of medications
- Torsade de pointes

SIDE EFFECTS

patients with known hepatic disease	hypotension
dysrhythmias	respiratory depression
cardiovascular collapse and arrest	blurred vision
nausea/vomiting and vertigo	overdose may cause seizures
use caution in patients with heart rates below 60	

DOSAGE AND ADMINISTRATION

Cardiac Arrest

Adults:

- 1.0 - 1.5 mg/kg IV push
- An additional 0.5 - 0.75 mg/kg over 3 - 5 minutes may be required in refractory VF/VT, to a maximum dose of 3 mg/kg
- Follow with maintenance infusion of 2 - 4 mg/min drip rate

Pediatric:

- 1 mg/kg IV push
- Follow with maintenance infusion of 20 - 50 mcg/kg/min

Non-Cardiac and geriatric dosage

- 1 mg/kg IV push, not to exceed 100 mg
- Watch for seizures

NOTE

- Lidocaine may be administered via E.T. tube at 2 - 2.5 times the IV dose.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Magnesium Sulfate	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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

- eclampsia or pre-eclampsia
- cardiac dysrhythmias (per ACLS protocol)
- 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.	diaphoresis
severe bradycardia	flushing
respiratory paralysis	hypotension
depressed reflexes	hypothermia
hypotonia	prolonged PR interval
sweating	widened QRS complex

INCOMPATIBILITIES

IV Alcohol	Bicarbonates
barium	Calcium
Clindamycin	Dobutamine
Hydrocortisone	Hyperalimantation
Polymyxin	Procain
solutions containing soluble phosphates	

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Magnesium Sulfate	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

DOSAGE AND ADMINISTRATION

Eclampsia

- Initial dose of 4 grams IV, administered slowly over 1-2 minutes, followed by a 1-2 gram/hour continuous infusion.
- Monitor deep tendon reflexes and mental status and titrate infusion to depress the brisk tendon reflexes typical of eclampsia, to near normal reflexes, while maintaining mental status.

Pre-eclampsia:

- Mix 4 grams in 500 ml D5W and infuse over 1 hour

Bronchospasm:

Adult:

- 2 grams mixed in 50 ml of D5W infused IV over 10-20 minutes

Pediatric:

- 40 mg/kg mixed in 50 ml of D5W infused IV over 20-30 minutes

Torsades de pointes:

Adult:

- 1-2 grams, IV slow

Pediatric:

- 25 – 50 mg/kg IV / IO SLOW over 10 – 20 minutes

NOTE:

- Magnesium Sulfate may need to be diluted in D5W to 10% solution prior to administering the IV dose.
- To reverse cardiac or respiratory depression, administer 5-10 mEq of Calcium Gluconate. (10-20 ml or 20% solution)

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Methylene Blue	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Methylene Blue is a Phenothiazin-5-ium,3,7-bis (dimethylamino)-,chloride, trihydrate. It will produce two opposite actions on hemoglobin. Low concentrations convert methemoglobin to hemoglobin. High concentrations convert the ferrous iron of reduced hemoglobin to ferric iron which results in the formation of methemoglobin.

INDICATIONS

Treatment of drug induced methemoglobin.

SIDE EFFECTS

nausea	abdominal and precordial pain
dizziness	mental confusion
headache	profuse sweating
formation of methemoglobin	

CONTRAINDICATIONS

None, given the need

PRECAUTIONS

Safety for use in pregnancy has not been established. Use in women of child-bearing potential requires the anticipation of benefit, weighed against possible hazards.

DOSAGE AND ADMINISTRATION

Adult:

- 1-2 mg / kg IV, very SLOW
- 0.1– 0.2 ml / kg

Pediatric:

- Same as Adult dose

NOTE:

Methylene Blue should be stored at between 68° and 77° F.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Morphine Sulfate	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Morphine is an opium derivative, narcotic analgesic. It binds to opiate receptors inhibiting transmission of pain impulses. The onset of effects is almost immediate, lasting up to two hours. Morphine does cross the placental barrier.

INDICATIONS

- chest pain of cardiac origin, unresponsive to nitroglycerine
- pulmonary edema
- isolated, orthopedic trauma / amputations
- significant burn injuries
- frostbite, in the absence of hypothermia

CONTRAINDICATIONS

- hypersensitivity to this medication
- exacerbated COPD
- acute abdomen
- patients currently taking MAO inhibitors

PRECAUTIONS

- Morphine is a CNS depressant, which may potentiate other depressant actions, i.e. ETOH, barbiturates and psychotropic agents.

SIDE EFFECTS

CNS depression	bradycardia
respiratory depression	anaphylaxis
hypotension	nausea
increased intra-cranial pressure	

DOSAGE AND ADMINISTRATION

Adult:

- 2 – 10 mg IV push slow, in 2 mg increments
- Can be administered IO or IM

Pediatric:

- 0.1 mg/kg IV push slowly
- Can be administered IO

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Narcan Naloxone	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Narcan 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:

- 0.4 – 2 mg IV, IM, SQ or ET
- 1 - 2 mg via MAD

Pediatric:

- 0.1 mg / kg IV, IM, SQ or ET
- 0.5 – 1 mg via MAD

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Nipride Sodium Nitroprusside	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Nipride is an antihypertensive agent. It is a potent, rapid acting, peripheral vasodilator. It is metabolized by an enzyme in the RBC's into cyanogen, then into thiocyanate, in the liver. It is excreted renally.

INDICATIONS

- acute hypertensive crisis (systolic >220 mmHg and diastolic >120 mmHg)
- refractory hypertensive emergencies associated with CHF

CONTRAINDICATIONS

- hypersensitivity to this medication
- compensatory hypertension
- inadequate cerebral circulation

PRECAUTIONS

- hepatic or renal insufficiency
- dissecting aneurysm
- elderly patients (due to decreased clearance rate of medications)

SIDE EFFECTS

hypotension	methemoglobinemia
headache	nausea and vomiting
vertigo	cyanide toxicity
metabolic acidosis	

DOSAGE AND ADMINISTRATION

Adult:

- 0.5 - 10 mcg/kg/min IV infusion (with constant B/P monitoring)
- Onset is almost immediate with duration only as long as the infusion is maintained.

NOTE

- Solution must be protected from light. (opaque covering comes with the product)

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Nitro-Lingual Spray Nitroglycerine	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Nitroglycerine is a peripheral vasodilator which reduces preload and to a lesser extent, after-load, thus decreasing myocardial oxygen demand.

INDICATIONS

- ischemic chest pain
- hypertension
- CHF

CONTRAINDICATIONS

- hypotension
- head injury
- cerebral hemorrhage
- hypovolemia

PRECAUTIONS

- patients with glaucoma as it may increase intraocular pressure

SIDE EFFECTS

transient headache	diaphoresis
hypotension	syncope
nausea and vomiting	tachycardia

DOSAGE AND ADMINISTRATION

- One metered dose spray of 0.4 mg, sublingually
- May be repeated x 3 after 3 – 5 minutes

NOTE:

- DO NOT SHAKE CAN

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Norcuron Vecuronium Bromide	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Norcuron is a non-depolarizing neuromuscular blocking agent. It acts by competing for cholinergic receptors at the motor end plate.

INDICATIONS

- induction of skeletal muscle paralysis and facilitation of intubation after induction of anesthesia in patients with actual or potential airway compromise
 - GCS of 8 or less in which Rapid Sequence Intubation (RSI) is necessary.
- used when Succinylcholine is contraindicated; in penetrating eye injuries, history of glaucoma and malignant hyperthermia
- used for long term paralysis during transport

CONTRAINDICATIONS

- known hypersensitivity to the drug or to bromides
- use cautiously in patients with underlying cardiovascular disease (increased risk of arrhythmia)

SIDE EFFECTS

Extension of the drug's pharmacological action beyond the time period needed as this may vary from skeletal muscle weakness to profound and prolonged skeletal muscle paralysis, resulting in respiratory insufficiency or apnea.

DOSAGE AND ADMINISTRATION

Reconstitute Norcuron with 10 ml bacteriostatic water, 0.9% NaCl, or D₅W

Adult:

- 0.1 mg/kg IV bolus

Pediatric (1 – 10 yrs.):

- 0.1 mg/kg IV bolus

NOTE:

- An initial IV dose generally produces first depression of muscle twitch in approximately 1 minute, good or excellent intubation conditions within 2.5 to 3 minutes and maximum neuromuscular blockade within 3 to 5 minutes.
- Duration of action will be 15 to 25 minutes.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Pontocaine Tetracaine Hydrochloride	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Pontocaine stabilizes cell membranes and blocks nerve impulses resulting in loss of sensation to skin and surrounding tissue.

INDICATIONS

- foreign body removal
- irrigation of eye (in conjunction with use of Morgan Lens®)

CONTRAINDICATIONS

- hypersensitivity to any component of this medication

PRECAUTIONS

- pregnancy
- contact lens use
- diabetes
- heart disease
- thyroid disease
- blood coagulation problems

SIDE EFFECTS

anxiety	restlessness
dyspnea	vertigo
lethargy	nausea and vomiting
seizures	urticaria
edema	tremors
bradycardias	burning sensation of the eye

DOSAGE AND ADMINISTRATION

- 1-2 drops in the affected eye prior to insertion of Morgan Lens®
- Onset in 15-20 seconds, duration 15-20 minutes

Caution: Do not allow the patient to rub or touch the eye after administration of Pontocaine as this can cause damage to globe or cornea.

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Sodium Bicarbonate	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Sodium Bicarbonate is an alkalizing agent, which causes blood pH to rise.

INDICATIONS

- metabolic acidosis not resolved with ventilation and oxygenation
- tricyclic antidepressant overdose
- hyperkalemia

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 bolus
- May be repeated, after 10 minutes, at 0.5 mEq / kg

Pediatric:

- Same as adult dose
- Repeat dose guided by ABG's only

Neonates:

- Should use half strength solution

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Sublimaze Fentanyl Citrate	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Sublimaze is an opioid analgesic. It binds to opiate receptors in the CNS, altering the response to and the perception of pain. It produces CNS depression and is a supplement to anesthesia.

INDICATIONS

- to assist in airway intubation in combative trauma patients
- to sedate violent or agitated patients
- pain control for burns and isolated extremity injuries

CONTRAINDICATIONS

- patients currently taking MAO inhibitors (a type of hypertension medication)
- hypersensitivity to Sublimaze

SIDE EFFECTS

apnea	laryngospasm
respiratory depression	arrhythmia
bradycardia	circulatory depression
hypotension	nausea and vomiting
skeletal and thoracic muscle rigidity	

DOSAGE AND ADMINISTRATION

Sedation

Adult:

- 50 - 100 mcg, IV push slowly over 1-2 minutes
- May be administered IM at the same dose

Pediatric:

- 1-2 mcg/kg, IV push slowly over 1-2 minutes, not to exceed 100 mcg

Pain management

Adult:

- 50 to 100 mcg IV slow (to avoid chest wall spasm)
- May be administered I.M. at the same dose
- Repeat until pain is controlled, or until a total of 250 mcg has been administered
- May repeat total dosing in 30 minutes, if necessary

Pediatric:

- 1-2 mcg/kg, administered IV slowly or IM
- May repeat one time at 0.5 -1.0 mcg/kg in 5 to 10 minutes
- Total dosing may be repeated in 30 minutes, if necessary

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Sublimaze Fentanyl Citrate	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

To assist in intubation

Adult:

- 100 – 250 mcg, IV push slowly, over 1 minute

Pediatric:

- 3-6 mcg/kg, up to 100 mcg, IV push slowly, over 1 minute
- After the initial IV dose, onset of sedation will be in 1 - 2 minutes with peak in 3 - 5 minutes and duration of 0.5 - 1 hour
- IM injection will produce onset of sedation in 7 –15 minutes with peak in 20 - 30 minutes and duration of 1 - 2 hours

NOTE:

- Dosage may be adjusted up for large body weight adults and children.
- 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	Thiamine Hydrochloride	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Thiamine is a water-soluble vitamin necessary to most metabolic processes, especially carbohydrate metabolism. It is used in the prevention of Wernicke's encephalopathy.

INDICATIONS

- decreased level of consciousness of unknown etiology
- moderate to severe hypothermia
- prolonged post-ictal states of unknown etiology
- hypoglycemia, secondary to ETOH abuse

CONTRAINDICATIONS

- known hypersensitivity to this medication

PRECAUTIONS

- none

SIDE EFFECTS

anaphylaxis

DOSAGE AND ADMINISTRATION

Adult:

- 100 mg IV push over 2 minutes

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Vasopressin	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Vasopressin is an exogenous, parenteral form of antidiuretic hormone (ADH). An endogenous ADH is a hormone secreted by the hypothalamus and stored in the posterior pituitary gland. Vasopressin stimulates the contraction of smooth muscle in coronary, splenic, GI, pancreatic, skin and muscular vascular beds.

INDICATIONS

- alternative pressor to epinephrine in the treatment of adult shock-refractory ventricular fibrillation
- hemodynamic support in vasodilatory shock (e.g. septic shock)

CONTRAINDICATIONS

- hypersensitivity to the drug
- not recommended for responsive patients with coronary artery disease
- pediatric patients

SIDE EFFECTS

potent peripheral vasoconstrictor

increased peripheral vascular resistance may provoke cardiac ischemia and angina

DOSAGE AND ADMINISTRATION

Adult:

- 40 units, IV push, single dose (one time only)
- IO or E.T. if IV route is unavailable

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Versed Midazolam	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Versed 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

- to achieve sedation for RSI
- seizure activity refractory to Ativan

CONTRAINDICATIONS

- known hypersensitivity to other benzodiazepines
- shock
- coma
- alcohol intoxication
- barbiturates
- uncontrolled severe pain
- pregnancy, neonates

USE CAUTIOUSLY IN

- pulmonary disease
- CHF
- renal impairment
- severe hepatic impairment
- geriatric or debilitated patients (dosage reduction required)

SIDE EFFECTS

agitation	drowsiness
excess sedation	headache blurred
vision	apnea
laryngospasm	respiratory depression
bronchospasm	coughing
cardiac arrest	arrhythmia
hiccups, nausea and vomiting	rash, pruritus
urticaria	pain and swelling at injection site

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Versed Midazolam	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

DOSAGE / ADMINISTRATION

Adult:

Healthy adults:

- 1 - 5 mg IV, titrate to effect
- < 50 kg body weight: 5 mg via MAD
- > 50 kg body weight: 10 mg via MAD
- Total dose can be repeated every 5 minutes, not to exceed 5 mg
- Can be administered I.M., but this route delays onset and extends effect
 - I.M. is not especially helpful for RSI application

Chronically ill or >60 years of age:

- 0.3-0.35 mg IV.
- Total dose can be repeated every 5 minutes, not to exceed 3.5 mg

Pediatric:

Status Epilepticus

- 2 mos. to 12 yrs., start with 0.15 mg/kg IV
- Titrate to effect
- May be repeated in 5 minutes, using 0.01 mg/kg for 2nd and subsequent doses
- 0.2 mg / kg (estimated body weight) via MAD

Procedural Sedation

<6mos:

- 0.1mg/kg I.V. May repeat same dose at 3 minutes if necessary

6mos. to 5yrs:

- 0.05-0.1 mg/kg I.V.
- Onset of action should be within 3 minutes
- Repeat using 0.05mg/kg if necessary after 3 minutes to a maximum of 6 mg cumulative dose

5yrs to 12yrs:

- 0.025-0.05 mg/kg I.V.
- Repeat in 3 minutes if necessary, to a maximum of 10 mg cumulative dose

Over 12yrs.

- Use adult dosage

NOTE:

- After IV dose, onset will be 1.5 - 5 minutes, with peak being rapid
- Duration could be from 2-6 hours

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
PHARM PROTOCOL	REVISION DATE	Zofran Ondansetron	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

ACTION

Zofran 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 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:

2 - 12 years of age

- <40 kg: 0.1 mg/kg IV
- >40 kg: 4 mg IV
- Administer over at least 30 sec and preferably over 2-5 min

Tampa Fire Rescue

Medical Protocol

APPENDIX

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	APGAR Score	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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	Assumption of Patient Care and Liability By an On-Scene Physician	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

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.

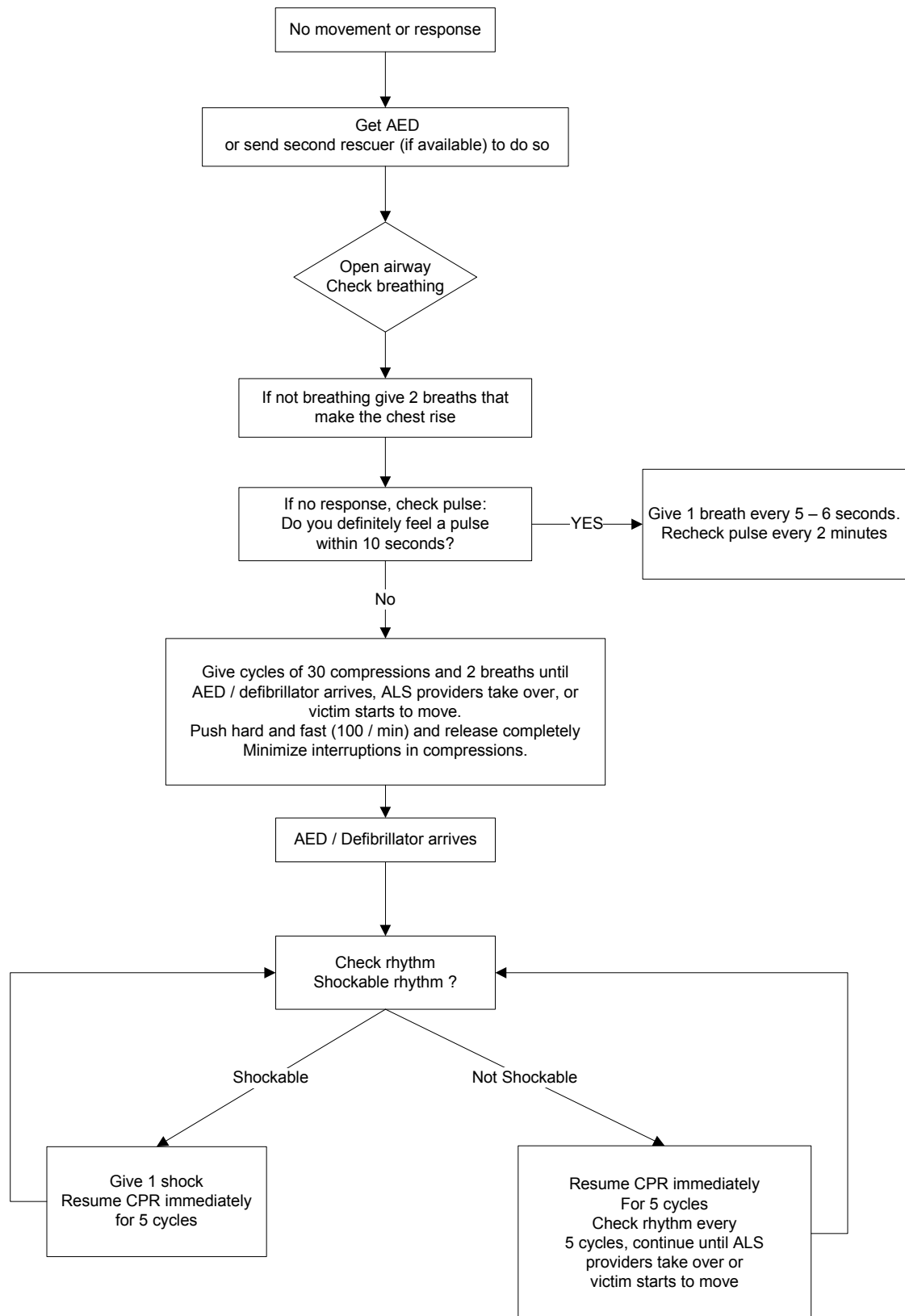
_____, MD Date: ____/____/____ Time: ____ A /P

_____ TFR _____ Witness

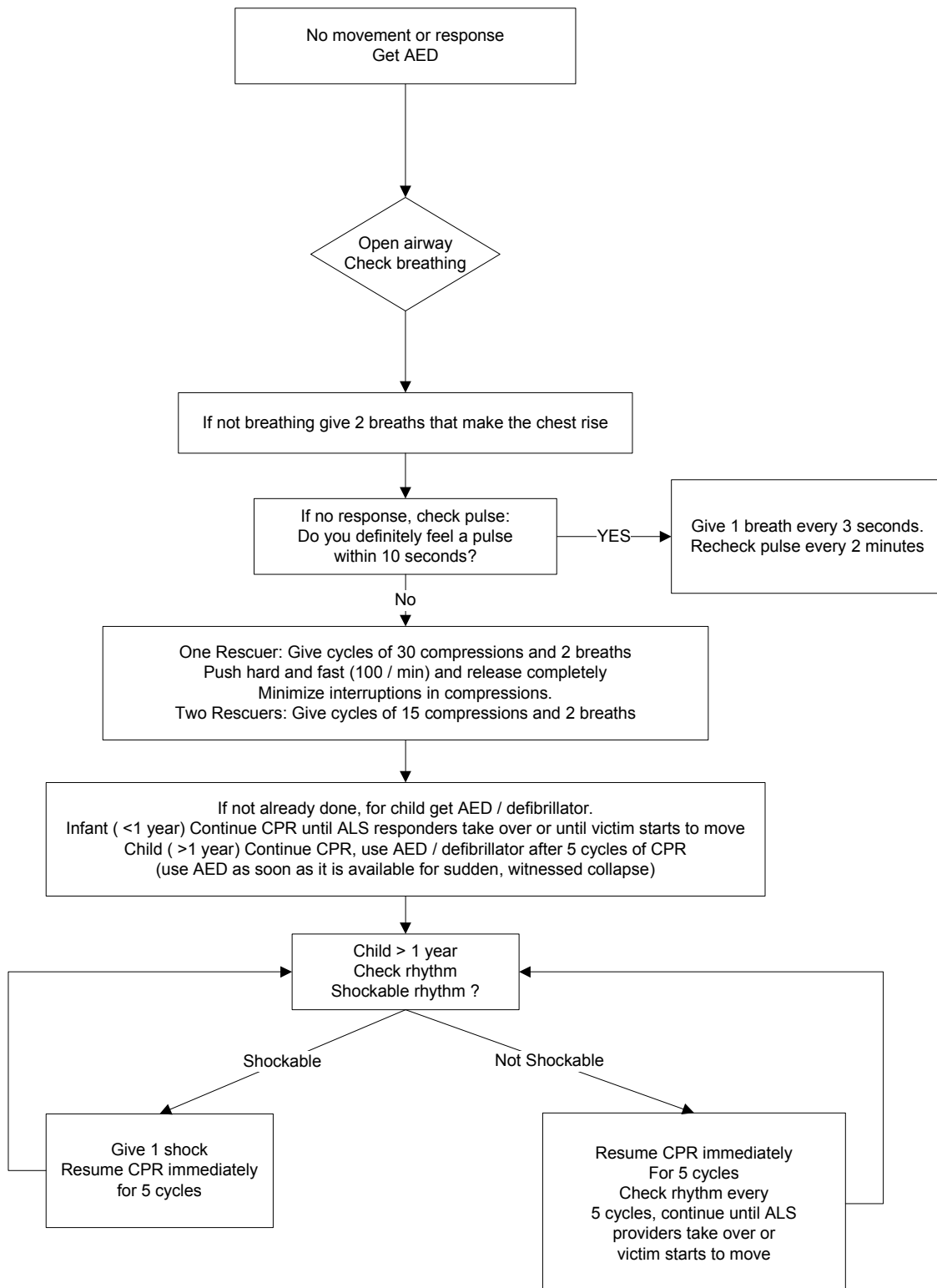
TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Carboxyhemoglobin Reference Guide	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

	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

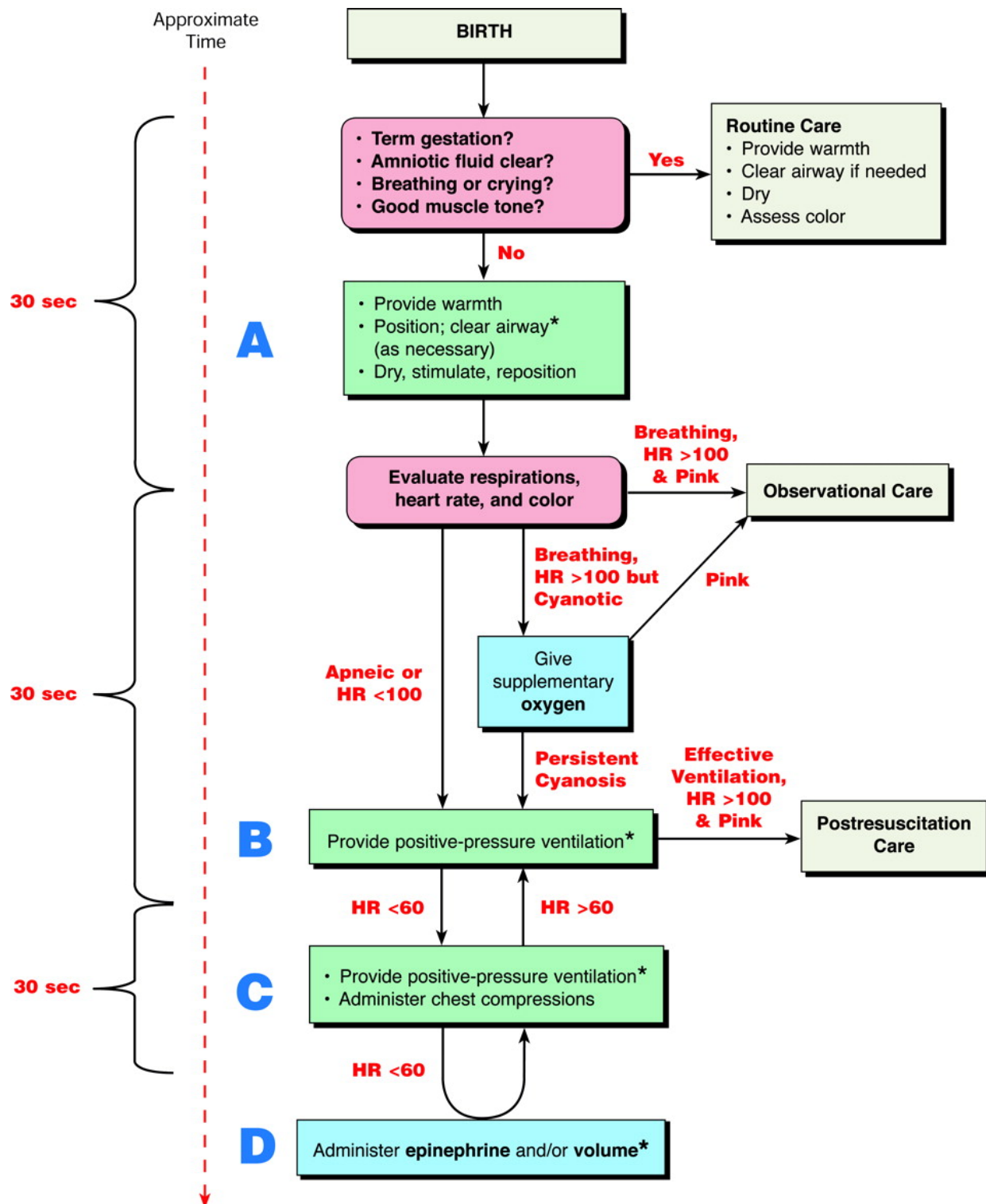
TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Adult Basic Life Support Algorithm	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Pediatric Basic Life Support Algorithm	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Neonatal Resuscitation Algorithm	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director



TAMPA FIRE RESCUE MEDICAL PROTOCOL

APPENDIX	REVISION DATE	1 Rescuer Adult CPR	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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Performance Guidelines

Check for response

- If there is no response, shout for help. If no help is available, activate the emergency response system and get the AED



Open the airway

- Head tilt–chin lift

Check for adequate breathing (take at least 5 and no more than 10 seconds)

- Look, listen, and feel

If no adequate breathing, give 2 breaths

- Make the chest rise

Check pulse

- Take at least 5 and no more than 10 seconds



Open airway



Give 2 breaths

If no pulse, start cycles of 30 compressions and 2 breaths:

- 30 compressions (push hard, push fast)
- Rate of 100 per minute
- 2 breaths

Minimize interruptions in chest compressions; try to keep interruptions to 10 seconds or less



30



2

TAMPA FIRE RESCUE MEDICAL PROTOCOL

APPENDIX	REVISION DATE	1-Rescuer Child CPR	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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Performance Guidelines

Check for response

- If there is no response, shout for help
Send someone to activate the emergency response system and get the AED



Open the airway

- Head tilt–chin lift

Check for breathing (take at least 5 and no more than 10 seconds)

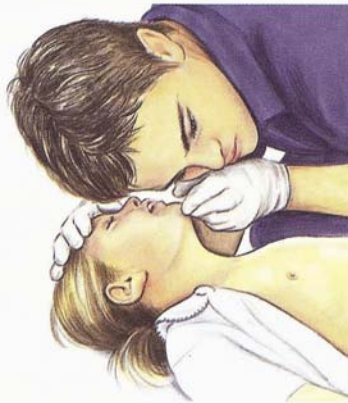
- Look, listen, and feel

If no breathing, give 2 breaths

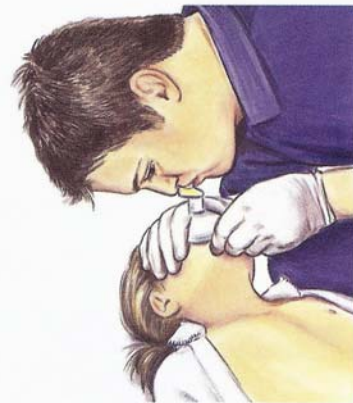
- Make the chest rise (you may need to try a couple of times to give a total of 2 breaths that make the chest rise)

Check pulse

- Take at least 5 seconds and no more than 10 seconds



Open airway, check breathing

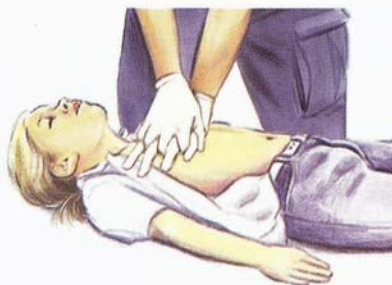


Give 2 breaths

If no pulse or if heart rate is less than 60 beats per minute with signs of poor perfusion, start cycles of 30 compressions and 2 breaths:

- 30 compressions (push hard, push fast)
- Rate of 100 per minute
- 2 breaths

Minimize interruptions in chest compressions; try to keep interruptions to 10 seconds or less



30



2

After 5 cycles, if alone, activate the emergency response system and get the AED

TAMPA FIRE RESCUE MEDICAL PROTOCOL

APPENDIX	REVISION DATE	1 Rescuer Infant CPR	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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Performance Guidelines

Check for response

- If no response, shout for help or send someone to activate the emergency response system



Open the airway

- Head tilt–chin lift

Check for breathing (take at least 5 seconds and no more than 10 seconds)

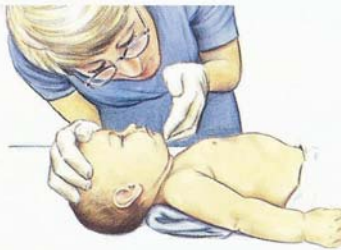
- Look, listen, and feel

If no breathing, give 2 breaths

- Make the chest rise

Check pulse

- Take at least 5 seconds and no more than 10 seconds



Open airway, check breathing



Give breaths

If no pulse or if heart rate is less than 60 beats per minute with signs of poor perfusion, start cycles of 30 compressions and 2 breaths:

- 30 compressions (push hard, push fast)
- Rate of 100 per minute
- 2 breaths



After 5 cycles, if alone, activate the emergency response system. Then return to the infant and provide CPR.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

APPENDIX	REVISION DATE	2 Rescuer Adult CPR	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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Performance Guidelines

Check for response

- If there is no response, send someone to activate the emergency response system and get the AED



Open the airway

- Head tilt–chin lift

Check for adequate breathing (take at least 5 and no more than 10 seconds)

- Look, listen, and feel

If no adequate breathing, give 2 breaths

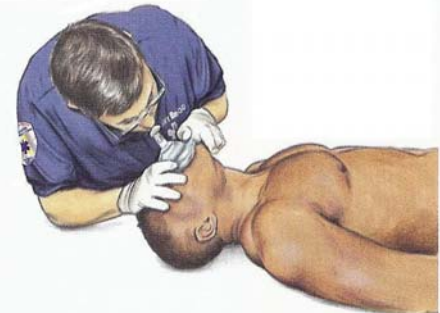
- Make the chest rise

Check pulse

- Take at least 5 seconds and no more than 10 seconds



Open airway



Give 2 breaths

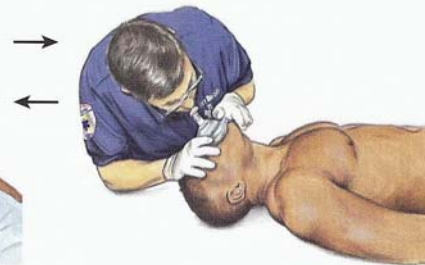
If no pulse, start cycles of 30 compressions and 2 breaths:

- 30 compressions (push hard, push fast)
 - Rate of 100 per minute
 - 2 breaths
- AED arrives after 2 cycles of CPR

Minimize interruptions in chest compressions; try to keep interruptions to 10 seconds or less



30



2

TAMPA FIRE RESCUE MEDICAL PROTOCOL

APPENDIX	REVISION DATE	2 Rescuer Child CPR	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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Performance Guidelines

Check for response

- If there is no response, send someone to activate the emergency response system and get the AED



Open the airway

- Head tilt–chin lift

Check for breathing (take at least 5 and no more than 10 seconds)

- Look, listen, and feel

If no breathing, give 2 breaths

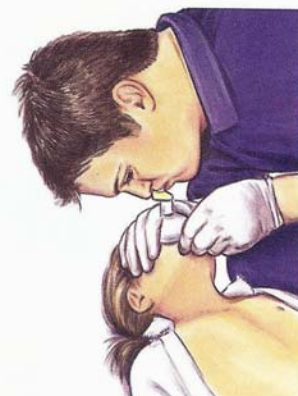
- Make the chest rise (you may need to try a couple of times to give a total of 2 breaths that make the chest rise)

Check pulse

- Take at least 5 seconds and no more than 10 seconds



Open airway, check breathing

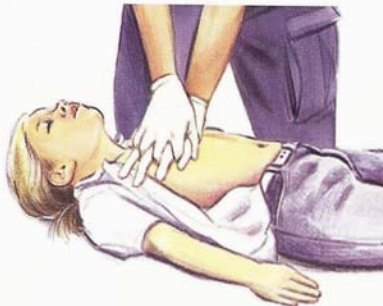


Give 2 breaths

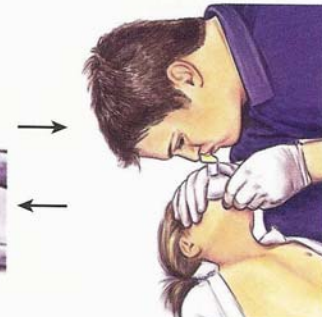
If no pulse or if heart rate is less than 60 beats per minute with signs of poor perfusion, start cycles of 15 compressions and 2 breaths:

- 15 compressions (push hard, push fast)
- Rate of 100 per minute
- 2 breaths

Minimize interruptions in chest compressions; try to keep to less than 10 seconds



15



2

TAMPA FIRE RESCUE MEDICAL PROTOCOL

APPENDIX	REVISION DATE	2 Rescuer Infant CPR	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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Performance Guidelines

Check for response

- If no response, send someone to activate the emergency response system



Open the airway

- Head tilt–chin lift

Check for breathing (take at least 5 seconds and no more than 10 seconds)

- Look, listen, and feel

If no breathing, give 2 breaths

- Make the chest rise

Check pulse

- Take at least 5 seconds and no more than 10 seconds



Open airway, check breathing



Give breaths

If no pulse or if heart rate is less than 60 beats per minute with signs of poor perfusion, start cycles of 15 compressions and 2 breaths:

- 15 compressions (push hard, push fast)
- 2 thumb–encircling hands technique
- Rate of 100 per minute
- 2 breaths



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Cincinnati Pre-hospital Stroke Scale	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Policy

The Cincinnati Pre-hospital Stroke Scale is to be utilized and documented on ALL suspected CVA patients.

<p style="text-align: center;">Facial Droop Have patient show their teeth, or smile</p>
--

Normal – Both sides of face move equally well.

Abnormal – One side of the face does not move as well as the other side.

<p style="text-align: center;">Arm Drift Patient closes eyes and holds both arms out.</p>
--

Normal – Both arms move the same or both arms do not move at all.

Abnormal – One arm does not move or one arm drifts down, compared to the other one.

NOTE: Other findings such as “pronator” grip may be helpful.

<p style="text-align: center;">Speech Have the patient say “You can’t teach an old dog new tricks”</p>

Normal – Patient uses correct words with no slurring.

Abnormal – Patient slurs words, uses inappropriate words, or is unable to speak.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

APPENDIX	REVISION DATE	State of Florida Do Not Resuscitate Order	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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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.



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 ☐ Proxy (both as defined in Chapter 765, F.S.)
☐ Court appointed guardian ☐ 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)



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

APPENDIX	REVISION DATE	EZ IO Guide	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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EZ-IO

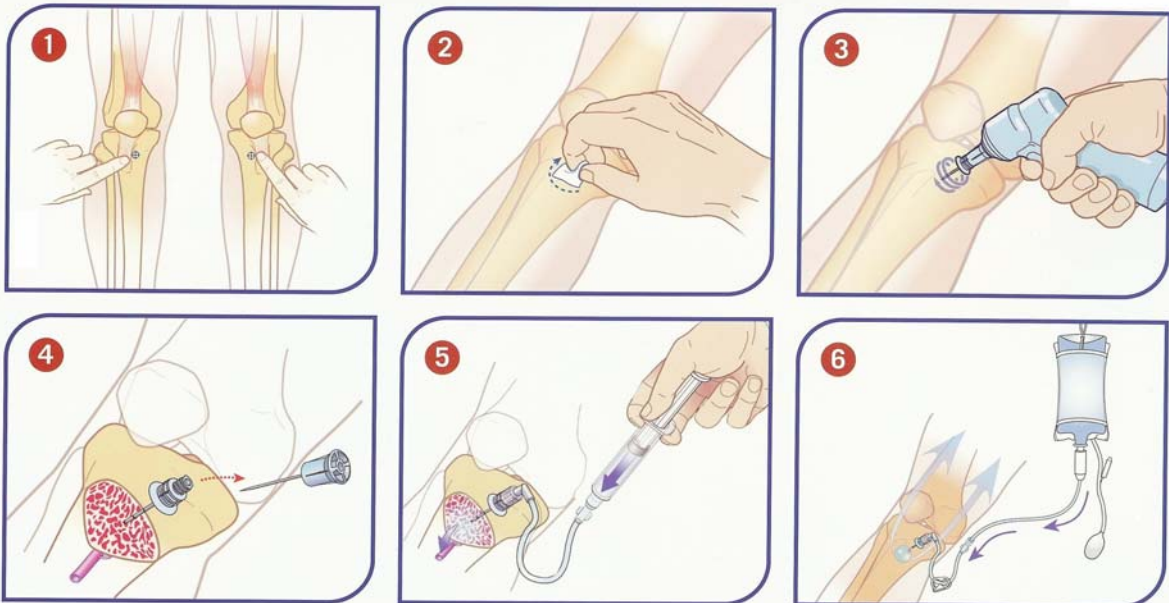
Intraosseous Infusion System

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. Catherine Carrubba Medical Director
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<i>Eye Opening</i>	
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
<i>Verbal Response</i>	
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
<i>Motor Response</i>	
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. Catherine Carrubba Medical Director
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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 if 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".

TFR USE ONLY

*PATIENT UNABLE TO SIGN DUE TO EMERGENCY CONDITION. ☐

*LEFT COPY OF "PRIVACY NOTICE" WITH PATIENT AT HOSPITAL. ☐

*PATIENT REFUSED TO SIGN. ☐

SIGNATURE OF PATIENT OR GUARDIAN

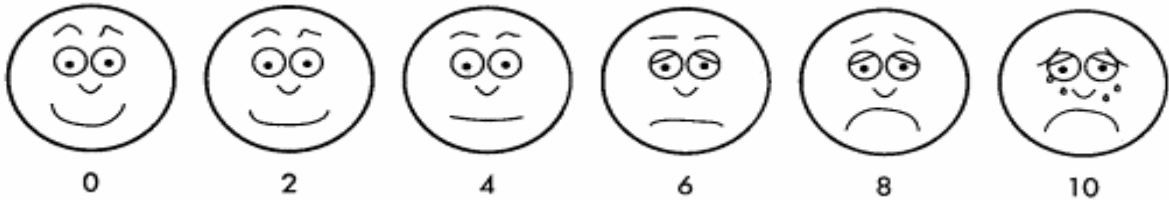
INCIDENT#: _____ DATE: _____

SIGNATURE OF OFFICER / ACT. OFFICER

TAMPA FIRE RESCUE MEDICAL PROTOCOL

APPENDIX	REVISION DATE	Pain Scale	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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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 Pain Mild Pain Moderate Pain Severe Pain Very Severe Worst Possible



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	RSI Quick Reference Chart	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

STEP 1

Lidocaine 1mg/kg ⇒ **NOT TO EXCEED 100 MG**

-OR-

Atropine 0.01 mg/kg ⇒ **FOR CHILDREN UNDER 10 YEARS OF AGE**

STEP 2

Etomidate 0.3 mg/kg

-OR-

Fentanyl or Versed ⇒ **FOR PREGNANT PATIENTS**

⇒ **FOR CHILDREN UNDER 10 YEARS OF AGE**

STEP 3

Succinylcholine 1.0 to 1.5 mg/kg

-OR-

Norcuron ⇒ **FOR MALIGNANT HYPERTHERMIA**

⇒ **FOR GLAUCOMA**

⇒ **FOR PENETRATING EYE INJURY**

FOR LONG-TERM **SEDATION** DURING TRANSPORT

Fentanyl Adult : 100 - 250 mcg
Child : 3 – 6 mcg/kg up to 100 mcg

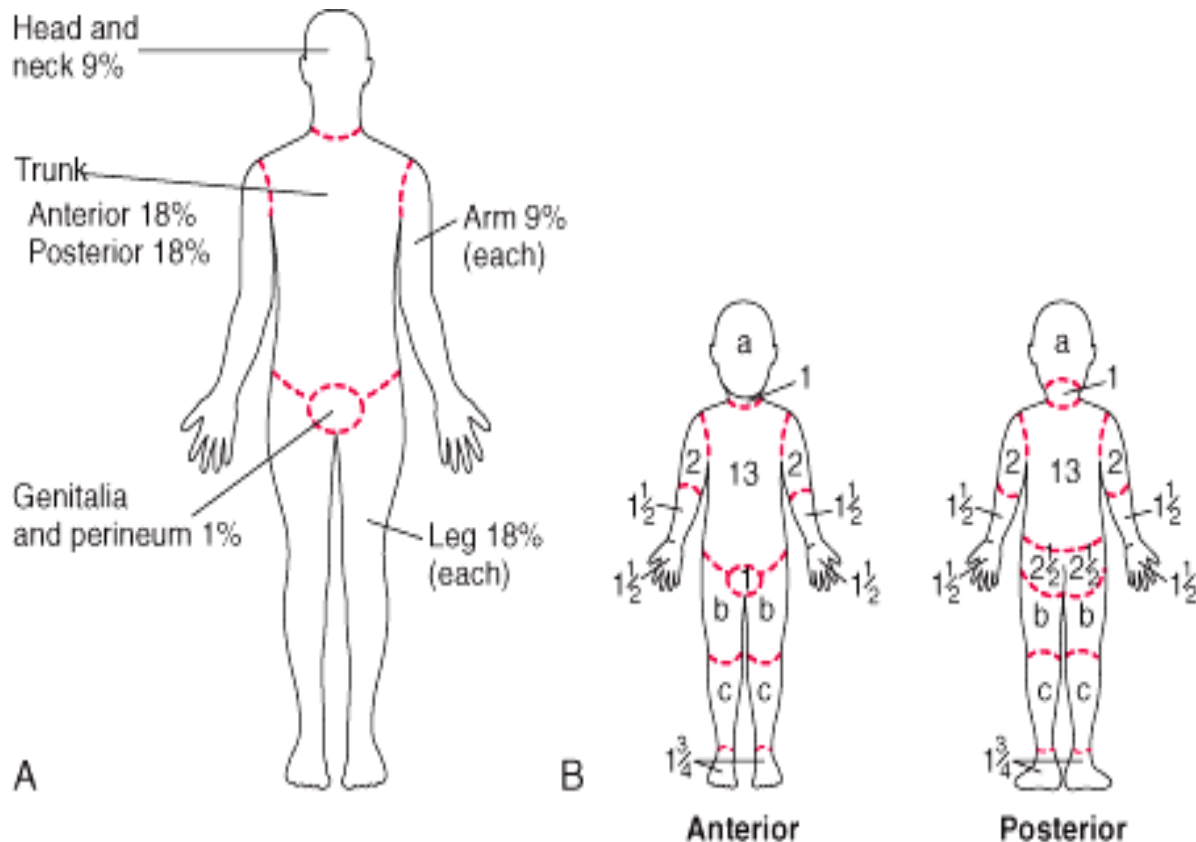
-AND-

Versed Adult : 1.0 – 5.0 mg/kg
Child : 0.05 – 0.1 mg/kg

FOR LONG-TERM **PARALYSIS** DURING TRANSPORT (consider)

Norcuron 0.1mg/kg

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Rule Of Nines	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director



Lund and Browder Chart

Body part	0 yr	1 yr	5 yr	10 yr	15 yr
a = $\frac{1}{2}$ of head	$9\frac{1}{2}$	$8\frac{1}{2}$	$6\frac{1}{2}$	$5\frac{1}{2}$	$4\frac{1}{2}$
b = $\frac{1}{2}$ of 1 thigh	$2\frac{3}{4}$	$3\frac{1}{4}$	4	$4\frac{1}{4}$	$4\frac{1}{2}$
c = $\frac{1}{2}$ of 1 lower leg	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{3}{4}$	3	$3\frac{1}{4}$

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. Catherine Carrubba Medical Director

Coral Snake



Cottonmouth - Adult



Pygmy Rattler



Eastern Diamondback



Southern Copperhead



Timber Rattler



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Spiders	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Black Widow



Brown Recluse



Black Widow Bite - Day 1



Day 2



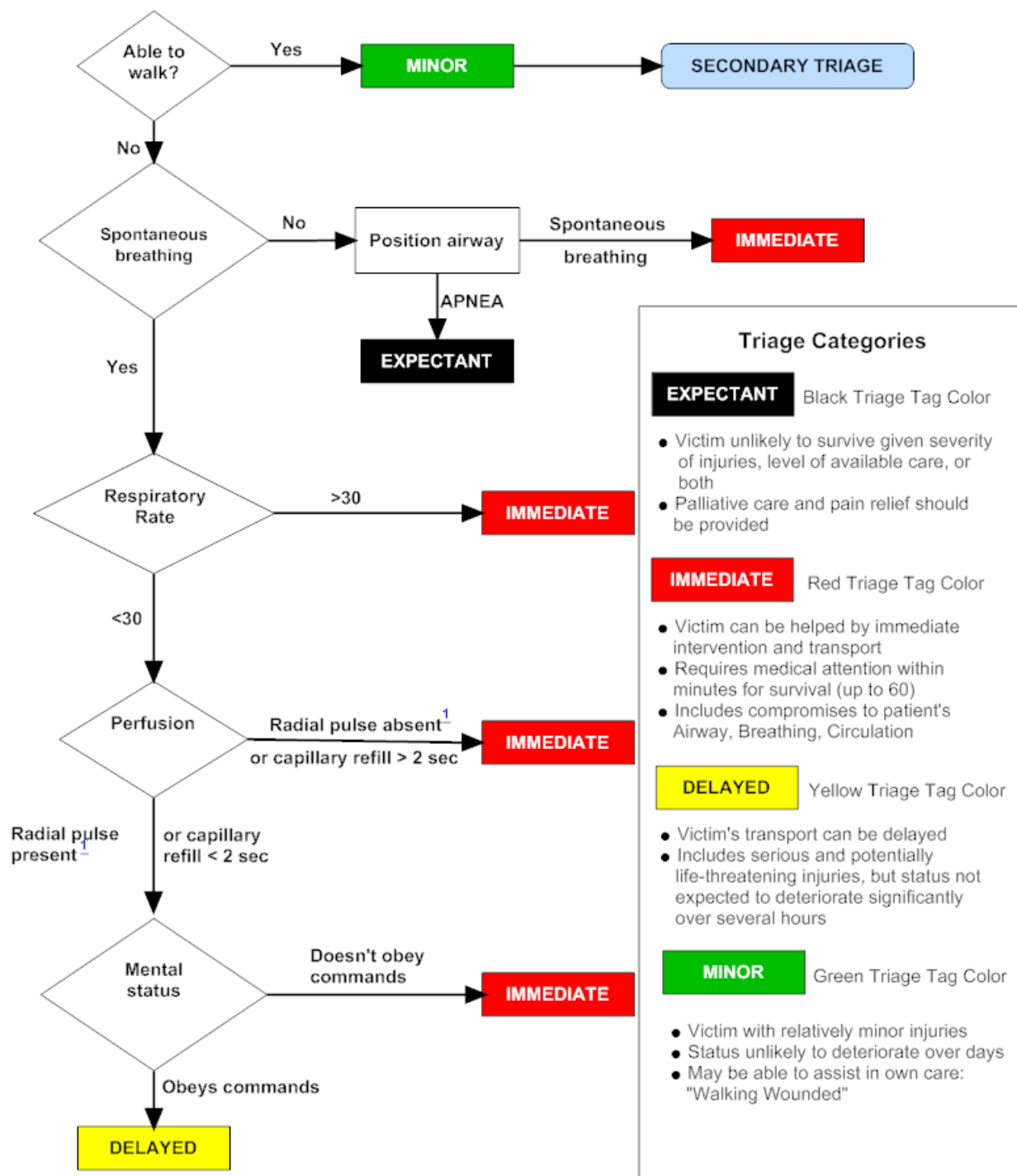
Brown Recluse Bite – Day 1



Day 10



TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	S.T.A.R.T. Triage Algorithm	ISSUE DATE 9-2009	APPROVED Catherine Carrubba Medical Director



West Central Florida EMS
STROKE ALERT AGENCY **2911**

Date: _____ /Time: _____ Rescue Unit #: _____ Age _____ Male: ☐ Female: ☐

Pt. Name _____ Incident # _____

CINCINNATI STROKE SCALE (FAST)

(check if abnormal)

☐ **F-(face)** **FACIAL DROOP:** Have patient smile or show teeth. (Look for asymmetry)

Normal: Both sides of the face move equally or not at all

Abnormal: One side of the patient's face droops.

☐ **A-(arm)** **MOTOR WEAKNESS:** Arm Drift (close eyes, extend arms, palms up)

Normal: Remain extended equally, or drifts equally or does not move at all

Abnormal: One arm drifts down when compared with the other.

☐ **S-(speech)** "You can't teach an old dog new tricks" (repeat phrase)

Normal: Phrase is repeated clearly and correctly

Abnormal: Words are slurred (dysarthria) or abnormal (aphasia) or none

☐ **T- TIME Of SYMPTOM ONSET:** _____ ←!

EVENT WITNESS NAME: _____ Cell Phone#: _____ Home _____ Pager _____

CLOSEST RELATIVE NAME (if different) _____

Cell Phone No. _____ Home phone _____ Pager _____

STROKE ALERT criteria met – Transport **IMMEDIATELY**.
Determine if destination facility can handle an acute stroke (see below).

PERTINENT HISTORY / SYMPTOMS

<input type="checkbox"/> Cardiac Arrhythmia	<input type="checkbox"/> Head trauma at onset**
<input type="checkbox"/> Weakness/numbness	<input type="checkbox"/> Seizure at onset**
<input type="checkbox"/> Dizziness	<input type="checkbox"/> On Coumadin (Warfarin)**
<input type="checkbox"/> Headache, Nausea / Vomiting, Neck Pain*	<input type="checkbox"/> Recent or current bleeding, trauma, surgery, or invasive procedure**
<input type="checkbox"/> Visual Disturbances	<input type="checkbox"/> Bleeding Disorder**
<input type="checkbox"/> Other _____	<input type="checkbox"/> Pregnancy**

EVALUATION:

SpO2 _____ % Glucose _____ mg / dl

TREATMENT:

Head Elevation > 30 (unless hypotensive)

IV NaCl (2 sites preferred, draw labs)

O2 @ 2 L/min (unless hypoxic then high flow)

Drug Therapy _____

Other _____

* **HEADACHE ONSET:** If present, was onset that of a classic "explosive" headache that is the "worst of the patient's life"? : ☐ YES ☐ NO (if yes, consider aneurysm)

Vital Signs: P: _____ R: _____ BP: Lt _____ Rt: _____

Destination: Onset < 2hours, Transport to facility capable of IV thrombolytics within 3 hour window
Onset 2-4 hours, Consider transport to facility capable of Intra-cerebral thrombolytics

*For suspected aneurysms

or

**When lytics are potentially contraindicated: consider transport (including aeromedical) to Neuroendovascular / Neurosurgical facility

Hospital Destination: _____ Time Stroke Alert called: _____

Time Arrived at Hospital _____

Name of hospital contact person: _____

ADULT TRAUMA SCORECARD



**A TRAUMA ALERT
MUST BE CALLED FOR:**

1	A score of 2 or greater for ADULT (>greater than 15 y.o.) according to trauma scorecard methodology below:	
	1 Point	2 Points
Airway	Sustained RR > 30	Active assistance (not just oxygen)
Circulation	Sustained HR > 120	Lack of radial pulse with sustained HR >120, or BP < 90
BestMotor 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)	
<p>2</p> <p>A GCS score less than or equal to 12 (excluding those whose baseline is 12 or less) [SEE SCALE BELOW]</p>		

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

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

- Approximate age
- Sex
- 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)

HILLSBOROUGH COUNTY TRAUMA AGENCY

Telephone: 813.276.2051 • Fax: 813.272.5346

<http://www.hillsboroughcounty.org/traumaagency/>

PEDIATRIC TRAUMA SCORECARD



**A TRAUMA ALERT
MUST BE CALLED FOR:**

	A score of 2 or greater for CHILD (<less than 15 y.o.) according to trauma scorecard methodology below:		
	Normal 0 Points	1 Point	2 Points
Size	Weights > 11 Kg (24 lbs)	Weights (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 non-palpable 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 trauma center, but **do not** trauma alert



EMS PROVIDER HIGH INDEX OF SUSPICION

PEDIATRIC GLASGOW COMA SCALE (< 2 yrs)

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

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

- Approximate age
- Sex
- 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)

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TAMPA FIRE RESCUE MEDICAL PROTOCOL

APPENDIX	REVISION DATE	Hillsborough County Trauma Agency Elder Gray-area Criteria	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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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

TAMPA FIRE RESCUE MEDICAL PROTOCOL				
APPENDIX	REVISION DATE	Tricyclic Antidepressant Cross-Reference List	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director

Generic Names	Trade Names
Amitriptyline	Endep Elavil Etrafon Limbitrol Trional
Nortriptyline	Aventyl Pamelor
Doxepin	Sinequan
Imipramine	Tofranil
Trimipramine	Surmontil
Amoxapine	Asendin
Desipramine	Norpramin
Protriptyline	Vivactil
Clomipramine	Anafranil

Tampa Fire Rescue

Medical Protocol

GLOSSARY

TAMPA FIRE RESCUE MEDICAL PROTOCOL

GENERAL PROTOCOL	REVISION DATE	Glossary	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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Abbreviated Run Report:	TFR 310. This is the minimum criteria established by the Florida Bureau of EMS for information left with the hospital following a patient transport.
Angioedema	The rapid swelling (edema) of the dermis, subcutaneous tissue, mucosa and submucosal tissues. It is very similar to urticaria, but urticaria, commonly known as hives, occurs in the upper dermis
Bariatrics	The branch of medicine that deals with the causes, prevention, and treatment of obesity.
Barotrauma	Physical damage to body tissues caused by a difference in pressure between an air space inside or beside the body and the surrounding gas or liquid. Barotrauma typically occurs to air spaces within a body when that body moves to or from a higher pressure environment, such as when a SCUBA diver or an airplane passenger ascends or descends
Blephrospasm	Blepharo means "eyelid". Spasm means "uncontrolled muscle contraction". The term blepharospasm ['blef-a-ro-spaz-m] can be applied to any abnormal blinking or eyelid tic or twitch resulting from any cause.
BURP maneuver	The backward, upward and rightward pressure of larynx. It improves the visualization of the larynx structures and the intubation.
Cellulitis	is a diffuse infection of connective tissue with severe inflammation of dermal and subcutaneous layers of the skin.
Coma	Coma is unresponsiveness from which a person cannot be aroused. In coma, the person's eyes remain closed.
Compartment Syndrome	An acute medical problem following injury, surgery or in most cases repetitive and extensive muscle use, in which increased pressure (usually caused by inflammation) within a confined space (fascial compartment) in the body impairs blood supply.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

GENERAL PROTOCOL	REVISION DATE	Glossary	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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Concomitantly	Existing or occurring with something else, often in a lesser way; accompanying.
Cribriform plate	The horizontal bone plate perforated with several holes for the passage of olfactory nerve filaments from the nasal cavity.
Cushings response	A compensatory response that attempts to provide adequate cerebral perfusion pressure in the presence of rising ICP presents as a rising systolic pressure, a widening pulse pressure, and bradycardia and is a late presentation of brain stem dysfunction
Cushings Triad	Cushing's triad (a very late presentation of brain stem dysfunction) presents as hypertension, usually with a widening pulse pressure, bradycardia, and abnormal respiratory patterns.
Differential	Two or more diseases with similar symptoms
Diverticulitis	A common digestive disease particularly found in the colon, which results if one of these diverticula becomes inflamed or infected. The colon can become infected with craters of food stuck inside, which causes abdominal pain.
Dysuria	Difficult or painful urination.
E.D	Emergency Department
Emancipated minor	A pregnant female, a female who has given birth, or a married person of either sex).
Encephalopathy	Literally means disorder or disease of the brain
ePCR	Electronic patient care report
Erythema	Any abnormal redness of the skin.
Exsanguinate	To drain away or deprive an organ of blood.
Extrapyramidal effects	These symptoms can include things such as repetitive, involuntary muscle movements (such as lip smacking) or an undeniable urge to be moving constantly

TAMPA FIRE RESCUE MEDICAL PROTOCOL

GENERAL PROTOCOL	REVISION DATE	Glossary	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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Extravasation	The accidental administration of IV medication into the surrounding tissue, either by leakage (e.g. because of brittle veins in very elderly patients), or direct exposure (e.g. because the needle has punctured the vein and the infusion goes directly into the arm tissue).
FAC	Florida Administrative Code
Fasciculation	A small, local, involuntary muscle contraction (twitching) visible under the skin arising from the spontaneous discharge of a bundle of skeletal muscle fibers.
Five-point auscultation	Auscultation of the left and right anterior chest, left and right mid-axillary, and over the stomach
Gait	The pattern of how a person walks
HRS Abuse Hotline	1-800-96ABUSE
Hypochloremia	An electrolyte disturbance whereby there is an abnormally depleted level of the chloride ion in the blood and is often due to vomiting.
Hypokalemia	Refers to the condition in which the concentration of potassium in the blood is low.
Hyponatremia	An electrolyte disturbance in which the sodium concentration in the plasma is lower than normal
Hypopharynx	The inferior portion of the pharynx, between the epiglottis and the larynx.
Hypotonia	Decreased tone of skeletal muscles.
Lacrimator	A gas that makes the eyes fill with tears but doesn't damage them.
LEO	Law Enforcement Officer
Lividity	Unnatural lack of color in the skin (as from bruising or sickness or emotional distress). Usually refers to the process through which the body's blood supply will stop moving after the heart has stopped pumping it around the inside of the deceased.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

GENERAL PROTOCOL	REVISION DATE	Glossary	ISSUE DATE 9-2009	APPROVED Dr. Catherine Carrubba Medical Director
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Malaise	A condition of general bodily weakness or discomfort, often marking the onset of a disease.
Malignant Hyperthermia	Malignant hyperthermia occurs when a rare, inherited muscle abnormality causes a severe and sometimes fatal reaction to a dose of anesthetics. Symptoms usually occur within the first hour after a medication that can trigger the disorder is administered, although the symptoms can be delayed for up to 12 hours.
Micturition	Urination, the act of urinating
Myalgia	Muscular pain or tenderness, especially when diffuse and nonspecific.
Myoclonus	A sudden twitching of muscles or parts of muscles, without any rhythm or pattern, occurring in various brain disorders.
Myoclonus	A neurologic condition characterized by sudden, abrupt, brief, involuntary, jerk-like contractions of a muscle or muscle group.
NIBP	Non-invasive blood pressure
O.I.C.	Officer In Charge. The officer of a TFR advanced life support unit. He / she may be the Captain or Acting Captain on an ALS Engine, or Lieutenant or Acting Lieutenant on a Rescue Car.
On-line medical control physician:	An emergency department physician who is under contract with Tampa Fire Rescue to provide medical advice via radio, to TFR paramedics.
On-scene physician:	A State of Florida licensed D.O. or M.D. who assumes patient care on the scene of a TFR medical emergency.
Orthostatic hypotension	A form of hypotension in which a person's blood pressure suddenly falls when the person stands up.
P.C.I.	Percutaneous Coronary Intervention, commonly known as coronary angioplasty or simply angioplasty, is a therapeutic procedure to treat the stenotic (narrowed) coronary arteries of the heart found in coronary heart disease.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

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Patient Care Report:	Official, legal documentation which includes all pertinent information, and treatment of a patient, attended to by Tampa Fire Rescue.
PCR	Patient care report
Pleural effusion	Excess fluid that accumulates in the pleural cavity,
Positional Asphyxia	Positional asphyxia, also known as “postural asphyxia”, is a form of asphyxia which occurs when someone's position prevents them from breathing adequately. Asphyxia or asphyxiation is a condition of severely deficient supply of oxygen to the body. Research has suggested that restraining a person in a face down position is likely to cause greater restriction of breathing than restraining a person face up.
Potentiate	To increase the effect of or act synergistically with a drug.
Pressor agent	Any substance that elevates arterial blood pressure.
Pyelonephritis	An ascending urinary tract infection that has reached the pyelum (pelvis) of the kidney.
RDO	Rescue Division Officer
Return of Spontaneous Circulation (ROSC)	A palpable pulse, which is present after clinically documented asystole.
Rhinitis	Commonly known as a runny nose, is the medical term describing irritation and inflammation of some internal areas of the nose.
Rigor mortis	The stiffening of the body after death because of a loss of Adenosine Triphosphate (ATP) from the body's muscles.
Sellick Maneuver	A method of preventing regurgitation of an anaesthetized patient during endotracheal intubation by applying pressure to the cricoid cartilage.
Sick Sinus Syndrome	Malfunction of the heart's natural pacemaker (sinus or sinoatrial node) that causes heart rhythm to vary randomly. Heart rhythm may be too slow or too fast.

TAMPA FIRE RESCUE MEDICAL PROTOCOL

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Somnolence	A state of near-sleep, a strong desire for sleep, or sleeping for unusually long periods
Stupor	Stupor is unresponsiveness from which a person can be aroused only by vigorous, physical stimulation.
Supine Hypotension Syndrome	A syndrome characterized by pallor, tachycardia, sweating, nausea, hypotension and dizziness and occurs when a pregnant woman lies on her back and resolves when she is turned on her side.
TFR 310	See Abbreviated Run Report
Thyroid storm	A life-threatening condition that develops in cases of untreated hyperthyroidism. Symptoms are severe and may include: agitation, change in alertness (consciousness), confusion, diarrhea, fever, pounding heart (tachycardia), restlessness, shaking, sweating.
TKO	To Keep Open. Usually refers to an IV infusion rate of 5-30cc/hr in order to keep from having to do periodic IV flushes.
Torsade de pointes	An uncommon variant of ventricular tachycardia. Torsade is defined as a polymorphous VT in which the morphology of the QRS complexes varies from beat to beat. The ventricular rate can range from 150 beats per minute (bpm) to 250 bpm.
Vasculitis	A term for a group of diseases that feature inflammation of the blood vessels.
Visual acuity	Acuteness or clearness of vision, especially form vision, which is dependent on the sharpness of the retinal focus within the eye and the sensitivity of the interpretative faculty of the brain
WPW Syndrome	Wolff-Parkinson-White Syndrome: A syndrome of pre-excitation of the ventricles of the heart due to an accessory pathway known as the bundle of Kent. This accessory pathway is an abnormal electrical communication from the atria to the ventricles.