

# Hillsborough County Trauma Agency Uniform Trauma Transport Protocol

Change 11

Effective January 31, 2011 through January 30, 2013

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



## System Participants:

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



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**IA. DISPATCH PROCEDURES - GROUND**

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

The primary PSAPs and their area of responsibility are:

1. Tampa Police Department (TPD): all of the city of Tampa
  2. Hillsborough County Sheriff's Office (HCSO): all of unincorporated Hillsborough County
  3. Temple Terrace Police Department (TTPD): all of Temple Terrace
  4. Plant City Police Department (PCPD): all of Plant City
  5. Tampa International Airport Police Department (TIA PD): all of TIA
  6. University of South Florida Police Department (USF PD): all of USF area
  7. MacDill Air Force Base Alarm Center: all of MacDill AFB
- B. The 9-1-1 call taker relies on the address information provided by the caller as primary dispatch information, using the screen display only as secondary or backup information. The public safety call taker may also require a call back number. Generally, wireless phone calls provide the 9-1-1 system with the caller's phone number and longitude, latitude coordinates, but the call taker still obtains location and call back numbers from all cellular callers.
- C. A special needs registry is maintained in conjunction with Verizon to identify locations where callers might be unable to speak over the phone. Each PSAP is equipped with telecommunications devices for the deaf (TDDs). Every PSAP can also refer callers to AT&T's language line if in-house interpreters are not available.



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- D. Once the 9-1-1 call taker determines the nature of the call is medical, the request for emergency assistance can be then transferred to the appropriate secondary PSAP for ambulance, fire, highway emergency, or poisoning information by pressing one button.
- E. Hillsborough County Emergency Dispatch Center (HCEDC), TFR, TTPD, PCPD, and MacDill AFB Alarm Center, have received specialized training in emergency medical dispatch.
1. Unincorporated Hillsborough County  
Calls requesting emergency medical assistance are first routed through the primary PSAP at HCSO and transferred to the secondary PSAP at HCEDC if call is medical in nature.
  2. City of Tampa  
Calls requesting emergency medical assistance originating in the City of Tampa, TIA and USF, are first routed through the primary PSAP of the respective jurisdiction (TPD, TIA PD, or USF PD) and transferred to the secondary PSAP at TFR if call is medical in nature.
  3. Temple Terrace and Plant City  
Requests for emergency medical assistance originating in these jurisdictions are dispatched within their respective PSAPs.
  4. MacDill Air Force Base  
Requests for emergency medical assistance originating from MacDill AFB are initially answered at the MacDill Alarm Center and transferred to the secondary PSAP at TFR as indicated.
  5. All Florida state road emergencies  
Florida Highway Patrol (FHP) is a primary PSAP for \*FHP cellular phone calls only. Both HCSO and TPD can refer calls in their jurisdiction that jointly falls on FHP's territory.
  6. Poison information for entire region  
If the request for emergency medical assistance is poison-related in nature, the emergency medical dispatchers at the secondary PSAPs, HCEDC and TFR, will transfer the call to the Florida Poison Information Center.
- F. General public requests for emergency medical assistance:
- The emergency medical dispatcher is responsible for providing prearrival medical instructions where appropriate, and obtaining the following information when answering all incoming phone lines, regardless of origin:



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

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

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

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

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

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



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- I. In Hillsborough County, all emergency medical dispatch PSAPs have adopted the nationally recognized Medical Priority Dispatch System into their standard operating procedure to decide the appropriate level of response (personnel, equipment and vehicles) to send to a scene. While emergency medical dispatch caller interrogation algorithms are uniform across agencies, deployment practices necessarily vary because of differences in population distribution and emergency medical resources in the Hillsborough County trauma system.
- J. There are a finite number of possible deployment response patterns: ALS with or without lights and sirens, with or without an engine, and/or BLS (choice of four BLS ambulance services - American Medical Response, Americare, Sun City Center Emergency Squad, and TransCare). The recommended deployment for a potential trauma alert is an ALS transport vehicle plus additional first responder vehicles such as engine companies.
- K. Tampa, Temple Terrace, Plant City, Hillsborough County and MacDill Air Force Base operate separate emergency medical services response systems. The emergency medical dispatcher of each will be responsible for:
1. Dispatching all calls within his respective jurisdiction in priority sequence.
  2. Promptly acknowledging all radio transmissions, and maintaining appropriate response coverage.
  3. Tracking current unit status to ensure proper unit selection by the Computer Aided Dispatch (CAD) system. The closest available unit should be responded to a call for assistance. The CAD system will be the initial source of information for determining that closest unit. An available unit not in station may be considered for deployment. Examples of such circumstances can include:
    - a. A unit "on the air" close to the call will be responded over a unit that is in its substation.
    - b. A unit at a hospital or on a scene where transport is not anticipated will be considered for dispatch over a unit that is not yet activated.
    - c. The emergency medical dispatcher will refer to the jurisdiction's dispatch procedure for zoning, if appropriate.
- L. Additional emergency response agencies will be used when necessary. All dispatch centers have access to emergency resources through radio communications if available, or by telephone if necessary, to request assistance. On-scene personnel must identify the



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emergency resources needed. These services include but are not limited to the following:

1. hazardous materials exposure teams (HAZMAT): City of Tampa and Hillsborough County Fire Rescue;
  2. structural collapse and technical rescue specialists: Tampa Bay Task Force Urban Search and Rescue (USAR) through the City of Tampa and Hillsborough County Fire Rescue;
  3. water rescue teams: Florida Marine Patrol and U.S. Coast Guard;
  4. utility emergency teams: Tampa Electric and Peoples Gas Company;
  5. law enforcement agencies: the Police Departments of the Cities of Tampa, Temple Terrace, Plant City, Tampa Airport, University of South Florida; Hillsborough County Sheriff's Office, and Florida Highway Patrol.
- M. For the efficient day-to-day operation of the Hillsborough County trauma system, formal and informal mutual aid agreements exist among the emergency medical transport services within Hillsborough County and between specific outlying counties to supplement equipment and personnel on an ad hoc basis. Depending on the severity and extent of an incident, a graduated approach for additional assistance is followed when local emergency medical response needs exceed the capacity of the requested ALS ground emergency medical transport service.

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

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



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**IB. DISPATCH PROCEDURES - AIR**

- A. There are two air ambulance services available to Hillsborough County: Aeromed, operated by Tampa General Hospital, 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, the emergency medical dispatcher will notify all responding field units of the action taken, provide a helicopter ETA to the scene, and dispatch appropriately (additional engine for LZ). The emergency medical dispatcher will be as specific as possible when contacting the air medical communication specialist by providing the following information:

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



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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
- 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



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- F. The security of the air medical and ground crews, the patient, and bystanders are of paramount importance in the execution of any helicopter mission. The personnel responsible for LZ setup and communications shall have received prior training in helicopter safety.
1. The fire department or law enforcement personnel routinely lays out the LZ for the air medical unit.
  2. The LZ commander of the agency will establish and maintain contact with the flight crew through the emergency medical dispatcher to keep a continuous communication connection between the scene and the helicopter.
- G. The air medical communication specialist must be aware of the operational status of its flight program at all times. If an air medical unit is out of service for repair or maintenance procedures, that individual is responsible for notifying the dispatchers of the city and county fire rescue and emergency medical services concurrently of changes in state of readiness.
- H. The air medical communication specialist is responsible for tracking flight status to maintain current helicopter location and activity.
- I. If the air medical agency's aircraft is not already in service, the air medical communication specialist may deploy the helicopter to an emergency scene for a patient meeting trauma alert criteria. A twenty minute time frame is suggested as a guideline only and is not intended to be an absolute. Appropriate scenarios include the following:
1. If the patient is inaccessible by a ground rescue approach.
  2. If total transport time by ground significantly exceeds transport time by air.
  3. Strong suspicion of spinal cord injury, where ground transportation may aggravate injury.
- J. The air medical program may decline the deployment of the helicopter to an emergency scene response request. Examples of such situations include but are not limited to:
1. Inclement weather: the pilot decides mission viability subject to environmental conditions, and advises the air medical communication specialist accordingly.
  2. The presence of hazardous materials.
  3. Certain presumption of death conditions such as a blunt trauma code.



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- 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 64J-2.004, 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 <sup>1</sup>	• Sustained RR $\geq$ 30	<input type="checkbox"/> Active assistance <sup>2</sup>
CIRCULATION	• Sustained HR > 120	<input type="checkbox"/> Lack of radial pulse with sustained fast heart rate (>120), or <input type="checkbox"/> BP < 90
BEST MOTOR RESPONSE	<input type="checkbox"/> BMR = 5	<input type="checkbox"/> BMR of $\leq$ 4, or <input type="checkbox"/> Paralysis, or <input type="checkbox"/> Suspected spinal cord injury, or <input type="checkbox"/> Loss of sensation
CUTANEOUS	<input type="checkbox"/> Tissue loss <sup>3</sup> <input type="checkbox"/> GSW to extremities	<input type="checkbox"/> Amputation <sup>4</sup> , or <input type="checkbox"/> 2nd or 3rd degree burns $\geq$ 15% TBSA, or <input type="checkbox"/> Any high voltage electrical or lightning injury, or <input type="checkbox"/> Penetrating injury to head, neck or torso <sup>5</sup>
LONG BONE FRACTURE	<input type="checkbox"/> Single fracture site due to MVA, or <input type="checkbox"/> Single fracture site due to a fall $\geq$ 10 feet	<input type="checkbox"/> Multiple fracture sites
AGE	<input type="checkbox"/> $\geq$ 55	
MECHANISM OF INJURY	<input type="checkbox"/> Ejection from vehicle <sup>6</sup> , or <input type="checkbox"/> Deformed steering wheel <sup>7</sup>	

<sup>1</sup> Airway evaluation is designed to reflect the intervention required for effective care

<sup>2</sup> Not just oxygen

<sup>3</sup> Degloving injuries, major flap avulsions (> 5 inches)

<sup>4</sup> Amputations proximal to the wrist or ankle

<sup>5</sup> Excluding superficial wounds in which the depth of the wound can be easily determined

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

<sup>7</sup> Only applies to driver of vehicle

**\* NOTE: A SCORE OF 2 OR GREATER DETERMINES AN ADULT TRAUMA ALERT, AND WILL BE TRANSPORTED TO A TRAUMA CENTER**



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- 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. The EMT or paramedic should consider transporting that patient to a trauma center if one or more of the following conditions are satisfied:

#### 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
  - iii) Diabetic medications
  
- e. Medical History of:
  - i) Cardiac
  - ii) CHF
  - iii) COPD
  - iv) Paralysis
  - v) Dementia
  - vi) Surgical: recent surgery, transplant recipient
  - vii) Diabetes



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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 64J-2.005, 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	<input type="checkbox"/> Weighs more than 11 Kg (24 lbs)	<input type="checkbox"/> Weighs 11 Kg or less (24 lbs) or measures 33 inches or less in length	
AIRWAY	<input type="checkbox"/> Normal, or <input type="checkbox"/> Supplemental O <sub>2</sub>		<input type="checkbox"/> Assisted <sup>1</sup> , or <input type="checkbox"/> Intubated
CONSCIOUSNESS	<input type="checkbox"/> Awake, alert and age-appropriate orientation	<input type="checkbox"/> Amnesia, or <input type="checkbox"/> Reliable Hx. of loss of consciousness	<input type="checkbox"/> Altered mental status, or <input type="checkbox"/> Coma, or <input type="checkbox"/> Paralysis, or <input type="checkbox"/> Suspected spinal cord injury <sup>2</sup> , or <input type="checkbox"/> Loss of sensation
CIRCULATION	<input type="checkbox"/> Good peripheral pulses, or <input type="checkbox"/> SBP is greater than or equal to 90 mm Hg	<input type="checkbox"/> The carotid or femoral pulse is palpable but neither the radial or pedal pulses are palpable, or <input type="checkbox"/> SBP is less than 90 mm Hg	<input type="checkbox"/> Weak or nonpalpable carotid or femoral pulse, or <input type="checkbox"/> SBP is less than 50 mm Hg
FRACTURE	<input type="checkbox"/> None seen nor suspected	<input type="checkbox"/> Suspected single closed long bone fracture <sup>3</sup>	<input type="checkbox"/> Any open long bone fracture, or <input type="checkbox"/> Multiple fracture / dislocation sites <sup>3</sup>
CUTANEOUS	<input type="checkbox"/> No visible injury, or <input type="checkbox"/> Contusion, abrasion, minor laceration		<input type="checkbox"/> Major tissue disruption <sup>4</sup> , or <input type="checkbox"/> Amputation <sup>3</sup> , or <input type="checkbox"/> 2nd or 3rd degree burns to 10% or more of total body surface area, or <input type="checkbox"/> Any high voltage electrical or lightning injury, or <input type="checkbox"/> Penetrating injury to head, neck, or torso

<sup>1</sup> Includes measures such as manual jaw thrust, continuous suctioning, or other adjuncts

<sup>2</sup> As evidenced by sensory or motor findings of weakness, decreased strength or sensation

<sup>3</sup> Proximal to the wrist or ankle

<sup>4</sup> Major degloving injuries, major flap avulsions, or major soft tissue disruption

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



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- 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.
  
  - b. If the number of patients exceeds the capacity of all ALS services that are otherwise engaged in a mass casualty response, and when directed by the incident commander, the BLS unit may transport the trauma alert patient to a trauma center or a non-trauma center meeting the criteria for an initial receiving hospital as per 64J-2.002(3)(a), F.A.C.
  
4. There will be instances when the trauma patient would benefit from the rapid transport or specialized treatment modalities that an air medical service can provide. Although the clinical capabilities of the air and ground units may not differ greatly, the flight crew's chief priorities are to minimize scene time and facilitate rapid transport to the appropriate facility, while providing safe and appropriate emergency care to the patient. To that end, the flight crew will assume medical responsibility for the patient immediately upon receipt of a verbal patient report from the ground crew.



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.
  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.

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 813-914-4596, immediately upon its completion without solicitation. If the particular emergency medical services unit must go back into service at once, every attempt should be made to comply with this requirement at the earliest available opportunity, but no later than the end of the shift when the death occurred. To ensure legibility, only the top (original) pages of the form will be faxed.
  
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



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### **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 Hospital (Level I) and St. Joseph's Hospital (Level II).
  - b. Depending on the location of the incident, traffic considerations or weather conditions, the senior care giver may decide at times that it would be faster to transport an adult trauma alert from certain scenes 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 2<sup>nd</sup> or 3<sup>rd</sup> burn involving a body surface area of 15% or greater for adults, or 10% or greater for children, and/or a circumferential burn, and/or any high voltage electrical or lightning injury. Currently Tampa General Hospital has the only burn



center in the County.

- b. Amputation with the potential for reimplantation. Currently Tampa General Hospital is the only trauma center with a comprehensive hand surgery team on call 24 hours a day.
  - c. Suspected spinal cord injury with evidence of significant motor or sensory involvement. Currently Tampa General Hospital is the only 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.

Examples of such emergency circumstances include the following:

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



command/ management procedure)

6. The EMS provider shall only transport a trauma alert to an initial receiving hospital (non-trauma center) which has previously certified to the Trauma Agency that it meets the state's five prehospital trauma alert hospital transport requirements specified in 64J-2.002(3)(a), F.A.C. Those criteria and certified facilities are listed in section VIII: Documentation of Hospital Criteria.
7. All ground emergency medical transport services responding at the request of agencies located outside of Hillsborough County will deliver trauma patients only to those hospitals which meet the state's five prehospital trauma alert hospital transport requirements specified in 64J-2.002(3)(a), F.A.C.
8. If the senior care giver at the scene determines that the trauma patient does not meet trauma alert criteria nor need trauma center level care, the patient may choose his/her hospital destination.

B. Transport destination deviations

1. Causing a trauma patient to be transported to an inappropriate destination is a TTP exception. The following circumstances are examples of such a departure. Any TTP exception must be documented and accompanied with a justification for the decision on the current patient care record.
  - a. Transporting a trauma alert patient to a non-trauma center.
  - b. Transporting a trauma alert patient to a hospital that does not meet all five criteria specified in 64J-2.002(3)(a), F.A.C. These hospitals will be listed under "Other" in section VIII.
  - c. Transporting a trauma alert patient requiring specialized capabilities contrary to the provisions specified in section III, paragraph A2.
  - d. Transporting a trauma alert patient to a trauma center contrary to the provisions specified in section III, paragraph A1.
2. Out-of-county response transport destination decisions will be based upon the protocol of the requesting agency or county.

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#### **IV. EMERGENCY INTERHOSPITAL TRANSFER PROCEDURES**

- A. A trauma alert patient will only be transported to a trauma center or pediatric trauma center facility that can continue the appropriate level of definitive care. Once a trauma alert patient has been brought to a trauma center or pediatric trauma center facility, that patient may not be moved to a facility that is not trauma center or pediatric trauma center until his life-threatening injuries have been stabilized by the necessary operative or nonoperative measures. The attending trauma center physician will decide when the patient may be safely transferred to another facility without compromise of physiological status.
  
- B. Mutual aid agreements may be pursued between the trauma centers in the county and/or between each of these facilities with out-of-county trauma centers to appropriately triage and transfer certain trauma cases between facilities on an ad hoc basis.
  
- C. There will be occasions when a non-trauma center hospital in Hillsborough County should refer a trauma patient to a trauma center or pediatric trauma center facility. The transfer process should be initiated immediately upon the recognition that a patient meets trauma alert criteria, even while resuscitative efforts are underway. This hospital should initiate procedures within 30 minutes of the patient's arrival to transfer the trauma alert patient to a trauma center or pediatric trauma center (Section 64J-2.002 (3)(a) (4), F.A.C.). The transfer should then be implemented without delay.
  
- D. Referral to a trauma center or pediatric trauma center facility should also be strongly considered for any trauma patient with specific injuries, combinations of injuries or who suffered a mechanism of injury consistent with a high-energy transfer. Guidelines for indications to transfer trauma patients early in the resuscitative phase from a non-trauma center to a trauma center-are included at the end of this section for physicians at non-trauma centers to facilitate timely transfer decisions for patients suffering trauma. The services available at the initial receiving hospital and the services necessary at the referring trauma center should be taken into account when using these guidelines. As always, the decision to transfer a patient should be made weighing the risks and benefits of that transfer.



## Hillsborough County Uniform Trauma Transport Protocol

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

1. Tampa General Hospital Transfer Center

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

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

2. St. Joseph's Hospital Referral Communication Center

Local	(813) 870-4445
Statewide	(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:

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.



## *Hillsborough County Uniform Trauma Transport Protocol*

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



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### 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. Hillsborough County hospitals will update their availability of on-call surgical specialty physicians via the appropriate EMResource website page.
- 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/flare, chemical, scalding, contact, or electrical, are to be transferred to a burn center as follows:

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

9. ELDER GRAY-AREA CRITERIA

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

- a. Motor vehicle collision associated with:
  - i. Rapid deceleration of automobile (> 35 mph)
  - ii. Pedestrian/bicycle/golf cart
  - iii. Motorcyclist
  - iv. Vehicle occupant with lack of restraints
  - v. Significant passenger space invasion
  - vi. Prolonged extrication greater than 20 minutes
  - vii. Significant vehicular damage
  - viii. Rollover
  - ix. Fatality of other occupant
  
- b. Other events associated with high-energy dissipation:
  - i. Fall greater than ground level
  - ii. Blast
  
- c. Injuries associated with an above mechanism:
  - i. Significant chest or pelvic trauma
  
- d. Traumatic injury and currently taking:
  - i. Anticoagulants and blood thinners
  - ii. Cardiac medications such as beta blockers and antiarrhythmics
  - iii. Diabetic medications
  
- e. Traumatic injury and medical history of:
  - i. Cardiac
  - ii. CHF
  - iii. COPD
  - iv. Paralysis
  - v. Dementia
  - vi. Surgical: recent surgery, transplant recipient
  - vii. Diabetes



**Hillsborough County Uniform Trauma Transport Protocol**

<b>Hillsborough County Inter-Hospital Trauma Transfer Orders</b>	
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 <sub>2</sub> Sat; Notify receiving facility if SAO <sub>2</sub> <
	( ) CO <sub>2</sub> monitor
	Oxygen: ( ) Nasal cannula at L/min ( ) Face mask at L/m
	( ) Ventilator settings TV FIO <sub>2</sub> 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



**V. EMS MEDICAL DIRECTORS**

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

<b>EMERGENCY MEDICAL SERVICE</b>	<b>MEDICAL DIRECTOR</b>
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.
Hillsborough County Fire Rescue	Michael Lozano, Jr., M.D.
Plant City Fire Department	Dean A. 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	Jason L. Johnson, D.O.



**VI. HOSPITAL REQUIREMENTS TO RECEIVE TRAUMA ALERTS ON EMERGENCY BASIS**

- A. The emergency medical service provider may only transport a trauma alert patient to a facility which has previously indicated that it meets the criteria listed in 64J-2.002 (3)(a), F.A.C. Each facility should provide a written attestation signed by the chief executive officer that the above criteria have been met. Those criteria are as follows:
1. Is staffed 24 hours per day with a physician and other personnel who are qualified in emergency:
    - a. airway management
    - b. ventilatory support
    - c. control of life-threatening circulatory problems which include, but not be limited to, placement of:
      - i. endotracheal tubes
      - ii. establishment of central intravenous lines
      - iii. insertion of chest tubes.
  2. Has equipment and staff in hospital and available to conduct chest and cervical spine x-rays.
  3. Has laboratory facilities, equipment and staff in hospital and available to analyze and report laboratory results.
  4. Has equipment and staff on call and available to initiate definitive care required by a trauma alert patient within 30 minutes of the patient's arrival at the hospital, or can initiate procedures within 30 minutes of the patient's arrival to transfer the trauma alert patient to a trauma center or pediatric trauma center.
  5. Has a written transfer agreement with at least one trauma center or pediatric trauma center. The transfer agreement shall provide specific procedures to ensure the timely transfer of the trauma alert patient to the trauma center or pediatric trauma center.



**VII. HOSPITALS WHICH MAY RECEIVE TRAUMA ALERT PATIENTS**

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

**A. Trauma Centers/Pediatric Trauma Centers**

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

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

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