CVA Transport Guidelines

Medical Director: Benjamin Oei, M.D.

Austin County EMS Protocol & Guideline	
Version:	1.0
Date:	10 / 2017

Confirmed or Suspected CVA- According to AHA standards, these patient should be taken to an stroke facility within 3 hours, the area RAC has extended that to 5 hours

1. CHI St. Joseph Bellville/ Scott& White Brenham/Katy Hospital / Methodist West / Memorial City /CHI St. Joseph Bryan/ Scott & White College Station

2. Life Flight/ PHI / Airevac - if available and suspected hemorrhagic stroke

3. Fail Safe- In the event the 2 primary facilities are not available see the list below for transport options. Levels- as with Trauma there are multiple levels of stroke centers

Comprehensive center-very similar to level-1 trauma center Primary center-can handle most of what the level-1 can, just not in house coverage 24 hours Support Center-this is a rapid CT and transfer hospital

Area Stroke Centers

Comprehensive (Level I) Stroke Facility

CHI St Lukes Health Baylor College Of Medicine Medical Center

Houston, 77030 - **Contact # 832-355-2121**

Harris Health System Ben Taub Hospital

Houston, 77030 – **Contact # 713-873-2446**

Houston Methodist Hospital

Houston, 77030 – **Contact # 713-441-2245**

Memorial Hermann Hospital

Houston, 77030-1501 - **Contact# 713-704-8229**

Primary (Level II) Stroke Facilities

CHI St. Joseph Regional Health Center

Bryan, 77802 – **Contact # 979-776-4974**

College Station Medical Center

College Station, 77845 – **Contact # 979-764-5111**

Houston Methodist West Hospital

Houston, 77094 – **Contact # 832-522-0911**

Memorial Hermann Katy Hospital

Katy, 77494 – Contact # 281-644-7111

Memorial Hermann Memorial City Medical Center

Houston, 77024 - **Contact # 713-242-3070**

Support (Level III) Stroke Facilities

Baylor Scott & White Medical Center – Brenham

Brenham, 77833 – **Contact # 979-337-5050**

Bellville St. Joseph Health Center

Bellville, 77418 – **Contact # 979-413-7269**

If the patient does not meet TPA Criteria, consider transporting to a comprehensive stroke center for care

If the patient is > 3 hour window, consider transporting to a comprehensive stroke center for care

Air Medical Utilization

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This guideline outlines the criteria and patient identifiers that may be used to warrant the utilization of air medical transport services. The following documentation is not intended to be all inclusive nor is it designed to replace competent clinical judgment. All transport destination decisions whether by ground or by air will be made to serve the best interest of the patient. In cases of severe trauma where time is of the essence according to the Golden Hour for transport to a Level I or Level II Trauma Center; or in the critically ill Medical Patient where transport to a Specialty Care Center is needed, air medical transport services will be utilized if it would prove to be more expedient than ground transport. If the injury or illness is such that it is not time dependent and a delay will not increase morbidity or mortality, ground transport should be considered.

TRAUMA PATIENTS:

- GCS <8
- Blunt force or penetrating trauma to the abdomen, pelvis, chest, neck or head
- Blunt force abdominal trauma to a pregnant patient presenting with physiological evidence of internal injury
- Partial or total amputation of an extremity (excluding single digits)
- Crushing injuries
- Major Burns that are 2nd or 3rd degree in nature in which BSA is >9%; hands, feet, face or perineum; electrical burns, inhalation burns, chemical burns.
- Near drowning patients presenting w/ pulmonary edema
- Ejection from a moving vehicle in which the patient presents with physiological evidence of significant injuries
- Extrication time > 20 minutes from a vehicle or machinery in which the patient presents with physiological evidence of significant injuries
- Fall from a height of >12' in which the patient presents with physiological evidence of significant injuries
- Any scalping or de-gloving injury
- Spinal cord/spinal column injury resulting in paralysis and or spinal column deformity regardless of paralysis
- Any other situation in which the credentialed provider deems necessary

ADULT MEDICAL PATIENTS

- Hemorrhagic or ischemic stroke in which ground transport to a Stroke Center would be extended or delayed (See Stroke/CVA transport guideline)
- Any patient experiencing complications from an indwelling pulmonary catheter, intra-aortic balloon pump, arterial line, intracranial pressure-monitor or other specialized equipment
- Post- surgical patient presenting with complications including but not limited to hemorrhage, infection or CVA within 30-60 days of surgery requiring transport back to the original surgical facility
- Any patient with a clinical condition that requires definitive care to be continued by a physician at the receiving facility that is intimately familiar with the patient's condition including but not limited to extensive prior invasive procedures, chemotherapy regimens and special equipment needs.
- Any patient requiring imminent transport to a facility capable of performing organ transplantation or procurement

- Any patient requiring hyperbaric facilities
- Organophosphate poisoning after Decontamination Guideline has been followed
- Any other situation in which the credentialed provider deems necessary

PEDIATRIC MEDICAL PATIENTS

- Any patient presenting with cardiac compromise, stroke, neuro-deficits, altered mental status of unknown etiology, or renal failure
- Near drowning patients presenting with pulmonary edema
- Reye's syndrome (a syndrome characterized by acute encephalopathy and fatty infiltration of the liver, pancreas, heart, kidneys, spleen and lymph nodes secondary to an acute viral infection. Signs and symptoms include persistent nausea and vomiting, disorientation, agitation, comatose states and seizures.)
- Hypothermia / hyperthermia
- Any patient requiring hyperbaric facilities
- Organophosphate poisoning after Decontamination Guideline has been followed
- Any other situation in which the credentialed provider deems necessary

SPECIAL CONSIDERATIONS

Austin County EMS currently has the availability of three air medical transport services according to our geographical location which include Life Flight, PHI Air Med and Air Evac. When requesting air medical services, Austin County EMS providers will be specific with the dispatchers as to which service they want to utilize and will ask for them by name. Criteria to consider in which service to use will be at the sole discretion of the credentialed provider in regards to the best interest of the patient and will not hinder on personal or political preferences.

Life Flight is currently the only service capable of transporting two patients at once. However, if one or both of the patients are intubated; then two separate helicopters will be needed. Be prepared to provide the dispatcher and/or EMS Command with the specific injury or illness, patient condition and their weight in kilograms.

Other criteria to consider for utilizing air medical transport services include:

- If the patient is located in a remote area that is inaccessible to regular ground traffic
- Potential for delays are inevitable with ground transport such as road hazards, obstacles, and traffic.
- The utilization of ground transport to a to a facility >50 miles in distance would leave the local area without adequate EMS coverage.
- In the event that air medical transport is not possible due to weather or availability, transport destinations will be determined at the sole discretion of the EMS Supervisor.
- **UNDER NO CIRCUMSTANCES SHOULD TRANSPORT BE DELAYED DUE AWAITING EXTENDED ETA FOR AIR AMBULANCE**

General Trauma Management

Trauma

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Trauma is the leading cause of premature death in all age groups. Rapid assessment and intervention with scene times focused on rapid transport to definitive care is the key to survival for these patients. In a rural setting, definitive care (Level 1 and Level 2 trauma centers) is reached with the assistance of air medical from the scene and/or transporting to local hospital (Level 3 and Level 4 trauma centers) for stabilization prior to being transferred to hospitals capable of definitive care

EMT

- Airway/Oxygen appropriate for condition
- Manual C Spine until full spinal restriction is complete. Full spine restriction is required in all injuries where mechanism indicates a spine injury is possible.
- Control bleeding as needed; IT Clamp, Quick Clot, Israeli Gauze, trauma tourniquet.
- Injuries to the eye, Tetracaine 2 to 4 drops. Not for blunt trauma to the eye.
- Assess what facility and mode of transport is necessary for the patient condition

AEMT

• Establish IV of Normal Saline. IV bolus of 250 to 500 ml not to exceed 20 ml/kg titrated to systolic BP 70 mmHg (non-compressible) or 90 mmHg (compressible)

Paramedic

- Needle decompression as needed for patients with BLUNT or PENETRATING thoracic trauma with indications of diminished or absent lung sounds

Pearls

- Sodium Bicarbonate should only be given for crush injury lasting 2 hours or greater.
- Evidence of distal ischemia: Pain, Pallor, Pulselessness, Paralysis, Paresthesia, Poikilothermia (cool to touch).

HOSPITAL CAPABILITIES

	TRAUMA LEVEL	STEMI PCI	STROKE LEVEL	LABOR & DELIVERY	NICU	ORTHO	SEXUAL ASSAULT ADULT	SEXUAL ASSAULT PEDIATRIC
BELLVILLE MEDICAL CENTER	LEVEL 4		SUPPORT					
BRENHAM SCOTT AND WHITE	LEVEL 4		SUPPORT	YES				
BEN TAUB	LEVEL 1	YES	COMPREHENSIVE	YES	LEVEL 3	YES		
COLLEGE STATION MEDICAL	LEVEL 3	YES	PRIMARY	YES	LEVEL 2	YES	ON-CALL	
COLUMBUS HOSPTIAL	LEVEL 4		SUPPORT	YES	LEVEL 1	YES		
MEMORIAL HERMANN KATY	LEVEL 4	YES	PRIMARY	YES		YES		
MEMORIAL HERMANN MEMORIAL CITY		YES	PRIMARY	YES				
MEMORIAL HERMANN SUGARLAND	LEVEL 4		SUPPORT					
MEMORIAL HERMANN	LEVEL 1	YES	COMPREHENSIVE	YES	LEVEL 4			
METHODIST WEST CAMPUTS		YES	PRIMARY					
METHODIS DOWNTOWN		YES	COMPREHENSIVE					
METHODIST SUGARLAND	LEVEL 4	YES	PRIMARY					
OAK BEND - JACKSON STREET	LEVEL 3	YES	PRIMARY			YES		
OAK BEND - WILLIAMS WAY	LEVEL 4		PRIMARY	YES	LEVEL 2	YES		
SCOTT AND WHITE COLLEGE STATION	LEVEL 3	YES	PRIMARY			YES		
ST JOSEPH BRYAN	LEVEL 2	YES	PRIMARY					
ST LUKES		YES	COMPREHENSIVE					
ST LUKES SUGARLAND		YES						
ST MARKS LAGRANGE	LEVEL 4			YES	LEVEL 1	YES		
TEXAS CHILDRESN WEST CAMPUS								
TEXAS CHILDRENS MEDICAL CENTER								

BURN CENTERS: UTMB GALVESTON / MEMORAL HERMANN TEXAS MEDICAL CENTER / SAN ANTONIO MILITARY MEDICAL

Pallative Care

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Objective

This protocol addendum serves to provide clarification to the term “Palliative Care” and provides clear direction to providers who are faced with patients who have a VALID DNR and require Palliative Care.

Definition

The World Health Organization defines palliative care as: “the active total care of patients whose disease is not responsive to curative treatment. Control of pain, of other symptoms, and of psychological, social and spiritual problems, is paramount. The goal of palliative care is achievement of the best quality of life for patients and their families.”

Treatments NOT Permitted for DNR Patients

1. Artificial Ventilation: This includes Bag Valve Mask and/or automatic ventilators
2. CPR: Cardio Pulmonary Resuscitation
3. TCP: Transcutaneous pacing for bradycardia
4. Defibrillation: For arrest and non-arrest rhythms
5. Advanced Airway: This includes endotracheal intubation, nasotracheal intubation, cricothyrotomy or Combitube.
6. Aggressive STEMI Therapy: No use of Plavix, Heparin, Metoprolol and/or Integrelin

Treatments Permitted for DNR Patients

1. All basic level therapy and treatments are permitted with the exception of Combi Tube airway placement and bag valve mask ventilation.
2. IV therapy for dehydration and/or medication access. IO infusion is not an acceptable means of access.
3. All medications including those used to treat all cardiac and medical conditions as needed to provide care for the patient. This includes pain management and sedation as needed to provide palliative care.

Exceptions

1. Patients who require treatment based on a traumatic injury will receive all treatments available regardless of DNR.
2. A patient and/or qualified family member may revoke the DNR at any time and require resuscitation.