ADULT TRAUMA CENTER GUIDELINES FOR TRANSFER

Patients with severe multiple system injury from any location in the state are candidates for referral to one of the nine Maryland adult trauma centers or two out-of-state trauma centers. Transfer patients to the appropriate level trauma center based on specialty medical care needs and resources required for patients' injuries.

INDICATIONS FOR TRANSFER

Adults with one or more of the following:

A. Severe multiple injuries (two or more systems) or severe single system injury

B. Cardiac or major vessel injuries

C. Injuries with complications (e.g., shock, sepsis, respiratory failure, cardiac failure)

D. Severe facial injuries

E. Severe orthopaedic injuries

F. Co-morbid factors (e.g., age > 55 years, cardiac or respiratory disease, insulin-dependent diabetes, morbid obesity)

ADULT BURN INJURY CENTERS

Johns Hopkins Bayview Medical Center
4940 Eastern Avenue, Baltimore, MD 21224

Hopkins Access Line:
410-955-9444 or 800-765-5447

MedStar Washington Hospital Center
Burn Center
110 Irving St, NW, Washington, DC 20010
Ste: 3B-55

Physician's referral line:
800-824-6814

Pediatric Burn Centers

Johns Hopkins Children's Burn Center
1800 Orleans St., Baltimore, MD 21287

Hopkins Access Line:
410-955-9444 or 800-765-5447

Children's National Hospital Pediatric
Burn Center
111 Michigan Ave. NW,
Washington, DC 20010

Emergency Department Transfer
Center: 202-476-5433

BURN INJURY

INTRODUCTION

The decision about where to transport a burned patient is based on location of the patient and location of available beds.

The **Johns Hopkins Burn Center for Adults** is located at **Johns Hopkins Bayview Medical Center** in eastern Baltimore City.

The **Adult Burn Center at MedStar Washington Hospital Center** in the District of Columbia also participates in the Maryland Specialty Referral System.

BURN CENTER REFERRAL CRITERIA

1. Partial thickness burns greater than 10% total body surface area (TBSA) in all adult age groups
2. Burns that involve the face, hands, feet, genitalia, perineum, or major joints
3. Third-degree (full thickness) burns of any size in all adult age groups
4. Electrical burns, including lightning injuries
5. Chemical burn injuries
6. Inhalation injuries
7. Burn injuries in patients with pre-existing medical conditions that may complicate management, prolong recovery, or affect mortality
8. Any patient with burns and coinciding trauma in which the burn injury poses the greatest risk of morbidity and mortality
9. Burned children in hospitals without qualified personnel or equipment to care for children (transport to a Pediatric Burn Center; see page 62)
10. Burned patients who require special social, emotional, or long-term burn rehabilitation

Note: Adult Burn Centers receive patients who have reached their 15th birthday. Pediatric Burn Centers receive patients who have NOT reached their 15th birthday (see page 64).

EYE TRAUMA CENTER

Johns Hopkins Hospital
Wilmer Eye Institute's Trauma Center
1800 Orleans Street, Baltimore, MD 21287

Hopkins Access Line: 410-955-9444 or 800-765-5447

EYE TRAUMA

INTRODUCTON

The Wilmer Eye Institute at the Johns Hopkins Hospital serves as an Eye Trauma Center for patients who have sustained ophthalmic trauma.

REFERRAL CONTACT

For patients who are suspected of having an eye/ophthalmic injury in the setting of multiple system trauma, call the Hopkins Access Line (HAL) and ask for the Pediatric or Adult Trauma Clinician On-call, who will evaluate the patient for acceptance and assist to facilitate the transfer of care to the Eye Trauma Center at the Johns Hopkins Hospital.

For pediatric or adult patients with an isolated eye/ophthalmic injury, call the HAL number and ask for the Ophthalmology Resident On-call, who will evaluate the patient for acceptance and assist to facilitate the transfer of care to the Eye Trauma Center at the Johns Hopkins Hospital.

If any question or concerns should arise during the referral process, please call the Hopkins Access Line at 410-955-9444 to contact the Medical Director.

NOTE: Patients are to be directed to either the Pediatric Emergency Department or the Adult Emergency Department unless otherwise told to access another care area.

INDICATIONS FOR EYE TRAUMA TRANSFER

1. Serious ophthalmic injury, including but not limited to:
   A. Open globe (penetrating or rupture)
   B. Chemical burns of the eye
   C. Periorbital trauma
   D. Intraocular foreign bodies (foreign material inside the eye, not on the surface)
2. Individualized consultations are available for any other eye injuries.
3. Patients with isolated eye injuries, who are medically stable; eye trauma patients with multi-system injury who require involvement of the adult or pediatric trauma teams to determine the appropriateness for transfer

NOTE: Patients with other significant trauma should be transported to the appropriate facility for stabilization before transfer to an Eye Trauma Center.

STABILIZATION PROCEDURES/PREPARATION FOR TRANSPORT

1. Protect eye with a rigid eye shield ONLY.
2. DO NOT remove impaled objects or attempt to clean the eye or eyelids. Stabilize penetrating objects in place.
3. Chemical injuries should receive continuous irrigation (if strong alkaline or acid, attempt to determine initial pH of the eye):
   A. Water, sterile water, or normal saline
   B. Send specimen of chemical with patient.
4. Keep patient NPO.

TRANSPORT PATIENT with:

1. Copy of medical record
   A. Treatment rendered (including medications)
   B. Laboratory and X-ray results if available
      (1) Send copies of X-rays and CT scans, not reports, if obtained prior to transport.
      (2) DO NOT delay transport awaiting results.
2. Eye shield
3. Specimens of chemical agent, if indicated

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CENTER FOR HYPERBARIC AND DIVE MEDICINE

R Adams Cowley Shock Trauma Center
23 Penn St. Baltimore, MD 21201

Maryland Express Care:
410-328-1234

HYPERBARIC TRANSFER GUIDELINES

DECOMPRESSION SICKNESS/AIR EMBOLUS
GAS GANGRENE/SOFT TISSUE INFECTIONS
SMOKE INHALATION/CARBON MONOXIDE POISONING

The Center for Hyperbaric Medicine at the R Adams Cowley Shock Trauma Center has the only multi-place chamber in the State of Maryland, accommodating up to 23 patients per dive. The hyperbaric chamber is staffed by a team of specially trained critical care nurses, physicians, and respiratory therapists enabling them to provide care to critically ill patients 24/7.

INDICATIONS FOR TRANSFER

- Suspected decompression sickness*
- Compromised/crush injury
- Diving Accidents*
- Suspected air embolus*
- Suspected gas gangrene/soft tissue infection (following consultation with Soft Tissue MD or designee)
- Central Retinal Artery Occlusion (CRAO)
- Other indications may be appropriately transferred after consultation with hyperbaric physician or designee

Presence of any one symptom in smoke inhalation/CO poisoning:

- Loss of consciousness
- Change in mental status (e.g., confusion, stupor, combativeness)
- Carboxyhemoglobin level of 25% or higher, measured transcutaneously or by blood levels
- Symptoms suggestive of cardiac ischemia (e.g., chest pain, ST segment changes)
- Pregnancy

** If air transport is chosen, helicopters must fly under 1,000 feet*

HAND AND UPPER EXTREMITY TRAUMA CENTER

The Curtis National Hand Center
MedStar Union Memorial Hospital
3333 North Calvert Street, Baltimore, MD 21218

Physician referral hotline:
410-554-2266

HAND AND UPPER EXTREMITY TRAUMA

INTRODUCTION

The Curtis National Hand Center at MedStar Union Memorial Hospital in Baltimore serves as a specialty referral center for patients experiencing hand and upper extremity trauma.

INDICATIONS FOR REFERRAL TO A HAND CENTER

1. Fractures and dislocations of the hand, wrist, forearm, and elbow (open and closed, with or without neurovascular compromise)
2. Complex lacerations or tissue loss (with or without nerve or tendon involvement)
3. Amputations (complete or partial from mid-humerus distally)
4. Thermal injuries isolated to the hand and upper extremity (burns and frostbite)
5. High-pressure injection injuries
6. Selected infections (complex suppurative processes at and below the level of the carpus)
7. Compartment syndrome of the forearm and hand
8. Nerve and vessel injuries of the arm
9. Crush or degloving injuries and other trauma resulting in loss or perfusion or suspected nerve injury

CONTRAINDICATIONS FOR TRANSFER

1. Patients with major and/or multiple system trauma
2. Patients with unstable or abnormal vital signs
3. Lower extremity amputation; lower extremity amputations should be directed to Pediatric or Adult Trauma Center: Patient may exhibit injuries to skeletal or soft tissue components with complete or incomplete amputation of ankle/foot lower extremity, complicated nerve, vessel, or compartment syndrome. Toe amputation (partial or complete).

STABILIZATION PROCEDURES/PREPARATION FOR TRANSPORT

1. Total patient assessment
    a. Assess for evidence of other trauma. (The Hand Trauma Center is not a multi-system trauma facility. It accepts only patients with isolated extremity trauma or extremity trauma with other minor injuries.) If the patient is stable, follow emergency care instructions below while consultation and preparation for transport are accomplished.

2. Emergency care
    a. DO NOT wash, rinse, scrub, or apply antiseptic to extremity. Apply dry sterile dressing, wrap in Kling or Kerlix, apply pressure, elevate, and cool.
    b. DO NOT wash, rinse, scrub, or apply antiseptic solution to the severed part
        i. Wrap in dry sterile gauze or towel (depending on size). Package amputated extremity in sealed plastic bag and place ON TOP OF coolant bags or sealed bag of ice in a container (Styrofoam).
        DO NOT FREEZE.
        ii. THE AMPUTATED PART MUST NOT BE SUBMERGED IN ICE WATER. If the ice melts, replace it with another bag of ice.
    c. For partial amputation:
        i. Place severed part(s) in a functional position.
        ii. Apply dry sterile dressing.
        iii. Splint.
        iv. Elevate extremity.
        v. Apply coolant bags or ice bag to the outside of the dressing.
    d. If possible, control bleeding with pressure. If tourniquet is necessary, place it close to the amputation site.
    e. Consider appropriate pain medication.

TRANSPORT PATIENT WITH:

1. Copy of medical record including:
    a. X-ray and laboratory results
    DO NOT delay transport while awaiting results. X-rays and blood work can be obtained upon arrival to the Hand Center.
    b. Documentation of medications given:
        i. Tetanus prophylaxis
        ii. Antibiotics
        iii. Pain medications
2. Extremity and/or part:
    a. Elevated and cooled
    b. Splints, as necessary

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NEUROTRAUMA CENTER

R Adams Cowley Shock Trauma Center
Neurotrauma Center
23 Penn St. Baltimore, MD 21201

Maryland Express Care:
410-328-1234 or 800-373-4111

NEUROTRAUMA TRANSFER GUIDELINES

Head and Spinal Injuries

INTRODUCTION

As the state's designated referral center for head and spinal injuries, the multidisciplinary team of clinical experts at the Neurotrauma Center at the R Adams Cowley Shock Trauma Center utilizes evidence-based treatment strategies to care for patients with traumatic brain injuries and spinal column and spinal cord injuries.

Those patients with severe brain injury receive a multisystem assessment with intracranial pressure and cerebral oxygenation parameters closely monitored so that factors that may cause secondary brain injury are rapidly recognized and treated, thus optimizing patient outcomes. Neurosurgeons are readily available to intervene if necessary and perform craniotomies for hematoma evacuation and gunshot wound debridement, elevation of depressed skull fractures, decompressive craniectomies, and cranioplasties. Surgical interventions for spinal column injuries include discectomies, laminectomies, arthrodesis, and open reduction internal fixations.

This section provides guidelines for the stabilization and transport of patients with head and spine injuries. Patients who are under 15 years of age should be transported to a pediatric trauma center.

INDICATIONS FOR HEAD INJURY TRANSFER

Presence of any one symptom below:

1. Patients with deterioration in level of consciousness
2. Patients with severe head injuries (Glasgow Coma Score ≤ 8)
3. Patients with focal or lateralizing signs such as hemiparesis
4. Patients with penetrating cranial injury, including gunshot wounds or depressed skull fractures
5. Patients with cerebrospinal fluid leak: rhinorrhea or otorrhea
6. Seizures within 48 hours of trauma
7. Inability to perform immediate rapid neurosurgical pre-operative studies, intracranial monitoring, or neurosurgical operation that is or is likely to be necessary in management of the patient
8. Patients with moderate head injuries who may require other procedures or prolonged anesthesia (Glasgow Coma Scale scores of 9 to 12-13)

INDICATIONS FOR SPINE INJURY TRANSFER

Presence of any one symptom below:

1. Adult spinal cord injuries
2. Patients with suspected spinal injury whose level of consciousness is deteriorating
3. Patients with possible spinal fracture or dislocations that are unstable or need stability evaluation
4. Patients with neurological deficits
5. Patients with penetrating spinal injury, including gunshot or stab wounds
6. Patients with documented stable or unstable spinal column injuries with or without neurologic deficit
7. Inability to rapidly reduce fractures compressing the spinal cord by closed and/or surgical techniques

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SPECIAL PATHOGEN/HIGHLY INFECTIOUS DISEASE ASSESSMENT AND TREATMENT NOTIFICATIONS

The potential transfer of a patient with a special pathogen should be coordinated with the assistance of the local health department and the Maryland Department of Health (MDH). When a patient with a special pathogen is identified, the first external point of contact should be the local health department. If unable to reach the local health department, notify MDH via one of the numbers below.

MARYLAND DEPARTMENT OF HEALTH
Infectious Disease Epidemiology and
Outbreak Response Bureau (IDEORB)
201 W. Preston St, Baltimore, MD 21201
410-767-6700 (daytime)
410-795-7365 (after hours)

MARYLAND PRIMARY EBOLA/SPECIAL PATHOGEN TREATMENT HOSPITAL
Johns Hopkins Hospital
Biocontainment Unit
1800 Orleans Street, Baltimore, MD 21287

MARYLAND PRIMARY EBOLA/SPECIAL PATHOGEN TREATMENT HOSPITAL
University of Maryland Medical Center
22 S. Greene Street, Baltimore, MD 21201

MARYLAND PRIMARY EBOLA/SPECIAL PATHOGEN ASSESSMENT HOSPITALS
Anne Arundel Medical Center
2001 Medical Parkway
Annapolis, MD 21401

Frederick Health Hospital
400 West Seventh Street
Frederick, MD 21707

Holy Cross Hospital
1500 Forest Glen Rd.
Silver Spring, MD 20910

MedStar Southern Maryland Hospital Center
7503 Surratts Rd.
Clinton, MD 20735

TidalHealth Peninsula
Regional Medical Center
100 E. Carroll St.
Salisbury, MD 21801

SPECIAL PATHOGEN/HIGHLY INFECTIOUS DISEASE ASSESSMENT AND INTERHOSPITAL TRANSFER

The Maryland Department of Health (MDH) has developed a three-tier hospital system for patients with symptoms of highly infectious special pathogens*. These three tiers are frontline hospitals, assessment hospitals, and treatment centers.

Hospitals receiving a patient with symptoms of a special pathogen should do the following:

- **Identify the signs and symptoms**
- **Isolate the patient and utilize appropriate personal protective equipment**
- **Inform – notify your local health department (if unable to reach the local health department, contact the MDH epidemiologist on call at 410-767-6700 (during business hours) or 410-795-7365 after hours, weekends, and holidays).**

The local health department and MDH will assist with pathogen identification and with coordinating transfer to an appropriate destination if the patient requires an interhospital transfer. MDH will notify MIEMSS to coordinate the appropriate transport unit for the patient.

Below is a brief description of the three-tier hospital criteria and roles and responsibilities of each:

Frontline hospitals: All hospitals that are not Assessment or Treatment Hospitals are considered Frontline Hospitals. These facilities are expected to promptly identify and isolate a Patient Under Investigation (PUI) for a special pathogen and to promptly inform the health department. Frontline hospitals are expected to screen and isolate the patient and provide care for 12-24 hours until a special pathogen can be ruled out, or a patient transfer can be arranged. All frontline hospitals must have the capability to support EMS clinicians that transport a PUI to their facility including: an appropriate location for doffing of PPE, shower facilities for decontamination of EMS clinicians, an area to decontaminate transport vehicles, and acceptance of waste associated with the transport of PUIs.

Assessment hospitals: These hospitals are facilities that are prepared to receive and isolate PUIs and to care for the patient until a diagnosis of a special pathogen can be confirmed or ruled out, or until discharge or transfer is completed (if special pathogen diagnosis is confirmed). These hospitals must have the ability to coordinate Ebola Virus Disease (EVD) and other special pathogen testing and be able to provide appropriate care for up to 96 hours (i.e., have sufficient staff training, PPE, and isolation facilities appropriate for 4-5 days of patient care). All assessment hospitals must have the capability to support EMS transport personnel as listed under frontline hospitals.

Treatment Centers: These centers are hospitals which have been assessed by CDC for EVD and special pathogen readiness and are prepared to care for and manage a patient with confirmed EVD for the duration of the patient's illness. At minimum, these hospitals need sufficient staff, PPE, and isolation facilities appropriate for at least 7 days of patient care. All treatment centers must have the capability to support EMS transport personnel as listed above.

*Special pathogens include: emerging and/or highly infectious diseases such as Ebola, Lassa Fever, MERS, category A agents, BSL 4 pathogens, etc. When in doubt, contact your local health department for guidance **(if unable to reach the local health department, contact the MDH epidemiologist on call at 410-767-6700 (during business hours) or 410-795-7365 after hours, weekends, and holidays).**

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STROKE GUIDELINES FOR TRANSFER

INTRODUCTION

Development of a state wide system for stroke care in Maryland includes four (4) levels of hospital care. Each designated hospital level of care is based on accessibility and availability of timely health care resources. The development of designated levels of care and inter-facility transfer guidelines will maximize quality of care, ensure patient safety and promote effective use of health care resources.

(1) Level I – Comprehensive Stroke Center (CSC);
(2) Level II – Thrombectomy-Capable Primary Stroke Center (TCPSC)
(3) Level III – Primary Stroke Center (PSC); and
(4) Level IV – Acute Stroke Ready Center (ASRC)

I. Level I – Comprehensive Stroke Center: Defined as a facility with immediate access 24 hours a day to the necessary personnel, infrastructure, equipment, expertise, and programs to rapidly diagnose and treat stroke patients who require a high intensity of medical and surgical care, specialized tests, or interventional therapies.

Timely Transfer of Patient's to a Comprehensive Stroke Center:

Because of the potential for rapid clinical deterioration, patients who present with severe disease or who have the high likelihood of clinical deterioration should be considered for timely transfer to a CSC. The transfer process should be initiated as early as possible in the patient's course. Remember, **"time is brain."**

Refer to Stabilization and Preparation for Transport Section on page 4.

Circumstances to consider transfer to a Comprehensive Stroke Center:

- Non-traumatic Subarachnoid Hemorrhage
- Intracerebral Hemorrhage
- Hemispheral/Supratentorial: (> 30 ml or > 3 cm)
  - Cerebellar hemorrhage
  - Brain Stem hemorrhage
  - Intraventricular hemorrhage
  - Suspected underlying lesion by imaging (e.g. CTA reveals a possible AVM)
- s/p IV t-PA with Concerns
  - Potential for malignant cerebral edema
  - Potential need or benefit from intra-arterial recanalization interventions
  - Perceived higher risk for symptomatic intracranial hemorrhage (e.g., difficult to control hypertension; malignant hypertension)
- Consideration for Hemicraniectomy
  - Age dependent (considered especially for age less than 60)
  - Baseline Modified Rankin of 0 or 1 or baseline independent in activities of daily living (ADLs)
  - Potential for malignant cerebral edema (e.g., high NIH stroke scale)
- Consideration for Endovascular Mechanical Thrombectomy (Interventional Neuroradiology)

Consultation with tertiary facility initiated as soon as possible

There is a goal time of 90 minutes from arrival of the patient at the PSC to departure to the CSC or PSC with EVT capability.

Goal from acceptance of the patient for transfer by the CSC or PSC with EVT capability to arrival at the CSC or PSC with EVT capability is 90 minutes.

A. Thrombectomy for M1 and ICA occlusions are of proven benefit and recommended by guidelines. Patients should be considered candidates for neurointervention if imaging demonstrates a large artery occlusion and:

1. Less than 4.5 hours from time of onset (time last known to be at neurologic baseline)
   - NIH stroke score greater than or equal to 6;
   - ASPECTS score greater than or equal to 6; and
   - functionally independent at baseline.

2. Greater than 4.5 hours up to 20 hours from time of onset (time last known to be at neurologic baseline) and can be received in the tertiary facility by 22 hours of last known well (LKW).
   - ASPECTS score 8-10 or core measurements < 30 ml from CT Perfusion or MRI;
   - NIH stroke score greater than or equal to 6; and
   - functionally independent at baseline.

B. Other large artery occlusion patients can be considered **based on the above criteria**, however, is not a proven indication. However, it may be reasonable in certain select patients although the benefit is uncertain:

   - Basilar Artery
   - M2
   - M3
   - PCA
   - ACA

Special Circumstances to consider transfer to a Comprehensive Stroke Center

- Pregnancy-associated stroke
- Pediatric stroke (under age 18) refer to a MIEMSS designated Pediatric Trauma Center
- Any circumstance for which there is a perceived need for higher level of care
- Young adult (18-45 years of age) with ischemic stroke
- Large cerebellar infarct and anticipation for surgical decompression
- History of Sickle Cell Anemia

II. Level II – Thrombectomy-Capable Primary Stroke Center: Defined as a facility with immediate 24 hour access to the necessary personnel, infrastructure, equipment, experts and programs to rapidly diagnose, treat and admit the acute stroke patient who require interventional therapies. Level II Thrombectomy-Capable Primary Stroke Centers are able to take referrals for some but not all conditions managed at a Comprehensive Stroke Center.

Timely Transfer of Patients to a Thrombectomy-Capable Primary Stroke Center:

Because of the potential for rapid clinical deterioration, patients who present with large vessel occlusions (LVO) should be considered for timely transfer to a TCPSC or CSC.

Refer to Stabilization and Preparation for Transport Section on page 36.

Circumstances to consider for a transfer to a Thrombectomy-Capable Primary Stroke Center

- Consideration for Endovascular Recanalization Treatment (ERT) – (Interventional Neuroradiology)

Consultation with tertiary facility initiated as soon as possible.

There is a goal time of 90 minutes from arrival of the patient at the PSC to departure to the TCPSC or CSC.

Goal from acceptance of the patient for transfer by the TCPSC or CSC to arrival at the TCPSC or CSC is 90 minutes.

A. Thrombectomy for M1 and ICA occlusions are of proven benefit and recommended by guidelines. Patients should be considered candidates for neurointervention if imaging demonstrates a large artery occlusion and:

1. Less than 4.5 hours from time of onset (time last known to be at neurologic baseline)
    - NIH stroke score greater than or equal to 6;
    - ASPECTS score greater than or equal to 6; and
    - Functionally independent at baseline.
2. Greater than 4.5 hours up to 20 hours from time of onset (time last known to be at neurologic baseline) and can be received in the tertiary facility by 22 hours of last known well (LKW).
    - ASPECTS score 8-10 or core measurements < 30 ml from CT Perfusion or MRI;
    - NIH stroke score greater than or equal to 6; and
    - Functionally independent at baseline.

B. Other large artery occlusion patients can be considered **based on the above criteria**, though it is not a proven indication. However, it may be reasonable in certain select patients, although the benefit is uncertain:

- Basilar Artery
- M2
- M3
- PCA
- ACA

III. Level III – Primary Stroke Center: Defined as a facility with the immediate availability of necessary personnel, infrastructure, equipment, expertise and programs to rapidly diagnose, treat and either admit the patient or transfer the acute stroke patient. Level III Primary Stroke Center's may be able to take referrals for some but not all conditions managed at a Comprehensive Stroke Center (e.g., Subarachnoid Hemorrhage).

Circumstances to consider transfer to a Comprehensive Stroke Center or Thrombectomy-Capable Primary Stroke Center:

- Meeting circumstances as identified in §A of this guideline

Circumstances to consider keeping patient at a Primary Stroke Center:

- Intracerebral Hemorrhage
    a. Small volume (less than 30 ml or < 3 cm)
    b. No cerebellar / brain stem involvement
    c. No intraventricular hemorrhage
    d. An alert patient
    e. No suspicion of an underlying lesion such as AVM / Aneurysm
- Patients not meeting circumstances as identified in §A under Comprehensive Center and Thrombectomy-Capable Primary Stroke Center
- Discussion of goals of care is recommended when making decisions to transfer to a Comprehensive Stroke Center or Thrombectomy-Capable Primary Stroke Center
    - Situations in which further interventions might be considered futile
    - Patients with advanced co-morbid disease
    - Patients with poor baseline level of independent function
    - Patients identified as DNR
- s/p IV t-PA without special concerns
- Unruptured and Asymptomatic Cerebral Aneurysm (consider outpatient clinic referral)

III. **Level IV – Acute Stroke Ready Center:** Defined as a facility with limited access to the necessary personnel, infrastructure, equipment, expertise, and programs to treat the acute stroke patient. The Acute Stroke Ready Center does possess the means to deliver emergent stroke therapies and transfer the acute stroke patient to a Primary Stroke Center, Thrombectomy-Capable Stroke Center or Comprehensive Stroke Center based on the patients immediate needs.

Circumstances to consider transfer to a Comprehensive Stroke Center or Thrombectomy-Capable Primary Stroke Center

- Meeting circumstances as identified in §A of this guideline

Circumstances to consider transfer to a Primary Stroke Center

- Limited or no cranial neurosurgery coverage for patients s/p IV t-PA or hemorrhage
- s/p IV t-PA
- Intracerebral hemorrhage
    - Small volume (less than 30 ml or < 3 cm)
    - An alert patient
    - No Midline shift

IV. Non-Stroke Centers:

Circumstances to consider transfer to a Comprehensive Stroke Center

- Meeting circumstances as identified in §A of this guideline

Circumstances to consider transfer to a Thrombectomy-Capable Primary Stroke Center

- Meeting the circumstances as identified in §A of this guideline

Circumstances to consider transfer to a Primary Stroke Center

- Limited or no cranial neurosurgery coverage
- Intracerebral Hemorrhage
  - Small volume (less than 30 ml or < 3 cm)
  - An alert patient
  - No midline shift
- s/p IV t-PA

STABILIZATION AND PREPARATION FOR TRANSPORT

1. Upon identification of a patient who may require transfer, immediately contact the potential receiving Primary Stroke Center, Thrombectomy- Capable Primary Stroke Center, or Comprehensive Stroke Center based on the above criteria. A list of centers and contact information is included on page 39 of this manual.

   Once transfer is recommended, the consulting facility will reply to the sending facility, within 15 minutes, whether or not a bed will be available for transfer. If a bed is not available, the consulting facility will advise the sending facility to contact an alternative Comprehensive Stroke Center, Thrombectomy capable Primary Stroke Center or Primary Stroke Center.

2. The transferring physician is responsible for contacting the accepting hospital and securing an accepting physician at the receiving facility.

3. The accepting physician will determine the transfer location, e.g., directly to the unit, Interventional Radiology Lab, or the Emergency Department.

ARRANGING FOR TRANSPORTATION

When determining the mode of transport, the following factors should be considered:

1. How soon does the patient need to reach the referral center?

   A complex stroke patient who might benefit from emergent neurosurgical or Interventional neuroradiology treatment should have the transfer completed within 90 minutes of acceptance of patient at the Comprehensive Stroke Center.

   Transfer times for all other cases will be determined by the receiving center based on the patient's diagnosis and clinical status. The sending facility should inform the patient and family that the patient is being transferred for consideration for advanced treatment.

- However, upon arrival at the Comprehensive Stroke Center the patient will be re-evaluated.
- The appropriateness of advanced treatment will be determined by the receiving center after re-evaluation.
- Advanced treatment may include enrollment in a clinical trial as appropriate.

2. What are the weather/ground conditions that might inhibit air transport?
3. What are the transport times for ground versus air transport from the referring institution?
4. The transferring hospital physician should make an assessment as to whether the patient requires intubation for safe transport to the higher level of care.
5. Should a patient's clinical status change (for better or worse) prior to departure from the hospital, it is imperative that the transferring physician inform the receiving physician of the change in clinical status.
6. All reasonable efforts will be made to obtain a reliable cell phone number for the patient and for responsible family members.

The transportation decision should be made by the receiving physician in collaboration with the referring physician based on clinical judgment, with careful consideration given to the above questions. Please refer to the Transport Services section on page 13 for additional information on arranging transportation.

TRANSPORT PATIENT WITH:

- Copy of Medical Record including treatment rendered;
- Signed consent to transfer patient to receiving facility;
- Documentation of medications given; and
- X-ray, neuroimaging and laboratory results. Include a CD with any relevant imaging.

DO NOT DELAY TRANSPORT WHILE AWAITING RESULT

PRIMARY STROKE CENTERS

REGION I

UPMC Western Maryland
12500 Willowbrook Rd. Cumberland, MD 21502
Emergency Department: 240-964-1200

REGION II

Frederick Health Hospital
400West Seventh Street Frederick, MD 21701
Emergency Department: 240-566-3500

Meritus Medical Center
11116 Medical Campus Road
Hagerstown, MD 21742
Emergency Department: 301-790-8300301-790-8300

REGION III

Anne Arundel Medical Center
2001 Medical Parkway Annapolis, MD 21401
Emergency Department: 443-481-1200

UM Baltimore Washington Medical Center
301 Hospital Dr.
Glen Burnie, MD 21061
Emergency Department: 410-787-45674

Carroll Hospital Center
200 Memorial Ave. Westminster, MD 21157
Emergency Department: 410-871-6700

MedStar Good Samaritan Hospital 5601
Loch Raven Blvd. Baltimore, MD 21239
Emergency Department: 443-444-4040

Greater Baltimore Medical Center
6701 N. Charles St. Baltimore, MD 21204
Emergency Department: 443-849-2227

MedStar Harbor Hospital
3001 S. Hanover St. Baltimore, MD 21225
Emergency Department: 410-350-3510

UM Upper Chesapeake Medical Center
500 Upper Chesapeake Drive
Bel Air, MD 21014
Emergency Department: 443-643-2000

Howard County General Hospital - JHM
5755 Cedar Lane Columbia, MD 21044
Emergency Department: 443-718-2100

UM Midtown Campus
827 Linden Ave. Baltimore, MD 21201
Emergency Department: 443-552 2650

Mercy Medical Center
301 St. Paul Place Baltimore, MD 21202
Emergency Department: 410-332-9477

Northwest Hospital
5401 Old Court Road
Randallstown, MD 21133
Emergency Department: 410-521-5950

St. Agnes Ascension Health
900 S. Caton Ave. Baltimore, MD 21229
Emergency Department: 667-234-2000

REGION III (Continued)

UM St. Joseph Medical Center
7601 Osler Dr. Towson, MD 21204

Emergency Deptment: 10-337-1226

MedStar Union Memorial Hospital 201 E. University Parkway
Baltimore, MD 21218

Emergency Department: 410-554-2626

REGION IV

Atlantic General Hospital
9733 Healthway Dr. Berlin, MD 21811

Emergency Department: 410-641-9630

UM Shore Medical Center at Easton
219 S. Washington St. Easton, MD 21601

Emergency Department: 667-343-5555

TidalHealth Peninsula Regional Medical Center
100 E. Carroll St. Salisbury, MD 21801

Emergency Department: 410-543-7100

ChristianaCare, Union Hospital
106 Bow St. Elkton, MD 21921

House Supervisor/Clinical Placement 443-907-6136

106 Bow St.

REGION V

Adventist HealthCare
White Oak Medical Center
1890 Healing WaySilver Spring, MD 20904

Emergency Department: 240-637-5070

CalvertHealth Medical Center
100 Hospital Rd.
Prince Frederick, MD 20678

Emergency Department: 410-535-8344

UM Charles Regional Medical Center
5 Garrett Ave. La Plata, MD 20640

Emergency Department: 301-609-4160

Doctor's Community Hospital
8118 Good Luck Road Lanham, MD 20706

Emergency Department: 301-552-8665

Holy Cross Germantown Hospital
19801 Observation Drive
Germantown, MD 20876

Emergency Department: 301-557-6500

Holy Cross Hospital
1500 Forest Glen Rd.
Silver Spring, MD 20910

Emergency Department: 301-754-7500

MedStar Montgomery Medical Center
18101 Prince Philip Dr.
Olney, MD 20832

Emergency Svcs.: 301-774-8900
Nsg. Coordinator: 301-774-8767

MedStar Southern Maryland Hospital Center 7503 Surratts Rd.
Clinton, MD 20735

Admissions: 301-877-4290
ED: 301-877-4500

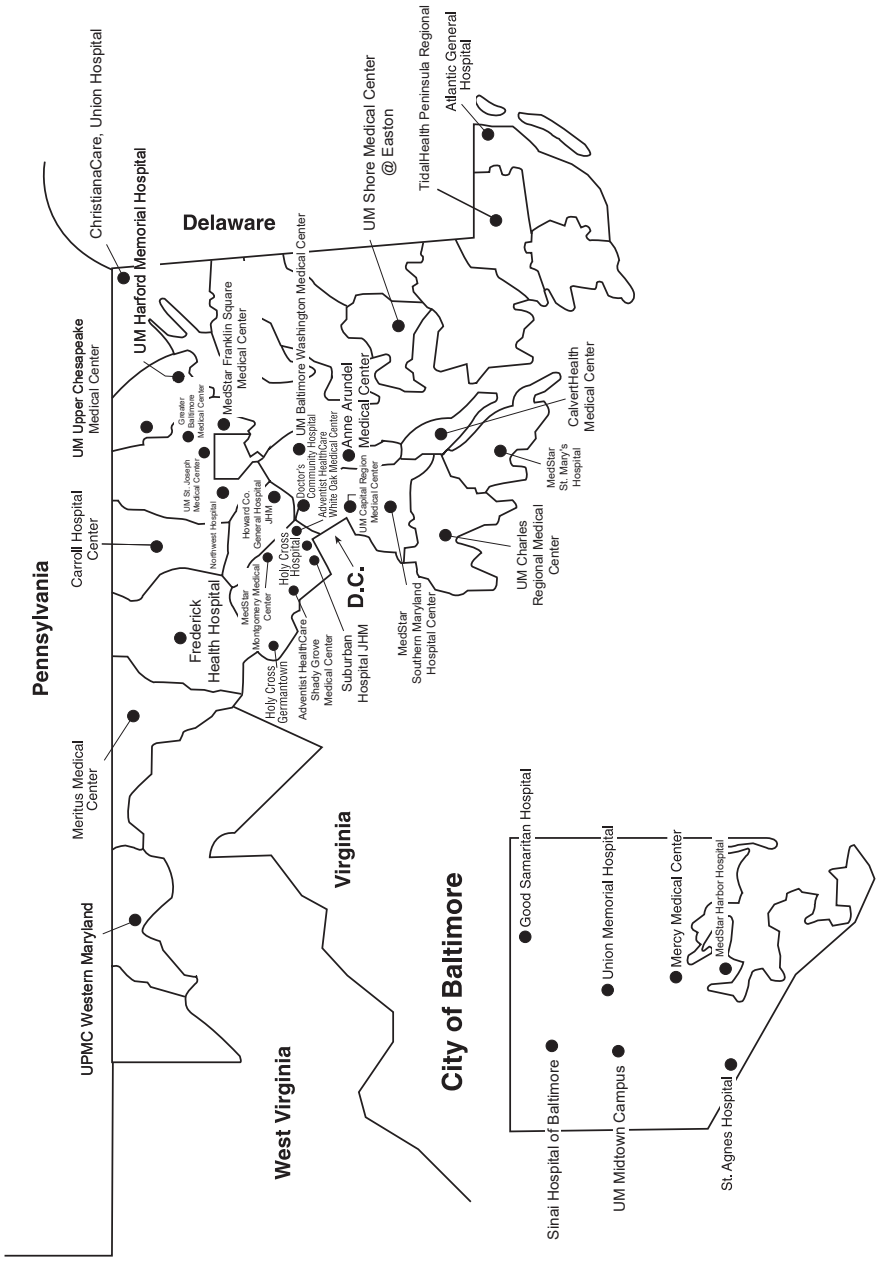
MedStar St. Mary's Hospital
25500 Point Lookout Rd.
Leonardtown, MD 20650

Emergency Department: 301-475-6110

University of Maryland CapitalRegion Medical Center
901 Harry S. Truman Dr. N.
Largo, MD 20774

Emergency Department: 240-677-2000

Primary Stroke Centers



COMPREHENSIVE STROKE CENTERS

The Johns Hopkins Hospital
1800 Orleans St.Baltimore, MD 21287

Hopkins Access Line: 410-955-9444

University of Maryland Medical Center
22 S. Greene St. Baltimore, MD 21201

Maryland Express Care: 410-328-1234

MedStar Franklin Square Medical Center
9000 Franklin Square Dr.
Baltimore, MD 21237

MedStar Transfer Center: 844-877-2424

Thrombectomy Capable Stoke Centers

Adventist HealthCare Shady Grove Medical Center
9901 Medical Center Dr.
Rockville, MD 20850

Transfer Center: 240-826-7462
(SGMC)
"Can I speak to a neurologist, I have a thrombectomy transfer"

Johns Hopkins Bayview Medical Center
4940 Eastern Ave. Baltimore, MD 21224

Suburban Hospital - JHM
8600 Old Georgetown Rd.
Bethesda, MD 20814

Hopkins Access Line: 410-955-9444

Sinai Hospital of Baltimore
2401 W. Belvedere Ave.
Baltimore, MD 21215

Contact LifeLink: 410-601-5465
press #2 for transfer

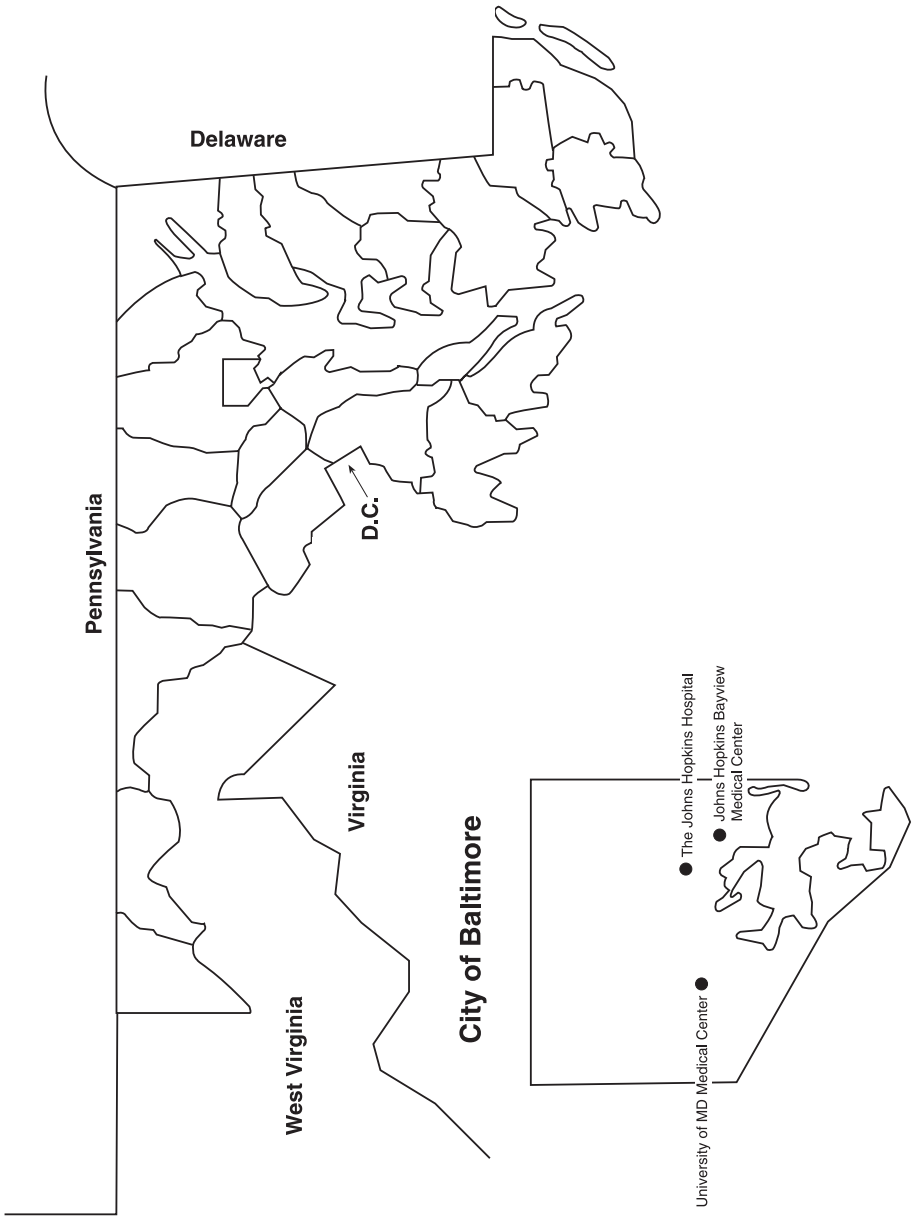
Acute Stroke Ready Stroke Centers

REGION III

UM Upper Chesapeake Medical Center at Aberdeen
660 McHenry Road Aberdeen, MD 21001

Emergency Department: 443- 843-5500

Comprehensive Stroke Centers



ENDOVASCULAR CAPABLE CENTERS IN MARYLAND*

Johns Hopkins Bayview Medical Center
4940 Eastern Ave.
Baltimore, MD. 21224
Contact: call the HAL Line 410-955-9444 or
Toll-free 1-800-765-5447 and ask for the Stroke Attending
Endovascular Availability: 24/7/365

The Johns Hopkins Hospital
1800 Orleans St.
Baltimore, MD 21287
Contact: call the HAL Line 410-955-9444 or Toll-free: 1-800-765-5447
Endovascular Availability: 24/7/365

Sinai Hospital of Baltimore
2401 West Belvedere Ave.
Baltimore, MD 21215
Contact: Lifelink 410-601-5465 and press #2 for stroke transfer
Endovascular Availability: 24/7/365

Suburban Hospital - JHM
8600 Old Georgetown Rd.
Bethesda, MD 20814
Contact: call the HAL Line 410-955-9444 or Toll-free: 1-800-765-5447
Endovascular Availability: 24/7/365

University of Maryland Medical Center
22 S. Greene St.
Baltimore, MD 21201
Contact: Maryland Express Care 410-328-1234
Endovascular Availability: 24/7/365

Adventist Health Care - Shady Grove Medical Center
9901 Medical Center Drive
Rockville, MD 20850
Contact: 240-826-7462
Endovascular Availability: 24/7/365

** Stroke Centers with Endovascular Capabilities are accredited by The Joint Commission as either a Comprehensive Stroke Center or Thrombectomy-Capable Primary Stroke Center and/or have submitted relevant data to MIEMSS and to the Get with the Guidelines® Thrombectomy Registry for more than the past 24 months.*

Endovascular Capable Centers

ACUTE ISCHEMIC STROKE GUIDELINES FOR POTENTIAL ENDOVASCULAR RECANALIZATION THERAPY (ERT)

OVERVIEW

- IV Alteplase (tPA) should be administered to acute ischemic stroke patients as soon as possible according to guidelines.
- Patients with a NIHSS score ≥ 8 should be considered for emergent endovascular recanalization therapy (ERT).
  - o There is evidence-based data supporting the benefit and safety of ERT for anterior circulation (carotid artery territory) acute ischemic stroke.
- If a patient is a potential candidate for ERT, contact an endovascular capable facility immediately to discuss patient management.

ELIGIBILITY CRITERIA

a) Age ≥ 18
   a. Children with stroke symptoms who have not reached their 18th birthday shall be treated under the pediatric protocol. Consult with a local base station and a pediatric base station to arrange transport to a Maryland pediatric trauma center.

b) Administer IV Alteplase per established guidelines as soon as possible—IV Alteplase should NOT be delayed for decisions about ERT (goal door to needle time is less than 60 minutes). IV Alteplase does NOT preclude ERT. IV Alteplase is the standard of care first-line treatment for patients within 4.5 hours of stroke onset.

c) NIHSS score ≥ 8 or occlusion of large artery on vascular imaging such as CT Angiography or MRA.

d) Non-contrast head CT without hemorrhage or hypodensity of greater than 1/3 of the MCA territory.

e) Patients ineligible for IV Alteplase due to anticoagulant use or recent surgery can be considered for ERT on a case-by-case basis.

f) Transfer procedures should be urgently initiated with a goal of patient arrival at the receiving facility within 6 hours from last seen well.

g) Patients with basilar thrombosis/occlusion should be urgently considered if transfer can be initiated with a goal of patient arrival at the receiving facility within 12 hours from last seen well.

GENERAL COMMENTS

a) Discussion of goals of care is recommended in the following cases:
   I. Situations in which further interventions might be considered futile:
      i. Patients with advanced co-morbidities.
      ii. Patients with poor baseline level of independent function.
      iii. Patients identified as DNR.
b) Patients not meeting the Eligibility Criteria will be considered on a case-by-case basis. For instance:
   I. Time is greater than 6 hours from last seen well.
   II. Contraindication to IV Alteplase other than established above or potential contraindication to ERT.

COMMENTS ON TIMING AND TRANSFER STRATEGIES

a) The decision about IV Alteplase should be independent of, and should not be delayed because of, decisions about ERT.
b) Consent: Every attempt to identify family members to consent for transfer and advanced treatment should be made. <u>The lack of an available person to provide consent should NOT preclude or delay discussion or transfer</u> of a patient for ERT.
c) If it is determined the patient is a candidate for transfer and evaluation for ERT then:
   a. Contact with endovascular capable facility should be initiated as soon as possible without delaying administration of IV Alteplase.
   b . Transfer should be initiated as soon as possible. There is no need to wait for the IV Alteplase infusion to be completed.
   c. The sending facility should inform the patient and family that the patient is being transferred for consideration for advanced treatments, including ERT.
      i. However, upon arrival at the endovascular-capable facility the patient will be re-evaluated to determine which management strategy is most appropriate.
      ii. Advanced treatment may include enrollment in a clinical trial.

TRANSFER RECOMMENDATIONS

For potential ERT patients, to decrease transfer time:

a) Once transfer is accepted, set target time of 15 minutes for patient to be ready for transport.
b) Avoid intubation if the patient is maintaining an airway, and is expected to maintain the airway during transport.
c) Unless vascular imaging can be obtained immediately, and not delay transfer, avoid further brain or vessel imaging prior to transfer.
    a. If vascular imaging is obtained, do not delay transfer while waiting for a Radiologist interpretation. Send images on a CD with the patient to the endovascular capable facility.
    b. If time allows, for radiographic contrast allergic patients consider IV administration of Solumedrol 100 mg and Benadryl 50 mg.
    c. Do not delay transfer waiting for a discharge summary. Sending facility should fax discharge summary to accepting facility as soon as stat discharge summary is completed.
    d. Patients with wake-up stroke and patients whose clinical status is not included in these guidelines will be considered on a case-by-case basis.

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CARDIAC INTERVENTIONAL CENTERS

REGION I

UPMC Western Maryland
12500 Willowbrook Road
Cumberland, MD 21502
ED transfer line: 240-964-1010
Fax: 240-964-1270

REGION II

Frederick Health Hospital
400 W. 7th Street
Frederick, MD 21701
ED Charge RN: 240-566-3500
Fax: 240-566-3946

Meritus Medical Center
11116 Medical Campus Road
Hagerstown, MD 21742
Hospital Operator: 301-790-8000
Fax: 301-790-9437

REGION III

Anne Arundel Medical Center
2001 Medical Parkway
Annapolis, MD 21401
STEMI Line 443-481-1122
Fax: 443-481-1299

UM Baltimore Washington Medical Center
301 Hospital Dr.
Glen Burnie, MD 21061
ED: 410-787-4312
Cath Lab: 410-787-4214
Fax: 410-595-1961

Carroll Hospital Center
200 Memorial Avenue
Westminster, MD 21157
ED: 410-871-6700
ED Charge Nurse: 410-871-7686
Shift Coordinator: 410-871-6938
Fax: 410-871-7177

MedStar Franklin Square Medical Center
9000 Franklin Square Drive
Rosedale, MD 21237
ED Charge Nurse 443-777-2712
Nursing Supervisor 443-777-2771
Fax: 443-777-7070

Howard County General Hospital - JHM
5755 Cedar Lane
Columbia, MD 21044
Hopkins Access Line: 410-955-9444 Fax:
410-740-7551

The Johns Hopkins Hospital
1800 Orleans Street
Baltimore, MD 21287
Hopkins Access Line: 410-955-9444
Fax: 1-877-884-8839

Johns Hopkins Bayview Medical Center
4940 Eastern Ave.
Baltimore, MD 21224
Hopkins Access Line: 410-955-9444
Fax: 410-550-7679

St. Agnes Hospital
900 S. Caton Avenue
Baltimore, MD 21229
Transfer Activation Line: 410-368-3480
Fax: 410-368-2009

UM St. Joseph Medical Center
7601 Osler Drive
Towson, MD 21204
Cath Lab BAT line: 410-427-2170
Fax: 410-337-1118

Sinai Hospital of Baltimore
2401 W. Belvedere Ave.
Baltimore, MD 21215
Heart Line: 1-800-900-HART (4278)
Fax: 410-601-6478

REGION III (continued)

MedStar Union Memorial Hospital
201 E. University Parkway
Baltimore, MD 21218
Heartline 410-554-2332 or 1-888-529-0200
Fax: 410-554-6544

University of Maryland Medical Center
22 S. Greene Street (Adult ED located off of Lombard St.)
Baltimore, MD 21201
Maryland Express Care: 410-328-1234
Fax: 410-328-1717

UM Upper Chesapeake Medical Center
500 Upper Chesapeake Drive
Bel Air, MD 21014
Nursing Supervisor: 443-643-4099
ED Charge Nurse: 443-643-4042
Fax: 443-643-2019

REGION IV

Bayhealth Hospital
640 South State Street
Dover, DE 19901
House Supervisor 302-744-7791
Fax: 302-744-6595

Christiana Hospital
4755 Ogletown Stanton Road
Newark, DE 19718
Transfer Telephone:
302-733-1430 or 302-733-5555, Access Center
Fax: 302-733-2108

UM Shore Medical Center - Easton
219 South Washington St.
Easton, MD 21601
Single-Call Access:
410-822-1000 #5433 (LIFE)
Fax: 410-820-8874

TidalHealth Nanticoke
801 Middleford Road
Seaford, DE 19973
302-629-6611, press 0 for operator
Ask for cardiologist on call
Fax: 302-628-6320

TidalHealth Peninsula Regional Medical Center
100 E. Carroll Street
Salisbury, MD 21801
Peninsula Access Center Bed Coordinators:
410-543-4722
Fax: 410-912-5757

REGION V

Adventist HealthCare White Oak Medical Center
11890 Healing Way
Silver Spring, MD 20904
Patient Access: 1-866-684-8460
Fax: 301-240-6211

Holy Cross Hospital
1500 Forest Glen Road
Silver Spring, MD 20910-1484
Direct STEMI Line: 240-638-0300
ED Charge Nurse: 240-635-0301
Fax: 301-754-7504

University of Maryland Capital Region Medical Center
901 Harry S. Truman Dr. N.
Largo, MD 20774
One-Call: 240-677-1234
Main Hospital: 240-677-1000

Adventist HealthCare Shady Grove Medical Center
9901 Medical Center Drive
Rockville, MD 20850
ED charge nurse and/or ED physician:
240-826-6596
Fax: 240-826-5206

MedStar Southern Maryland Hospital Center
7503 Surratts Road
Clinton, MD 20735
ED Physician: 1-866-724-3188
Fax: 301-877-4668

Suburban Hospital - JHM
8600 Old Georgetown Road
Bethesda, MD 20814
"BEAT" Line: 301-896-2328
Fax: 301-896-7195

MedStar Washington Hospital Center
110 Irving Street, NW
Washington, DC 20010
MedStar Transfer Center: 1-800-824-6814
Fax: 202-877-7879

Cardiac Interventional Centers

ST-ELEVATION MYOCARDIAL INFARCTION (STEMI) GUIDELINES FOR TRANSFER

INTRODUCTION

Time to reperfusion is one of the most important factors in the survival of STEMI patients. While thrombolytics may be beneficial if given within 30 minutes of ED arrival, there is a higher rate of complications than with primary percutaneous coronary intervention (pPCI), which is the treatment of choice if door to balloon times of less than 90 minutes can be achieved. Therefore, rapid identification and transfer of STEMI patients to Cardiac Interventional Centers where pPCI can be performed is critical to achieve optimal patient outcomes. When primary PCI is the treatment of choice, STEMI patients arriving at non-Cardiac Interventional Centers should be transferred out of the emergency department within 30 minutes of arrival.

INDICATIONS FOR TRANSFER

Documented or suspected STEMI.

STABILIZATION AND PREP FOR TRANSPORT:

1. Upon confirmation of a STEMI, immediately contact the receiving Cardiac Interventional Center. A list of centers and contact information starts on page 51 of this manual.

2. Notify commercial ground or air medical transport service that a STEMI patient needs to be transferred STAT. If a specialty care transport (SCT) unit and SCT paramedic or nurse is not available, a registered nurse or physician may need to accompany the patient to the Cardiac Interventional Center in an ALS-licensed unit depending on the condition of the patient and treatment that has been initiated at the transferring hospital. Please refer to the Transport Services section on page 4 for additional information on arranging transports.

INFORMATION FOR CALL TO CIC CARDIOLOGIST:

Obtain the following history from patient or EMS if possible:

- Time of acute symptom onset
- Duration of pain
- Age and DNR status
- History of prior MI/stent/CABG/renal failure?
- CPR, intubation, or multiple defibrillations en route to ED?
- Send fax confirming STEMI EKG to CIC (see pages 51-52 for fax numbers)

3. Obtain labs and portable CXR if time permits. **Do not delay transport to obtain.**

Consult with receiving CIC regarding administration of medications prior to transfer. Do not delay transport to administer medications unless otherwise advised to do so by the receiving CIC.
AVOID ALL IVs/DRIPS IF POSSIBLE, BUT DO NOT COMPROMISE PATIENT CARE. DRIPS COMPLICATE AND MAY DELAY TRANSPORT.

4. All transport documentation and paperwork should be completed STAT:
   - Signed consent to transfer patient to other facility
   - Signed release of medical records form
   - Medical treatment and assessment forms and documentation
   - Data sheet with the following times:
     - o Time symptoms started
     - o Time of first qualifying ECG (prehospital or ED)
     - o Time patient arrived in ED
     - o Time of first call to CIC
     - o Time of administration of medications, if given
     - o Time patient left sending hospital

TRANSPORT PATIENT WITH:

- Copy of Medical Record including treatment rendered (including medications) and lab and x-ray results if available
- Data Sheet
- Copy of EKG(s) obtained by EMS and/or ED documenting STEMI (fax in advance if possible)
- eMEDS®
- Prehospital Consultation/Interventions Radio Report Form

DO NOT DELAY TRANSPORT AWAITING LAB RESULTS OR OBTAINING TIMES. These may be faxed to the receiving CIC while patient is en route.

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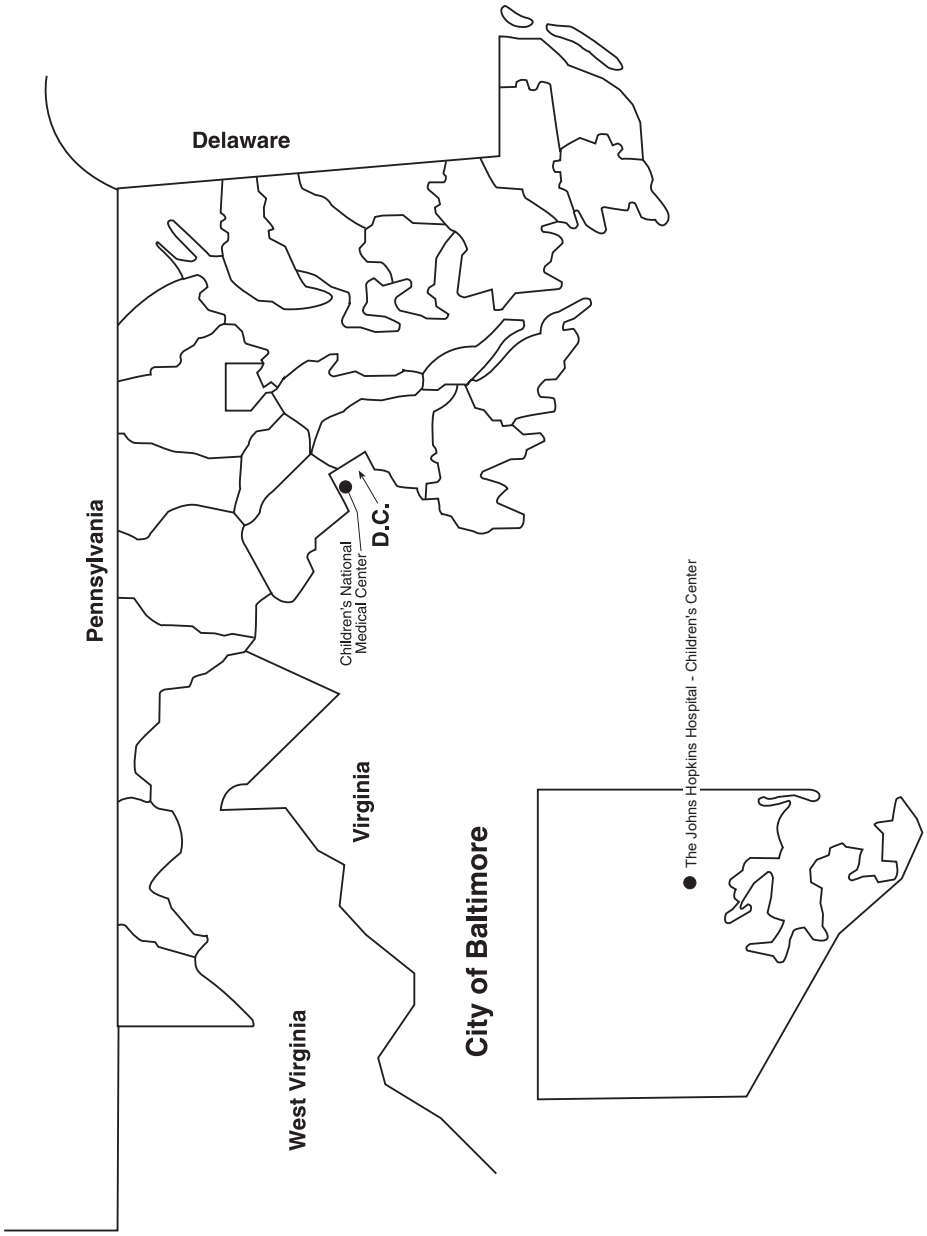
PEDIATRIC TRAUMA CENTERS

The Johns Hopkins Hospital -
Children's Center
1800 Orleans Street, Baltimore, MD 21287
HAL Line: 410-955-9444
Administrative Office: 410-614-1811

Children's National Medical Center
111 Michigan Avenue, NW, Washington, DC 20010
ECIC: 202-476-5433
ECIC: 1-800-884-5433
Administrative Office: 202-476-6698

Pediatric Trauma Centers



PEDIATRIC TRAUMA CENTERS' GUIDELINES

Children who have not reached their 15th birthday should be transferred to a pediatric trauma center. There are two Level 1 Pediatric Trauma Centers serving the state of Maryland caring for children who have not reached their 15th birthday. Both the Johns Hopkins Children's Center and Children's National Medical Center are designated by MIEMSS as Pediatric Base Stations, Pediatric Trauma Centers, and Pediatric Burn Centers with specially trained physicians, nurses, and other health professionals, as well as specially adapted equipment, to meet the needs and problems unique to children and their families.

The Johns Hopkins Children's Center, Baltimore, MD

ALS ground and air medical transport is available for children to be transferred to the hospital. The transport team is capable of performing invasive and noninvasive monitoring and is able to provide full ventilatory support for children. The **Hopkins Access Line (HAL)** provides telephone access to the pediatric transport team, pediatric critical care and emergency medicine physicians, pediatric trauma and burn service, and other subspecialty consultants. **To initiate a transport to the Johns Hopkins Children's Center, call the HAL at 410-955-9444.**

Children's National Medical Center, Washington, DC

ALS ground and air medical transport is available for children to be transferred to the hospital from other facilities. The transport team is capable of performing invasive and noninvasive monitoring and is able to provide full ventilatory support for children. The Emergency Communications Information Center (ECIC) allows for communications between hospitals and EMS agencies and access to the pediatric transport team, pediatric critical care and emergency medicine physicians, pediatric trauma and burn service, and other subspecialty consultants. To schedule a transport, call **1-800-884-5433** (pediatric transport team at the Children's National) and speak with the communication specialist who will connect you with an attending physician in the ED and trauma center.

It is recommended that you first attempt to contact the pediatric trauma center directly. If you are unable to contact the Johns Hopkins Children's Center through the HAL or the Children's National Medical Center through the ECIC, you may contact the EMRC at 1-800-492-3805 for assistance.

REASONS FOR TRANSFER TO A PEDIATRIC TRAUMA CENTER

1. Trauma - any of the following:
   a. Multiple-system injury (two or more systems)
   b. Blunt thoracic trauma
   c. Blunt abdominal trauma
   d. Penetrating wounds
      (1) Head
      (2) Chest
      (3) Abdomen
      (4) Extremity with neurovascular compromise
   e. Cardiac or major vessel injury
   f. Extremity injury
      (1) Open fractures
      (2) Major long bone fracture
      (3) Neurovascular compromise
      (4) Avulsion or amputation of upper or lower extremities
   g. Massive maxillofacial trauma
   h. Spinal injury with or without deficit
   i. Estimated Injury Severity Score (ISS) greater than 13
   j. Severe head injury
      (1) Deteriorating Glascow Coma Scale (GCS) regardless of score (9-15)
      (2) GCS less than or equal to 8
      (3) Depressed skull fracture or open head injury
      (4) CSF leak—otorrhea or rhinorrhea
      (5) Focal or lateralizing signs
      (6) Intracranial hemorrhage

2. Burns - See list in Pediatric Burn Referral Center section on page 62.

3. Evidence of shock or respiratory compromise:
   a. Hypotension
   b. Hypoxia
   c. Hypovolemia
   d. Mottled, cold, pale extremities
   e. Tachycardia
   f. Thready pulse
   g. Tachypnea
   h. Decreased level of consciousness
   i. Urine production less than 0.5 mL/kg/hr
   j. Metabolic acidosis (pH less than 7.2)

4. Any seriously injured child who cannot be managed in the community hospital

GENERAL GUIDELINES FOR TRANSPORT OF CHILDREN

NOTES: These steps are guidelines in the assessment and stabilization of a pediatric trauma patient. Not all of these steps need to be accomplished prior to transfer of a patient to a trauma center. Call the pediatric trauma center for consultation/transfer as early as possible after considering that a patient may need care in a trauma center.

For Newborn transports - refer to the Neonatal Transport Section on page 69.

- Children should receive 100% oxygen during transport unless contraindicated by pre-existing condition.
- Children transported with an ETT will have both a gastric tube placed for decompression and exhaled CO2 monitoring along with a chest X-ray.
- Secure all lines and tubes.
- Children meeting trauma criteria should be immobilized with a collar and backboard appropriate for size.
- Children should be transported with a secured and patent IV/IO.
- Children receiving intravenous medications must have the IV rate regulated by an infusion pump.
- Children should be kept NPO.
- Children should have a baseline glucose taken and recorded.
- Children should be kept warm with blankets and heat; document initial and regular temperatures with vital signs.
- Transport service must be notified of the transport of any child with a potentially infectious disease.

When possible, the pediatric transport teams will bring one adult family member with the child; siblings will not be transported. Safety of all occupants of both ambulance and helicopter transports will be the primary consideration. Driving directions to the receiving hospital should be provided to the family, along with contact phone numbers.

PEDIATRIC BURN CENTERS

The Johns Hopkins Hospital
1800 Orleans Street
Baltimore, MD 21287
410-955-9444 (HAL line for referrals)

Administrative Office: 410-614-1811 for Pediatric Trauma and Burn Offices

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Pediatric Burn Center
Children's National Medical Center
111 Michigan Avenue, NW
Washington, DC 20010
202-476-5433 or 1-800-884-5433
(ECIC for referrals and Pediatric Transport Team)

Administrative Office: 202-476-6698 for Pediatric Trauma and Burn Offices

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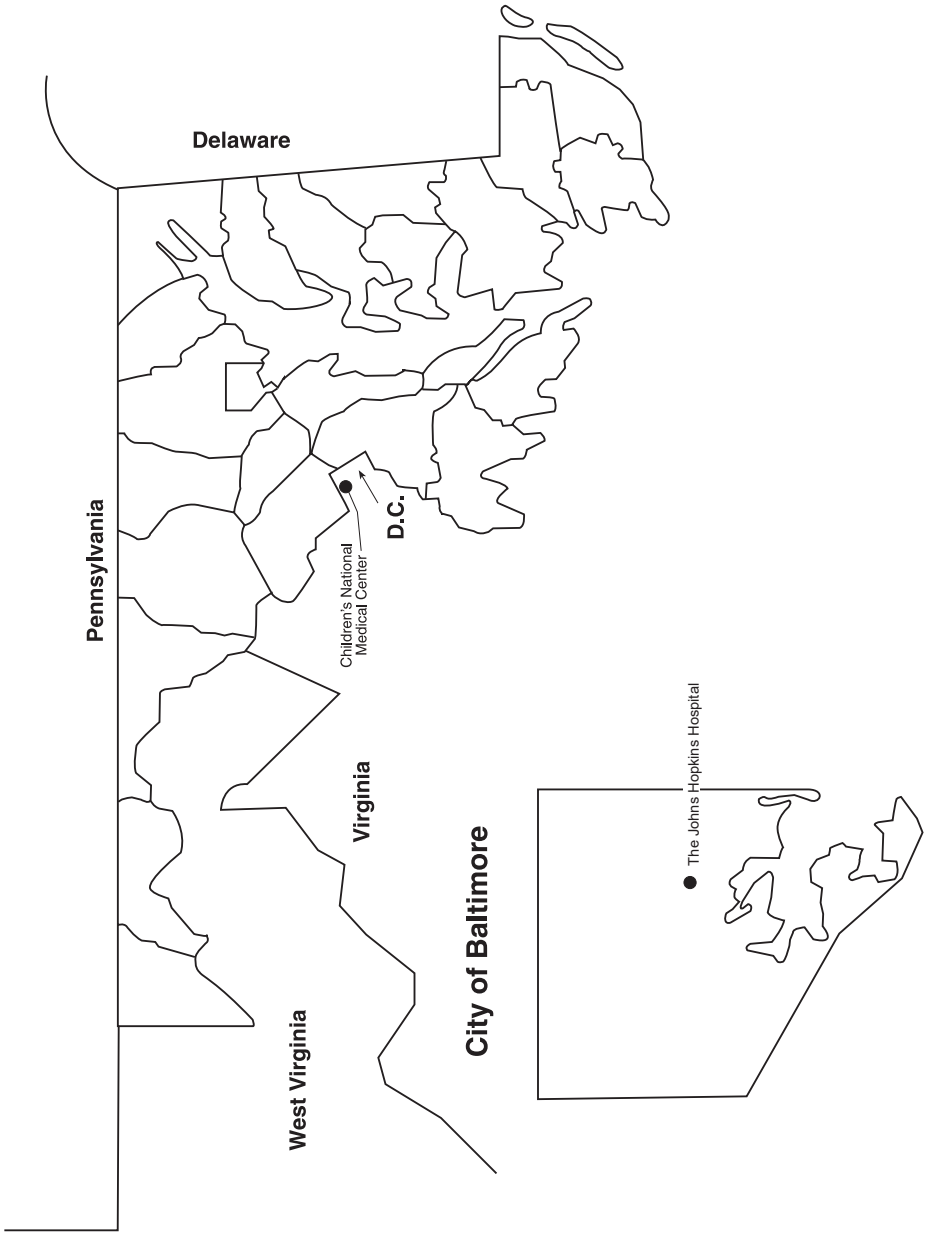
Pediatric Burn Centers



INDICATIONS FOR TRANSFER TO A PEDIATRIC BURN CENTER

1. Partial thickness burns greater than 10% total body surface area (TBSA) in all age groups
2. Burns that involve the face, hands, feet, genitalia, perineum, or major joints
3. Full thickness burns in any age group (formerly referred to as third-degree burns)
4. Electrical burns, including lightning injury
5. Chemical burns
6. Burns complicated by smoke inhalation
7. Circumferential burns
8. The two Pediatric Burn Centers are also Pediatric Trauma Centers; burns complicated by trauma should be transferred to these two centers
9. Burns in patients with serious pre-existing medical conditions
10. Burns with concern regarding intentionality of injury (child victimization)

When necessary, the referring physician, in consultation with one of the Pediatric Burn Centers, may request a Pediatric Transport Team from the receiving center. Both Pediatric Burn Centers have dedicated Pediatric Transport Teams with ground and air capabilities.

University-Based Perinatal Referral Centers

The Johns Hopkins Hospital
1800 Orleans St
Baltimore, MD 21287
L&D: 410-955-5850 Fax: 410-614-7720
NICU: 410-955-5255 Fax: 410-614-8834
For Neonatal Transport: 1-888-540-6767

University of Maryland Medical Center
22 South Greene Street
Baltimore, MD 21201-1595
L&D: 410-328-1234 Fax: 410-328-8622
NICU: 410-328-6716 Fax: 410-328-5273
For Neonatal Transport: 1-888-540-6767

Maryland Perinatal Referral Centers

Anne Arundel Medical Center
2001 Medical Parkway
Annapolis, MD 21401-2777
L&D: 443-481-6989
Fax: 443-481-6954
NICU: 443-481-6962
Fax: 443-481-6954

MedStar Franklin Square Medical Center
9000 Franklin Square Drive
Baltimore, MD 21237-3998
L&D: 443-777-8149
Fax: 443-777-7447
NICU: 443-777-7050 OR 443-777-2096
Fax: 443-777-8409
OB In-House Attending: 443-777-2074
For Maternal Transportation: 844-777-2424
Fax: 443-777-7447

Frederick Health Hospital
400 West Seventh Street
Frederick, MD 21701
L&D: 240-566-3533
Fax: 240-566-3979 NICU: 240-566-3582
Fax: 240-566-3247

Greater Baltimore Medical Center
6701 North Charles Street
Towson, MD 21204-6892
L&D: 443-849-2577
Fax: 443-849-3026 NICU: 410-849-2591
Fax: 443-849-3025

Holy Cross Hospital
1500 Forest Glen Road
Silver Spring, MD 20910
L&D: 301-754-7591
Fax: 301-754-7594
NICU: 301-754-7600
Fax: 301-754-7604

Howard County General Hospital - JHM
5755 Cedar Lane
Columbia, MD 21044-2999
L&D: 410-740-7845
Fax: 410-740-7614
NICU: 410-740-7555
Fax: 410-740-7513

Johns Hopkins Bayview Medical Center
4940 Eastern Avenue
Baltimore, MD 21224-1505
L&D: 410-550-0328
Fax: 410-550-1098
NICU: 410-550-0395
Fax: 410-550-0439

Mercy Medical Center
301 St. Paul Place
Baltimore, MD 21202-2165
L&D: 410-332-9325
Fax: 410-234-2591
NICU: 410-332-9568
Fax: 410-528-5320

Adventist HealthCare Shady Grove Medical Center
9901 Medical Center Drive
Rockville, MD 20850-3395
L&D: 240-826-6386
Fax: 240-826-6200
NICU: 240-826-7495
240-826-5372

Sinai Hospital of Baltimore
2401 W. Belvedere Avenue
Baltimore, MD 21215-5271
L&D: 410-601-5240
Fax: 410-601-6875
NICU: 410-601-6077
Fax: 410-601-5557
For Neonatal Transport: 410-601-5465 (LifeLink)

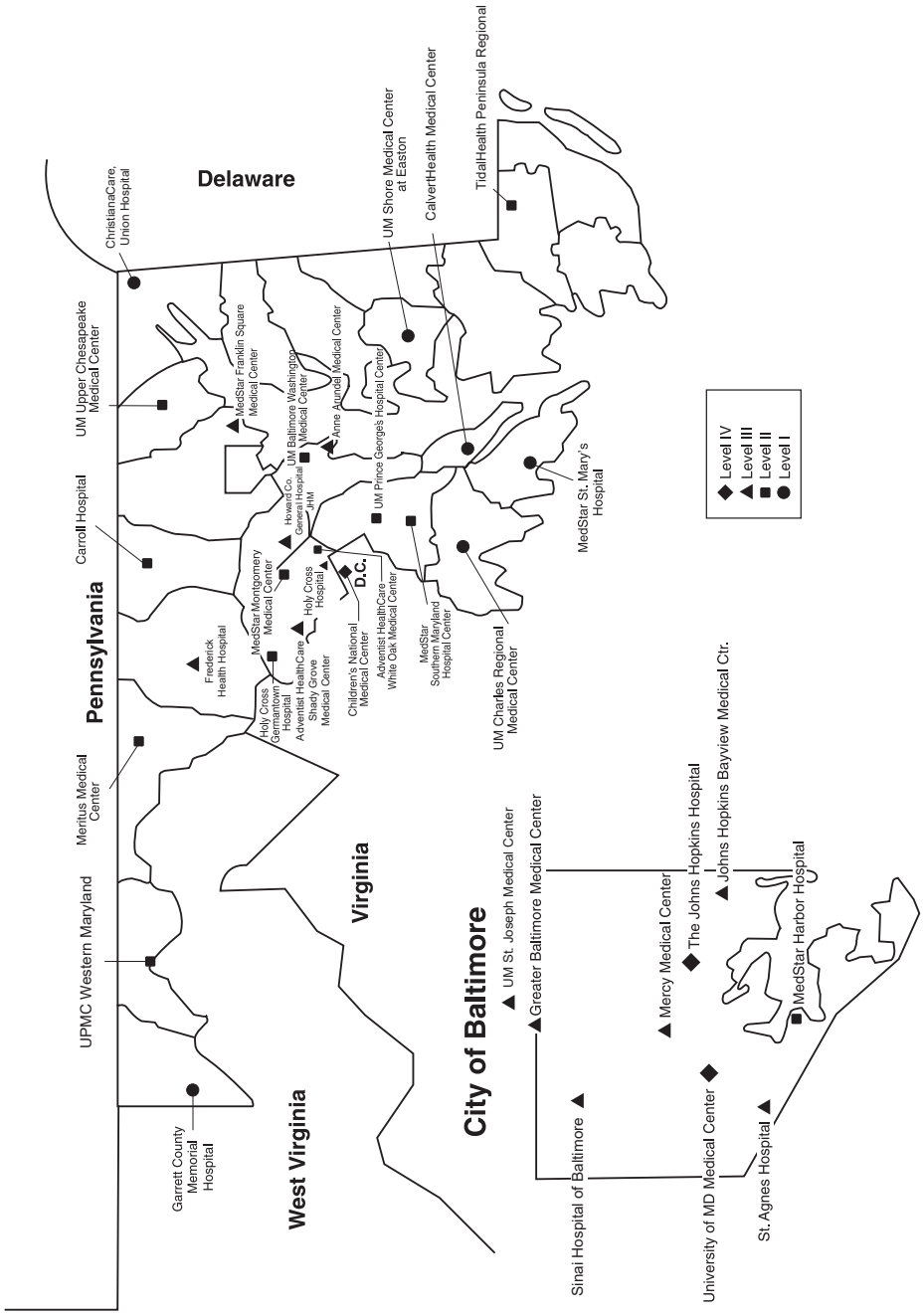
St. Agnes Hospital
900 Caton Avenue
Baltimore, MD 21229-5299
L&D: 667-234-2610
Fax: 667-234-3559
NICU: 667-234-2630
Fax: 667-234-3569

UM St. Joseph Medical Center
7601 Osler Drive
Towson, MD 21204-7582
L&D: 410-337-1178
Fax: 410-337-1009
NICU: 410-337-1150
Fax: 410-337-1844

Out-of-State Neonatal Referral Centers

Children's National Medical Center
111 Michigan Avenue, NW
Washington, DC 20010
202-476-5433
1- 800-884-5433

Maryland Perinatal Centers



PERINATAL REFERRAL:
MATERNAL REFERRAL/CONSULTATION

INTRODUCTION

The value of neonatal transport in reducing neonatal morbidity and mortality rates has been well documented in the medical literature. Current evidence supports the theory of maternal transport as a significant factor in the reduction of neonatal mortality rates.

INDICATIONS FOR TRANSFER

1. Maternal status does not improve.
   Examples:
   - Preterm labor
   - Premature rupture of membranes (PROM)
   - Hypertensive disorders
   - Second trimester incompetent cervix
   - Third trimester bleeding
2. Delivery will occur prior to 34 weeks of gestation.
   Examples:
   - Preterm labor
   - PROM
3. Newborn facilities are inadequate to support the infant should delivery occur within 24 hours.
   Examples:
   - Suspected or known fetal anomalies
   - Intrauterine growth retardation (IUGR)
4. The obstetrician or pediatrician feels that a mother, fetus, or newborn may require intensive care or special services available in the perinatal centers.
   Examples:
   - Suspected or known fetal anomalies
   - IUGR
   - Pregnancies complicated by medical disorders, such as diabetes, cardiac disease, sickle cell disease, or thromboembolic disease

HOW TO INITIATE A TRANSFER

The referring physician should:

- Contact any one of the perinatal referral centers, or
- If unable to make contact with the perinatal referral center, you may call the EMRC to request a maternal transport and they will connect you with the institution of your choice. Toll-free: 1-800-492-3805

ARRANGING FOR TRANSPORTATION

When determining the mode of transport, the following factors should be considered:

1. How soon does the patient need to reach the referral center?
2. What are the weather/ground conditions that might inhibit air transport?
3 What are the transport times for ground versus air transport from the referring institution?

The transportation decision should be made by the receiving physician in collaboration with the referring physician based on clinical judgment, with careful consideration given to the above questions.

For GROUND TRANSPORTATION, the referring hospital will arrange transportation through local or commercial ambulance services.

For AIR TRANSPORTATION IN MARYLAND, the receiving perinatal center will arrange air transport.

PERINATAL REFERRAL:
NEONATAL REFERRAL/CONSULTATION

INTRODUCTION

There are 15 Maryland hospitals with Neonatal Intensive Care Units (NICU) that are capable of caring for critically ill newborns. These same 15 hospitals also care for high-risk mothers. Two of these are university-based hospitals capable of caring for all types of newborns, including those requiring cardiac and complex surgical procedures as well as medical intensive care. The other 13 Maryland hospitals provide medical intensive care and some may accept certain types of surgical patients. There are at several other hospitals out-of-state with NICUs that may accept neonatal patients from Maryland hospitals within their surrounding geographic areas.

All Perinatal Referral Centers meet Level III or IV standards in their respective Neonatal Intensive Care Unit as set by MIEMSS. The Maryland Regional Neonatal Transport Program (MRNTP) transfers to hospitals associated with the Johns Hopkins Hospital or University of Maryland Medical System. In addition, Holy Cross Hospital, Sinai, and Shady Grove Adventist have their own neonatal transport teams.

HOW TO INITIATE A TRANSFER

The referring physician should:

- Contact any one of the hospital or transport programs directly, or
- If unable to make contact with the perinatal referral center, you may call EMRC to request a neonatal transport and they will connect you with the institution of your choice.
  Toll-free: 1-800-492-3805
  When contacting the EMRC operator, be very clear that this is either a neonatal or maternal transport/consultation request so the call is appropriately handled.

NEONATAL TRANSPORT

1. Contact the desired Perinatal Referral Center to initiate the referral. Neonates with suspected cardiac or complex surgical problems should be referred to one of the university centers. Neonates with suspected surgical problems may also be referred to a perinatal referral center with surgical capabilities. The selection of the receiving Perinatal Referral Center must be in compliance with COMAR 30.08.12 (Guidelines for Levels of Perinatal Care).
2. The receiving Perinatal Referral Center, in consultation with the sending facility, will determine if ground or air transport is clinically most appropriate.

Ambulance Transports

- The receiving Perinatal Referral Center is responsible for arranging appropriate ambulance transport in a timely manner.
- This transport must be carried out by a Maryland Licensed Neonatal Commercial Ambulance Service and in compliance with COMAR 30.09 (Commercial Ambulance Regulations).

Neonatal Assessment Prior to Transport

1. Assess/address the following
   a. Airway - positioning
   b. Breathing - bag mask ventilation if necessary - place pulse ox and monitor
   c. Circulation - pink, warm
   d. Sugar - glucose >50
   e. Temperature - 36.5-37.5 axillary
   f. Airway - document respiratory rate (< 60) and heart rate (100-150 bpm) Pulse ox (92) every 15 minutes
   g. Blood Pressure - is the baby pink, well perfused, voiding and stooling
   h. Any risk factors for sepsis
   i. Parental disposition
   j. Treat any of the above parameters based on the S.T.A.B.L.E. guidelines

2. Placement
   Gestational age and weight - based on the perinatal guidelines
   a. Level I > 35 weeks
   b. Level II ≥ 32 weeks gestation and ≥ 1500 grams
   c. Level III & IV no gestational age or weight criterion
   If born at a setting without Perinatal Services, needs to be taken to the closest appropriate facility with Peds/Perinatal Services. The Maryland Regional Neonatal Transport Program can be called to assist with the transport.

3. Items essential for transport
   a. Maternal Care Records and Labor & Delivery medical record
   b. Infant Care Records, nursery and Labor & Delivery records
   c. Armband that matches the maternal armband
   d. One tube each or cord blood and maternal blood, if available
   e. Transport equipment as defined by COMAR 30.09.12.06 that is designed and developmentally appropriate for the age of the neonate.

Commercial Air Medical Transport (See page 7)

Maryland State Police Helicopter Transports

1. The attending pediatrician/neonatologist at the referring hospital should call the MRNTP at 1-888-540-6767 to request transport. The MRNTP transport nurse will contact the on-call neonatologist. In a three-way conversation, with the coordinating center monitoring and recording the call, the MRNTP nurse and neonatologist and the referring physician will determine whether air or ground transport is more appropriate.

2. The transport nurse will contact MSP to request a helicopter transport and to obtain an estimated time of arrival of the MSP helicopter at the MRNTP hospital to pick up the nurse and the air sled.

3. Approval for helicopter utilization will be made by the attending neonatologist on-call for the MRNTP based on the patient's need to get to a higher level of care in a time-critical manner. Patients must either have a need to receive a specific intervention quickly or be unstable, such that air transport is needed to minimize their out-of-hospital time:
   a. Any disagreements regarding approval for the MSP helicopter utilization will be resolved via an immediate conference call between the requesting physician, the MRNTP neonatologist, and the State Aeromedical Director; and
   b. Neonatal centers without helipads immediate accessible to the hospital (i.e., an intermediate ambulance transport is required) will be utilized only when no appropriate center with an accessible helipad is available.

4. Once the MRNTP agrees to provide the neonatal transport nurse for the mission, online medical direction, including direction to the neonatal transport nurse, will be overseen by the MRNTP neonatologist until the patient arrives at the receiving Perinatal Referral Center.

TRANSPORT OF STABLE NEWBORNS FROM A PERINATAL CENTER TO A COMMUNITY OR CONVALESCENT HOSPITAL

The following refers to stable infants being transferred for convalescent care who do not need the same level of care during transport as newborns being transferred to a Perinatal Referral Center or those being transferred who still require intensive care.

1. These elective transports must be prearranged between the referring Perinatal Referral Center and the receiving hospitals.

2. Transports must be carried out by a licensed Neonatal Ambulance Service and in compliance with COMAR 30.09. Neonatal Commercial Ambulance Services may also transport stable infants; however, since these patients do not need the same level of care, they may also be transported in an Advanced Life Support (ALS) Commercial Ambulance or Specialty Care Transport (SCT).

3. When an ALS Commercial Ambulance is utilized for these transports, it must have:
   a. One neonatal transport incubator powered by internal batteries as well as by alternating current power. The incubator must be secured with litter fasteners that meet the U.S. General Services Administration standard for ambulance litter fasteners and anchorages;
   b. A registered nurse with a current Neonatal Resuscitation Program (NRP) certification from the American Academy of Pediatrics must accompany the infant.

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EMTALA

THE EMERGENCY MEDICAL TREATMENT AND ACTIVE LABOR ACT

EMTALA - EXPLANATION OF REGULATIONS

The Emergency Medical Treatment and Active Labor Act (EMTALA) became effective in 1986 as a federal law as part of the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA). The purpose of EMTALA is to ensure that hospitals that receive Medicare funding and maintain a "dedicated ED" assess and stabilize or transfer patients with an emergency medical condition without consideration of ability to pay. It is sometimes referred to as the "antidumping" law.

If an individual's emergency medical condition has not been stabilized prior to transferring the individual to another hospital, the sending hospital must comply with certain EMTALA requirements in order to make an appropriate transfer.[1]

At the outset, it is important to remember that duties imposed by EMTALA are in addition to traditional state law requirements that patients be transferred in accordance with the standard of medical care applicable in a given situation. State regulations regarding patient transfer between hospitals are set forth in COMAR 10.07.01.23. Furthermore, a patient must always be transferred under the conditions that a reasonably prudent physician of like skill and training would require.

The general principles of EMTALA, as of March 2019, are briefly outlined below. Legal counsel should be consulted and the full statutory and regulatory materials reviewed to understand how EMTALA might impact a particular situation at any given time.

WHAT HOSPITALS DOES EMTALA APPLY TO?

Under regulations promulgated in 2003, EMTALA applies to hospitals that have a "dedicated emergency department," which is defined as "any department or facility of the hospital, regardless of whether it is located on or off the main hospital campus, that meets at least one of the following requirements:

(1) It is licensed by the State in which it is located under applicable State law as an emergency room or ED;

(2) It is held out to the public (by name, posted signs, advertising, or other means) as a place that provides care for emergency medical conditions on an urgent basis without requiring a previously scheduled appointment; or

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1 Appendix V, Interpretive Guidelines - Responsibilities of Medicare Participating Hospitals in Emergency Cases *(Rev. 60, 07-16-10), Tag A-2409/C-2409, § 489.24 (e)(2)(i-iv). (Available online at http://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_v_emerg.pdf.)*

(3) During the calendar year immediately preceding the calendar year in which a determination under this section is being made, based on a representative sample of patient visits that occurred during that calendar year, it provides at least one-third of all of its outpatient visits for the treatment of emergency medical conditions on an urgent basis without requiring a previously scheduled appointment.[2]

WHERE DOES EMTALA APPLY?

EMTALA applies everywhere on "hospital property," but regulations promulgated in 2003 make somewhat of a distinction between individuals presenting at a dedicated ED and individuals presenting elsewhere on hospital property.

Hospital property is defined as the physical area immediately adjacent to the main buildings as well as other areas within 250 yards of the main buildings and any other areas determined on an individual case basis by the Centers for Medicare and Medicaid Services (CMS) regional office. Hospital property includes the hospital's parking lots, sidewalks, and driveways, plus certain facilities located off campus.[3]

Hospital property does not include "other areas or structures of the hospital's main building that are not part of the hospital, such as physician offices, rural health centers, skilled nursing facilities, or other entities that participate separately under Medicare or restaurants, shops, or other nonmedical facilities."[4]

WHEN DOES EMTALA APPLY?

The medical screening examination/stabilization requirements of EMTALA apply when an individual presents to a "dedicated ED" and requests examination or treatment for a **medical condition**.[5]

For individuals presenting on hospital property at locations other than the dedicated ED, EMTALA applies when the individual requests examination or treatment for an **emergency medical condition** (as opposed to requesting examination or treatment for a **medical condition**).[6]

A request for examination or treatment is considered to exist if a prudent layperson observer would believe, based on the individual's appearance or behavior, that the individual needs examination or treatment for a medical condition (if in a dedicated ED) or needs emergency examination or treatment (if elsewhere on hospital property).[7]

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2 42 CFR § 489.24(b)

3 Appendix V Interpretive Guidelines, *above n.1, Tag 406, § 489.24 (a)(1)(i)*

4 42 CFR § 489.24(b)

5 The statute speaks in terms of "comes to the emergency department." 14 USC §1395dd (a). The regulations refine that concept. 42 CFR § 489.24(b) (definition of "comes to the emergency department")

6 42 CFR § 489.24(b) (definition of "comes to the emergency department")

7 Ibid.

In general, once an ambulance is on hospital property, EMTALA applies if the hospital is subject to EMTALA.[8]

However, EMS entry on hospital property with a patient to rendezvous with an air medical transport does not trigger EMTALA if the hospital is not the recipient hospital, unless a request is made by EMS personnel, the patient, or a legally responsible person acting on the individual's behalf for the examination or treatment of an emergency medical condition.[9]

EMTALA also applies when an individual is in a ground or air ambulance owned or operated by a hospital to which EMTALA applies even if the ambulance is not on hospital property unless the ambulance is operated under community-wide EMS protocols directing transport locations.[10]

EMTALA does not apply to patients who have begun to receive outpatient services as part of an encounter,[11] and EMTALA does not apply to an individual admitted as an inpatient. Inpatient means an individual who is admitted to a hospital (including the ED) for bed occupancy for purposes of receiving inpatient hospital services as described in 42 CFR § 409.10(a) with the expectation that he or she will remain at least overnight and occupy a bed even though the situation later develops that the individual can be discharged or transferred to another hospital and does not actually use a hospital bed overnight.[12]

Receiving hospitals are required to report violations of the EMTALA transfer provisions to CMS.[13] Failure to do so is itself a violation of EMTALA.

SCREENING EXAMINATION

When EMTALA applies, the hospital must provide a screening examination to the individual who has presented. The examination must be within the hospital's capabilities and conducted by individuals determined qualified in the hospital's by-laws or rules and regulations and who meet the emergency services requirements of hospitals participating in Medicare.

"Depending on the individual's presenting symptoms, the …[medical screening examination] represents a spectrum ranging from a simple process involving only a brief history and physical examination to a complex process that also involves performing ancillary studies and procedures such as (but not limited to) lumbar punctures, clinical laboratory tests, CT scans, and/or diagnostic tests and procedures."[14] The medical screening examination is an ongoing process, not an isolated event.

"**Triaging is not equivalent to a medical screening examination**. Triaging merely determines the 'order' in which patients will be seen, not the presence or absence of an emergency medical condition."[15]

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8 Ibid.

9 Appendix V Interpretive Guidelines, *above n.1, Tag A-2406/C-2411, § 489.24 (a)(1)(i)*

10 42 CFR § 489.24(b).

11 Encounter means a direct personal contact between a patient and a physician, or other person who is authorized by State licensure law and, if applicable, by hospital or …[Critical Access Hospital] staff bylaws, to order or furnish hospital services for diagnosis or treatment of the patient. 42 CFR 410.2; Torretti v. Main Line Hosps., Inc., 580 F.3d 168, 174-176 (3d Cir. 2009)

12 42 CFR § 489.24

13 42 CFR § 489.20(m)

14 Appendix V Interpretive Guidelines, *above n.1, Tag A-2406/C-2406, § 489.24 (a)(1)(i).*

15 Ibid.

ABILITY TO PAY MUST NOT INTERFERE

At no time should any effort be made to determine the patient's ability to pay for or cover by insurance the costs of the EMTALA requirements. CMS and the Office of Inspector General advise that the hospital should employ properly trained staff members to respond to patient inquiries about costs in an effort to make certain the patient realizes the extent to which EMTALA procedures are available without cost.[16]

However, "It is not impermissible under EMTALA for a hospital to follow normal registration procedures for individuals who come to the ED. For example, a hospital may ask the individual for an insurance card, so long as doing so does not delay the medical screening examination. In addition, the hospital may seek other information (not payment) from the individual's health plan about the individual such as medical history. And, in the case of an individual with an emergency medical condition, once the hospital has conducted the medical screening examination and has initiated stabilizing treatment, it may seek authorization for all services from the plan, again, as long as doing so does not delay the implementation of the required …[medical screening examination] and stabilizing treatment. A hospital that is not in a managed care plan's network of designated clinicians cannot refuse to screen and treat (or appropriately transfer, if the medical benefits of the transfer outweigh the risks or if the individual requests the transfer) individuals who are enrolled in the plan who come to the hospital if that hospital participates in the Medicare program."[17]

EMTALA STABILIZATION REQUIREMENT

If it is determined that an emergency medical condition exists, either by means of a screening examination or otherwise, the hospital must either provide treatment within the capabilities of the staff and facilities available at the hospital to stabilize the condition or transfer the patient to another medical facility which can and has agreed to provide appropriate care.

If a patient refuses treatment or transfer, EMTALA provides specific requirements for documenting the circumstances of a refusal and the fact that the patient was properly informed of the risks and benefits. Samples of such documentation follow.[18] Before any forms are implemented, the proposed procedure for using such forms should be reviewed with counsel to ensure appropriateness in a given situation.

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16 64 Fed. Reg. 217 at 61358 (1999)

17 Appendix V Interpretive Guidelines, *above n.1, Tag A-2406/C-2406, § 489.24 (a)(1)(i)*

18 See sample forms on pages 75-77.

EMTALA PRECONDITIONS FOR A PATIENT TRANSFER

In general, if a hospital is aware that a patient is experiencing an emergency medical condition, the patient cannot be transferred until:

A. The emergency medical condition has been stabilized as required under EMTALA; or

B. The following conditions are met:

(1) The transfer is requested in writing by the patient[19] or a legally responsible person acting on the patient's behalf after being informed of the hospital's obligations under EMTALA. The request must state the reasons for the request and indicate that the person making the request is aware of the risks and benefits of the transfer; and

(2) A physician has signed a certification[20] that, based upon the information available at the time of the transfer, the medical benefits reasonably expected from the provision of appropriate medical treatment at another medical facility outweigh the increased risks to the individual or, in the case of a woman in labor, to the woman or the unborn child, from being transferred. The certification must contain a summary of the risks and benefits upon which it is based; or, if a physician is not physically present in the emergency department at the time an individual is transferred, a qualified medical person (as determined by the hospital in its by-laws or rules and regulations) has signed the certification after consultation with a physician who agrees with the certification and countersigns the certification, which contains a summary of the risks and benefits upon which it is based.

EMTALA REQUIREMENTS FOR A PROPER PATIENT TRANSFER TO ANOTHER MEDICAL FACILITY

EMTALA requires that transfer of a patient who is not stabilized meets four requirements[21]:

1. The sending hospital must provide medical treatment within its capacity that minimizes the risks to the individual's health and, in the case of a woman in labor, the health of the unborn child;
2. The receiving facility must have available space and qualified personnel for the treatment of the individual and must have agreed to accept transfer of the individual and to provide appropriate medical treatment;
3. The sending hospital must send to the receiving facility all medical records (or copies) related to the emergency condition available at the time of transfer, including:
   - Available history;
   - Records related to the individual's emergency condition;
   - Observations of signs or symptoms;
   - Preliminary diagnosis;
   - Results of diagnostic studies or telephone reports of the studies;
   - Treatment provided;
   - Results of any tests;
   - The informed written consent or certification (or a copy) required for the transfer; and
   - Name and address of any on-call physician who has refused or failed to appear within a reasonable time to provide necessary stabilizing treatment.

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19 See sample form on page 76.
20 See sample form on page 77.
21 Appendix V Interpretive Guidelines, *above n.1, Tag A-2409/C-2409, § 489.24(e)(2)(i-iv).*

Other records, such as test results not yet available or historical records not readily available from the hospital's files, must be sent as soon as practicable after transfer; and

4. The transfer must be effected through qualified personnel and transportation equipment, as required, including the use of necessary and medically appropriate life support measures during the transfer.

Under EMTALA, EMS clinicians may not always be qualified to provide the level of care for certain patients being transferred. A patient's condition may make the presence of a physician or some other specialist mandatory. **Under current CMS guidelines, the physician at the sending hospital (not at the receiving hospital)[22] has responsibility to determine the appropriate mode, equipment, and attendants for transfer.**

A Medicare-participating hospital that has specialized capabilities or facilities (including burn units, shock-trauma units, and neonatal intensive care units) may not refuse to accept from a referring hospital an appropriate transfer of an individual who requires such specialized capabilities or facilities if the receiving hospital has the capacity to treat the individual. This requirement applies regardless of whether the hospital has a dedicated emergency department.[23]

Between 2008 and 2012, the CMS explored requiring a hospital with specialized capabilities to continue to have EMTALA obligations despite the fact that a patient had been admitted to another hospital. On February 2, 2012, CMS published notice that it would not change the EMTALA responsibilities of a hospital with specialized capacities, and that the EMTALA obligations of a hospital with specialized capabilities would cease with respect to a patient when the patient is admitted to another hospital.[24]

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22 Appendix V Interpretive Guidelines, *above n.1, Tag 409 §489.24(e)(2)(iv)*
23 42 CFR § 24(f)
24 77 FR 5217

ENFORCEMENT

EMTALA is enforced by CMS and by the Department of Health and Human Services' Office of the Inspector General.

Investigations are based on complaints, and the limitations period is two years after the date of the violation with respect to which the action is brought.

Possible penalties for violations are:

Termination of a hospital's Medicare clinician agreement;

A maximum civil money penality for a hospital or responsible physician
(a) Hospital less than 100 beds - $52,484
(b) Hospital more than 100 beds - $106,965

The exclusion of a physician from Medicare and Medicaid programs;

Civil suit by a patient for damages; and

A suit by a receiving facility that suffered loss because of another hospital's violation of EMTALA.

Sample Form. Review with counsel before using.

Refusal of Examination, Treatment, or Transfer

I understand that [insert name of hospital] (Hospital) must provide me a medical screening examination to determine whether I have an emergency medical condition, and if I do, to either stabilize the condition or transfer me in an appropriate manner to another facility.

I further understand that the medical screening and stabilization or transfer in connection with an emergency condition must be performed by Hospital without regard for whether I am able to pay or whether I have insurance that will pay part or all of the costs of the examination, treatment, or transfer.

Hospital proposes to perform the following examination, treatment, or transfer:

Hospital has informed me of the following risks and benefits of this proposed examination, treatment, or transfer:

I refuse the examination, treatment, or transfer set forth above for the following reasons:

I understand my refusal is against medical advice and that my refusal may result in serious harm to me, including death.

Date: _____
Patient Signature: _____
Patient Printed Name: _____
Date of Birth: _____
Address: _____
_____
Witness signature: _____
Witness printed name: _____
Witness address: _____
_____

Sample Form. Review with counsel before using.

Patient Request for Transfer

I understand that [insert name of hospital] (Hospital) must provide me a medical screening examination to determine whether I have an emergency medical condition, and if I do, to either stabilize the condition or transfer me in an appropriate manner to another facility.

I further understand that the medical screening and stabilization or transfer in connection with an emergency condition must be performed by Hospital without regard for whether I am able to pay or whether I have insurance that will pay part or all of the costs of the examination, treatment, and/or transfer.

I understand these obligations of Hospital, and I request a transfer to:

The reasons for my request for a transfer are:

Hospital has informed me that the transfer that I request exposes me to the following risks:

Date: _____
Patient Signature: _____
Patient Printed Name: _____
Date of Birth: _____
Address: _____
_____
Witness signature: _____
Witness printed name: _____
Witness address: _____
_____

Sample Form. Review with counsel before using.

Certification of Transfer

Patient Name: _____

It is hereby certified that, based upon the information available at the time of transfer, the medical benefits to this patient reasonably expected from the provision of appropriate medical treatment at another medical facility outweigh the increased risks to the individual, and, in the case of labor, to the unborn child, from being transferred.

This certification is based on the following risks and benefits.

Risks:

Benefits:

Name of Certifying Physician: *_____

Signature of Certifying Physician: _____

Date: _____

*If a physician is not physically present in the emergency department at the time of transfer, a qualified medical person (as determined by the hospital in its by-laws or rules and regulations) must consult with a physician and sign the certification below. The physician must subsequently countersign above:

Name of qualified medical person: _____

Signature of qualified medical person: _____

Name of physician consulted: _____

At (time)_____ on (date)_____

TRANSPORT OF STABLE PATIENTS FROM A TRAUMA/BURN OR SPECIALTY CENTER TO A COMMUNITY HOSPITAL OR REHABILITATION/LONG-TERM CARE FACILITY

The following refers to stable patients (pediatric and adult) being transferred for specialty or convalescent care who do not need to stay at the tertiary care centers and have non-emergent transport care needs. Examples include: back transfer to referring hospital closer to home, transfer to out-of-state hospital closer to patient's home, rehabilitation or long-term care, another acute care facility for consultation, or a psychiatric facility.

1. These elective transports must be prearranged between the referring Specialty Care Referral Center and the receiving hospital.

2. Transports must be carried out by a currently licensed Basic or Advanced Life Support Commercial Ambulance (see COMAR 30.09).

3. When a BLS or ALS Commercial Ambulance is utilized for these transports, it must have:
   - Stretcher that can be secured in accordance with the U.S. General Services Administration standard for ambulance AND the appropriate child restraint or five-point adult stretcher straps appropriate for the patient's height and weight;
   - Method to secure a family member in an appropriate seat belt if accompanying the patient;
   - Method to secure patient care equipment and personal items;
   - Equipment required by SOCALR licensure;
   - Additional equipment required for the specific needs of the patient being transferred.

4. The transferring attending physician will contact the attending physician at the receiving hospital to determine if the back transfer or transfer for additional care is appropriate based upon the patient's condition and will determine the composition of the transport team needed in transport. (Refer to INTERHOSPITAL TRANSFER CHECKLIST on pages 86-87 as a guideline.)

5. On the day of transfer, verbal patient care report will be given nurse to nurse from the sending facility to the receiving facility, providing updated information in addition to the written discharge summaries in the transfer records.

6. The sending and receiving facility discharge planners, case manager, and/or social workers will provide for the continuity of care to include:
    a) Verify availability of patient care bed at the appropriate level of care
    b) Time and date of transfer
    c) Arrange for appropriate transport via a licensed Maryland BLS or ALS ambulance
    d) Verify consent for transfer by the patient, parent, or guardian
    e) Patient belongings to be transported by family and those needed in ambulance transport

7. Transfer summary of the patient's care and copies of pertinent part of the patient's chart to include but not limited to:
    - Physician orders for care during transfer
    - Primary family member and contact information (e.g., parents, guardian, spouse, significant other, legal guardian)
    - Medical history and history from acute admission
    - Patient primary care clinician prior to the acute admission, if known
    - Physician and Nursing discharge summaries
    - Discharge teaching provided to the patient and family
    - Results from most recent laboratory studies and diagnostic studies
    - Results from most recent radiology studies
    - Rehabilitation, PT, OT, speech progress notes, and plan of care

Sample Form. Review with counsel before using.

INTERHOSPITAL TRANSFER CHECKLIST

The reason for transfer: ___ higher level of care ___ for specialty care ___ patient request ___ directed by payor ___ other (please specify)_____

Attending physician written order for transfer on chart ____ yes ____ no

Reason for transfer has been discussed with patient and/or family ____ yes ____ no

Consent for transfer has been signed by patient and/or responsible family member
____ yes ____ no

Medical screening exam provided by: _____

Attending physician has contacted receiving physician ____ yes ____ no

Name of accepting physician: _____
Contact phone numbers: _____

Name of receiving hospital: _____

Report Given MD to MD: time _____ Names: _____
RN to RN: time _____ Names: _____

Mode of transport:
____ Specialty Care Ambulance
____ Neonatal Care Ambulance
____ Advanced Life Support Ambulance
____ Basic Life Support Ambulance
____ Ground Ambulance
____ Air Medical Transport
____ Other

Mode of transport: ____ ambulance ____ air medical transport _____ private car

Level of care needed during transport ____ BLS ___ ALS ___ RN ___ MD ___
Other: (please specify)_____

Equipment needed for support of patient during transport is available on transport unit.
____ yes ____ no

Medications and IV fluids needed during transport are with patient. ____ yes ____ no

Patient's airway and ventilation is being controlled with _____

Continued on next page

The following copies of the medical records related to the patient's emergency condition are being provided to the receiving hospital at the time of the patient's arrival:

____ 1. Prehospital care record
____ 2. ED record of care
____ 3. Medical history, if available
____ 4. Results of laboratory studies and diagnostic studies
____ 5. Copies of radiographs
____ 6. Nursing care records, including I & O documentation and vital signs
____ 7. Doctor's orders for care during transfer
____ 8. Transfer consent form
____ 9. Patient's belongings
____ 10. Family contact information/notification of transfer

PROMPT TRANSPORT

Do not delay transport while awaiting laboratory or radiology results. These can be communicated by phone as they become available.

Name and number from referring hospital: _____

Maryland Institute for
Emergency Medical Services Systems