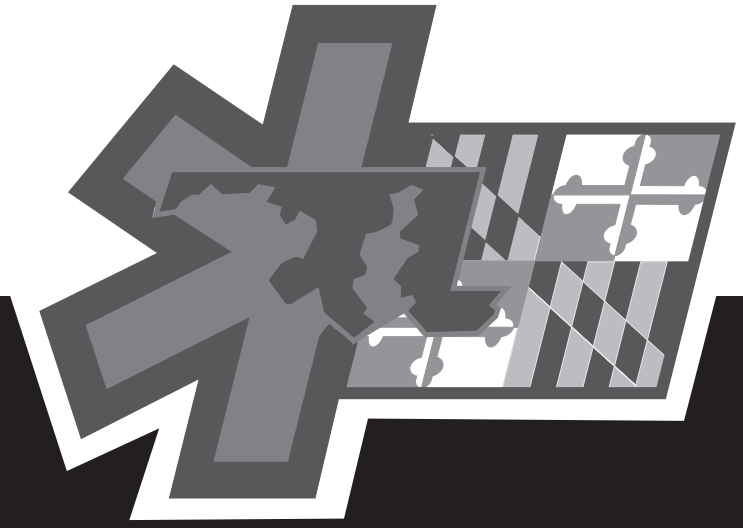
Maryland Emergency Medical Services

# Interhospital Transfer Resource Manual

Developed by the

Maryland Institute for
Emergency Medical Services Systems

Revised
October 2014



Previous editions published:
January 1986
April 1994
January 2002
November 2009

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# INTRODUCTION

This version of the Maryland Emergency Medical Services Interhospital Transfer Resource Manual replaces the manual dated November 2009. This updated manual reflects current practice and changes that have occurred in the Maryland EMS System. The updated manual has been organized to facilitate the quick retrieval of information, with each section tabbed to facilitate easy access. The "Quickstart" section has been eliminated and its information has been inserted in the appropriate section. Each facility has a separate page of driving directions, which you are encouraged to copy and distribute to family members as needed.

There have been some significant changes in this version, including the addition of separate Primary and Comprehensive Stroke tabbed sections. A STEMI section has been added and consolidated with Cardiac Interventional Centers into one "Cardiac" section. The Specialty Care Transport (SCT) section has been updated and incorporates the Maryland Board of Nurses Standards of Practice for Specialty Care Transport for Registered Nurses. The address and telephone number for each specialty center has been updated. Additionally, the information found in the section addressing EMTALA has been updated to reflect the most current language.

Direct communication needs to occur between the sending and receiving hospital staffs to arrange an interhospital transfer as specified in the manual. However, MIEMSS' Emergency Medical Resource Centers (EMRCs) and System Communications (SYSCOM) are available to assist, if needed, to arrange transfers. SYSCOM, staffed by MIEMSS and the Maryland State Police (MSP), is the communications core for MSP helicopter dispatch, coordination, and monitoring.

Typically, tertiary care hospitals in and around Maryland are able to assist referring hospitals with the transfer of patients from community hospitals by both ground and air ambulances. In consultation with the referring physician, the receiving facility is able to determine the appropriate transport method for specific patients. Interfacility air transportation is ideally accessed through the receiving facility. However, if a referring physician or patient desires contact information for an alternate air provider, he/she may call SYSCOM, which maintains a list of all available providers in the area.

**To access SYSCOM, call 1-800-648-3001. SYSCOM remains the point of contact to arrange MSP helicopter transportation. (See page 1.)**

**For questions, or if you are having trouble contacting a specific trauma and/or specialty referral center, contact EMRC at 1-800-492-3805.**

# THE MARYLAND EMERGENCY MEDICAL SYSTEM
## Overview

The Maryland Institute for Emergency Medical Services Systems (MIEMSS) is the state agency that coordinates the statewide system of emergency medical services. MIEMSS oversees and coordinates all components of the statewide emergency medical services (EMS) system (including planning, operations, evaluations, and research), provides leadership and medical direction, conducts and/or supports EMS educational programs, operates and maintains a statewide communications system, designates trauma and specialty centers, licenses and regulates commercial ambulance services, licenses EMS providers, and participates in EMS-related public education and prevention programs.

Maryland EMS legislation, passed in 1993, mandated regulations for the designation of trauma centers and specialty centers. Four levels of trauma centers were defined and designated by MIEMSS with the approval of the EMS Board.

The following types of specialty care centers have been designated in Maryland to provide specialized services to patients with certain types of illnesses or injuries, including Adult and Pediatric Burn, Eye Trauma, Hand/Upper Extremity Trauma, Neurotrauma, Hyperbaric Medicine, Poison, Perinatal, Stroke, and Cardiac Interventional. Each specialty care center is separately tabbed in this manual for easy reference.

In this coordinated system of emergency care, critically ill and injured patients are transported to the medical facility that is best staffed, equipped, and experienced to treat their injuries or illness. This manual has been designed by MIEMSS, in collaboration with the trauma and specialty referral centers, to assist emergency department personnel in identifying those patients with specialty care needs who should be transferred to a trauma or specialty referral center. The manual also provides reference information for access numbers, locations, and directions to the various specialty centers.

The Maryland State Police Aviation Command (MSPAC) medevac program provides helicopter transportation of critically ill or injured patients requiring time-critical transport to a higher level of care. Interhospital transports are provided by commercial ground and air ambulance companies throughout the state. Contact information is included in this manual for MSP medevac, commercial air ambulance, and commercial ground ambulance transportation.

This Interhospital Transfer Resource Manual has been developed and distributed by MIEMSS to all hospitals in Maryland to facilitate timely transfers of patients who need trauma and/or specialty care services to the appropriate level trauma center and specialty referral center.

# FACILITY ACRONYMS

| | |
|---|---|
| JHM | Johns Hopkins Medicine |
| MedStar | MedStar Health |
| UM | University of Maryland |
| UMSRH | University of Maryland Shore Regional Health |
| UMUCH | University of Maryland Upper Chesapeake Health |

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# HOW TO INITIATE A REFERRAL AND TRANSPORT

1. The referring physician should contact the receiving referral center, and the receiving physician must confirm that the admission is accepted.
2. Once acceptance of the patient is confirmed, mode of transport is considered by the referring and receiving physicians based on:
   a) Patient's medical needs during transport; and
   b) Need to minimize out-of-hospital transport time.
3. If helicopter is the indicated mode of transport:
   a) Preferably the receiving referral center will arrange air transportation.
   b) The following patient information should be provided:
      - Approximate weight and age
      - Suspected major injuries or medical condition
      - Level of consciousness and airway status
      - Most recent vital signs
      - Ongoing therapies
      - Specialized equipment, e.g. isolette
4. If ambulance is the indicated mode of transport:
   a) Either the referring or receiving hospital will contact an ambulance service of its choice that is capable of providing the level of care required, or
   b) If the patient requires a critical care level of care, or care outside the scope of practice of the ALS provider, the hospital or the commercial ambulance service must provide for a supplemental provider capable of providing the care required.
5. Information needed by the receiving center:
      - Referring physician's name
      - Referring hospital
      - Location of patient within the hospital
      - Call-back number

   Patient information needed:
      - Name, age, and weight
      - Necessity for an interpreter
      - Mechanism of injury
      - Type and extent of injury
      - Treatment rendered
      - Status of other family members injured and destination (if known)
6. A copy of all medical records must be sent with the patient. Include:
      - Progress notes
      - Nursing notes
      - Medication and fluid records
      - Copies of X-rays
      - Laboratory results
      - Fact sheet that includes patient address, phone number, and emergency contact information

**PROMPT TRANSPORT**

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

**MARYLAND UNIVERSAL INTERHOSPITAL HAND-OFF TRANSFER FORM**
**(Optional Use)**

Patient Identification Label

**PATIENT INFORMATION**

**TRANSFER DATE:** _____ **TRANSFER TIME:** _____ **ETA:** _____ **TRANSFER FROM:** _____**TRANSFER TO:** _____

**TRANSPORT MODE:** _____**DIAGNOSIS RELATED TO TRANSFER:** _____ **REASON FOR TRANSFER:** ☐**Higher Level of Car**e; ☐Cardiac Intervention ☐Stroke Intervention ☐Adult Trauma ☐Pediatric Trauma ☐**Specialty Referral;** ☐Hand ☐Eye ☐Adult Burn ☐Pediatric Burn ☐Other

**PATIENT NAME:** LAST_____FIRST_____ DOB: _____ AGE: _____ ☐M ☐F Pregnant? ☐Y ☐N LMP_____

**MEDICAL ORDERS for LIFE SUSTAINING TREATMENT (MOLST)**: Documents ☐Y ☐N; Attached ☐Y ☐N

**CONTACT PERSON:** LAST NAME _____ FIRST_____ RELATIONSHIP_____ **PHONE: Day**_____ **Night** _____ **Cellular** _____

**Contact with Patient? ☐Y ☐N, Contact Notified of Transfer? ☐Y (Date** _____ **Time** _____ **) ☐N, Contact Enroute to Receiving Hospital? ☐Y ☐N**

**INFORMATION GIVEN TO CONTACT PERSON:** _____

Healthcare Representative/Proxy/Legal Guardian: ☐Y ☐N LAST NAME _____FIRST _____

**PATIENT ASSESSMENT (most recent) SYSTEMS ASSESSMENT & PAST MEDICAL HISTORY PERTINENT TO TRANSFER**

**DATE** _____ **TIME** _____ HT _____ WT _____Kg. T _____ P _____ R _____ BP _____ Pulse Ox _____, ☐O2/N.Cannula _____ L , **Pain Score**_____☐Numbers ☐Faces

**Airway:** ☐Natural ☐LMA ☐King ☐ ETT; Size _____ Depth _____ On Vent ☐Y ☐N, Vent Setting_____; Tolerating ☐Y ☐N, OG Tube ☐Y ☐N, CPR ☐Y ☐N

**GCS:** ____ Eye ____ Motor ____ Verbal = ____ Total **Pupil size:** (mm) R _____ L _____ **EKG:** ☐Y ☐N; Abnormal Rhythm_____

**ALLERGIES:** **IMMUNIZATIONS/SCREENING DATES**: Flu _____ , Tetanus _____, Pneumonia _____, PPD _____; ☐Pos ☐Neg

| **Abnormal Assessment Findings** | **Past Medical History** |
|---|---|
| Cardiovascular: | ☐CABG ☐CAD ☐AICD ☐MI ☐Pacemaker ☐Stent ☐Other |
| Gastrointestinal: | |
| Genitourinary: | ☐Renal Failure |
| HEENT: | |
| Integumentary: | |
| Musculoskeletal: | |
| Nervous/Neurological: | ☐TIA ☐Stroke ☐Shunt ☐AVM ☐Hemorrhage ☐ Other |
| Thorax/Lungs "Respiratory": | ☐Trach |

**PRE-EXISTING MEDICATION:** Anticoagulants ☐Y ☐N; Name: Other:

**ISOLATION PRECAUTIONS:** ☐None ☐MRSA ☐VRE ☐ESBL ☐C-Diff ☐Colonized ☐Other, specify _____ Site _____

**TREATMENTS**

**TOTAL INTAKE:** _____ Blood Products Given: PRBC/_____ units, FFP/_____ units, Platelets/_____ units, Other _____/____ units

**TOTAL OUTPUT:** _____ ☐Voided ☐Foley ☐Gastric ☐Chest Tube _____ ☐Estimated Blood Loss _____ For Burns: Total Crystalloids Given _____ Date Started_____Time_____

**LAB TESTS:** CBC____ Coags_____ CMP ____ Trop_____ Myo_____ Other_____ **IMAGING: Films Sent** ☐Y ☐N; X-Rays_____ CT_____ MRI_____

**OPERATIVE PROCEDURES:** **OTHERS:**

**MEDICATIONS GIVEN PRIOR TO TRANSFER AT HOSPITAL: Antibiotics, Resuscitative, Sedative/Paralytic, Thrombolytics/TPA, Others**

| **Medication** | **Dosage** | **Date** | **Time** | **Medication** | **Dosage** | **Date** | **Time** |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**TIME-SPECIFIC**

**CARDIAC:** Acute Symptom Onset Date_____ Time_____ Duration of Pain _____ ED Arrival Date _____ Time_____

First Qualifying EKG Date_____ Time_____ ☐EMS ☐ED, First Call CIC Date _____ Time_____, ED Discharge Date _____ Time_____

**STROKE:** Patient Last Known Well: Date_____ Time_____, Neurologist Consult: Date_____ Time_____, Stroke Activation: Date_____ Time_____

NIHSS ☐Y ☐N Score _____, Dysphagia Screening Before Oral Intake ☐Y ☐N; ☐ Pass ☐Fail, Had stroke symptoms resolved by presentation ☐Y ☐N

**TRAUMA:** Date of Injury _____ Time of Injury _____, Death in same incident ☐Y ☐N, Family Member ☐Y ☐N, Was patient notified? ☐Y ☐N

Mechanism of Injury: ☐ MVC ☐MCC ☐Ped ☐ATV ☐Bicycle ☐Beating ☐Stabbing ☐Cut/Pierce ☐Firearm ☐Burn ☐Fall ☐Drowning ☐Blast ☐Other_____

Spinal Protection: ☐Backboard ☐C-Collar ☐Pelvic ☐Extremity; __RU __LU __RL __LL ☐Towel Roll/Bolster ☐Other _____

Social Concern: ☐Domestic Violence Suspicion, ☐Child/Elder; ☐ Suspicion ☐Neglect ☐Abuse, Reported? ☐Y ☐N, To Whom? _____

| | |
|---|---|
| **Sending Physician Name:** | **Receiving Physician Name:** |
| **Sending Facility Contact Name:** | **Receiving Facility Contact Name:** |
| **Form Completed By Name:** | **Date:** **Time:** |

# THE MARYLAND UNIVERSAL INTERHOSPITAL HAND-OFF TRANSFER FORM
## Instructions

**Background:**

The Quality Improvement Committees for the specialty centers (Trauma, Stroke, Cardiac, and Perinatal) identify, address, and develop recommendations/solutions to issues/problems brought forth by the hospital specialty referral centers. One such issue identified by the centers is the disconnect between the report given from the sending hospital to the receiving hospital. Many receiving centers have identified an issue with the report given by the sending hospital in that it did not always provide a true representation of the patient they received. The Quality Improvement Committees investigated this issue and together developed the "Maryland Universal Interhospital Hand-off Transfer Form." The form is focused on time-critical information and provides standardization in the report format.

**Purpose:**

The "Maryland Universal Interhospital Hand-off Transfer Form" was designed to communicate pertinent and accurate clinical patient care information at the time of transfer to the receiving hospital. This form does not negate, but is in addition to, the Hospital's EMTALA documentation, necessary medical record and test results needed for the transfer of a patient.

The Joint Commission requires an appropriate "Hand-off" between caregivers. The Committee on Trauma American College of Surgeons' Resources for the Optimal Care of the Injured Patient identifies interhospital transfer documentation requirements, which may include a mutually agreed upon transfer form. This form will meet the requirements of both the Joint Commission and the American College of Surgeons. Use of the "Maryland Universal Interhospital Hand-off Transfer Form" is optional.

**Process:**

The sending hospital will complete any of the form sections pertinent to its patient. A telephone report to the receiving hospital will be done utilizing the form content for standardization. Additional information may be given as well.

The Hand-off Form will be given to the Transport Team to "Hand-off" to the receiving hospital representative upon arrival. Emergency medical services personnel are not required to document on this form.

# TRANSPORT SERVICES

## INTRODUCTION

Transportation of critically ill and injured patients from a residence or the scene is usually accomplished by a public service ambulance, i.e., emergency medical services, fire department or rescue squad ambulance, or Maryland State Police (MSP) medevac helicopter. The interfacility transportation of patients is primarily carried out by Maryland licensed commercial ambulances, commercial medevac helicopters, or MSP medevac helicopters.

The EMS providers on all of these ambulances and medevac helicopters are licensed or certified by MIEMSS at one of the following levels: Emergency Medical Responder (EMR), Emergency Medical Technician (EMT), Cardiac Rescue Technician (CRT), or Paramedic. The EMR and EMT are Basic Life Support (BLS) providers and the CRT and Paramedic are Advanced Life Support (ALS) providers. All EMS providers, those working in the public service arena and those working for commercial ambulance services, must provide care as defined in *The Maryland Medical Protocols for EMS Providers*.

## PUBLIC SERVICE AMBULANCES

The primary mission of public service ambulances is to respond to the scene or a 9-1-1 call for emergency medical assistance from a residence or the scene. Rarely are these ambulances available to hospitals for interfacility transport. However, if a commercial ambulance is not able to respond for a patient requiring emergency transport to a referral center and if the public service ambulance is available, along with the required staff, they may agree to assist with an interfacility transport.

## LICENSED COMMERCIAL AMBULANCE SERVICES

### Basic Life Support

A licensed BLS commercial ambulance is staffed at a minimum with an EMR driver and an EMT attendant. BLS may transport patients within the scope of practice of an EMT that includes patients who are stable with maintenance IVs. BLS licensed ambulances may not add a nurse or other health care provider to staff the ambulance for the purpose of caring for a patient who requires care outside the scope of practice of the EMT. These patients must be transported by an ALS licensed ambulance.

### Advanced Life Support

A licensed ALS commercial ambulance is staffed at a minimum with an EMT driver and a CRT or Paramedic attendant. The ALS provider may start IVs, as well as administer certain medications and perform certain procedures that are listed in *The Maryland Medical Protocols for EMS Providers*, which defines the scope of practice for all Maryland EMS prehospital providers. Patients requiring care outside the scope of practice of the ALS provider must be accompanied by a health care provider authorized by law to provide the level of care required and in accordance with EMTALA (refer to the EMTALA section).

**Specialty Care Transport (SCT)**

A licensed SCT commercial ambulance is staffed at a minimum with an EMT driver and two additional providers. The scope of practice of the SCT-credentialed paramedic requires additional training, includes additional medications and procedures and is defined in *The Maryland Medical Protocols for EMS Providers*. If the patient's care is outside of the scope of practice of an SCT-credentialed paramedic, the first of the two additional providers must be either a nurse or physician with critical care expertise. The second provider may be either an SCT-credentialed paramedic or a paramedic who has been oriented to specialty care transports. If the patient's care is within the scope of practice of the SCT-credentialed paramedic, the first provider may be either a nurse with critical care expertise[1] or the specially oriented SCT-credentialed paramedic. The second provider may be either a CRT licensed after July 1, 2001, or a paramedic who has been oriented to specialty care transports.

**Neonatal Transports**

Licensed neonatal commercial ambulances are specialized ambulances that are staffed and equipped to transport critically ill newborns from their hospital of birth to a tertiary care facility. Transport of critically ill newborns may be carried out only in a licensed neonatal ambulance.

**AIR AMBULANCES**

Typically, tertiary care hospitals in and around Maryland are able to assist referring physicians with the transfer of patients from community hospitals by both ground and air ambulance. In consultation with the referring physician, the receiving facility is able to determine the appropriate transport method for specific patients. Interfacility air transportation is usually accessed through the receiving facility. Nearly all interfacility air transports are provided by commercial air services that are under contract to the facility and that typically bill third party payors and/or patients for transport services. Should a referring physician or patient desire contact information for an alternate air provider, he/she may call SYSCOM at 1-800-648-3001; SYSCOM maintains a list of all available providers in the area. State police helicopters play a secondary role in interfacility transports since the majority of their flights are from the scene of an incident.

**Utilization of Air Medical Transport for Interfacility Transfer**

Air medical transport should be considered for interfacility transfer of patients for whom time is critical. An air ambulance is best used when a patient requires time-critical interventions or when it is important to minimize time out of a hospital setting. In either case, air transport would result in clinically significant reduction in time over ground transport.

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[1] *Nurses who provide care during an interfacility transfer with a Specialty Care Licensed ambulance service shall comply with COMAR 10.27.09.04. The transport nurse shall have competency with the ongoing care of the patient being transferred and either a national transport certification or two years of critical care experience within the past five years.*

**Time to Intervention Care**

Patients may need rapid evaluation and treatment that are not available at the sending hospital. Reducing the time to clinical intervention is clinically important and air medical transport may be utilized in order to minimize the time to intervention. Examples of the type of patient that would fit in this category may include, but are not limited to:

- Trauma patients being transferred for emergent diagnosis and operative intervention
- STEMI patients being transferred for emergency intervention
- Stroke patients being transferred for emergency intervention
- Intracranial hemorrhage patients being transferred for emergent diagnosis and intervention
- Patients being transferred for aortic catastrophe (leaking aneurysm, dissection, or disruption)
- Patients with tenuous airways unable to be secured at the sending hospital
- Patients with unstable blood pressure
- Patients with unstable cardiac rhythm
- Patients with severe sepsis requiring tertiary care
- Perinatal patients with eclampsia

**Reduction of "out-of-hospital time" or Provision of Appropriate Level of Care en route**

Frequently, patients transferred to tertiary care facilities will require a high level of care, and for these patients it is critical to minimize the time they are away from the hospital setting. As well, it may be that a referring facility may not have timely access to SCT ground ambulances that would be able to provide the appropriate level of care. Examples of the type of patient that would fit into this category may include, but are not limited to:

- Patients with tenuous airways unable to be secured at the sending hospital
- Patients with unstable blood pressure or on vasopressor medication
- Patients with unstable cardiac rhythm or on cardioactive drips
- Patients on mechanical ventilation with poor oxygenation
- Patients on intraaortic balloon pumps (IABPs)
- Patients with Ventricular Assist Devices (VADs)
- Neonatal and critical pediatric patients
- Perinatal patients receiving tocolysis
- Other unstable patients where time out-of-hospital needs to be minimized

**Commercial Air Ambulance Providers**

Commercial helicopters licensed by MIEMSS are staffed and equipped to provide primarily interfacility critical care transport to a tertiary care facility.

**You may contact the State Office of Commercial Licensing and Regulation at 410-706-8511 or SOCALR@miemss.org for the most current list or for information about arranging a commercial ground or air transport.**

**A current list of commercial services is also available online at www.miemss.org; navigate to Commercial Ambulance Licensing & Regulation (under Departments and Programs) and click on List of Licensed Commercial Services.**

**Maryland State Police Medevac Helicopters**

The primary medical role for MSP helicopters is direct scene response. They are available for interfacility transports at a Paramedic level, primarily as a back-up to the commercial helicopter programs. Critical Care interfacility helicopter transports are performed by the commercial programs. MSP back-up for Critical Care interfacility transports is typically dependent upon crew augmentation by a transport nurse or physician from the tertiary receiving facility, which may or may not be available at the time of such request.

**To access SYSCOM, call 1-800-648-3001. SYSCOM remains the point of contact to arrange MSP helicopter transportation.**

# *Maryland EMS Provider Descriptions*

**Emergency Medical Dispatch:** ***Skills include:*** Call intake/call allocator; medical interrogation; medical pre-arrival and post-dispatch instructions; medical call prioritization; EMS resource allocation and management. ***Hours of training:*** 24 hours minimum from an EMS Board approved agency. ***Licensure requirements:*** written exam; successful completion of a Healthcare Provider CPR Course. Licensure period is for two years. ***Renewal requirements:*** Current Healthcare Provider CPR card; 24 hours continuing dispatch education.

**Emergency Medical Responder:** ***Skills include:*** Patient assessment; vital signs; bleeding control and bandaging; fracture management; emergency medical management; CPR and AED; airway management and optional O2 administration; optional self and buddy WMD auto injectors. ***Hours of training:*** 51 hours minimum. ***Certification requirements:*** Written and practical exams. Certification period is for three years. ***Renewal requirements:*** 12 hours of approved continuing education (6 hours didactic and 6 hours of skills). Maryland grants legal recognition for Emergency Medical Responders from most states, National Registry, and EMS Board approved certifying agencies.

**Emergency Medical Technician:** ***Skills included:*** Patient assessment; vital signs; bleeding control and bandaging; shock management; fracture management; CPR, AED, O2 administration; airway management; emergency medical management; patient assisted medications; spinal immobilization; patient movement; transport. ***Hours of training:*** 165 hours minimum. ***Certification requirements:*** EMS field internship; written and practical exams; affiliation with a BLS EMS Operational program. Certification period is for three years. ***Renewal requirements:*** 24 hours of approved continuing education (12 hours didactic and 12 hours of skills); a current NREMT certification at the time of Maryland renewal may be used. Maryland accepts reciprocity for Emergency Medical Technicians from most states and National Registry.

**Cardiac Rescue Technician:** ***Skills included:*** All skills listed under EMT plus additional advanced procedures such as intravenous and intraosseous cannulation; medication administration; EKG monitoring; electrical therapy. ***Hours of training:*** EMT certification plus approximately 400 additional hours. ***Licensure requirements:*** Written and practical exams; successful completion of a Maryland ALS licensing protocol exam; affiliation with an ALS EMS Operational program. Licensure period is for two years. ***Renewal requirements:*** 72 hours of approved continuing education; continued affiliation with an ALS EMS Operational program.

**Paramedic:** ***Skills included:*** All skills listed under CRT plus additional skills and medication administration. ***Hours of training:*** EMT certification plus approximately 1,100 additional hours. ***Licensure requirements:*** NRP certification; successful completion of a Maryland ALS licensing protocol exam; affiliation with an ALS EMS Operational program. Licensure period is for two years. ***Renewal requirements:*** Successful re-registration as an NRP; continued affiliation with an ALS EMS Operational program.

# TRAUMA CENTERS

## Primary Adult Clinical Resource Center (PARC)

**R Adams Cowley Shock Trauma Center**
University of Maryland Medical Center
22 South Greene Street, Baltimore, MD 21201
***Maryland Express Care 410-328-1234***
***1-800-373-4111***

## LEVEL I

**The Johns Hopkins Hospital**
Adult Trauma Center
1800 Orleans Street
Baltimore, MD 21287
***Hopkins Access Line 410-955-9444***
***1-800-765-5447***

## LEVEL II

**Johns Hopkins Bayview Medical Center**
4940 Eastern Avenue
Baltimore, MD 21224
***Hopkins Access Line 410-955-9444***
***1-800-765-5447***

**Prince George's Hospital Center**
3001 Hospital Drive
Cheverly, MD 20785-1189
***301-618-3752***

**Sinai Hospital**
2401 W. Belvedere Avenue
Baltimore, MD 21215
***410-601-6161***

**JHM Suburban Hospital**
8600 Old Georgetown Road
Bethesda, MD 20814
***301-896-3880***

## LEVEL III

**Western Maryland Regional Medical Center**
12500 Willowbrook Rd.
Cumberland, MD 21502
***240-964-7000***

**Peninsula Regional Medical Center**
100 East Carroll Street
Salisbury, Maryland 21801-5493
***410-543-4722***
***866-614-4722***

**Meritus Medical Center**
11116 Medical Campus Rd.
Hagerstown, MD 21742
***301-790-8000***

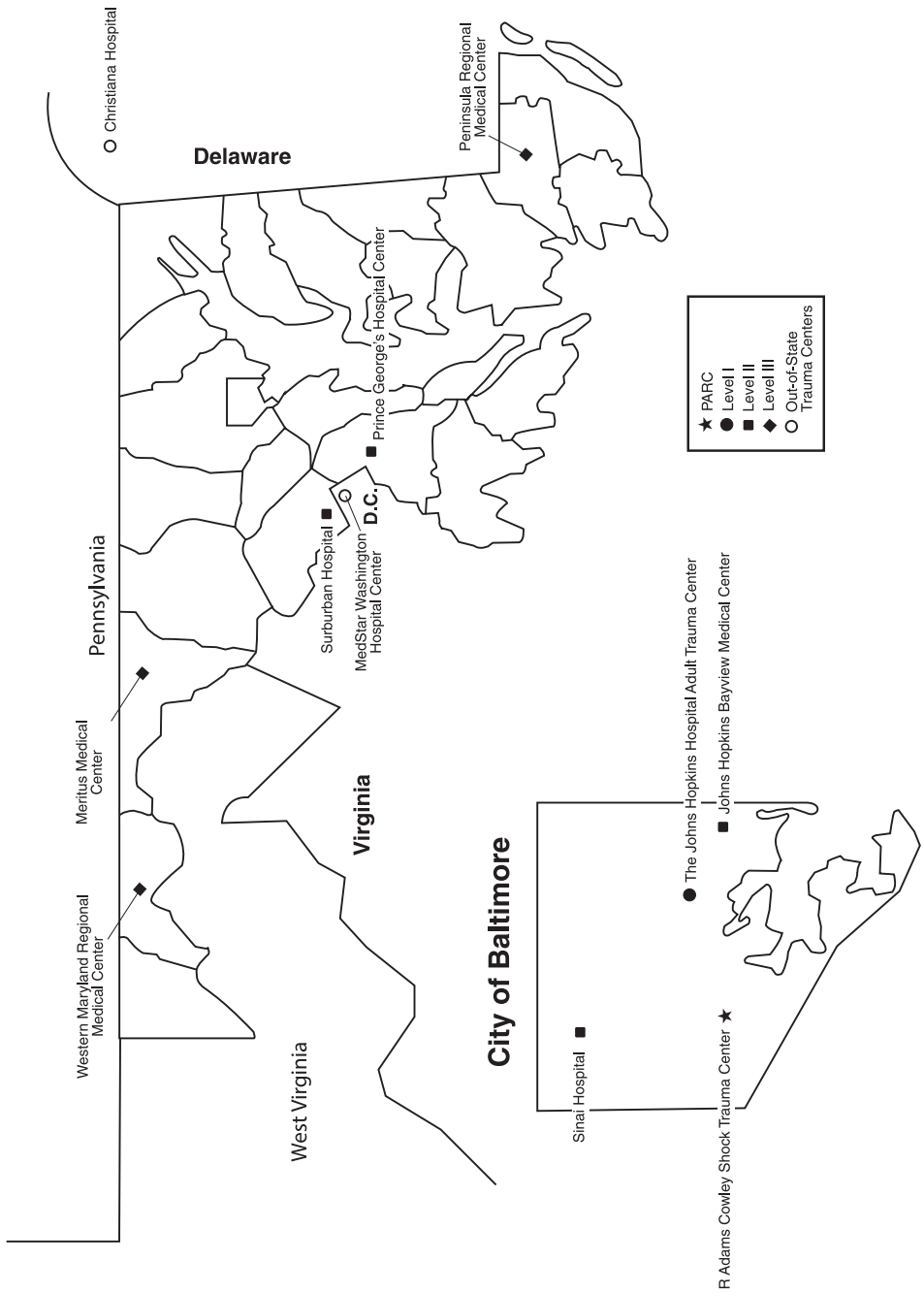
## Out-of State*

**Christiana Hospital**
4755 Ogletown-Stanton Road
Newark, DE 19718
***1-800-428-0911***
***302-733-5555***

**MedStar Washington Hospital Center**
110 Irving St, NW
Washington, DC 20010
***1-800-824-6814***

* *These facilities are American College of Surgeons Level I Trauma Centers that each have a Memorandum of Understanding with the State of Maryland for trauma care.*

# Adult Trauma Referral Centers



# ADULT TRAUMA 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 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)**

## JOHNS HOPKINS ADULT BURN CENTER
## Johns Hopkins Bayview Medical Center
**4940 Eastern Avenue, Baltimore, MD 21224**

***410-955-9444***
***1-800-765-5447***

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## ADULT BURN CENTER
## MedStar Washington Hospital Center
**110 Irving Street, NW, Washington, DC 20010**

***1-800-824-6814***

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# BURN INJURY

## INTRODUCTION

The **Johns Hopkins Burn Center for Adults** is located at **Johns Hopkins Bayview Medical Center** in eastern Baltimore City. It consists of a 10-bed combined ICU and step-down unit for adult burn patients. The phone number is **410-955-9444**.

The **Adult Burn Center at MedStar Washington Hospital Center** in the District of Columbia also participates in the Maryland Specialty Referral System. This burn center is comprised of a 7-bed intensive care unit with an operating room and recovery room, a 13-bed rehabilitation/intermediate care unit, and the Skin Bank for Burn Injuries. The phone number is **1-800-824-6814**.

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

## 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 56)
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 56).

# EYE TRAUMA CENTER

**The Wilmer Eye Institute at**
**The Johns Hopkins Hospital**
**1800 Orleans Street, Baltimore, MD 21287**
***Hopkins Access Line (HAL): 410-955-9444***
***1-800-765-5447***

# EYE TRAUMA

**INTRODUCTON**

The Wilmer Eye Institute at The Johns Hopkins Hospital serves as a Specialty Referral Center for patients who have sustained ocular or orbital trauma.

**REFERRAL CONTACT**

For patients who are suspected of having an eye or orbital injury in the setting of multiple system trauma, call the Hopkins Access Line (HAL) and ask for the Pediatric or Adult Trauma Provider 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 or orbital injury, call the Hopkins Access Line (HAL) and ask for the Oculoplastics Fellow 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 eye 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 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 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 MEDICINE

**R Adams Cowley Shock Trauma Center**
**University of Maryland Medical Center**
**22 South Greene Street, Baltimore, MD 21201**

***Maryland Express Care 410-328-1234***
***1-800-373-4111***

# 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 therapist enabling them to provide care to critically ill patients 24/7.

**INDICATIONS FOR TRANSFER**

- Suspected decompression sickness*
- Diving Accidents*
- Suspected air embolus*
- Suspected gas gangrene/soft tissue infection (following consultation with Soft Tissue MD or designee)
- 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*

## THE CURTIS NATIONAL HAND CENTER

**MedStar Union Memorial Hospital**

**3333 North Calvert Street, Baltimore, MD 21218**

**Handline: 410-261-8100**

***1-855-540-HAND (4263)***

# HAND/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 below the elbow level
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**
**University of Maryland Medical Center**
**22 South Greene Street, Baltimore, MD 21201**
***410-328-1234***
***1-800-373-4111***

# NEUROTRAUMA TRANSFER GUIDELINES

## HEAD INJURIES SPINE 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. Severely head-injured patients (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. Moderate head injury patients 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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## MARYLAND POISON CENTER

**University of Maryland**

**School of Pharmacy**

**220 Arch Street, Office Level 01, Baltimore, MD 21201**

***Poison Emergency: 1-800-222-1222***

***TDD: 410-706-1848***

***Business Office: 410-706-7604***

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## NATIONAL CAPITAL POISON CENTER

**3201 New Mexico Avenue, NW**

**Suite 310, Washington, DC 20016**

***Poison Emergency: 1-800-222-1222***

***TDD: 1-800-222-1222***

***Business Office: 202-362-3867***

# POISON INFORMATION RESOURCE

## INTRODUCTION

Maryland is served by two poison centers, both of which are certified by the American Association of Poison Control Centers. The Maryland Poison Center provides coverage to all of Maryland except Prince George's and Montgomery Counties and is a service program of the University of Maryland School of Pharmacy. The National Capital Poison Center covers Prince George's and Montgomery Counties in Maryland. Each poison center is staffed by certified specialists in poison information (pharmacists or nurses with extensive background and training in emergency poisoning patient care), by medical directors who are board-certified Medical Toxicologists, and by board-certified clinical toxicologists. Each center is staffed 24 hours a day and has access to 24-hour interpretation services with over 140 languages available for callers who do not speak English.

***Poison Centers are not patient care facilities.***

## HOW TO OBTAIN POISON MANAGEMENT ASSISTANCE

Anywhere in Maryland: Call toll-free 1-800-222-1222

TDD in Montgomery and Prince George's Counties: 1-800-222-1222

TDD elsewhere in Maryland: 410-706-1848

Consultation with the referring physician will be provided by a poison information specialist. If ground transport is necessary, the referring hospital will arrange for transportation.

## PROMPT TRANSPORT

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

## TRANSPORT PATIENT with:

1. Copy of medical record
2. All drug and/or chemical containers
3. Toxicology specimens
4. Laboratory and x-ray results
   DO NOT delay transfer while awaiting laboratory or radiology results. These can be communicated by phone as they become available.

***What will I need when I call the Poison Center?***

- If possible, have the container from which the medication or chemical came, and give a brief, quick overview of the situation.
- The poison specialist will then ask you several questions. This information is needed for the nurse or pharmacist specialist in poison information to make an accurate assessment of the situation's severity and will play an important part in the treatment information you are given.

***Some of the questions may include:***

- AGE of patient. Be exact.
- CONDITION of the patient.
- WEIGHT of the patient.
- HEALTH HISTORY of the patient (medical problems, allergies, and any current medications the patient is on).
- The EXACT name of the product, as read from the label (if available). Many medications and household products have similar names with only slight variations. This information is crucial when providing the information to the Poison Center.
- The SIZE of the container (OZ, FL OZ, QTY, ML, number of pills. Even if the container was not full before the exposure, the specialist will need to know the size of a full container).
- The STRENGTH of a particular product (mg, mcg, mg/ml, mg/oz, mg/tsp, mg/ml or it may be in %. Look for the area on the container that has active ingredients listed).
- WHEN the exposure occurred and HOW LONG the exposure lasted.
- The AMOUNT involved in the exposure, if known. Do not estimate, guess, or assume.
- WHAT therapy (if any) has been provided? Sometimes inappropriate prior treatment will cause additional problems.
- WHY was the patient exposed to the product or substance? Was it a small child with an accidental exposure? Or was the patient trying to get high or harm him/herself?

A return phone number is very important in case you are disconnected while speaking with the Poison Center. Since the Poison Center is giving treatment information on the phone, it is important that they can contact you to provide more information or advice as needed. The Poison Centers follow up with both the referring and receiving hospitals, as well as with the patient's family, enabling outpatient care, quality treatment, surveillance for public health or terrorism incidents, and prevention of further poison exposures.

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# STROKE GUIDELINES FOR TRANSFER

**INTRODUCTION**

Development of a state wide system for stroke care in Maryland includes three (3) 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 - Primary Stroke Center (PSC); and
(3) Level III - 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 Patients 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 > 3cm)
  - 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 (ADL's)
  - Potential for malignant cerebral edema (e.g., high NIH stroke scale)
- Consideration for Endovascular Recanalization Treatment (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:

   a) 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.

   b) 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 - 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 II 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**

- 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 < 3cm)
  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
- Discussion of goals of care is recommended when making decisions to transfer to a Comprehensive 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 III -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 or Comprehensive Stroke Center based on the patients immediate needs.

**Circumstances to consider transfer to a Comprehensive 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 Primary Stroke Center**

- Limited or no cranial neurosurgery coverage
- Intracerebral Hemorrhage
  - Small volume (less than 30 ml or < 3cm)
  - 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 37 of this manual.

   Once transfer is recommended, the consulting facility will reply tothe 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

**Primary Stroke Center**
**Western Maryland Regional Medical Center**
12500 Willowbrook Rd.
Cumberland, MD 21502
***Stroke center neurologist on call: 240-964-7000***

## REGION II

**Primary Stroke Center**
**Frederick Memorial Hospital**
400 West Seventh Street
Frederick, MD 21701
***Emergency Department: 240-566-3500***

**Primary Stroke Center**
**Meritus Medical Center**
11116 Medical Campus Drive
Hagerstown, MD 21742
***Emergency Department: 301-790-8300***

## REGION III

**Primary Stroke Center**
**Anne Arundel Medical Center**
2001 Medical Parkway
Annapolis, MD 21401
Patient Access 443-481-6688
***Administrative Coordinators: 443-481-5909***

**Primary Stroke Center**
**UM Baltimore Washington Medical Center**
301 Hospital Dr.
Glen Burnie, MD 21061
***Stroke center physician on call: 410-787-4000***

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

**Primary Stroke Center**
**MedStar Franklin Square Medical Center**
9000 Franklin Square Dr.
Baltimore, MD 21237
***On Call Neurologist: 443-777-4663*** *(Mon-Fri until 4:30 pm)*
***or 443-777-7000 (****to have paged)*

**Primary Stroke Center**
**MedStar Good Samaritan Hospital**
5601 Loch Raven Blvd.
Baltimore, MD 21239
***Stroke center physician on call: 443-444-8000***

**Primary Stroke Center**
**Greater Baltimore Medical Center**
6701 N. Charles St.
Baltimore, MD 21204
***Stroke center neurologist on call: 443-849-4145***

**Primary Stroke Center**
**MedStar Harbor Hospital**
3001 S. Hanover St.
Baltimore, MD 21225
***Stroke Center neurologist on call: 410-350-3200***

**Primary Stroke Center**
**UMUCH Harford Memorial Hospital**
501 S. Union Avenue
Havre de Grace, MD 21078
***443-843-5500***
***Administrative Coordinator: 443-843-6176***

**Primary Stroke Center**
**JHM Howard County General Hospital**
5755 Cedar Lane
Columbia, MD 21044
***Emergency Department Clinical Coordinator: 443-718-2100***

**Primary Stroke Center**
**UM Midtown Campus**
827 Linden Ave.
Baltimore, MD 21201
***Neurologist on call: 410-225-8000***

# REGION III (continued)

**Primary Stroke Center**
**Mercy Medical Center**
301 St. Paul Place
Baltimore, MD 21206
***Stroke center neurologist on call: 410-332-9000***

**Primary Stroke Center**
**Northwest Hospital**
5401 Old Court Road
Randallston, MD 21133
***Emergency Department Charge Nurse: 410-496-8709***

**Primary Stroke Center**
**Sinai Hospital**
2401 W. Belvedere Ave.
Baltimore, MD 21215
***Stroke center neurologist on call: (Main Hospital) 410-601-9000 (Page Operator) 410-601-5901***

**Primary Stroke Center**
**St. Agnes Hospital**
900 S. Caton Ave.
Baltimore, MD 21229
***Stroke center neurologist on call: 410-368-6000***

**Primary Stroke Center**
**UM St. Joseph Medical Center**
7601 Osler Dr.
Towson, MD 21204
***Stroke center physician on call: 410-337-1000***

**Primary Stroke Center**
**MedStar Union Memorial Hospital**
201 E. University Parkway
Baltimore, MD 21218
***Stroke center physician on call: 410-554-2000***

**Primary Stroke Center**
**UMUCH Upper Chesapeake Medical Center**
500 Upper Chesapeake Drive
Bel Air, MD 21014
***443-643-2000***
***Administrative Coordinator: 443-643-4099***

# REGION IV

**Primary Stroke Center**
**Atlantic General Hospital**
9733 Healthway Dr.
Berlin, MD 21811
***Stroke center physician on call: 410-641-1100***

**Primary Stroke Center**
**UMSRH Shore Medical Center at Easton**
219 S. Washington St.
Easton, MD 21601
***Stroke center neurologist on call: 410-822-1000***

**Primary Stroke Center**
**Peninsula Regional Medical Center**
100 E. Carroll St.
Salisbury, MD 21801
***Stroke center physician on call: 410-546-6400***

**Primary Stroke Center**
**Union Hospital of Cecil County**
106 Bow St.
Elkton, MD 21921
***House Supervisor/ Clinical Placement: 443-907-6136***

# REGION V

**Primary Stroke Center**
**Calvert Memorial Hospital**
100 Hospital Rd.
Prince Frederick, MD 20678
***Emergency Department: 410-535-8344***

**Primary Stroke Center**
**UM Charles Medical Center**
5 Garrett Ave.
La Plata, MD 20640
***Emergency Department: 301-609-4160***

**Primary Stroke Center**
**Doctor's Community Hospital**
8118 Good Luck Road
Lanham, Maryland 20706
***Emergency Department: 301-552-8665***

**Primary Stroke Center**
**Holy Cross Hospital**
1500 Forest Glen Rd.
Silver Spring, MD 20910
***301-754-7205***
***Emergency Department: 301-754-7500***

**Primary Stroke Center**
**MedStar Montgomery Medical Center**
18101 Prince Philip Dr.
Olney, MD 20832
***Emergency Svcs.: 301-774-8900***
***Nsg. Coordinator: 301-774-8767***

**Primary Stroke Center**
**MedStar Southern Maryland Hospital Center**
7503 Surratts Rd.
Clinton, MD 20735
***Admissions: 301-877-4290***
***ED: 301-877-4100***

**Primary Stroke Center**
**MedStar St. Mary's Hospital**
25500 Point Lookout Rd.
Leonardtown, MD 20650
***Emergency Department: 301-475-6110***

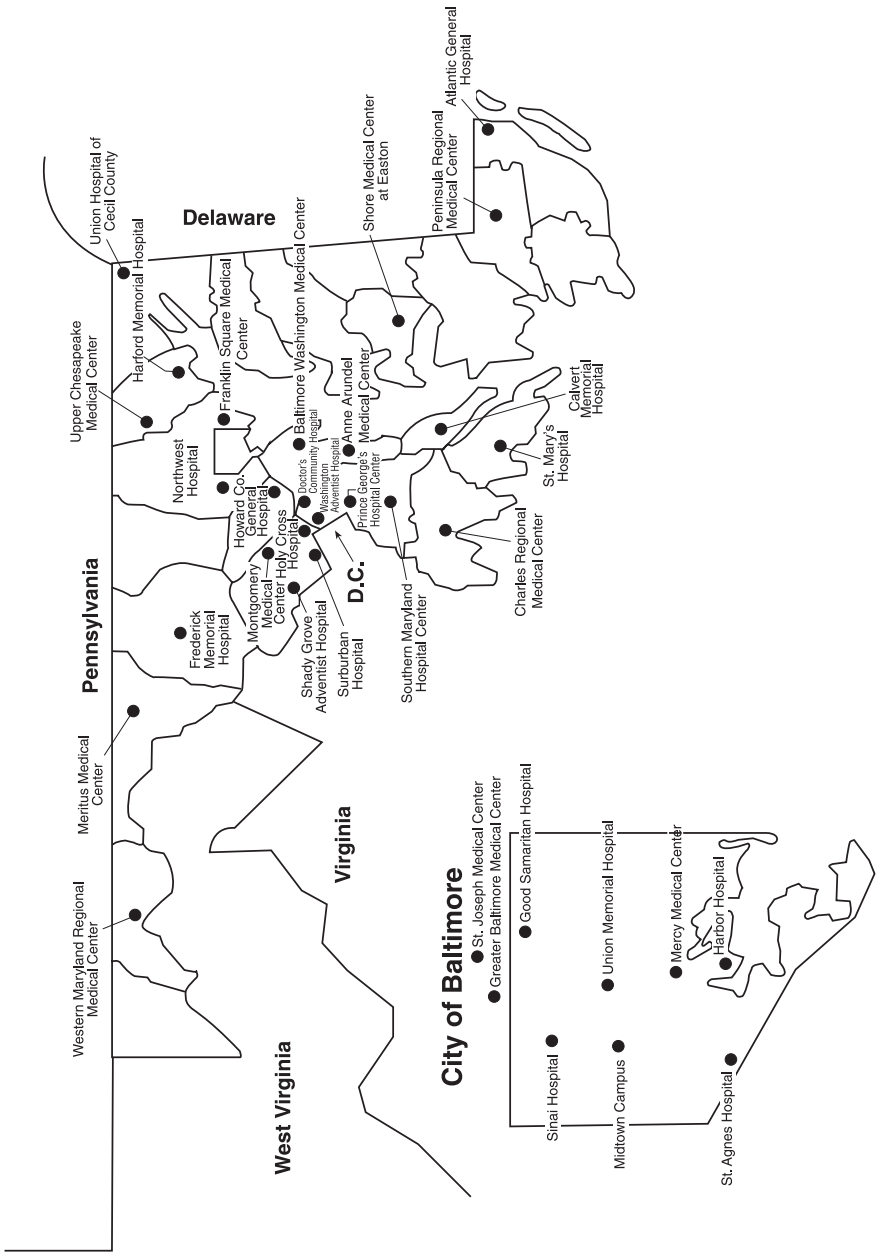
**Primary Stroke Center**
**Prince George's Hospital Center**
3001 Hospital Drive.
Cheverly, MD 20785
***Emergency Department: 301-618-3162***

**Primary Stroke Center**
**Shady Grove Adventist Hospital**
9901 Medical Center Dr.
Rockville, MD 20850
***Emergency Department: 240-826-6596***

**Primary Stroke Center**
**JHM Suburban Hospital**
8600 Old Georgetown Rd.
Bethesda, MD 20814
***Stroke neurologist on call: 301-896-3100***

**Primary Stroke Center**
**Washington Adventist Hospital**
7600 Carroll Avenue
Takoma Park, MD 20912
***Emergency Department: 301-891-5070***

# Primary Stroke Centers



# COMPREHENSIVE STROKE CENTERS

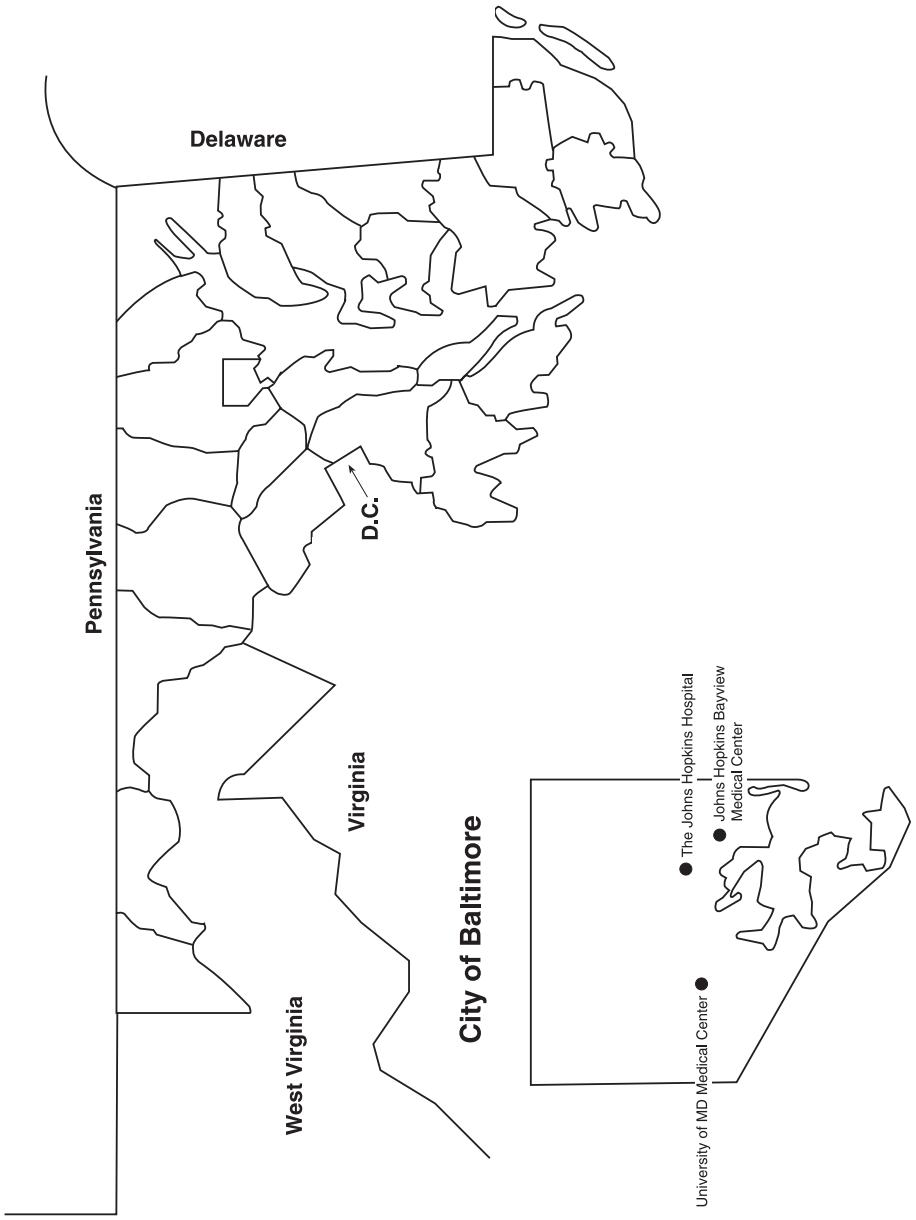
## REGION III

**Comprehensive Stroke Center**
**Johns Hopkins Bayview Medical Center**
4940 Eastern Ave.
Baltimore, MD 21224
***Urgent admissions and transfers:***
***410-955-9444***

**Comprehensive Stroke Center**
**The Johns Hopkins Hospital**
1800 Orleans St.
Baltimore, MD 21287
***Hopkins Access Line:***
***410-955-9444***

**Comprehensive Stroke Center**
**University of Maryland Medical Center**
22 S. Greene St.
Baltimore, MD 21201
***Maryland Express Care:***
***410-328-1234***
***1-800-737-4111***

# Comprehensive Stroke 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 that 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 1st 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 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.

# 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

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### 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

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### Peninsula Regional Medical Center

100 East Carroll St.
Salisbury, MD. 21801
**Contact:** Radiology Charge Technician (410) 543-7356 and they will contact
the Interventionlist on-call
**Endovascular Availability:** 24/7/365

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### Sinai Hospital

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

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### Suburban Hospital

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

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### University of Maryland Medical Center

22 S. Greene St.
Baltimore, MD 21201
**Contact:** Maryland Express Care (410)-328-1234
**Endovascular Availability:** 24/7/365

# 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 47 of this manual.

2. Notify commercial ground or air ambulance 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 47-48 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)

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

# CARDIAC INTERVENTIONAL CENTERS

## REGION I

**Western Maryland Regional Medical Center**
12500 Willowbrook Road
Cumberland, Md. 21502
***ED transfer line: 240-964-1010***
Fax: 240-964-1270

## REGION II

**Frederick Memorial Hospital**
400 W. 7th Street
Frederick Maryland 21710
***ED Charge RN: 240-566-3500***
Fax: 240-566-3796

**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

**JHM Howard County General Hospital**
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**
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

**UMUCH 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 Kent General**
640 South State Street
Dover, Delaware 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

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

**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

**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

**Prince George's Hospital Center**
3001 Hospital Drive
Cheverly, MD 20785
***Hospital Operator 301-618-4444***
Fax: 1-888-235-6449

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

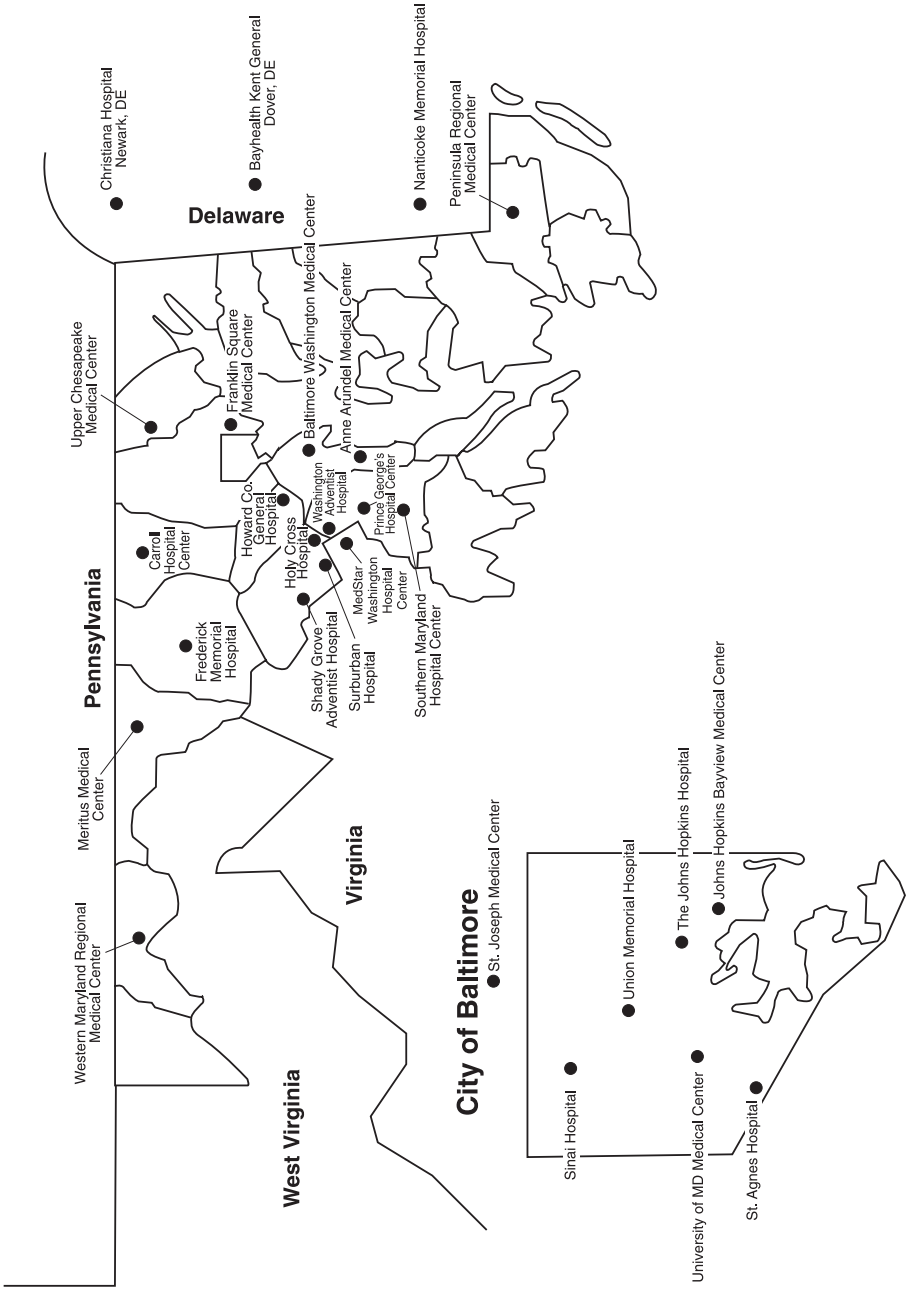
**MedStar Southern Maryland Hospital Center**
7503 Surratts Road
Clinton, MD 20735
***ED Physician: 1-866-724-3188***
Fax: 301-877-4668

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

**Washington Adventist Hospital**
7600 Carroll Avenue
Takoma Park, MD 20912
***Patient Access: 1-866-684-8460***
Fax: 301-891-6211

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

# Cardiac Interventional Center Hospitals



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## PEDIATRIC TRAUMA CENTER
## THE JOHNS HOPKINS HOSPITAL

**1800 Orleans Street, Baltimore, MD 21287**

***HAL Line for Referrals: 410-955-9444***

***Administrative Office: 410-614-1811***

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## PEDIATRIC TRAUMA CENTER
## CHILDREN'S NATIONAL HEALTH SYSTEM

**111 Michigan Avenue, NW, Washington, DC 20010**

***ECIC: 202-476-5433***

***ECIC: 1-800-884-5433***

***Administrative Office: 202-476-6698***

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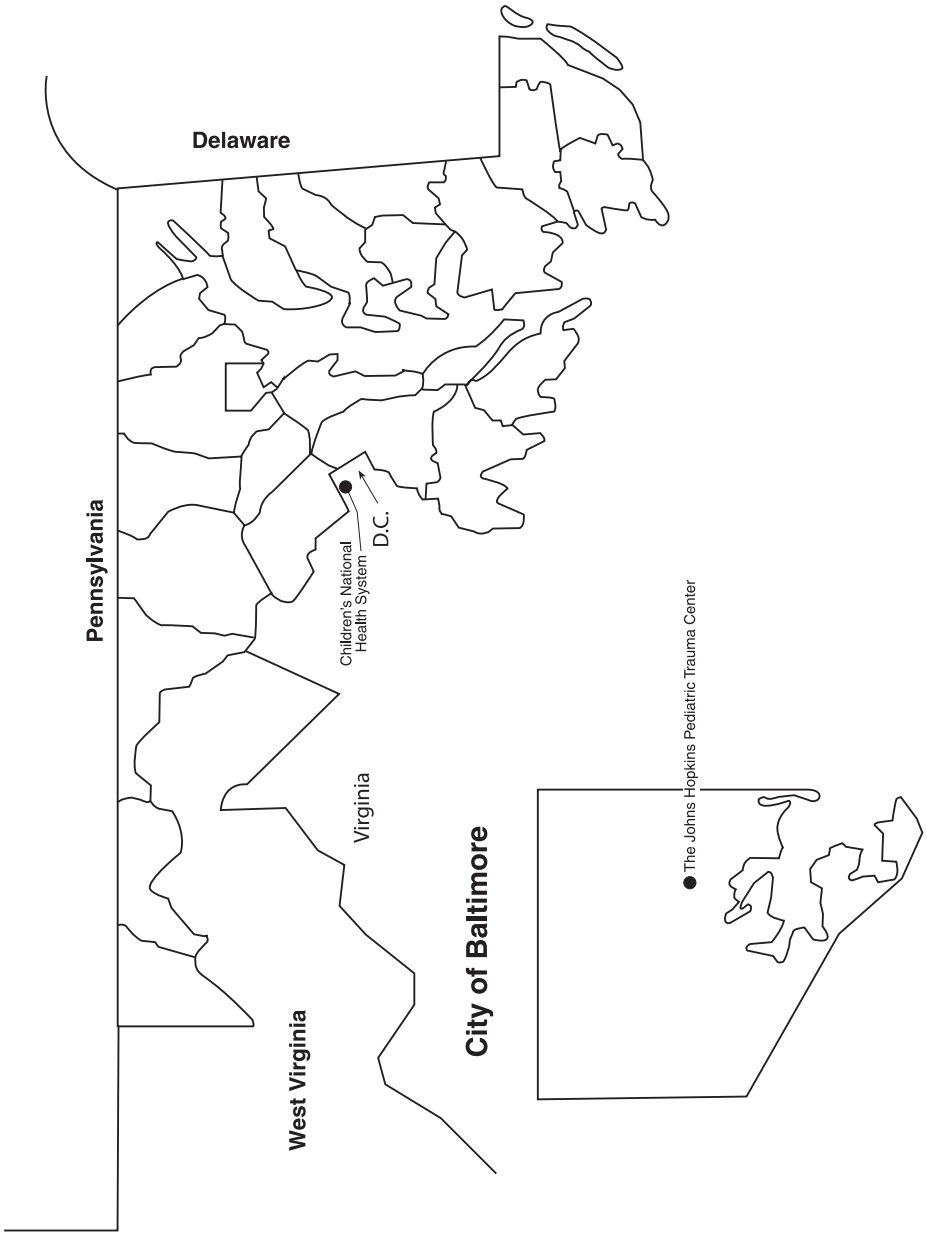
# Pediatric Trauma Referral Centers



# PEDIATRIC TRAUMA REFERRAL CENTERS' GUIDELINES

Children differ from adults in their physiological and psychological responses to injury and illness. 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 Health System 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.

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**The Johns Hopkins Children's Medical and Surgical Center, Baltimore, MD**

Advanced Life Support ground and air transportation 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 **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 Health System, Washington, DC**

Advanced Life Support ground and air transportation 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 emergency medicine 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 Health System through the ECIC, you may contact the Emergency Medical Resource Center (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 56.

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 63.*

- 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 CENTER

### 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 Health System

**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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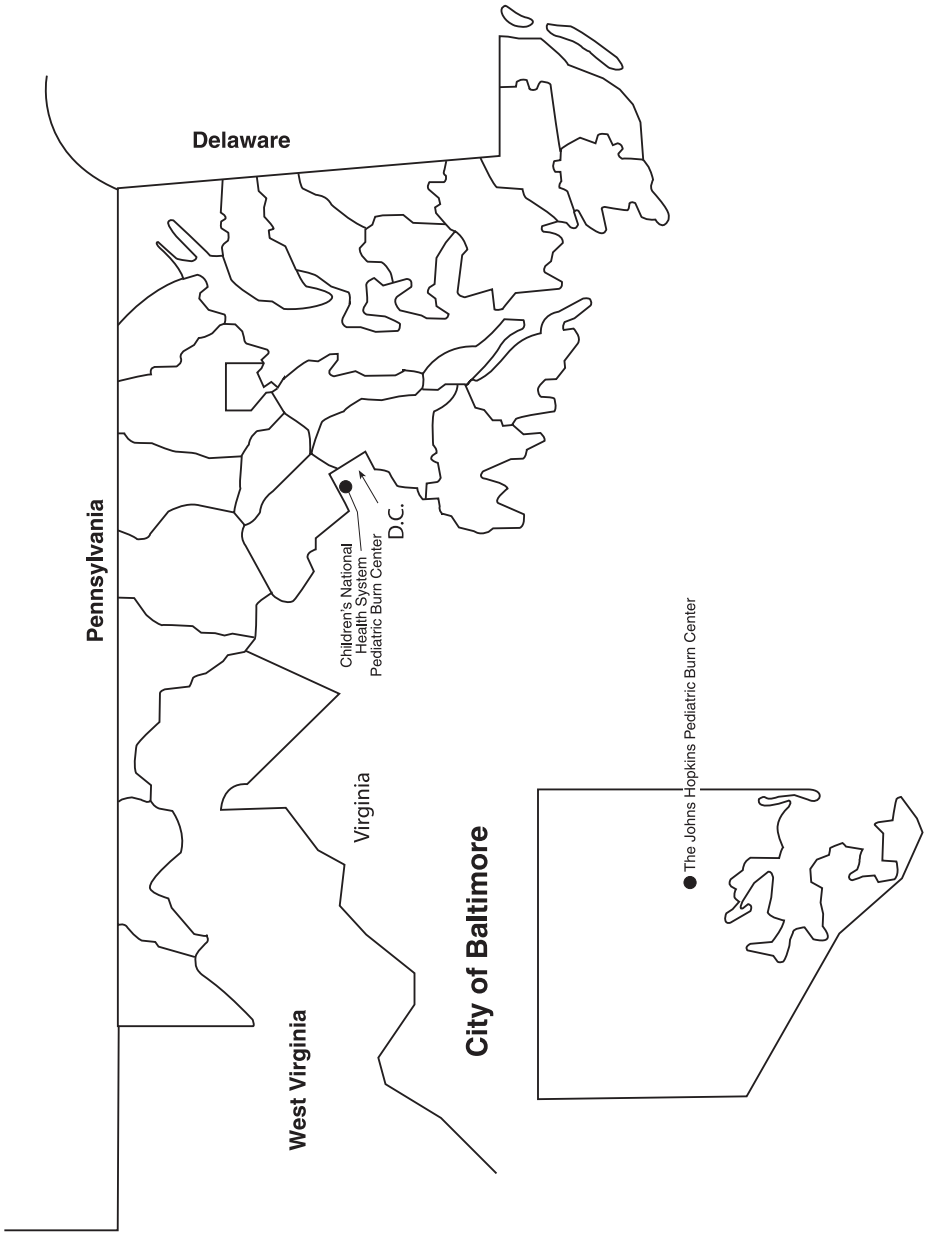
# Pediatric Burn Centers



# 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.

# MARYLAND PERINATAL REFERRAL CENTERS

## 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**

## Perinatal Referral Centers

Anne Arundel Medical Center
2001 Medical Parkway
Annapolis, MD 21401-2777
**L&D: 410-897-6989**
**Fax: 443-481-6981**
**NICU: 410-897-6962**
**Fax: 443-481-6954**

MedStar Franklin Square Medical Center
9000 Franklin Square Drive
Baltimore, MD 21237-3998
**L&D: 443-777-8264**
**Fax: 443-777-7447**
**NICU: 443-777-7050**
**Fax: 443-777-8409**

Frederick Memorial 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
Baltimore MD 21204-6892
**L&D: 410-828-2594**
**Fax: 443-849-3026**
**NICU: 410-828-2577**
**Fax: 443-849-3025**

Holy Cross Hospital
1119 Rockville Pike, # 505
Rockville, MD 20852-3143
**L&D: 301-754-7590**
**Fax: 301-754-7594**
**NICU: 301-754-7600**
**Fax: 301-754-7604**

JHM Howard County General Hospital
5755 Cedar Lane
Columbia, MD 21044-2999
**L&D: 410-740-7845**
**Fax: 410-740-7663**
**NICU: 410-740-7555**
**Fax: 410-740-7513**

Johns Hopkins Bayview Medical Center
4940 Eastern Avenue
Baltimore, MD 21224-1505
**L&D: 410-550-0378**
**Fax: 410-550-1098**
**NICU: 410-550-0395**
**Fax: 410-550-0606**

Mercy Medical Center
301 St. Paul Place
Baltimore, MD 21202-2165
**L&D: 410-332-9325**
**Fax: 410-234-2591**
**NICU: 410-332-9568**
**410-576-5287**

Prince George's Hospital Center
3001 Hospital Drive
Cheverly, MD 20785-1189
**L&D: 301-618-3265**
**Fax: 301-618-3948**
**NICU: 301-618-3280**
**Fax: 310-618-2996**

Shady Grove Adventist Hospital
9901 Medical Center Drive
Rockville, MD 20850-3395
**L&D: 301-279-6386**
**Fax: 310-279-6200**
**NICU: 301-279-6495**
**301-217-5372**

Sinai Hospital
2401 W. Belvedere Avenue
Baltimore, MD 21215-5271
**L&D: 410-601-5192**
**Fax: 410-601-6279**
**NICU: 410-578-5304**
**Fax: 410-601-5557**
**For Neonatal Transport: 1-800-606-2173**

St. Agnes Hospital
900 Caton Avenue
Baltimore, MD 21229-5299
**L&D: 410-368-2610**
**Fax: 410-368-3559**
**NICU: 410-368-2630**
**Fax: 410-368-3560**

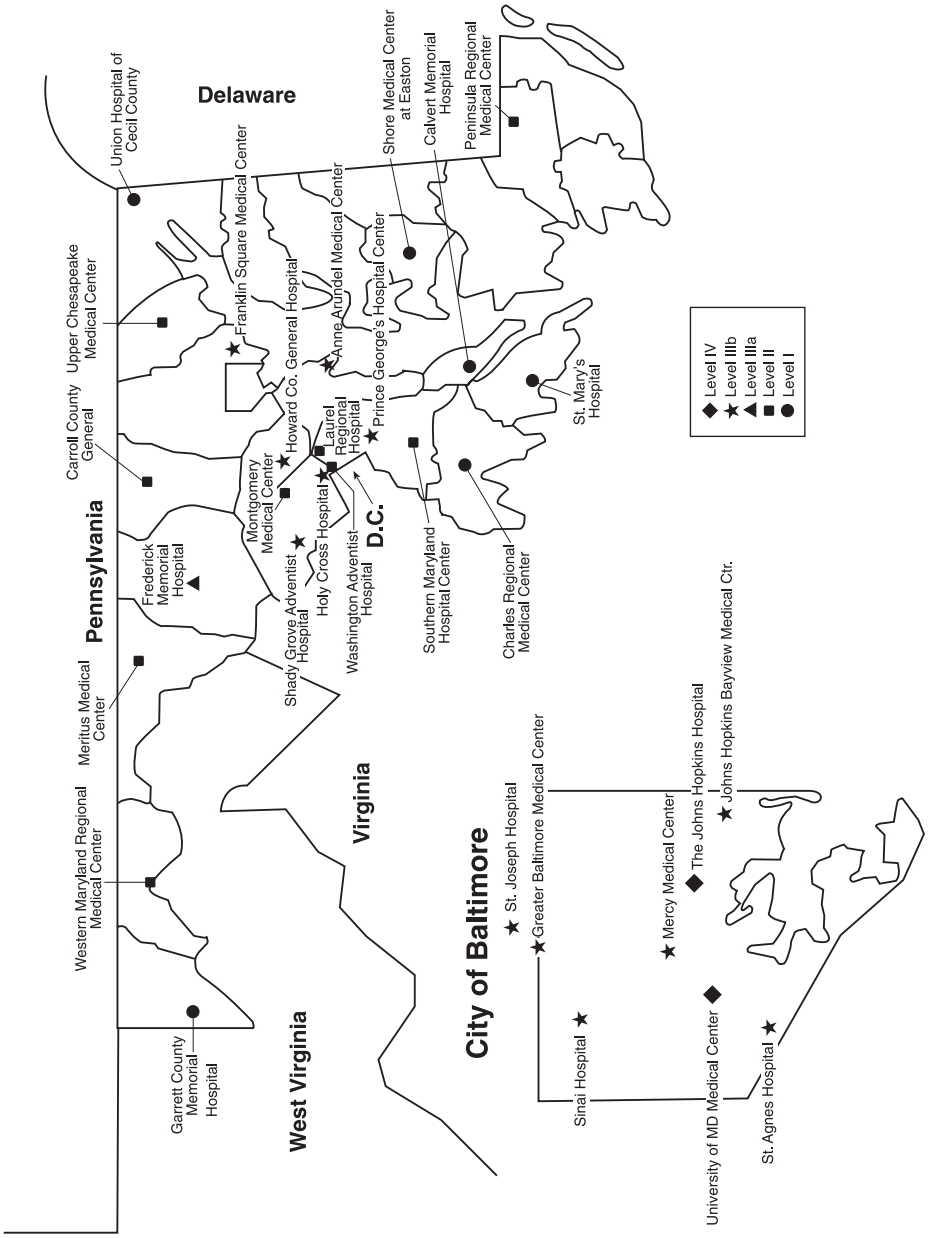
UM St. Joseph Medical Center
7601 Osler Drive
Towson, MD 21204-7582
**L&D: 410-337-1178**
**Fax: 410-337-1009**
**NICU: 410-337-1150**
**Fax: 410-337-1844**

## Out-of-State Neonatal Referral Centers

Children's National Health System
111 Michigan Avenue, NW
Washington, DC 20010
**202-476-5433**
**1- 800-884-5433**

West Virginia University Hospital
Morgantown, WV 26505
**NICU: 304-598-1212**

# 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, may call the Emergency Medical Resources Center (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 least two 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, Sinai and Shady Grove Adventist have their own neonatal transport teams.

**HOW TO INITIATE MATERNAL OR NEONATAL REFERRALS**

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, may call the Emergency Medical Resources Center (EMRC) to request a maternal or 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).

## Commercial Air Ambulance (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, on-line 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 NEONATAL PATIENT with:**

- Copy of the newborn's nursery and L&D medical records
- Copy of the maternal L&D medical record
- One tube each of cord blood and maternal blood, if available

**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.

3. When an ALS Commercial Ambulance is utilized for these transports, it must have:

- 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;
- One neonatal Bag-Valve-Mask (BVM) (a pediatric BVM is NOT adequate);
  **and**
- A registered nurse with a current Neonatal Resuscitation Program (NRP) certification from the American Academy of Pediatrics who 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 emergency department" 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 2014, 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 emergency department;

(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 emergency department 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 emergency department" and requests examination or treatment for a **medical condition**.[5]

For individuals presenting on hospital property at locations other than the dedicated emergency department, 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

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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")*

a dedicated emergency department) or needs emergency examination or treatment (if elsewhere on hospital property).[7]

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 helicopter 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 emergency department) 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

*7 Ibid.*
*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)*

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]

## 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 emergency department. 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 providers 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.

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

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.

## 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 meet four requirements[21]:

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*18 See sample forms on pages 75-77.*
*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).*

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.

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, emergency medical services providers 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.**

*22* Appendix V Interpretive Guidelines, *above n.1, Tag 409 §489.24(e)(2)(iv)*

A Medicare-participating hospital that has specialized capabilities or facilities (including burn units, shock-trauma units, 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 was not going to 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]

**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 for any violation.

Possible penalties for violations are:

Termination of a hospital's Medicare provider agreement;

A hospital civil money penalty between $25,000 (for a hospital with less than 100 beds) to $50,000 per violation;

A physician (including on-call physicians) civil money penalty up to $50,000 per violation;

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.

*23 42 CFR § 24(f)*
*24 77 FR 5217*

*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, 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 80-81 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 (parents, guardian, spouse, significant other, legal guardian)
    - Medical history and history from acute admission
    - Patient primary care provider 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

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
____ Helicopter
____ Other

Mode of transport: ____ ambulance ____helicopter _____ private car

Level of care needed during transport ____BLS ___ ALS ___ RN ___ MD ___ Other: _____

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 _____

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# DIRECTIONS TO TRAUMA AND SPECIALTY REFERRAL CENTERS

**Directions to**
**Children's National Health System**
111 Michigan Avenue, N.W.
Washington, D.C. 20010

***From the north***

- Route 495 (Capital Beltway) to exit 28, New Hampshire Avenue south, into the District of Columbia
- Turn left onto southbound North Capitol Street
- Follow to Michigan Avenue NW
- Turn right onto Michigan Avenue NW
- In one block, the hospital will be on the right
- Turn right at "Dr. Bear" sign to enter underground parking

***From the south***

- Route 395 north across the 14th Street bridge
- North to Southeast/Southwest Freeway; take the US Capitol/Third Street Tunnel exit
- Follow this exit through the Third Street Tunnel; take the Massachusetts Avenue exit
- Turn right on Massachusetts Avenue; follow to North Capitol Street
- Turn left on Channing Street; follow one block
- Turn right on First Street; follow one block to Michigan Avenue
- Turn left onto Michigan Ave NW
- The hospital will be on your right
- Turn right at "Dr. Bear" sign to enter underground parking

**Directions to**
**Christiana Hospital**
4755 Ogletown-Stanton Road
Newark, DE 19718

***From I-95, southbound***

- Take Exit 4B onto Route 58 west (Churchmans Rd.).
- Follow Route 58 one mile.
- Turn left at the light to enter Christiana Hospital campus.

***From I-95, northbound***

- Take Exit 4B onto Route 7/Route 1 north.
- Take Exit 166 onto Route 58 west (Churchmans Rd.).
- Follow Route 58 for six-tenths of a mile.
- Turn left at the light to enter Christiana Hospital campus.

***From Cecil County, Maryland***

- Take I-95 north to Exit 4B Route 7/Route 1 north.
- Take Exit 166 onto Route 58 west (Churchmans Rd.).
- Follow Route 58 six-tenths of a mile.
- Turn left at the light to enter Christiana Hospital campus.

***From Maryland's Eastern Shore***

- Take Maryland Route 213 north to Route 40 east.
- From Route 40 turn onto Route 7/Route 1 north.
- Take Exit 166 onto Route 58 west (Churchmans Rd.).
- Follow Route 58 six-tenths of a mile.
- Turn left at the light to enter Christiana Hospital campus.

**Directions to**
**The Curtis National Hand Center**
**Medstar Union Memorial Hospital**
201 East University Parkway
Baltimore, MD 21218

***From East***

- From Route 695 (Baltimore Beltway), take Route 40 (Pulaski Highway) toward downtown to Calvert Street.
- Follow Calvert Street (this is a one-way street) approximately 17 blocks to 34th Street.
- The emergency room is at this intersection.

***From West***

- Take 95 north off 695 (Baltimore Beltway).
- Take exit 53 (I-395 north); stay in the left lane.
- Turn right at Pratt Street; go approximately 3 blocks.
- Turn left onto Calvert Street; follow Calvert Street approximately 17 blocks to 34th Street.
- The emergency room is at this intersection.

## Directions to
## Johns Hopkins Bayview Medical Center

4940 Eastern Avenue
Baltimore, MD 21224

***From the North***

- Use I-95 south to East Baltimore exit.
- Make a right on Eastern Avenue; continue approximately 12 blocks to the hospital, which will be on the right.

***Alternate Route***

- Use I-95 south to 895 south; take Lombard Street exit; make right on Lombard Street exit.

***From the East***

- Use Route 40 west to I-95 south.
- Follow directions for "From the North."

***From the West***

- Use I-70 to 695 south to I-95 north.
- Go through Fort McHenry tunnel; take the Eastern Avenue exit.
- Turn left on Eastern Avenue; hospital will be on the right.

***From the South and Eastern Shore***

- Use Route 50 west to 97 north to 695 west to I-95 north; follow directions to Fort McHenry tunnel. See "From the West."

***Alternate Route***

- Use Route 50 west to 97 north; take 895 north to Lombard Street exit.

***Parking***

- Visitor parking lot. Hourly parking fee.

**Directions to**
**The Johns Hopkins Hospital**
1800 Orleans Street
Baltimore, MD 21287

***From Washington, DC, area, I-95 North:***

- Take I-95 North to Exit 53 (I-395 North Baltimore). Stay in the left lane off the exit (Note: Do not take Martin Luther King Jr. Blvd. fork at the exit).
- I-395 North becomes South Howard Street.
- Turn right onto West Pratt Street (by the Baltimore Convention Center).
- Turn left onto North Washington Street.
- Turn left onto McElderry Street.
- Turn left onto Wolfe Street.
- Turn right onto Orleans Street; JHH entrance is on the right.

***Northeastern Baltimore Suburbs, I-95 South***

- Take I-95 South towards Baltimore to Exit 57 (O'Donnell Street).
- Proceed West onto O'Donnell Street. Travel approximately three-quarters of a mile to Conkling Street and turn right.
- Follow Conkling Street to Eastern Avenue (West) and turn left.
- Continue on Eastern Avenue approximately two miles to Broadway; turn right on Broadway.
- Turn left onto North Washington Street.
- Turn left onto McElderry Street.
- Turn left onto Wolfe Street.
- Turn right onto Orleans Street.
- The JHH Main Entrance to the Hospital is on the left.
  The Orleans Parking Garage is on the right.

***From Annapolis and Maryland's Eastern Shore***

- From Route 50, take I-97 towards Baltimore,
- Take I-97 to the Baltimore Beltway (I-695) towards Towson.
- From the Beltway take exit to the Baltimore-Washington Parkway (I-295 North).
- Follow I-295 into Baltimore (it becomes Russell Street).
- Turn right onto Pratt Street.
- Turn left onto South President Street.
- Turn right onto East Fayette Street.
- Turn left onto Broadway.
- Turn right onto Orleans Street
- The JHH Main Entrance to the Hospital is on the left. The Orleans Parking Garage is on the right.

**Directions to**
**MedStar Washington Hospital Center**
110 Irving Street, N.W.
Washington, D.C. 20010

- Route 495 (Capital Beltway) to exit 31, Georgia Avenue.
- Follow Georgia Avenue toward Silver Spring to Irving Street (approximately 6.3 miles on Georgia Avenue).
- Turn left on Irving Street and follow to the hospital.

**Directions to**
**Meritus Medical Center**
11116 Medical Campus Rd.
Hagerstown, MD 21742

- I-70 to Hagerstown exit 32B onto Route 40 west.
- Follow Route 40 west to first light and turn right onto Edgewood Dr., which becomes Robinwood Dr.
- Left at second light to Medical Campus Rd.
- Follow signs to the Hospital

**Directions to**
**Peninsula Regional Medical Center**
100 East Carroll Street
Salisbury, MD 21801

***From Baltimore/Washington***

- Take Rt. 97 South out of Baltimore or Route 495 out of Washington, DC, exit to Route 50 East (John Hanson Highway). Cross the Chesapeake Bay Bridge and continue on Route 50 towards Salisbury, Maryland. Veer right to take Rt. 50 Business (Ocean Gateway).
- Drive south about 4 miles, and then take a right at Mill Street. You will pass Main Street then go over the Wicomico River. At the next intersection, take a left onto W. Carroll Street. Take the next right onto Waverly Drive. Peninsula Regional Medical Center will be to your left.
- Proceed to the next traffic light at Vine Street. Turn left onto West Vine Street and follow the signs to Garage B parking, which will be on your left after you enter the medical campus.

***From Delaware and Points North Using Route 13***

- Take Business Route 13 (not Route 13 Bypass) into Salisbury. Continuing on Route 13, cross Main Street and move into the right-hand lane.
- Continue for two blocks to the next stop light at the corner of South Salisbury Boulevard and East Carroll Street. Peninsula Regional Medical Center will appear in front of you and to the right.
- Proceed past the Medical Center to the next traffic light at Vine Street. Turn right onto East Vine Street and proceed past the Emergency/Trauma Center Ambulance Entrance. Shortly after East Vine curves to the right, follow the signs to Garage B parking.

***From Virginia and Points South Using Route 13***

- Take Route 13 North. Continue straight about 50 miles north into Maryland. Stay on Route 13 through Princess Anne and Fruitland. Continue past Salisbury State University. After you pass Giant Food on the right, you will come to a sharp bend to the left; move to the left lane.
- Turn left at the traffic light onto East Vine St. The Medical Center will be on your right. Proceed past the Emergency/Trauma Center Ambulance Entrance. Shortly after East Vine curves to the right, follow the signs to Garage B parking.

**Directions to**
**Prince George's Hospital Center**
3001 Hospital Drive
Cheverly, MD 20785

***From Points South:***

- Capital Beltway to Route 50 West (exit 19b).
- Exit on Route 202, Landover Road. Stay to right at end of ramp and go West on Landover Road.
- Turn left at 4th light, which is entrance to Baltimore/Washington Parkway. Stay to the LEFT at the fork (to the right will put you back on the Parkway). Turn left at the stop sign onto Hospital Drive.
- Hospital and visitor's parking garage is at the top of the hill on the right.

***From Baltimore/Points North:***

- From Baltimore/Washington Parkway (I-295 South) take the Cheverly exit.
- Turn left on Landover Road (202 - East) at light at end of exit ramp.
- Turn right at next traffic light, which is entrance to Baltimore/ Washington Parkway. Stay to the LEFT at the fork (to the right will put you back on the Parkway). Turn left at the stop sign onto Hospital Drive.
- Hospital and visitor's parking garage is at the top of the hill on the right.

**Directions to**
**R Adams Cowley Shock Trauma Center**
22 Greene Street
Baltimore, MD 21201
**Adult Trauma and Neurotrauma Centers**
**Hyperbaric Oxygen Center**

***From the South***

- Follow I-95 to exit 52 (Russell Street).
- Follow Russell as it merges into Paca Street.
- Go two blocks on Paca; turn left onto Redwood Street and enter the underground University Plaza Garage on your right.

***From the North***

- Follow I-95 to Exit 53 (395 North).
- Bear to your right as you exit, following the signs for Martin Luther King Jr. Blvd. and Russell Street.
- Follow the signs for Russell Street and turn right onto Russell Street as you pass Oriole Park at Camden Yards.
- Continue on Russell at it merges into Paca Street.
- Go two blocks on Paca; turn left onto Redwood Street and enter the underground University Plaza Garage on your right.

***From I-83***

- Follow I-83 (Jones Falls Expressway) to the end.
- Go two traffic lights and turn right onto Lombard Street.
- Follow Lombard for 12 traffic lights and turn right onto Paca Street.
- Turn left at the next light onto Redwood Street and enter the underground University Plaza Garage on your right.

***From the West***

- Take I-70 east to I-695 south (Glen Burnie).
- Follow I-695 to I-95 north.
- Take exit 52 (Russell Street).
- Follow Russell as it merges into Paca Street.
- Go two blocks on Paca; turn left onto Redwood Street and enter the underground University Plaza Garage on your right.

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**Directions to**
**R Adams Cowley Shock Trauma Center**
22 Greene Street
Baltimore, MD 21201
**Adult Trauma and Neurotrauma Centers**
**Hyperbaric Oxygen Center**

***From Washington, DC, or BWI Airport***

- Follow I-295 north to Baltimore.
- Inside city limits, I-295 becomes Russell Street.
- Follow Russell as it merges into Paca Street.
- Go two blocks on Paca; turn left onto Redwood Street and enter the underground University Plaza Garage on your right.

***Parking***

There are several locations for parking around the Medical Center:

- The Underground University Plaza Garage is reserved for patient parking and is located on W. Redwood Street, just opposite University Hospital and the University of Maryland Professional Building.
- Valet Parking at the main hospital entrance on S. Greene Street between Baltimore and W. Redwood Streets
- Baltimore Grand Garage on Paca Street, between Baltimore and Fayette Streets
- Marriott Hotel Parking, Lombard and Eutaw Streets
- Allright Parking, W. Redwood and Eutaw Streets
- Allright Parking, Lombard and Eutaw Streets

***Mass Transit***

- **Bus-** MTA buses 1, 2, 7, 8, 11, 20, 35, and 36 stop at the Medical Center. MTA buses 3, 15, 23, 28, 31, and 91 stop in the Medical Center area.
- **Subway-** Lexington Market Station, Eutaw and Lexington Streets (4 blocks), Charles Center Station, Baltimore at Charles Street (5 blocks).
- **Light Rail-** The Central Light Rail Line stops at the University Center/Baltimore Street Station three blocks from the Medical Center.

**Directions to**
**Sinai Hospital**
2401 West Belvedere Avenue
Baltimore, MD 21215-5271

***From the Northwest***

- From Carroll County, Owings Mills, or Reisterstown, take 795 to 695 north (Baltimore Beltway/Towson).
- Take Exit 21 (Park Heights Avenue south).
- Turn left on Northern Parkway.
- After passing Pimlico Racetrack, turn right on Belvedere. Hospital will be on the left.

***From the North***

- Head south on I-83.
- At 695 (Baltimore Beltway) bear right.
- Keep right on 695 and re-enter I-83 south (Jones Falls Expressway).
- Proceed for about 3 miles.
- Take the Northern Parkway exit, and bear right.
- Turn left at the second traffic signal (Belvedere Avenue). Hospital will be on the left.

***From the West***

- Head east on I-70 to 695 (Baltimore Beltway).
- Go north on 695 (Towson) and take exit 18 (Lochearn).
- You will be on Liberty Road; continue for 1 mile.
- Turn left on Northern Parkway and proceed about 2 miles.
- After passing Pimlico Racetrack, turn right on Belvedere Avenue. Hospital will be on the left.

***From the South (Freeway Route)***

- Head north on I-95 (Kennedy Expressway) or 295 (Baltimore/ Washington Parkway) to 695 (Baltimore Beltway).
- Go north on 695 (Towson) and take Exit 18 (Lochearn).
- You will be on Liberty Road; continue for 1 mile.
- Turn left on Northern Parkway and proceed about 2 miles.
- After passing Pimlico Racetrack, turn right on Belvedere Avenue. Hospital will be on the left.

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## Directions to Sinai Hospital

2401 West Belvedere Avenue
Baltimore, MD 21215-5271

***From the South (Baltimore City Route)***

- Head north on Charles Street and take the Jones Falls Expressway (I-83).
- Go north on I-83 and take the second Northern Parkway exit (heading west).
- Bear right onto Northern Parkway and turn left at the second traffic light signal (Belvedere Avenue). Hospital will be on the left.

***From the East***

- Head north on 695 (Baltimore Beltway/Towson).
- Take I-83 south (Jones Falls Expressway).
- Take the Northern Parkway exit and bear right.
- Turn left at the second traffic signal (Belvedere Avenue). Hospital will be on the left.

***Parking Lots***

- There are three major parking lots for visitors' use.

## Directions to
## Suburban Hospital–Johns Hopkins Medicine

8600 Old Georgetown Road
Bethesda, MD 20814

***From Baltimore & Points North***

- Take I-95 South to I-495 West (toward College Park/Silver Spring).
- Follow I-495 to Old Georgetown Road Exit (about 20 minutes).
- Bear LEFT off of exit toward Bethesda.
- Hospital is 1½ miles on the right.

Parking: just before you reach the hospital, turn RIGHT on Lincoln Street and park in garage on right.

***From Silver Spring/College Park & Points East***

- Take I-495 West to Old Georgetown Road Exit (about 20 minutes).
- Turn LEFT off of the exit toward Bethesda.
- Hospital is 1½ miles on the right.

Parking: just before you reach the hospital, turn RIGHT on Lincoln Street and park in garage on right.

***From Rockville/Gaithersburg & Beyond***

- From I-270 South, take I-270 spur toward I-495 East (Silver Spring).
- Take exit #1, Rockledge Drive/Old Georgetown Road (Rt 187).
- At second set of stoplights, bear right onto Old Georgetown Road (South).
- Follow Old Georgetown Road approximately 2 miles. Hospital will be on the right.

Parking: just before you reach the hospital, turn RIGHT on Lincoln Street and park in garage on right.

## Directions to Western Maryland Regional Medical Center

12500 Willowbrook Rd.
Cumberland, MD 21502

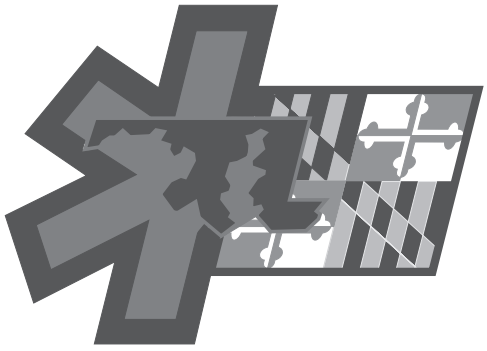
***Westbound***

- Exit Interstate 68 West at Exit 44, Willowbrook Road.
- Turn left at traffic light onto Willowbrook Road. Continue on Willowbrook Road for approximately 1 mile.
- After passing the entrance to Allegany College on the left, the new Western Maryland Regional Medical Center is located on the right. Enter the roundabout and turn right into a new hospital complex.
- To go to the main front entrance, turn left toward the front of the building. To drop someone off or to access free valet parking, please pull to the curb on the right under the awning at the main entrance.

***Eastbound***

- Exit Interstate 68 West at Exit 44, Willowbrook Road.
- Turn right at traffic light onto Willowbrook Road. Continue on Willowbrook Road for approximately 1 mile.
- After passing the entrance to Allegany College on the left, the new Western Maryland Regional Medical Center is located on the right. Enter the roundabout and turn right into a new hospital complex.
- To go to the main front entrance turn left toward the front of the building. To drop someone off or to access free valet parking, please pull to the curb on the right under the awning at the main entrance.

**Notes:**



Maryland Institute for
Emergency Medical Services Systems