

Maryland Emergency Medical Services

Interhospital Transfer Guidelines Manual

Developed by the

**Maryland Institute for
Emergency Medical Services Systems**

January 1986

April 1994

January 2002



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INTERHOSPITAL TRANSFER GUIDELINES MANUAL

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INTRODUCTION

The *Interhospital Transfer Guidelines Manual* replaces the *Maryland Emergency Medical Services Hospital Protocols for Interhospital Referral and Transport* manual dated April 1994. This updated interhospital transfer manual reflects current practice and changes that have occurred in the Maryland EMS System. One major change is an increased number of options for air ambulance and commercial ground ambulance transportation. Another change associated with these options is the communications point of contact.

The new guidelines manual has been organized to facilitate the quick retrieval of information. Each trauma and specialty referral center has its contact number listed in the Quick Start section and in the section discussing its center.

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

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

For questions or help with contacting a specific trauma and/or specialty referral center, contact EMRC at 1-800-492-3805.

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ADULT AND PEDIATRIC TRAUMA REFERRAL CENTERS

Adult Trauma

Primary Adult 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
600 North Wolfe Street
Baltimore, MD 21287-3200
410/955-9444 - Hopkins Access Line
1-800-765-5447

LEVEL III

Western Maryland Health
System–Memorial Hospital Campus
600 Memorial Avenue
Cumberland, MD 21502
301/723-4100

Peninsula Regional Medical
Center
100 East Carroll Street
Salisbury, Maryland 21801-5493
410/543-7100

LEVEL II

The Johns Hopkins Bayview
Medical Center
4940 Eastern Avenue
Baltimore, MD 21224-1505
410/955-9444 - Hopkins Access Line
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 21215-5271
410/601-6161

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

Washington County Health System, Inc.
251 E. Antietam Street
Hagerstown, MD 21740
301/790-8300

Pediatric Trauma

LEVEL I

Johns Hopkins Pediatric Trauma
Center
600 Wolfe Street
Baltimore, Maryland 21287-3200
410/955-5260
800/492-3805

Children’s National Medical
Center – Pediatric Trauma Center
111 Michigan Avenue, NW
Washington, DC 20010
202/884-5433
800/884-5433

SPECIALTY REFERRAL CENTERS

Eye Trauma

Wilmer Institute
Johns Hopkins Hospital
600 North Wolfe Street
Baltimore, Maryland 21287-3200
410/955-5347

Suburban Hospital
8600 Old Georgetown Road
Bethesda, MD 20014
301/896-3880

Poison

University of Maryland School of
Pharmacy
20 North Pine Street
Baltimore, Maryland 21201
410/706-7701; 800/222-1222
TDD: 410/706-1848

National Capital Poison Center
3201 New Mexico Avenue, NW
Suite 310, Washington, DC
School of Pharmacy
202/625-3333
TDD: 202/362-8563

Hand/Upper Extremity Trauma

The Curtis National Hand Center
Union Memorial Hospital
201 East University Parkway
Baltimore, Maryland 21218
410/554-2626

Neurotrauma

RA. Cowley Shock Trauma Center
Neurotrauma Center
22 South Greene Street
Baltimore, Maryland 21201
410/328-1234
1-800-373-4111

Burns

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

Burn Center
Washington Hospital Center
110 Irving Street, NW
Washington, DC 20010
202/877-7241

Pediatric Burn Unit
Children's National Medical Center
111 Michigan Avenue, NW
Washington, DC 20010
202/884-5433
800/884-5433

Hyperbaric Medicine

410/328-1234; 1-800-373-4111
Smoke Inhalation
CO Poisoning
Gas Gangrene
Air Embolus/Decompression
Sickness
RA. Cowley Shock Trauma Center
Hyperbaric Medicine Center
22 South Greene Street
Baltimore, Maryland 21201

MARYLAND PERINATAL REFERRAL CENTERS

University-Based Perinatal Referral Centers

The Johns Hopkins Medical System
600 North Wolfe Street
Baltimore, MD 21287-3200

L&D: 410/955-9444

NICU: 410/955-5255

For Neonatal Transport: 1-888-540-6767

University of Maryland Medical System
22 South Greene Street
Baltimore, MD 21201-1595

L&D: 410/328-1234

NICU: 410/328-6716

For Neonatal Transport: 1-888-540-6767

Perinatal Referral Centers

Anne Arundel Medical Center
64 Franklin Street
Annapolis, MD 21401-2777
L&D: 410/897-6989
NICU: 410/897-6962

Mercy Medical Center
301 St. Paul Place
Baltimore, MD 21202-2165
L&D: 410/332-9000
NICU: 410/332-9568

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

Franklin Square Hospital
Center
9000 Franklin Square Drive
Baltimore, MD 21237-3998
L&D: 443/777-8264
NICU: 443/777-7050

Prince George's Hospital
Center
3001 Hospital Drive
Cheverly, MD 20785-1189
L&D: 301/618-3265
NICU: 301/618-3280

St. Joseph Medical Center
7620 York Road
Towson, MD 21204-7582
L&D: 410/337-1178
NICU: 410/337-1150

Greater Baltimore Medical
Center
6701 North Charles Street
Baltimore MD 21204-6892
L&D: 410/828-2594
NICU: 410/828-2577

Shady Grove Adventist
Hospital
9901 Medical Center Drive
Rockville, MD 20850-3395
L&D: 301/279-6386
NICU: 301/279-6495

The Johns Hopkins Bayview
Medical Center
4940 Eastern Avenue
Baltimore, MD 21224-1505
L&D: 410/550-0378
NICU: 410/550-0328

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

Sinai Hospital of Baltimore
2401 W. Belvedere Avenue
Baltimore, MD 21215-5271
L&D: 410/601-5192
NICU: 410/ 578-5304

**For Neonatal Transport:
1-800-606-2173**

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

Out-of-State Neonatal Referral Centers

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

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

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THE MARYLAND EMERGENCY/TRAUMA 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 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 standards for the trauma and specialty centers. Four levels of trauma centers were defined and designated by MIEMSS with the approval of the EMS Board (see Trauma Center Categorization chart and location map).

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 and locations of the various specialty centers.

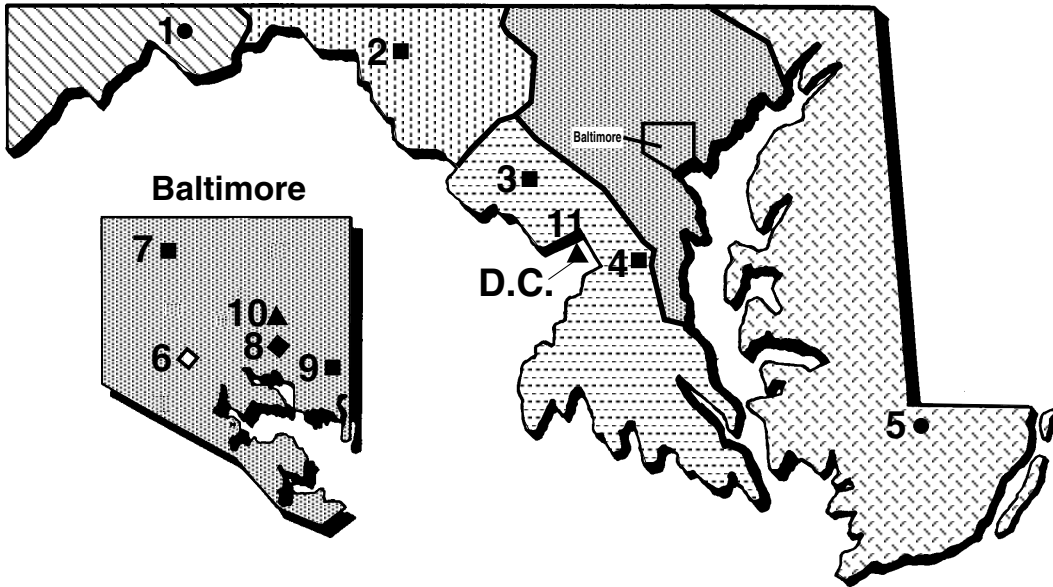
The Maryland State Police (MSP) Med-Evac program provides helicopter transportation of critically ill or injured patients requiring time-critical transport to a higher level of care. Interhospital transports are provided by commercial ambulance and med-evac companies throughout the state. Contact information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

This Interhospital Transfer Guidelines 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.

Trauma Center Categorization

Differences in Standards Based on Physician Availability and Dedicated Resources	PARC	Level I	Level II	Level III
Attending Trauma Surgeon who is fellowship-trained and is in the hospital at all times	X			
Dedicated facilities (Resuscitation Unit, Operating Room, and Intensive Care Unit) 24 hours	X			
Facilities (Resuscitation Unit, Operating Room, and Intensive Care Unit) available at all times	X	X	X	X
Trauma Surgeon available in the hospital at all times		X	X	
On-call Trauma Surgeon available within 30 minutes of call				X
Anesthesiologist in the hospital at all times and dedicated to trauma care	X			
Anesthesiologist in the hospital at all times but shared with other services		X	X	
On-call Anesthesiologist with CRNA who is in the hospital				X
Orthopedic Surgeon in the hospital at all times and dedicated to trauma care	X			
Orthopedic Surgeon in the hospital at all times but shared with other services		X		
On-call Orthopedic Surgeon available within 30 minutes of call			X	X
Neurosurgeon in the hospital at all times and dedicated to trauma care	X			
Neurosurgeon in the hospital at all times but shared with other services		X		
On-call Neurosurgeon available within 30 minutes of call			X	X
Fellowship-trained/board-certified surgical director of the Intensive Care Unit	X	X		
Physician with privileges in critical care on duty in the Intensive Care Unit 24 hrs/day	X	X	X	
Comprehensive Trauma Research Program	X	X		
Education—Fellowship Training in Trauma	X			
Surgical Residency Program	X	X		
Outreach Professional Education	X	X	X	

Locations of Trauma Centers in Maryland



Maryland Trauma Centers		Level
1	Western Maryland Health System— Memorial Hospital and Medical Center	III
2	Washington County Health System	II
3	Suburban Hospital	II
4	Prince George's Hospital Center	II
5	Peninsula Regional Medical Center	III
6	R A. Cowley Shock Trauma Center	PARC
7	Sinai Hospital	II
8	Johns Hopkins Adult Trauma Center	I
9	Johns Hopkins Bayview Medical Center	II
10	Johns Hopkins Pediatric Trauma Center	I PTC
11	Children's National Medical Center	I PTC

◇	PARC - Primary Adult Resource Center
◆	I
■	II
●	III
▲	Level I Pediatric Trauma Center (PTC)

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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.
 - b) If the patient required 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
 - 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

PROMPT TRANSPORT

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

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) med-evac helicopter. The interfacility transportation of patients is primarily carried out by Maryland licensed commercial ambulances, commercial med-evac helicopters, or MSP med-evac helicopters.

The EMS providers on all of these ambulances and med-evac helicopters are licensed or certified by MIEMSS at one of the following levels: First Responder (FR), Emergency Medical Technician-Basic (EMT-B), Cardiac Rescue Technician (CRT), or Emergency Medical Technician-Paramedic (EMT-P). The FR and EMT-B are Basic Life Support (BLS) providers and the CRT and EMT-P 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 a FR driver and an EMT-B attendant. They may transport patients within the scope of practice of an EMT-B only. This can include 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-B. 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-B driver and a CRT or EMT-P 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 accor-

dance with EMTALA (refer to the EMTALA section). At present there is no separate license for critical care ambulances; therefore, these patients are transported in licensed ALS commercial ambulances.

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

Air ambulance transportation should be considered for the interfacility transport of patients for whom time is critical.

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. They are usually staffed with one EMT-P provider and one RN in addition to the pilot.

Maryland State Police Med-evac Helicopters

MSP med-evac helicopters are routinely staffed with an EMT-P provider and the pilot to primarily do scene transports and are available to provide interhospital transport for patients with time-critical transport needs. Based on the patient's medical needs, the transport may occur with one EMT-P provider, or a second supplemental medical provider may be utilized in addition to the MSP flight paramedic.

LICENSED COMMERCIAL AMBULANCE SERVICES (10/22/01)

Ground Ambulance Service	BLS	ALS	Neonatal
A-1 AMBULANCE TRANSPORT, INC. Maryland Commercial Ambulance License #73 PO Box 835 Charlotte Hall, MD 20622 (301) 884-9900	yes	yes	—
ALLEGANY AMBULANCE SERVICE, INC. Maryland Commercial Ambulance License #45 176 West Main Street Frostburg MD 21532 (301) 689-1133	yes	yes	—
AM-VAN, INC./ALERT AMBULANCE TRANSPORTATION SERVICE, INC. t/a ALL AMERICAN AMBULANCE & TRANSPORT Maryland Commercial Ambulance License #56 1315 Mt. Zion Marlboro Road Lothian MD 20711 (301) 952-1193	yes	yes	—
AMELL AMBULANCE SERVICE, INC. Maryland Commercial Ambulance License #53 7801 York Road, Suite 335 Towson MD 21204 (410) 296-7321	yes	—	—
AMERI-CARE AMBULANCE COMPANY, INC. Maryland Commercial Ambulance License #100 9706 Bel Air Road Perry Hall, MD 21236 (410) 248-2200	yes	—	—
AMERICAN AMBULANCE AND OXYGEN SERVICE COMPANY PO Box 42117 Towson MD 21284-2117 1-800-440-5644	yes	yes	—
BEST AMBULANCE SERVICE, Inc. Maryland Commercial Ambulance License #85 PO Box 98 Perry Hall, MD 21128 (410) 256-1085	yes	yes	—
BEST CARE AMBULANCE, INC. Maryland Commercial Ambulance License #97 P.O. Box 88 Centreville MD 21617 (410) 476-3688	yes	yes	—

Ground Ambulance Service	BLS	ALS	Neonatal
CHARLESTOWN COMMUNITY, INC. t/a CHARLESTOWN EMERGENCY MEDICAL SERVICES Maryland Commercial Ambulance License #94 711 Maiden Choice Lane Catonsville MD 21228 (410) 247-3400	yes	yes	—
COUNTY MEDICAL TRANSPORT, INC. Maryland Commercial Ambulance License #54 15852 Falling Waters Road Williamsport MD 21795 (301) 582-6131	yes	yes	—
EAST COAST AMBULANCE SERVICE, LLC Maryland Commercial Ambulance License #82 9413 Harford Road Baltimore MD 21234 (410) 663-2012	yes	yes	—
GARRETT MEDICAL TRANSPORT Maryland Commercial Ambulance License #40 103 Shenandoah Avenue Loch Lyn MD 21550 (301) 334-7900	yes	yes	—
GREATER VALLEY HEALTH, INC. t/a JEFFERSON HEALTH SYSTEM PO Box 317 Paoli PA 19301 (610) 648-1648	yes	—	yes
HART TO HEART AMBULANCE SERVICE, INC. Maryland Commercial Ambulance License #50 2827 Churchville Road Churchville MD 21028 (410) 836-2556	yes	yes	—
LIFESTAR AMBULANCE, INC. Maryland Commercial Ambulance License #63 1024 Tower Drive Salisbury MD 21804 (410) 546-0809	yes	yes	—
LIFESTAR RESPONSE OF MARYLAND, INC. Maryland Commercial Ambulance License #74 1622 Sulphur Spring Road Baltimore MD 21227 (410) 270-6060	yes	yes	yes
LOWER SHORE AMBULANCE SERVICE, INC. Maryland Commercial Ambulance License #99 1747 Market Street, P.O. Box 457 Pocomoke City MD 21851 (410) 957-2313	yes	yes	—

Ground Ambulance Service	BLS	ALS	Neonatal
MARYLAND EXPRESSCARE Maryland Commercial Ambulance License #52 22 South Greene Street, TGR25 Baltimore MD 21201 (410) 328-1096 1-800-373-4111	yes	yes	—
MEDIC CARE, INC. Maryland Commercial Ambulance License #69 8100 Belair Road, Suite A Baltimore MD 21236 (410) 661-2075	yes	—	—
MID-MARYLAND MEDICAL TRANSPORT, LLC 930A Eldridge Drive Hagerstown MD 21740 (866) 232-8107	yes	yes	—
MOBILE MEDICAL TRANSPORTATION, INC. & RURAL/METRO MID-ATLANTIC II, INC. t/a Rural/Metro Mid-Atlantic Maryland Commercial Ambulance License #90 3920 Vero Road, Suite H Caton Research Center I Baltimore MD 21227 (410) 247-5655	yes	yes	yes
SILVER SPRING AMBULANCE SERVICE, INC. Maryland Commercial Ambulance License #80 5980 Sligo Mill Road, NE Washington DC 2011-1522 (202) 726-5551	yes	yes	yes
TENDER TRANSPORTATION, LLC dba INTEGRITY AMBULANCE Maryland Commercial Ambulance License #101 1216 E. Baltimore Street Baltimore, MD 21202 (410) 342-0590	yes	—	—
TLC BALTIMORE AMBULANCE AND OXYGEN SERVICE, INC. t/a TLC ULTIMATE SERVICE ADVANCED LIFE SUPPORT Maryland Commercial Ambulance License #81 P.O. Box 29554 Baltimore MD 21216-0154 (410) 922-7600	yes	—	—
TRANSCARE OF HARFORD COUNTY, INC. Maryland Commercial Ambulance License #61 1500 Caton Center Drive, Suite L-M Baltimore MD 21227 (410) 242-2279	yes	yes	—

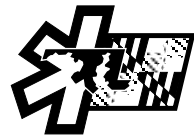
Ground Ambulance Service	BLS	ALS	Neonatal
URGENT AMBULANCE SERVICE, INC./MD 118 Sandy Drive, Unit 5 Newark DE 19713 (800) 452-4443	yes	—	yes
VALLEY REGIONAL ENTERPRISES, INC. t/a Valley Medical Transport Maryland Commercial Ambulance License #68 75 Henderson Avenue Cumberland MD 21502 1-800-776-4067	yes	yes	—
WE CARE TRANSPORTATION & MEDICAL SUPPORT SYSTEM., INC t/a WE CARE AMBULANCE SERVICE Maryland Commercial Ambulance License #89 300 Reisterstown Road Baltimore MD 21208 (410) 653-5047	yes	—	—

Air Ambulance Service

MEDSTAR
 110 Irving Street, NW
 Washington DC 20010-2975
(800) 824-6814

STAT MEDEVAC
 10 Allegany County Airport
 Pittsburgh PA 15122
(800) 633-7828

Note: This list is subject to change. You may contact the State Office of Commercial Licensing and Regulation at 888-200-5015 for the most current list.



Maryland EMS Provider Descriptions



Emergency Medical Dispatcher: *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. *Licensure requirements:* written exam; successful completion of a CPR Provider Course. Licensure period is for 2 years. *Relicensure requirements:* Current CPR Provider; 24 hours of continuing dispatch education.



First Responder: *Skills include:* Patient assessment; bleeding control and bandaging; fracture management; medical emergency management; CPR; optional O₂ administration; optional automated external defibrillator. *Hours of training:* 40 minimum (without options). *Certification requirements:* written and practical exams. Certification period is for 3 years. *Recertification requirements:* 12 hours of approved continuing education. Maryland grants legal recognition for First Responders from most states, National Registry, American Red Cross' Emergency Response Course, and the National Safety Council's First Responder Course.



Basic EMT: *Skills include:* Patient assessment; bleeding control and bandaging; shock management; fracture management; CPR; O₂ administration; medical emergency management; patient-assisted medications; spinal immobilization; patient movement; transport. *Hours of training:* 131 minimum. *Certification requirements:* field internship; written and practical exams; affiliation with an approved BLS/ALS company. Certification period is for 3 years. *Recertification requirements:* 24 hours of approved EMT-B refresher training; affiliation with an approved BLS/ALS company. We have legal recognition for EMT-B with most states and the National Registry.



Cardiac Rescue Technician: *Skills include:* intravenous fluid administration; medication administration; EKG monitoring and defibrillation/cardioversion; endotracheal intubation. *Hours of training:* Basic EMT hours, plus approximately 220 hours. *Licensure requirements:* written licensing exam. Licensure period is for 2 years. *Relicensure requirements:* Approved continuing education and affiliation with an approved ALS company, and demonstration of skills proficiency. (CRT licensure will be recognized until 3/31/2008.)



Cardiac Rescue Technician (NREMT-I99): *Skills include:* All skills listed under CRT plus external jugular cannulation, intraosseous cannulation, decompression thoracostomy, external transcutaneous pacing, Combitube, and others. *Hours of training:* Basic EMT, plus approximately 340 hours. *Licensure requirements:* NREMT-I99 registration; successful completion of a Maryland ALS licensing protocol exam; affiliation with an approved ALS program. Licensure period is for 2 years. *Relicensure requirements:* Successful reregistration as an NREMT-I99; affiliation with an approved ALS program.



Paramedic (NREMT-P): *Skills include:* All skills listed under CRT and CRT (NREMT-I99), plus additional medication administration; nasotracheal intubation; external transcutaneous pacing. *Hours of training:* Basic EMT hours plus approximately 600-1000 hours. *Licensure requirements:* NREMT-P registration; successful completion of a Maryland ALS protocol licensing exam; affiliation with an approved ALS company. Licensure period is for 2 years. *Relicensure requirements:* Successful reregistration as an NREMT-P; affiliation with an approved ALS program.

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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
1-800-737-4111

LEVEL I

The Johns Hopkins Medical System
University Trauma Center
600 North Wolfe Street
Baltimore, MD 21287
Hopkins Access Line 410/955-4444
1-800-765-5447

LEVEL II

**The Johns Hopkins Bayview
Medical Center**
4940 Eastern Avenue
Baltimore, MD 21224
Hopkins Access Line 410/955-4444

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

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

Washington County Health System, Inc.
251 E. Antietam Street
Hagerstown, MD 21740
301/790-8300

LEVEL III

**Western Maryland Health Systems –
Memorial Hospital Campus**
600 Memorial Avenue
Cumberland, MD 21502
301/723-4100

Peninsula Regional Medical Center
100 East Carroll Street
Salisbury, Maryland 21801-5493
410/543-7100

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 (SEE QUICK-START). 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 (2 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. Comorbid factors (e.g., Age>55 years, cardiac or respiratory disease, insulin-dependent diabetes, morbid obesity)

PEDIATRIC TRAUMA CENTER

The Johns Hopkins Medical System

600 Wolfe Street, Baltimore, MD 21287

410/955-5260

800/492-3805

PEDIATRIC TRAUMA CENTER

Children's National Medical Center

111 Michigan Avenue, NW, Washington, DC 20010

202/884-5433

800/884-5433

PEDIATRIC TRAUMA REFERRAL CENTERS' GUIDELINES

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

Children differ from adults in their physiological and psychological responses to injury and illness. Therefore, the Johns Hopkins Medical System (JHMS) Children's Center has 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.

Consultation for pediatric trauma and medical emergencies is available on a 24-hour-per-day basis and can be coordinated through the State Emergency Medical Resources Center (EMRC) at **1-800-492-3805**.

Advanced Life Support Transportation is also available for children to be transferred to the Johns Hopkins Children's Center from other facilities. The transport team is capable of performing invasive and non-invasive monitoring and is able to provide full ventilatory support for children. To schedule a transport, call **410-955-5260** (Pediatric Transport Team at the Johns Hopkins Children's Center).

Children's National Medical Center (CNMC), Washington, DC

CNMC, located in Washington, DC, is a specialty referral center for all pediatric emergencies. The 265-bed free-standing pediatric hospital is dedicated to the care of injured and ill children. CNMC provides extensive services and expertise to all children in need. The available regional services are described below.

The **Emergency Communications Information Center (ECIC)** is equipped with an aircraft console, which allows in-flight consultation; land patches to Maryland EMS and the DC Fire Department for field consultation; and a national toll-free number (**1-800-884-5433**) permitting direct consultation from anywhere in the continental United States. To schedule a Transport, call **1-800-884-5433** (Pediatric Transport Team at the CNMC).

The **Emergency Medical Trauma Center (EMTC)** at CNMC is dedicated to the care of acutely injured or ill children. The Children's Hospital heliport provides immediate access to the EMTC, which coordinates the multidisciplinary emergency resources (trauma team, emergency services, emergency communications information center) of CNMC and ensures the appropriate triage and management of pediatric emergencies.

REASONS FOR TRANSFER TO A PEDIATRIC TRAUMA CENTER

1. Trauma - any of the following:
 - a. Multiple-system injury (two or more systems)
 - b. Penetrating wounds
 - (1) Head
 - (2) Chest
 - (3) Abdomen
 - c. Cardiac or major vessel injury
 - d. Massive maxillofacial trauma
 - e. Spinal injury with or without deficit
 - f. Estimated Injury Severity Score (ISS) greater than 13
 - g. Severe head injury
 - (1) Glasgow Coma Scale score (GCS) less than or equal to 8 (patient does not open eyes or talk)
 - (2) Deteriorating GCS regardless of score
 - (3) Penetrating wound
 - (4) Depressed skull fracture or open head injury
 - (5) CSF leak—otorrhea or rhinorrhea
 - (6) Focal or lateralizing signs
 - (7) Intracranial hemorrhage
 - h. Single-system injury that cannot be managed by the community hospital
2. Burns
 - a. Second- and third-degree burns greater than 10% total body surface area for all pediatric patients (age 10 or less)
 - b. Involving face, hands, feet, or perineum
 - c. Electrical burns
 - d. Chemical burns
 - e. Suspected inhalation injury
 - f. Circumferential burns
3. Evidence of shock
 - a. Hypotension
 - b. Mottled, cold, pale extremities
 - c. Tachycardia
 - d. Thready pulse
 - e. Tachypnea
 - f. Decreased level of consciousness
 - g. Urine production less than 0.5 ml/kg/hr
 - h. Metabolic acidosis (pH less than 7.2)
4. Any seriously ill child who cannot be managed in the community hospital

GENERAL GUIDELINES FOR TRANSPORT

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.

Newborns may require modification of these guidelines.

1. Children should receive 100% oxygen during transport.
2. Children transported with an ETT will have a gastric tube to suction.
3. Children should be transported with a patent IV/IO.
4. Children receiving aminophylline or other continuous-drip medications must have the IV rate regulated by an infusion pump.
5. In general, children under 5 kg will be transported in an isolette to prevent hypothermia. Dependent on the particular patient, involvement of the neonatal transport nurse may be requested.
6. It is especially important to maintain body temperature in children. Patients should be kept warm with blankets and heat.
7. The transport service must be notified of the transport of any child with a potentially infectious disease.

**BALTIMORE REGIONAL BURN CENTER
The Johns Hopkins Bayview
Medical Center**

4940 Eastern Avenue, Baltimore, MD 21224

410/955-9444

1-800-765-5447

BURN CENTER

Washington Hospital Center

110 Irving Street, NW Washington, DC 20010

202/877-7241

PEDIATRIC BURN UNIT

**CHILDREN'S NATIONAL MEDICAL
CENTER (CNMC)**

111 Michigan Avenue, NW, Washington, DC 20010

202/884-5433

800/884-5433

BURN INJURY

INTRODUCTION

The **Regional Burn Center** is located at **The Johns Hopkins Bayview Medical Center** in eastern Baltimore City. It consists of a 10-bed combined ICU and step-down unit for adult and pediatric burn patients and a 5-bed pediatric step-down unit. The Baltimore Regional Burn Center admits 250 to 300 patients each year. The phone number is **410-955-9444**.

The **Burn Center at Washington Hospital Center** in the District of Columbia also participates in the Maryland Specialty Referral System. This burn center is composed 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. Between 275 and 300 adult burn patients are admitted to this center each year. The phone number is **202-877-7241**.

Children's National Medical Center (CNMC), in Washington, DC, is a specialty referral center for all pediatric emergencies. The 265-bed free-standing pediatric hospital has a pediatric burn team and a 4-bed ICU dedicated for burn care. CNMC provides extensive services and expertise to all children in need. The Center can be contacted by calling **1-800-884-5433**.

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

INDICATIONS FOR TRANSFER

1. Second- and third-degree burns
 - a. Greater than 10% of total body surface area (TBSA) in patients younger than 10 years and older than 50 years OR
 - b. Greater than 15% TBSA in patients between the ages of 10 and 50 years OR
 - c. Of the face, hands, feet, or perineum
2. Electrical/lightning burns
3. Chemical burns
4. Burns complicated by smoke inhalation *
5. Circumferential burns
6. Burns complicated by single system trauma
7. Burns in patients with serious preexisting medical conditions

Although seldom necessary, the referring physician, in consultation with the Burn Center, may activate the burn transport team from the Baltimore Regional Burn Center. In this case, SYSCOM will assist in arranging transport for the team to the referring hospital.

* Patients with carbon monoxide toxicity and no major burns should be considered for hyperbaric oxygen treatment at the R Adams Cowley Shock Trauma Center.

MARYLAND EYE TRAUMA CENTER
The Wilmer Ophthalmological Institute
The Johns Hopkins Hospital
600 North Wolfe Street, Baltimore, MD 21205
410/955-5347

CENTER FOR SIGHT
Suburban Hospital
8600 Old Georgetown Road
Bethesda, MD 20014
301/896-3880

EYE TRAUMA

INTRODUCTION

The eye trauma centers at the **Wilmer Ophthalmological Institute, Johns Hopkins Hospital** in Baltimore and at **Suburban Hospital** in Bethesda, form the Maryland Eye Trauma System. The main objective of the system is to provide optimal clinical management of severe ocular injuries.

INDICATIONS FOR 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.

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 an eye shield ONLY.
2. DO NOT remove impaled objects. Stabilize 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.
Send copies of X-rays and CT scans if obtained prior to transport.
DO NOT delay transport awaiting results.
2. Eye shield
3. Specimens of chemical agent, if indicated

THE CURTIS NATIONAL HAND CENTER
The Union Memorial Hospital
201 East University Parkway, Baltimore, MD 21218
410/554-2626

HAND/UPPER EXTREMITY TRAUMA

INTRODUCTION

The **Curtis National Hand Center at the Union Memorial Hospital** in Baltimore, in conjunction with the Foot and Ankle Service, serves as a specialty referral center for patients experiencing hand and certain other extremity trauma. It is not feasible to list the absolute triage for every possible hand or extremity injury. Time, distance, weather, and proximity to a trauma center are all factors that must be considered in making an individual patient decision based upon the patient assessment. The following guidelines are intended to aid in decision-making, with the understanding that appropriate consultation should be obtained if there is a question as to referral.

INDICATIONS FOR TRANSFER (also see Contraindications)

1. Primary considerations
 - A. Presence of isolated injury to the upper extremity
 - B. Complex hand injury
 - C. Stable patient
2. Major upper extremity trauma
 - A. Complex hand injury involving bones, tendons, nerves
 - B. Complete or incomplete upper extremity amputation
 - C. Degloving, crushing, devascularization injuries
3. Major lower extremity trauma. (Toe injuries are NOT candidates for microsurgery or referral.)
 - A. Degloving, crushing injury without suspicion of major long-bone fracture
 - B. Clean-cut amputation of a foot of a child. (There are very few indications for reimplantation of any portion of a lower extremity because of the risks to the patient compared with the potential benefit. Children with foot amputations are candidates for referral.)
 - C. Clean-cut amputation at the ankle (child or adult)
 - D. Patients with amputation above the ankle. (There is an occasional situation in which the part can be reimplanted or converted from an above-knee to a below-knee amputation in order to preserve knee function.)

CONTRAINDICATIONS FOR TRANSFER

1. Patients with unstable or abnormal vital signs
2. Patients with major and/or multiple system trauma

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.
 - 1) Wrap in dry sterile gauze or toweling (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).
 - 2) 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:
 - 1) Place severed part(s) in a functional position.
 - 2) Apply dry sterile dressing.
 - 3) Splint.
 - 4) Elevate extremity.
 - 5) 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.
 - B. Documentation of medications given:
 - 1) Tetanus prophylaxis
 - 2) Antibiotics
 - 3) Pain medications
2. Extremity and/or part:
 - A. Elevated and cooled.
 - B. Splints, as necessary.

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HYPERBARIC MEDICINE CENTER
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 **R Adams Cowley Shock Trauma Center Department of Hyperbaric Medicine** is the specialty referral center for the emergency treatment of smoke inhalation/carbon monoxide (CO) poisoning, decompression sickness, air embolism, gas gangrene/soft tissue infections, and near hanging (anoxia).

INDICATIONS FOR TRANSFER

- Suspected decompression sickness
- Scuba and diving accidents
- Suspected air embolus
- Suspected gas gangrene/soft tissue infections

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

- Unconsciousness upon arrival or history of unconsciousness following smoke inhalation
- Mental aberration, e.g., confusion, incoherence, combativeness
- Carboxyhemoglobin level of 30% or higher, regardless of clinical symptoms
- History of exposure to smoke and/or carbon monoxide that the referring physician feels would be best managed with hyperbaric oxygen
- **Carbon Monoxide Poisoning: If blood has been obtained by paramedical personnel, send this blood with the patient.**

NOTE: If air transport is chosen, helicopters must fly as low as possible (under 1,000 feet) and fixed-wing aircraft must have a cabin pressure of 1 atmosphere.

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

This section provides guidelines for the stabilization and transport of patients with head and spine injuries. Its purpose is to expedite the transfer of appropriate patients to the **R Adams Cowley Shock Trauma Neurotrauma Center (NTC)**, which is the specialty referral center for these 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 Scale 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 fractures 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

MARYLAND POISON CENTER

University of Maryland

School of Pharmacy

20 North Pine Street, Baltimore, MD 21201

410/706-7701

800/222-1222

TDD: 410/706-1848

Business Office *410/706-7604*

NATIONAL CAPITAL POISON CENTER

3201 New Mexico Avenue NW

Suite 310, Washington, DC

George Washington University Medical Center

School of Pharmacy

202/625-3333

TDD: 202/362-8563

Business Office *202/362-3867*

POISON INFORMATION RESOURCE

INTRODUCTION

The **Maryland Poison Center** is a 24-hour emergency telephone service providing information about toxicity and treatment to the general public and health professionals. The Poison Center is a division of the School of Pharmacy at the University of Maryland at Baltimore. It is certified as the Regional Poison Center for Maryland by the American Association of Poison Control Centers and serves as a consultation center for MIEMSS. Over 55,000 poison-related calls are handled annually.

The **National Capital Poison Center** is one of two poison centers available in Maryland and is certified by the American Association of Poison Control Centers. The specialists in poison information are registered nurses and pharmacists with extensive backgrounds in emergency and intensive care nursing. All specialists in poison information have passed a national certification exam in toxicology. The staff also includes three board-certified toxicologists available to the staff 24-hours-a-day. The Poison Center staff has access to a 24-hour interpreter service, with over 140 languages available, so callers who do not speak English are able to receive immediate help for emergency calls.

The Poison Center is not a patient care facility.

HOW TO OBTAIN POISON MANAGEMENT ASSISTANCE

Call the Maryland Poison Center

Metropolitan Baltimore	410-706-7701
Toll-free	1-800-222-1222
TDD	410-706-1848

Call the National Capital Poison Center

Metropolitan Washington	202-625-3333
TDD	202-362-8563

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 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 or guess or assume.

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 to ensure outpatient care if needed, quality management, epidemiology studies, and prevention of further poison exposures.

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MARYLAND PERINATAL REFERRAL CENTERS

University-Based Perinatal Referral Centers

The Johns Hopkins Medical System

600 North Wolfe Street
Baltimore, MD 21287-3200

L&D: 410/955-9444

NICU: 410/955-5255

For Neonatal Transport: 1-888-540-6767

University of Maryland Medical System

22 South Greene Street
Baltimore, MD 21201-1595

L&D: 410/328-1234

NICU: 410/328-6716

For Neonatal Transport: 1-888-540-6767

Perinatal Referral Centers

Anne Arundel Medical Center

64 Franklin Street
Annapolis, MD 21401-2777

L&D: 410/897-6989

NICU: 410/897-6962

Mercy Medical Center

301 St. Paul Place
Baltimore, MD 21202-2165

L&D: 410/332-9000

NICU: 410/332-9568

St. Agnes Hospital

900 Caton Avenue
Baltimore, MD 21229-5299

L&D: 410/368-2610

NICU: 410/368-2630

Franklin Square Hospital Center

9000 Franklin Square Drive
Baltimore, MD 21237-3998

L&D: 443/777-8264

NICU: 443/777-7050

Prince George's Hospital Center

3001 Hospital Drive
Cheverly, MD 20785-1189

L&D: 301/618-3265

NICU: 301/618-3280

St. Joseph Medical Center

7620 York Road
Towson, MD 21204-7582

L&D: 410/337-1178

NICU: 410/337-1150

Greater Baltimore Medical Center

6701 North Charles Street
Baltimore MD 21204-6892

L&D: 410/828-2594

NICU: 410/828-2577

Shady Grove Adventist Hospital

9901 Medical Center Drive
Rockville, MD 20850-3395

L&D: 301/279-6386

NICU: 301/279-6495

The Johns Hopkins Bayview Medical Center

4940 Eastern Avenue
Baltimore, MD 21224-1505

L&D: 410/550-0378

NICU: 410/550-0328

Holy Cross Hospital

1119 Rockville Pike, # 505
Rockville, MD 20852-3143

L&D: 301/754-7590

NICU: 301/754-7600

Sinai Hospital of Baltimore

2401 W. Belvedere Avenue
Baltimore, MD 21215-5271

L&D: 410/601-5192

NICU: 410/ 578-5304

For Neonatal Transport:

1-800-606-2173

Howard County General Hospital

5755 Cedar Lane
Columbia, MD 21044-2999

L&D: 410/740-7845

NICU: 410/740-7555

Out-of-State Neonatal Referral Centers

Children's National Medical Center

111 Michigan Avenue, NW
Washington, DC 20010

202/884-5433

800/884-5433

West Virginia University Hospital

Morgantown, WV 26505

NICU: 304/598-1212

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 may either:

- Contact anyone of the perinatal referral centers or
- Call the Emergency Medical Resources Center (EMRC) to request a maternal transport and they will connect you with the institution of your choice.

Metropolitan Baltimore: 410-578-8400

Toll-free: 1-800-648-3001

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 14 Maryland hospitals with Neonatal Intensive Care Units (NICU) that are capable of caring for critically ill newborns. These same 14 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 12 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 of these hospitals must have neonatal transport programs or agreements with a neonatal transport service so they can send an appropriately trained neonatal transport team to an infant's hospital of birth, to assist with stabilization procedures and provide care during transport. Maternal transports are arranged by the referring hospital.

HOW TO INITIATE MATERNAL OR NEONATAL REFERRALS

The referring physician may either:

- Contact any one of the hospitals or transport programs directly or
- Call EMRC to request either a maternal or neonatal transport, and the EMRC operator will connect you with the hospital of your choice.

Metropolitan Baltimore: 410-578-8400

Toll-free: 1-800-648-3001

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 p. 16)

Maryland State Police Helicopter Transports

1. The attending neonatologist at the accepting Perinatal Referral Center should contact SYSCOM at 1-800-648-3001. SYSCOM will verify that air transport is an option (considering such conditions as weather) and immediately patch the call through to the attending neonatologist on-call for the Maryland Regional Neonatal Transport Program (MRNTP).
 - a) Immediate arrangements will be made for a neonatal transport nurse from the MRNTP who is trained and experienced in air medical transport to accompany the patient;
 - b) A transport isolette that has been specially modified for mounting aboard the MSP Dauphin helicopters will be picked up with the transport nurse; and
 - c) There will be no charges for providing the MSP/SYSCOM service to the patient, the patient's family, the sending or the receiving hospitals, or to any other party.
2. Approval for helicopter utilization will be made by the attending physician 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 physician, and the State Aeromedical Director; and
 - b) Neonatal centers without helipads immediately 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.

-
3. Once the MRNTP agrees to provide the neonatal transport nurse for the mission, on-line medical direction, including stabilization recommendations to the referring physician and medical 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 Advanced Life Support Commercial Ambulance or a Neonatal Commercial Ambulance Service and in compliance with COMAR 30.09. NOTE: COMAR 30.09.12.02 (Requirements for a Neonatal Commercial Ambulance Service) refer specifically to those services transporting newborns from one hospital to another for a higher level of care. 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 by Advanced Life Support (ALS) Commercial Ambulances.
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, which is 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 Neonatal Resuscitation Program (NRP) certification must accompany the infant.

EMTALA

THE EMERGENCY MEDICAL TREATMENT AND ACTIVE LABOR ACT

EMTALA

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). It applies to hospitals receiving federal funding from Medicare and offering emergency care and physicians providing services in such hospitals. The purpose of EMTALA is to insure that patients with an emergency medical condition are assessed and treated at any hospital providing emergency services without consideration of ability to pay. It is sometimes referred to as the "antidumping" law.

EMTALA places certain conditions and affixes certain responsibilities in connection with interhospital patient transfers under certain circumstances.

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. 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 January 2001, are briefly outlined below. The contours of EMTALA continue to evolve in the courts, and 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.

Under current applicable Centers for Medicare and Medical Services (CMS) guidelines, a hospital offering emergency care is required to comply with EMTALA, regardless of whether it operates an emergency room as such.¹

Additionally, federal courts have held that the transfer requirements of EMTALA apply to any patient who comes to a hospital and who has an emergency condition even if the patient did not present at the emergency room.² Thus if a patient were admitted for an elective procedure and developed an emergency condition, under this interpretation, EMTALA would apply to an interhospital transfer of the patient.

Regulations effective January 10, 2001 expand the geographic area in which a hospital becomes responsible for EMTALA compliance.³ Under the new regulations a patient is on hospital property when the patient is on the main hospital cam-

1 HCFA Interpretive Guidelines and Investigative Procedures For Responsibilities of Medicare Participating Hospitals in Emergency Cases, Rev. 271, V-16.

2 Lopez-Soto, et al., V. Hawayek, M.D., et al., (1st Cir. 1999), 175 F. 3rd. 170

3 65 Fed Reg 18434 (April 7, 2000); 65 Fed Reg 58919 (October 3, 2000)

pus which 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 CMS regional office. Under the regulations, hospital property also includes the hospital's parking lots, sidewalks, and driveways plus certain facilities located off campus. A patient is on hospital property when in an ambulance owned and operated by the hospital or when in any ambulance when it is on the hospital campus.

A recent case from the United States Court of Appeals for the Ninth Circuit has interpreted the EMTALA regulations to mean that a patient has come to a hospital for purposes of EMTALA once an ambulance carrying the patient radios a hospital that it is en route to the hospital.⁴ Under the ruling in that case, a hospital is not able to redirect a patient who is en route unless the hospital is on "diversionary status" (lacks the staff or facilities to accept any additional emergency patients).

Receiving hospitals are required to report violations of the EMTALA transfer provisions to CMS.⁵ Failure to do so is itself a violation of EMTALA.

SCREENING EXAMINATION

EMTALA requires that a hospital offering emergency care provide a screening examination to any individual who comes to hospital property (including ambulances owned and operated by the hospital) requesting examination or treatment of a medical condition. 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.

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. The most current notice from CMS and Office of Inspector General proposes to require that the hospital 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.⁶

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.

⁴ *Arrington v. Wong*, 237 F.3d 1066 (9th Cir., 2001)

⁵ 42 Cfr §489.20(M).

⁶ 63 Federal Register 234 (Dec. 7, 1998)

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 are attached. Before any forms are implemented, the proposed procedure for using such forms should be reviewed with counsel to insure appropriateness in a given situation.

EMTALA REQUIREMENTS BEFORE A PATIENT CAN BE TRANSFERRED

In general, if a hospital is aware that a patient is experiencing an emergency condition, the patient can only be transferred if:

- 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 patient⁷ 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;
 2. A physician has signed a certification⁸ 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
 3. 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 referred to in paragraph 2 above 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 PATIENT TRANSFER

EMTALA requires that a transfer meet certain requirements. Under EMTALA, the responsibility for meeting these requirements rests with the transferring physician:

- A. The transferring hospital must provide medical treatment within its

⁷ See sample form on page 55.

⁸ See sample form on page 57.

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.

- B. 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.
- C. The transferring hospital must send to the receiving facility all medical records (or copies) related to the emergency condition available at the time of transfer including:
 - 1. Available history;
 - 2. Records related to the individual's emergency condition;
 - 3. Observations of signs or symptoms;
 - 4. Preliminary diagnosis;
 - 5. Results of any tests;
 - 6. The informed written consent or certification (or a copy) required for the transfer;
 - 7. Name and address of any on-call physician who has refused or failed to appear within a reasonable time to provide necessary stabilizing treatment.
- D. Records not readily available from the transferring hospital's files must be sent as soon as practicable after the transfer.
- E. 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.
 - 1. Under EMTALA, Emergency Medical Services providers may not always be qualified to provide the level of care for certain patients being transferred.
 - 2. A patient's condition may make the presence of a physician or some other specialist mandatory.
 - 3. **Under current CMS guidelines, the physician at the sending hospital is responsible for determining:**
 - (i) The appropriate mode of transfer (i.e.):
 - (a) Critical Care ambulance;
 - (b) Neonatal Care ambulance;
 - (c) Advanced Life Support ambulance;
 - (d) Basic Life Support ambulance;
 - (e) Land ambulance;
 - (f) Helicopter; or
 - (g) Other.
 - (ii) Necessary equipment for the transfer;
 - (iii) Necessary attendants for the transfer.

A 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 transferring 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.

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 2 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.
- A suit by a receiving facility which suffered loss because of another hospital's violation of EMTALA.

Sample Form. Review with counsel before using.
Refusal of Examination, Treatment, or Transfer

I understand that the 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 the hospital without regard for whether I am able to pay or whether I have insurance which will pay part or all of the costs of the examination, treatment, or transfer.

The hospital proposes to perform the following examination, treatment, or transfer:

The 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 Name: _____
Date of birth: _____
Address: _____

Witness: _____

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Sample Form. Review with counsel before using.
Patient Request for Transfer

I understand that the 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 the hospital without regard for whether I am able to pay or whether I have insurance which will pay part or all of the costs of the examination, treatment, and/or transfer.

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

The reasons for my request for a transfer are:

The hospital has informed me that the transfer which I request exposes me to the following risks:

Date: _____
Patient Signature: _____
Patient Name: _____
Date of birth: _____
Address: _____

Witness: _____

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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) _____

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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 _____

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 _____

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
- 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

PROMPT TRANSPORT

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

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DIRECTIONS TO TRAUMA AND SPECIALTY REFERRAL CENTERS

**Directions to
Children's National Medical Center
111 Michigan Avenue, N.W.
Washington, D.C. 20010
Pediatric Trauma and Medical Center
Pediatric Burn Center**

- Route 495 (Capital Beltway) to exit 28, New Hampshire Avenue.
- South to North Capitol Street.
- South to Michigan Avenue.
- Follow signs to parking.

**Directions to
Johns Hopkins Bayview Medical Center
4940 Eastern Avenue
Baltimore, MD 21205
Adult Trauma Center
Burn Center**

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
Johns Hopkins Hospital
600 North Wolfe Street
Baltimore, MD 21287
Adult & Pediatric Trauma Centers and
Wilmer Eye Trauma Center**

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

- Take I-95 north to Exit 53 (I-395) into Baltimore. Stay in left lane off exit. (Note: Do not take the Martin Luther King, Jr. Blvd. fork of the exit.)
- Turn right at Pratt Street (by Baltimore Convention Center).
- Stay on Pratt Street for 1.4 miles to Broadway; turn left on Broadway.

Northeastern Baltimore Suburbs, I-95 South

- Take I-95 south toward Baltimore to Exit 57 (O'Donnell Street).
- Proceed west on O'Donnell approximately three-quarters of a mile to Conkling Street and turn right.
- Follow Conkling to Eastern Avenue (west) and turn left.
- Continue on Eastern approximately two miles until Broadway; turn right on Broadway.

From Annapolis and Maryland's Eastern Shore

- From Route 50, take I-97 toward Baltimore.
- Follow I-97 to the Baltimore Beltway (I-695) toward Towson.
- Take the Beltway to the Baltimore-Washington Parkway (I-295) North.
- Follow I-295 into Baltimore (it becomes Russell Street).
- Turn right at Pratt Street.
- Stay on Pratt for 1.4 miles to Broadway; turn left on Broadway.

From Frederick and Western Maryland

- Take I-70 East to the Baltimore Beltway (I-695) South to I-95 North.
- Take I-95 North to Exit 53 (I-395 north) into Baltimore.
- Turn right at Pratt Street (by Baltimore Convention Center).
- Stay on Pratt for 1.4 miles; turn left on Broadway.

Parking at the hospital coming from the above locations

- Follow Broadway to East Monument Street, turn right on Monument.
- Go to second light and turn right on Wolfe Street.
- Pass the main Hospital entrance and turn right onto Jefferson Street.
- Entrance for the Broadway Parking Garage is on the left.

Continued
**Directions to
Johns Hopkins Hospital
600 North Wolfe Street
Baltimore, MD 21287
Adult & Pediatric Trauma Centers and
Wilmer Eye Trauma Center**

From Central Pennsylvania and Northern Baltimore Suburbs, I-83 South

- Take I-83 South (Harrisburg Expressway) into Baltimore (note: I-83 becomes the Jones Falls Expressway as you approach Baltimore).
- Exit at Fayette Street and turn left.
- Follow Fayette toward the medical campus.

Parking at the hospital coming from the above location

- Follow Fayette Street to Broadway and turn left.
- Follow Broadway to East Monument Street and turn right.
- Go to second light and turn right on Wolfe Street.
- Pass the main Hospital entrance and turn right onto Jefferson Street.
- Entrance for the Broadway Parking Garage is on the left.

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

Eastern Shore

- Route 50 to Route 13 South.
- Follow the Hospital signs to Carroll Street.
- The Hospital is located along Route 13 at Carroll Street.

**Directions to
Prince George's Hospital Center**
3001 Hospital Drive
Cheverly, MD 20795
Adult Trauma Center

- Capital Beltway to Route 50 West (exit 18b) to Route 202 West, Landover Road.
- Follow Hospital signs, four traffic lights, turn left onto Hospital Drive.

- From Baltimore/Washington Parkway (I-295) take the Cheverly exit.
- Turn left from exit ramp.
- Turn right at next traffic light, go to stop sign and turn left onto Hospital Drive.

**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.
- 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 as it merges into Paca Street.
- Go two blocks on Paca; turn left onto Redwood Street.
- 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.
- 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.
- Enter the underground University Plaza Garage on your right.

Continued
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 at it merges into Paca Street.
- Go two blocks on Paca; turn left onto Redwood Street.
- 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 of Baltimore
2401 West Belvedere Avenue
Baltimore, MD 21215-5271
Adult Trauma Center**

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.
- Pass Pimlico Race Course, then 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); 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.

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.

Continued
Directions to
Sinai Hospital of Baltimore
2401 West Belvedere Avenue
Baltimore, MD 21215-5271
Adult Trauma Center

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**
8600 Old Georgetown Road
Bethesda, MD 20814
Adult Trauma Center
Eye Trauma Center

- From 495 or 270 take the Old Georgetown Road exit south toward Bethesda.
- Go 1.5 miles.
- The hospital is on the right across from National Institutes of Health.

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

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.

**Directions to
Washington County Health System
251 East Antietam Street
Hagerstown, MD 21740-5771
Adult Trauma Center**

- I-70 to Hagerstown exit onto Route 40 west.
- Follow Route 40 in Hagerstown; then turn left onto Cleveland Avenue south.
- Right onto Antietam Street.
- Follow to the Hospital (approximately 3 blocks).

**Directions to
Washington Hospital Center
(Med-Star Trauma Unit)
110 Irving Street, N.W.
Washington, D.C. 20010
Adult Trauma and Burn Center**

- 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
Western Maryland Health System –
Memorial Hospital Campus
600 Memorial Avenue
Cumberland, MD 21502
Adult Trauma Center**

From I-68

- On I-68 in Cumberland, follow blue hospital signs or take 43-D, to Maryland Avenue.
- Make left onto Williams Street, continue straight onto Louisiana Avenue.
- Make left onto Kent Avenue.
- Follow signs to Emergency Room or Administration.



**Maryland Institute for
Emergency Medical Services Systems**