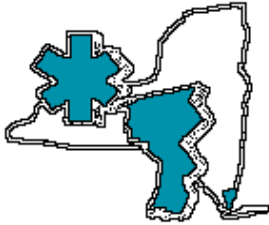




APPENDIX B



TRAUMA PROTOCOLS & PROCEDURES



TRAUMA PROTOCOL 1

HELICOPTER TRANSPORT

CRITERIA FOR REQUESTING DIRECT PICKUP OF PATIENTS BY HELICOPTER:

1. Helicopter Transport is an air ambulance and an extension of EMS. It should be considered in situations wherein the transport of critically ill or injured patient(s) to an appropriate facility will be faster by helicopter than by ground ambulance if time is determined to be a factor in patient care.
2. Police, Fire, or EMS will evaluate the situation or condition and if necessary, place the helicopter on standby. This is done anywhere in the region by radio with the Westchester County Communication Center.
3. The helicopter can be requested to respond to the scene when:
 - a) ALS personnel request the helicopter.
 - b) BLS personnel request the helicopter when ALS is delayed or unavailable.
 - c) In the absence of an EMS provider, any emergency agency may request the helicopter.

N.B.

WHEN EMS ARRIVES, THEY SHOULD ASSESS THE SCENE. IF IT IS LATER DETERMINED BY THE HIGHEST-RANKING EMS PROVIDER ON THE SCENE THAT THE HELICOPTER IS NOT NEEDED, IT MUST BE CANCELLED AS SOON AS POSSIBLE.

IF A HELICOPTER IS ALREADY ON THE SCENE, THE **ONLY** AGENCY THAT MAY CANCEL AN ADDITIONAL HELICOPTER IS THE HELICOPTER AGENCY ON THE SCENE.

TRAUMA PROTOCOL 1 CONTINUED ON NEXT PAGE



NOTE: THE FOLLOWING OPERATIONAL AND MEDICAL CRITERIA SHOULD BE MET PRIOR TO REQUESTING A HELICOPTER FOR DIRECT PICKUP OF PATIENTS:

OPERATIONAL CRITERIA FOR HELICOPTER TRANSPORT:

1. Ground transportation to the appropriate critical care facility will exceed 30 minutes.
2. The helicopter can be airborne and return the designated hospital quicker than an ambulance can transport the patient(s) to the nearest hospital.
3. Ground transportation is compromised.
4. A proper helicopter-landing site is available.
5. A Multiple Casualty Incident (MCI) threatens to overload local capabilities.
6. Difficult access situations such as wilderness rescue, ambulance access or egress impeded at the scene by road conditions, weather or traffic, or other situations cleared by the helicopter team.
7. Helicopter should not be called for patients that are in cardiac arrest (except for hypothermic patients).
8. Patients in cardiac arrest will not be transported by helicopter unless helicopter would be quicker than ground transport to the nearest hospital.
9. Ground providers should notify dispatch if more than one patient requires air transport. If available, one helicopter will be dispatched per critical patient requiring air transport.

MEDICAL CRITERIA ALGORHYTHM ON NEXT PAGE



MEDICAL CRITERIA ALGORITHM FOR HELICOPTER TRANSPORT

MEASURE VITAL SIGNS AND LEVEL OF CONSCIOUSNESS

GLASGOW COMA SCALE	≤ 13
SYSTOLIC BLOOD PRESSURE	< 90
RESPIRATORY RATE	< 10 OR > 29

YES



TRANSPORT TO AREA / REGIONAL TRAUMA CENTER

NO



ASSESS ANATOMY OF INJURY



- ALL PENETRATING INJURIES TO HEAD, NECK, TORSO AND EXTREMITIES PROXIMAL TO ELBOW AND KNEE
- FLAIL OR UNSTABLE CHEST
- COMBINATION TRAUMA WITH BURNS
- TWO OR MORE LONG BONE FRACTURES
- PELVIC FRACTURE (UNSTABLE W/ OPEN FRACTURE)
- SPINAL TRAUMA WITH ASSOCIATED PARA/HEMIPLEGIA
- LIMB PARALYSIS
- AMPUTATION PROXIMAL TO THE WRIST OR ANKLE
- FACIAL / AIRWAY BURNS, OR BURNS >15% BSA OR GREATER, ELECTRICAL BURNS
- HEAD TRAUMA WITH ALTERED STATE OF CONSCIOUSNESS, HEMIPLEGIA OR UNEQUAL PUPILS

YES



TRANSPORT TO AREA / REGIONAL TRAUMA CENTER

NO



EVALUATE FOR MECHANISM OF INJURY



- EJECTION FROM AUTOMOBILE
- DEATH IN SAME PASSENGER COMPARTMENT
- EXTRICATION TIME > 20 MINUTES
- FALLS ≥ 20 FEET OR ≥ 3 TIMES PATIENT'S HEIGHT
- ROLLOVER (UNRESTRAINED OCCUPANT)
- HIGH SPEED AUTO CRASH (WITH INTRUSION INTO PASSENGER COMPARTMENT, STEERING WHEEL DISPLACEMENT, AND / OR STARRED WINDSHIELD)
- AUTO PEDESTRIAN / AUTO BICYCLE INJURY WITH SIGNIFICANT IMPACT
- PEDESTRIAN THROWN OR RUN OVER
- MOTORCYCLE / ATV / BICYCLE CRASH >20 MPH OR WITH SEPARATION OF RIDER FROM BIKE OR VEHICLE

YES



TRANSPORT TO AREA / REGIONAL TRAUMA CENTER

NO



TRANSPORT TO REGIONALLY APPROVED HOSPITAL

AUTOMATIC REGIONAL TRAUMA CENTER CRITERIA



- PEDIATRIC TRAUMA PATIENTS < 12 Y/O
- THORACIC TRAUMA WITH RESPIRATORY DISTRESS OR SIGNS OF SHOCK
- LIMB AMPUTATION / SEVERE CRUSHING INJURY REQUIRING REIMPLANTATION OR RECONSTRUCTION
- SPINAL TRAUMA WITH SIGNS OF PARA/HEMIPLEGIA
- UNSTABLE MULTI SYSTEMS TRAUMA WITH ASSOCIATED OPEN PELVIC FRACTURE
- FACIAL / AIRWAY BURNS OR BURNS >15% BSA, ELECTRICAL BURNS

SPECIAL CONSIDERATIONS FOR TRANSPORT TO REGIONAL TRAUMA CENTER



- AGE <5 OR >55 Y/O
- CARDIAC / RESPIRATORY DISTRESS
- INSULIN DEPENDANT DIABETIC, CIRRHOSIS OR MORBID OBESITY
- PREGNANCY
- IMMUNOSUPPRESSED PATIENT
- PATIENTS WITH BLEEDING DISORDER (HEMOPHILIA, ANTICOAGULANTS)

NOTE

TRAUMATIC CARDIAC ARREST AND PATIENTS WITH AN UNMANAGEABLE AIRWAY WILL BE TRANSPORTED TO THE CLOSEST APPROPRIATE HOSPITAL.



TRAUMA PROTOCOL 2 GROUND TRANSPORT

NOTE: THE FOLLOWING MEDICAL CRITERIA SHOULD BE EVALUATED WHEN DETERMINING TRANSPORT DESTINATION OF A TRAUMA PATIENT BY GROUND AMBULANCE:

MEDICAL CRITERIA:

MEASURE VITAL SIGNS AND LEVEL OF CONSCIOUSNESS

GLASGOW COMA SCALE	≤ 13
SYSTOLIC BLOOD PRESSURE	< 90
RESPIRATORY RATE	< 10 OR > 29

YES
↓

NO
↓

TRANSPORT TO AREA / REGIONAL TRAUMA CENTER

ASSESS ANATOMY OF INJURY
↓

- ALL PENETRATING INJURIES TO HEAD, NECK, TORSO AND EXTREMITIES PROXIMAL TO ELBOW AND KNEE
- FLAIL OR UNSTABLE CHEST
- COMBINATION TRAUMA WITH BURNS
- TWO OR MORE LONG BONE FRACTURES
- PELVIC FRACTURE (UNSTABLE W/ OPEN FRACTURE)
- SPINAL TRAUMA WITH ASSOCIATED PARA/HEMIPLEGIA
- LIMB PARALYSIS
- AMPUTATION PROXIMAL TO THE WRIST OR ANKLE
- FACIAL / AIRWAY BURNS, OR BURNS >15% BSA OR GREATER, ELECTRICAL BURNS
- HEAD TRAUMA WITH ALTERED STATE OF CONSCIOUSNESS, HEMIPLEGIA OR UNEQUAL PUPILS

YES
↓

NO
↓

TRANSPORT TO AREA / REGIONAL TRAUMA CENTER

EVALUATE FOR MECHANISM OF INJURY
↓

- EJECTION FROM AUTOMOBILE
- DEATH IN SAME PASSENGER COMPARTMENT
- EXTRICATION TIME > 20 MINUTES
- FALLS ≥20 FEET OR ≥ 3 TIMES PATIENT'S HEIGHT
- ROLLOVER (UNRESTRAINED OCCUPANT)
- HIGH SPEED AUTO CRASH (WITH INTRUSION INTO PASSENGER COMPARTMENT, STEERING WHEEL DISPLACEMENT, AND / OR STARRED WINDSHIELD)
- AUTO PEDESTRIAN / AUTO BICYCLE INJURY WITH SIGNIFICANT IMPACT
- PEDESTRIAN THROWN OR RUN OVER
- MOTORCYCLE / ATV / BICYCLE CRASH >20 MPH OR WITH SEPARATION OF RIDER FROM BIKE OR VEHICLE

YES
↓

NO
↓

TRANSPORT TO AREA/ REGIONAL TRAUMA CENTER

TRANSPORT TO REGIONALLY APPROVED HOSPITAL

TRAUMA TRANSPORT PROTOCOL 2 CONTINUED ON NEXT PAGE



TRAUMA PROTOCOL 2: GROUND TRANSPORT (CONTINUED)

TRANSPORT DECISIONS:

AS PER NYS BLS PROTOCOLS:

“IF MECHANISM OF INJURY AND/OR PHYSICAL FINDINGS DOES INDICATE MAJOR TRAUMA, TRANSPORT THE PATIENT TO THE **NEAREST DESIGNATED REGIONAL/AREA TRAUMA CENTER** IF THE TOTAL TIME ELAPSED BETWEEN THE ESTIMATED TIME OF INJURY AND THE ESTIMATED TIME OF ARRIVAL AT A TRAUMA CENTER IS LESS THAN ONE HOUR.”

“TRANSPORT THE PATIENT TO THE **NEAREST HOSPITAL EMERGENCY DEPARTMENT** IF:

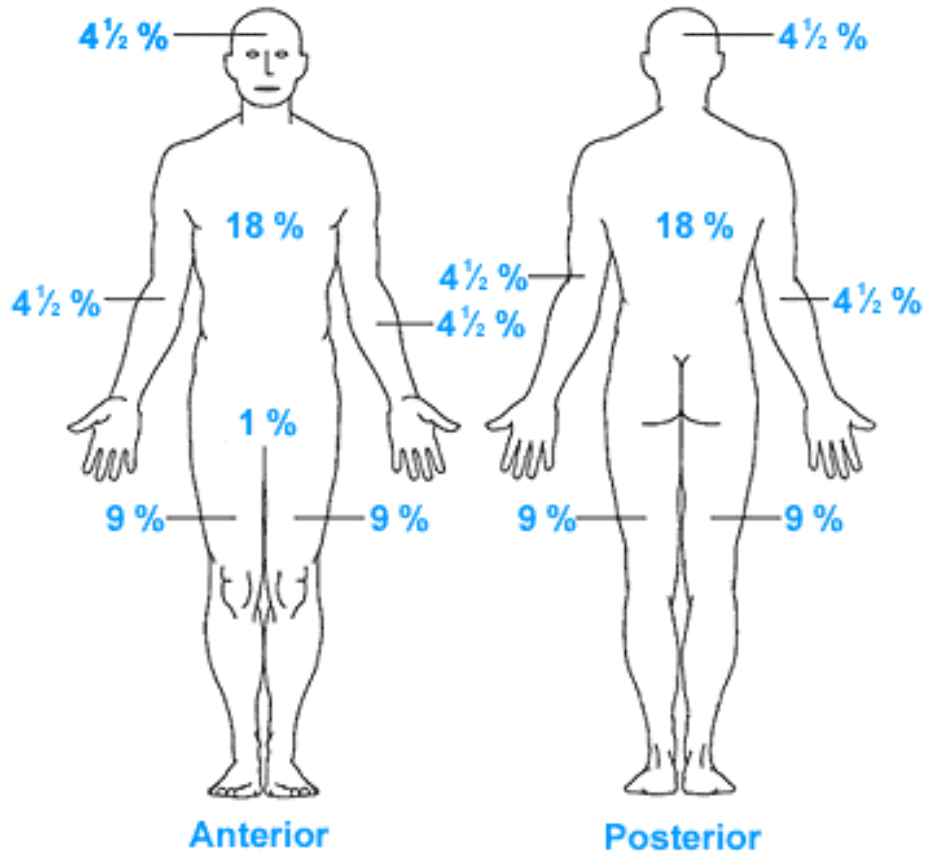
1. THE TOTAL TIME ELAPSED BETWEEN THE ESTIMATED TIME OF INJURY AND THE ESTIMATED TIME OF ARRIVAL AT A TRAUMA CENTER IS MORE THAN ONE HOUR; OR
2. THE PATIENT IS IN CARDIAC ARREST; OR
3. THE PATIENT HAS AN UNMANAGEABLE AIRWAY; OR
4. AN ON-LINE MEDICAL CONTROL PHYSICIAN SO DIRECTS.”

WESTCHESTER REMAC GUIDELINES ALSO INCLUDE THAT PATIENTS MEETING THE BELOW LISTED CRITERIA SHOULD BE TRANSPORTED TO A **REGIONAL TRAUMA CENTER** IF WITHIN THE NYS BLS PROTOCOL TIME CONSTRAINTS:

- PEDIATRIC TRAUMA PATIENTS < 12 Y/O
- THORACIC TRAUMA WITH RESPIRATORY DISTRESS OR SIGNS OF SHOCK
- LIMB AMPUTATION / SEVERE CRUSHING INJURY REQUIRING REIMPLANTATION OR RECONSTRUCTION
- SPINAL TRAUMA WITH SIGNS OF PARA/HEMIPLEGIA
- UNSTABLE MULTI SYSTEMS TRAUMA WITH ASSOCIATED OPEN PELVIC FRACTURE
- FACIAL / AIRWAY BURNS OR BURNS >15% BSA, ELECTRICAL BURNS

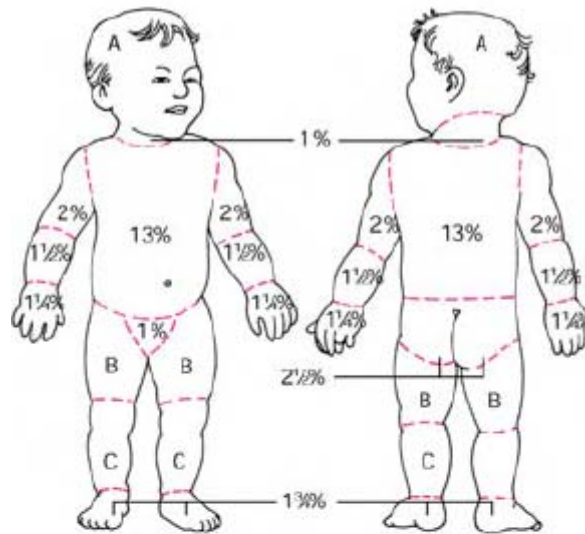


RULE OF NINES





LUND & BROWDER CHART



Relative percentages of areas affected by growth					
At birth	0 to 1 yr	2 to 4 yrs	5 to 9 yrs	10 to 15 yrs	Adult
A: Half of head					
9 1/2%	8 1/2%	6 1/2%	5 1/2%	4 1/2%	3 1/2%
B: Half of thigh					
2 3/4%	3 1/4%	4%	4 1/4%	4 1/2%	4 3/4%
C: Half of leg					
2 1/2%	2 1/2%	2 3/4%	3%	3 1/4%	3 1/2%

**IN THE WESTCHESTER REGION:**

REGIONAL WESTCHESTER MEDICAL CENTER
Office of EMS and Trauma
Macy Pavilion, Room 1423
Valhalla, NY 10595
914-493-8251
(Burn Center)

AREA SOUND SHORE MEDICAL CENTER
16 Guion Place
New Rochelle, NY 10801
914-632-5000

OTHER TRAUMA CENTERS:

CONNECTICUT DANBURY HOSPITAL
24 Hospital Avenue
Danbury, CT 06810
203-797-7000
(Area)

HUDSON VALLEY NYACK HOSPITAL
160 North Midland Ave.
Nyack, NY 10960
845-348-2345
(Area)

NEW YORK CITY JACOBI MEDICAL CENTER
1400 Pelham Parkway South
Bronx, New York 10461
718- 918-5000
(Regional, Burn Center)

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