

NYU LANGONE HOSPITALS EMS PROTOCOLS & PROCEDURES

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What do we do?

Emergency Medical Technicians (EMTs):

An Emergency Medical Technician provides basic life support (BLS) in a pre-hospital setting to individuals during medical emergencies.

Basic Life Support may include (but not limited to):

- CPR
- Defibrillation
- Oxygen Administration
- Bleeding Control
- Emergency Childbirth
- CPAP Administration
- Spinal Immobilization



What do we do?

Paramedics (EMT-P):

A Paramedic provides advanced life support (ALS) in a pre-hospital setting to individuals during medical emergencies. Paramedics receive more advanced training and can perform invasive procedures and give medications under the supervision of a physician.

Advanced Life Support may include (but not limited to):

- Intravenous Access (IV Access)
- Intraosseous Access (IO Access)
- Endotracheal Intubation (ETI)
- Obtain and Interpret 3 & 12 Lead EKGs
- Administration of Narcotics



Education Requirements

EMT:

- 18 Years of Age
- High School Diploma or GED
- Clinical Hours: 190
- Curriculum that provides a basic level of knowledge on emergency medical care and transportation for critical and emergent patients who access the EMS System.
- Pass State Exams

Paramedic:

- High School Diploma or GED
- EMT Certification
- Clinical Hours: 1200
- Curriculum that provides an advanced level of knowledge on emergency medical care for critical and emergent patients who access the EMS System.
- Possess complex knowledge & advanced skills necessary to provide patient care and transportation.
- Pass State and Regional Exams

What are the protocols for injuries (specifically head injuries) when 911 is called?

- NYU Langone Hospitals EMTs & Paramedics operate within the NYC 911 System.
 - New York State Department of Health Bureau of Emergency Medical Services
 - Regional Emergency Medical Services Council of New York City
 - FDNY Bureau of Emergency Medical Services Operating Guide
 - NYU Langone Hospitals EMS Policies and Procedures
- Treatment rendered to patients are dependent on the providers level of certification.

Standard Approach to Patient Care

- Perform Initial Scene Survey

NOTE: Refrain from making direct contact with patients exposed to hazardous materials until they have been decontaminated.

- Initiate Basic Cardiac Life Support (if appropriate)
- Perform Initial Assessment (Primary Survey) (See App. B)
- Administer oxygen (if appropriate)
- Monitor breathing for adequacy
- Determine if ALS assistance is required
- Obtain a focused medical history

- Complete the detailed physical exam as the patient's condition dictates
- Treat the patient according to the appropriate REMAC of NYC protocol(s)
- Provide continuous emotional support
- Maintain body temperature
- Transport the patient as soon as possible to the nearest appropriate facility
- Patients may be removed to the ambulance by stair chair, scoop stretcher, long board, ambulance cot, or other appropriate means.

NOTE: The method of transportation should not aggravate the patient's condition or injuries. For trauma patients, immediate transport is a priority.

- Monitor and continue patient care en-route to the hospital, unless relieved by a provider with a higher level of training.
- Document all findings and information, as they pertain to patient condition or care, on the PCR/ACR

Regional Emergency Medical Services Council of New York City. (2017, September 1). Retrieved from http://www.nycremsco.org/wp-content/uploads/2017/09/01-General_Operating_Procedures_September_1_2017_v09012017C.pdf Standard Approach of Patient Care

BLS, 421- Head & Spine Injuries

- Establish & Maintain airway control while stabilizing the cervical spine.

NOTE: Do not use a nasopharyngeal airway in patients with facial injuries or if severe head injury has occurred.

- Patients meeting one or more of the following criteria, either at the time of evaluation or at any time following the injury in question, must have spinal injury precautions during care and transport. Do not use Rapid Takedown technique.
 - Altered mental status for any reason, including possible intoxication due drugs or alcohol.
 - GCS <15
 - Complaint of, or inability of the provider to assess for, neck and/or spine pain or tenderness.
 - Weakness, paralysis, tingling, or numbness of the trunk or extremities at any time since the injury.
 - Deformity of the spine not present prior to the injury.
 - Distracting injury or circumstances, including anything producing an unreliable physical exam or history.
 - High risk mechanism (axial load such as diving or tackling, high-speed motor vehicles accidents, rollover accidents, falls greater than standing height).
 - Provider concern for potential spinal injury.

- Monitor breathing for adequacy.

NOTE: Monitor breathing continuously. Be alert for signs of hypoxia and/or increasing respiratory distress.

- Control External Bleeding.
- If the patient meets any of the criteria described in #2, is not awake or is unstable, apply a rigid cervical collar.
- Continue to monitor the Glasgow Coma Score. (See Appendix E)
- Hyperventilation should NOT be performed.
- Transport (See Appendix F).

Regional Emergency Medical Services Council of New York City. (2017, September 1). Retrieved November 21, 2018, from http://www.nycremsco.org/wp-content/uploads/2017/10/03-BLS_Protocols_September_1_2017_v09012017F.pdf 421- Head and Spine Injuries

ALS, 521- Head Injuries

- Begin Basic Life Support Head and Spine Injuries procedures.
 - Perform Advanced Airway Management* in patients for whom the GCS score is < 8 AND if less invasive methods of airway management are not effective.
 - Begin Cardiac Monitoring, record and evaluate EKG rhythm.
 - Begin an IV infusion of Normal Saline (0.9% NS) to KVO.
 - If a seizure is witnessed:
 - Administer Lorazepam 2mg, IV bolus, or, if IV access is unavailable, IN or IM. A single repeat dose of Lorazepam 2mg, may be given after 5 minutes if seizure activity persists or recurs.
- OR
- Administer Diazepam 5 mg, IV bolus. A single repeat dose of Diazepam 5mg, IV bolus, may be given if seizure activity persists or recurs. (Rate of administration may not exceed 5mg/min).
- OR
- Administer Midazolam 5 mg, IV/IO, or if IV/IO access is unavailable, 10 mg, IM or IN.

- If the GCS score is < 8 , and active seizures or one or more of the following signs of brain herniation are present, hyperventilate the patient to maintain a continuous end-tidal waveform capnography value between 30-35mmHg:
 - Fixed or asymmetric pupils
 - Abnormal flexion or extension (neurological posturing)
 - Hypertension and bradycardia (Cushing's Reflex)
 - Intermittent apnea (periodic breathing)
 - Further decrease in GCS score of 2 or more points (neurological deterioration)
- If seizure activity persists, contact Medical Control for implementation of one or more of the following Medical Control Options.

Medical Control Options:

Option A: Repeat Lorazepam 2mg, IV bolus, or, if IV access is unavailable, IN or IM.

OR

Repeat Diazepam 5 mg, IV bolus. (Rate of administration may not exceed 5 mg/min.)

OR

Repeat Midazolam 5 mg, IV/IO, or if IV/IO access is unavailable, 10 mg, IM or IN.

Option B: Transportation Decision.

** If the patient is alert prior to performing Advanced Airway Management, refer to Prehospital Sedation in General Operating Procedures. Prior permission from Medical Control is required*

Regional Emergency Medical Services Council of New York City. (2017, September 1). Retrieved November 21, 2018, from http://www.nycremsco.org/wp-content/uploads/2017/10/04-ALS_Protocols_September_1_2017_v09012017C.pdf 521- Head Injuries

How does EMS assess clients that need to be brought to the hospital or not?

Appendix B-

	Assessment	Management
Scene Size Up	<ul style="list-style-type: none"> • Body Substance Isolation • Scene safety • Mechanism of Injury/Nature of Illness • Consider C-spine 	<ul style="list-style-type: none"> • Goggles, gloves, gown, mask – as needed • Ensure safety of self & partner, patient & bystanders
Initial	<ul style="list-style-type: none"> • General impression of the patient • Level of Consciousness • Chief complaint 	<ul style="list-style-type: none"> • A-Alert • V-Responds to Verbal stimuli • P-Responds to Painful stimuli • U-Unresponsive – no gag or cough
Airway and Breathing	<ul style="list-style-type: none"> • Manage airway • O2, as needed • Ensure adequate ventilation • Treat any life threatening airway or breathing problems 	<ul style="list-style-type: none"> • Modified Jaw Thrust • Suction, as needed • OPA/NPA, as needed • CPR, as needed

<p style="text-align: center;">Circulation</p>	<ul style="list-style-type: none"> • Skin color • Assess for pulses (BP estimation): <ul style="list-style-type: none"> - Radial = 80+ - Femoral = 70+ - Carotid = 60+ • Major Bleeding 	<ul style="list-style-type: none"> • Control any obvious bleeding • Elevation of legs, as needed • Support circulation
<p style="text-align: center;">Transport Decision</p>	<ul style="list-style-type: none"> • Identify urgency of transport 	<ul style="list-style-type: none"> • Immediate or continued assessment

Regional Emergency Medical Services Council of New York City. (2017, September 1). Retrieved from http://www.nycremsco.org/wp-content/uploads/2017/10/05-Appendices_September_1_2017_v09012017B.pdf Appendix B- Patient Assessment- Adult Primary Survey

Index of Suspicion

High Index of Suspicion

- Concern that an individual may have an acute medical, traumatic, psychiatric, social or other condition that could result in a life-threatening or life-altering outcome.
- Indications for high index of suspicion may include, but are not to be limited to:
 - The mechanism or injury;
 - Assessment of injury/illness severity;
 - Abnormal vital signs;
 - A friend, neighbor, co-worker, or family member who has frequent contact with the patient and who expresses concern for the patient's health, **based on change in the patient's condition**;
 - A caller to 911 who reports expressed or actual suicidal or homicidal behavior by the patient (regardless of whether the caller is on the scene or not);
 - The request for assistance originated with a physician or other health care provider (regardless of whether the caller is on the scene or not) who indicates that there has been a significant change in the patient's medical condition.

Low Index of Suspicion

- Any condition that does not merit a high index of suspicion

What are the protocols on how the clients are transported, most especially when an ambulance is more than a mile from the site of the accident?

Movement of Patients From the Scene of Assignments

- EMS Priority is to render pre-hospital emergency care as necessary to resuscitate, stabilize, extricate, remove and/or transport the patient in accordance with their level of certification.
- In addition, we also are responsible for packaging, moving, and transporting the patient to an appropriate designated receiving hospital with a maximum of safety, while continuing all required patient care.
- If after a survey of the scene indicates that additional resources are required, EMS will contact the dispatcher and request additional units are needed.
- Not every patient is in an easily accessible location, therefore it is up to the EMS providers to utilize good judgement to access the patient safely and extricate them safely.

Condition	Method of Transport
Cardiac	Stretcher or Stair Chair
Chest Pains	Stretcher or Stair Chair
Difficulty Breathing	Stretcher or Stair Chair
Head/Spinal Injuries	Stretcher and Backboard
Lower Extremity Fractures	Orthopedic (scoop) Stretcher
Multi-Trauma	Stretcher and backboard or Orthopedic (scoop) Stretcher
Severe Abdominal Pain	Stretcher or Stair Chair
Suspected Back/Pelvic Injuries	Stretcher and backboard, or Orthopedic (scoop) Stretcher
Active/Postictal Seizures	Stretcher *

** A stair chair should only be used for postictal patients if absolutely necessary, and then used with caution*

- In other cases where the patient has difficulty walking, a stair chair or stretcher shall be used to transport the patient to and from the ambulance.
- If a patient refuses to be carried in such devices, the patient should sign the appropriate portion of the ACR, noting above the signature that the patient refused to be carried.

New York City Fire Department Bureau of Emergency Medical Services. (2016). *EMS OGP 106-02 On Scene Operations: General Regulations*.

New York City Fire Department Bureau of Emergency Medical Services. (1999). *Movement of Patients From The Scene Of Assignments*.

What are the measures taken when clients are being transported?

- During transportation patients are re-assessed and treated according to the providers level of certification and the protocol(s) that specific patient may fall under.
- EMS providers will continue to provide emotional support as well for the patient and their loved ones.
- It is the responsibility of the EMS providers to transport you safely to the nearest and most appropriate hospital for the patients illness and/or injuries, as per protocol.

WE MUST REMEMBER THOUGH...

- Every patient and situation is different. No ONE call is alike.
- The protocols set forth by the Regional Emergency Medical Services Council of New York City define the minimum standard of care provided to patients by CFRs, EMTs and Paramedics, in New York City. They reflect the curriculum and certification requirements of the New York State Department of Health Bureau of Emergency Medical Services and the NYC Regional Medical Advisory Committee.
- These protocols are guidelines that should be utilized in conjunction with good clinical judgement.



Questions?