REGIONAL EMERGENCY MEDICAL ADVISORY COMMITTEE
NEW YORK CITY

PREHOSPITAL TREATMENT PROTOCOLS

GENERAL OPERATING PROCEDURES

Effective July 1, 2020
Version 01302020
Updated 01/30/2020

GENERAL OPERATING PROCEDURES

TABLE OF CONTENTS

GENERAL OPERATING PROCEDURES

GENERAL OPERATING PROCEDURES

© The Regional Emergency Medical Services Council of New York City, Inc. 1991

All rights are reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior permission of the publisher (The Regional Emergency Medical Services Council of New York City, Inc., 475 Riverside Drive, Room 1929, New York, New York 10115, 212-870-2301).

Printed in the United States

1991, 1996, 1997, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2014, 2015, 2017, 2019, 2020

Issued January 1997
Revised July 2002
Revised March 2003
Revised January 2004
Revised July 2004
Revised January 2005
Revised July 2005
Revised January 2006
Revised July 2006
Revised January 2007
Revised January 2008
Revised January 2009
Revised July 2009
Revised January 2010, Implemented April 1, 2010
Revised May 2011, Implemented August 1, 2011
Revised April 2012, Implemented July 1, 2012
Revised January 1, 2014, Implemented May 1, 2014
Revised May 2015, Implemented August 1, 2015 (Re-issued July 1, 2016 with no changes)
Revised June 1, 2017, Implemented September 1, 2017
Revised September 2018, Implemented January 1, 2019, Updated April 1, 2019
Revised January 30, 2020, Implemented July 1, 2020

GENERAL OPERATING PROCEDURES

Associated REMAC Advisories:

2020-02 REMAC Advisory 2020 Protocol Revisions

GENERAL OPERATING PROCEDURES

These General Operating Procedures Apply to All Levels of Prehospital Providers Unless Stated Otherwise

Purpose

The Regional Emergency Medical Advisory Committee (REMAC) of New York City Unified Protocols include the Statewide Basic Life Support Adult and Pediatric Treatment Protocols as the current minimal standards for basic life support (BLS) delivered by Certified First Responders (CFR), and Emergency Medical Technicians (EMT) in New York State. Advanced Life Support (ALS) protocols have been included in the unified design to ensure a seamless transition from CFR through ALS care. These protocols reflect both the curriculum and certification requirements of the New York State Department of Health Bureau of Emergency Medical Services and the Regional Emergency Medical Advisory Committee (REMAC) of New York City, and have been endorsed by the Regional Emergency Medical Services Council of New York City.

Numbered steps are used throughout this document. Protocols should be followed sequentially, using clinical judgement, and tasks should be performed as most appropriate for patient care.

Scope

These protocols apply to all CFRs, EMTs and AEMT-Ps who are certified by the New York State Department of Health and by the Regional Emergency Medical Advisory Committee (REMAC) of New York City, including supervisory and administrative personnel, operating within the New York City region.

Responsibilities

CFRs, EMTs and AEMT-Ps shall provide appropriate care in accordance with these Prehospital Protocols as indicated by the patient's complaint and/or condition without exceeding the limit of their training.

Medical Control At The Scene

In accordance with Article 30 of the New York State Public Health Law, the Regional Emergency Medical Services Council is responsible for the coordination of emergency medical services within the region. In accordance with Article 30 of the New York State Public Health Law, the Regional Emergency Medical Advisory Committee (REMAC) is responsible for the medical oversight of the emergency medical service system within the region.

In accordance with the Regional Protocol on Coordination of Prehospital Resources, the highest level prehospital provider from the EMS Agency which first arrives at the scene of a prehospital medical emergency is responsible for coordination of patient care resources at the scene. In accordance with the Regional Protocol on Coordination of Prehospital Resources, when a NYC "911" participating EMS Agency is not the first EMS Agency on the scene and is not acting in the role of the primary care provider, it shall act as an operational resource for information regarding hospital diversions, specialty referral center bed availability, and other specialized resources, as well as incident scene safety (e.g., environmental conditions, crowd/traffic control in the absence of NYPD, potentially dangerous patient or family member to self and/or others).

The Fire Department, City of New York (FDNY) is responsible for coordination of patient care resources at the scene of Multiple Casualty Incidents (MCIs), unscheduled MEDEVAC transports, Hazardous Material (HAZMAT) situations which require decontamination, fires/crimes in progress or unusual public health or safety emergencies. At the point that FDNY assumes operational responsibility for coordination of prehospital resources, incident command procedures are in effect. (See “Coordination of Prehospital Resources Protocol”).

In all cases where EMTs are present at the scene of a medical emergency and AEMT-Ps are not present, EMTs are responsible for medical control at the scene. EMTs shall also assume medical control at the scene if EMTs and CFRs are present; CFRs shall assume medical control at the scene until the arrival of EMTs. AEMT-Ps shall assume medical control at the scene if AEMT-Ps and EMTs and/or CFRs are present. On calls where AEMT-Ps encounter multiple patients requiring Advanced Life Support treatment and the Transportation Decision requires the use of available Basic Life Support units, any Advanced Life Support protocols initiated by the AEMT-Ps should continue enroute as long as an EMT-P is attending the patient.

AEMT-Ps may release patients not having received or not requiring Advanced Life Support care to Basic Life Support personnel for care and transportation to a medical facility. However, under no circumstances shall an EMT-P or EMT transfer responsibility for patient care to a CFR once patient care has been initiated by an EMT-P or EMT. This does not relieve CFRs of their patient care responsibilities.

AEMT-P/EMT/CFR medical control includes, but is not limited to, decisions involving patient care, movement, and transportation, in accordance with scope of practice, these protocols, and agency policy.

Physicians providing Direct Medical Control at the scene and who are not representing a specific agency, should be credentialed by REMAC as On-Line Medical Control Physicians, and must limit the provision of Direct Medical Control to the scope of practice and level of training described in the GOP, BLS, ALS and appendices protocols.

NOTE: **Under no circumstances may CFRs, EMTs, and AEMT-Ps provide emergency treatment that exceeds the limit of their training.**

Physicians providing Direct Medical Control at the scene must have their names, and New York State License Numbers or REMAC On-Line Medical Control Physician Numbers documented on the Prehospital Care Report (PCR) / Ambulance Call Report (ACR).

Physicians – OLMC Credentialed by REMAC

These Physicians providing Direct Medical Control at the scene shall be able to authorize Standing protocol orders, Medical Control Option orders and Discretionary orders.

They must limit the provision of Direct Medical Control to the scope of practice and level of training described in the GOP, BLS, ALS and appendices protocols.

If any conflicts arise with the on-scene physician, the EMTs/AEMT-Ps shall contact Medical Control and proceed as directed by OLMC. If the EMTs/AEMT-Ps are unable to establish contact with Medical Control, the EMTs/AEMT, at their option, may follow directions from the on-scene physician within the context of the protocols.

GENERAL OPERATING PROCEDURES

Physicians – NOT OLMC Credentialed by REMAC

(For REMAC Telemedicine credentialed Physicians, see next section)

BLS Orders

In the event that a physician who is not credentialed by REMAC and appropriately identifies himself/herself appears at the scene and who is not representing any specific agency during their solicitation, and wishes to intervene in Basic Life Support care, may do so provided they do not conflict with Basic Life Support Standing Orders, policies and procedures. The on-scene physician's name, NYS license number and address shall be noted in the comment section of the PCR/ACR. If any conflicts arise with the on-scene physician, the EMTs/AEMT-Ps shall contact Medical Control and proceed as directed. If the EMT is unable to establish contact with Medical Control, the AEMT, at his/her option, may follow directions from the on-scene physician within the context of the protocols and within the scope of their practice.

ALS Orders

In the event that a physician who appropriately identifies himself/herself appears at the scene who is not representing any specific agency during their solicitation, and also wishes to intervene in Advanced Life Support care the EMT-Ps must contact Medical Control to approve the EMT-P taking orders from the on-scene physician. If granted approval, the on-scene physician's requests concerning emergency care and movement of the patient should be followed provided they are confined to Advanced Life Support Standing Orders and Medical Control Options contained in the appropriate protocol. In such cases, the on-scene physician may **not** order Discretionary Decisions. The on-scene physician's name, address and New York State Medical License number shall be noted in the comment section of the PCR/ACR. If any conflicts arise with the on-scene physician, the EMT-Ps shall contact Medical Control and proceed as directed. If the EMT-P is unable to establish contact with Medical Control, the AEMT-P, at his/her option, may follow directions from the on-scene physician within the context of the protocols and within the scope of their practice.

In the event that any licensed health care professional other than a physician appears at the scene and wishes to direct EMT-P care, the EMT-P is to maintain responsibility for the care of the patient.

REMAC Tele-Medicine Certified Physicians

A new certification category for some physicians was recently established for Telemedicine. These are physicians that are affiliated with a hospital or health system and will be sending out EMTs and Paramedics on Non-NYC "911" participating EMS units to evaluate and treat their own known patients.

These physicians possess medical knowledge in their medical specialty and have become familiar with the practice of prehospital medicine. They have gained insight and experience in the provision of Online Medical Control first hand, prior to undertaking the responsibility as a REMAC Tele-Medicine Certified Medical Control Physician. They are familiar with the current general operating procedures and regional protocols (BLS and ALS) so that s/he can give direction to Paramedics and EMTs in Non-NYC "911" participating EMS units within their scope and level of training.

These physicians can act as Medical Control for their own Non-NYC “911” participating EMS units who are treating one of their own known patients; whether on scene or via tele-medicine. This medical control shall be within their level of training as REMAC Tele-Medicine Certified Medical Control Physician.

If these physicians are on scene with a patient who is NOT their own known patient OR with a crew that is not their own unit (either a NYC 911 participating EMS unit or another Non-NYC 911 EMS participating unit), they can assist with Medical Control at the scene but only in the capacity of a physician who is **not OLMC Credentialed by REMAC** as outlined in that section.

Crews should familiarize themselves with this certification so as not to confuse this title’s capabilities and scope of practice, with one of a REMAC Certified On-Line Medical Control Physician

Physician performing procedures or requesting assistance or equipment from the EMS units

If at any time crews are asked to assist the physician in performing procedures at any facility (examples – Hospitals, Doctor’s offices, Urgent care facilities, same day surgical facilities) they should only assist if the procedure(s) are within their standing orders within the regional protocols / policies. OLMC should be contacted if there is any question/doubt or concern.

The crews should advise the physician that any procedure that the physician performs requiring maintenance that is not authorized by their training and policies of their agency will REQUIRE the physician to accompany the patient to the hospital for appropriate continuity of care and monitoring.

Equipment or medication should not be given to the physician or the facility to carry out patient care if it is not authorized by your standing orders, your agency medical director, or by OLMC. OLMC should be contacted for any further clarification as needed. Patient care is the responsibility of the crew upon transition of care from the physician or facility.

Scene Safety

It is the responsibility of the CFRs/EMTs/AEMT-Ps to evaluate and judge the scene with regard to safety. Safety factors include, but are not limited to, environmental conditions, crowd/traffic control, potentially dangerous patient or family member to self and/or others, Hazardous Material (HAZMAT) situations, fires/crimes in progress, or unusual public health or safety emergencies. Such conditions may be a threat to the health or safety of CFRs/EMTs/AEMT-Ps, patients, and other persons at the scene. CFRs/EMTs/ AEMT-Ps must use caution in situations that they are not trained or equipped to handle.

In accordance with the Regional Procedure on Coordination of Prehospital Resources, CFRs/EMTs/AEMT-Ps may use a NYC “911” system participating agency as an operational resource for incident scene safety (e.g., environmental conditions, crowd/traffic control in the absence of NYPD, potentially dangerous patient or family member to self and/or others); and must notify FDNY in situations involving Multiple Casualty Incidents (MCIs), unscheduled MEDEVAC transports, Hazardous Material (HAZMAT) situations which require decontamination, fires/crimes in progress, or unusual public health or safety emergencies. (See "Coordination of Prehospital Resources Protocol".)

GENERAL OPERATING PROCEDURES

Requesting Additional Assistance

When CFRs respond to an assignment where the patient's condition requires further treatment and/or transport, additional assistance should be requested as soon as possible.

When EMTs respond to an assignment where the patient's condition requires Advanced Life Support, EMTs should request Advanced Life Support assistance as soon as possible.

Initiating Transport

When CFRs, EMTs and AEMT-Ps are on the scene of an assignment and requesting advanced life support, other medical assistance, or ambulance transport, patient transport procedures should begin in accordance with their level of training. For non-transporting EMS Agencies, ambulance transport should begin once an appropriate transport vehicle from the designated transporting agency is available.

When EMTs are on the scene of an assignment and requesting Advanced Life Support assistance, transport procedures should begin. If the time of arrival of Advanced Life Support exceeds the time to the hospital, transport from the scene should not be delayed unless otherwise specified in a particular protocol.

Transportation Procedures and Decisions

The term “Transport” appears throughout the Protocols. This term encompasses all of the following Basic Life Support Transportation Procedures and Advanced Life Support Transportation Decisions:

NOTE: **Patients with an unmanageable airway must be taken to the nearest New York City 911 system ambulance destination emergency department.**

Basic Life Support Transportation Procedures

- Manner of extrication, when required, and preparation of the patient for transport;
- Safe conveyance of the patient from the scene to the ambulance on appropriate equipment in an appropriate position;
- Transportation of the patient in a properly equipped ambulance in accordance with current staffing policies of the Regional Emergency Medical Advisory Committee (REMAC) of New York City;

Advanced Life Support Transportation Decisions

- Timing of transport in consultation with Medical Control (e.g., before, during or after Medical Control Options and/or Discretionary Decisions);
- Designation of another unit to transport the patient (e.g., Basic Life Support unit, mortuary unit).

Once appropriate treatment has been initiated in accordance with these protocols, and an Advanced Life Support Decision has been made if appropriate, EMTs/AEMT-Ps should transport the patient as soon as possible to the nearest appropriate hospital:

GENERAL OPERATING PROCEDURES

Acute Stroke

If the historical/physical findings indicate an acute stroke, transport the patient to the closest appropriate Stroke Center as determined by Appendix Q, unless:

- The patient is in cardiac arrest or has an unmanageable airway;
- The patient has other medical conditions that warrant transport to the nearest appropriate New York City 911 system ambulance destination emergency department as per protocol;

If the patient has a NYC S-LAMS score of ≤ 3, transport the patient to the closest appropriate Primary Stroke Center.

If the patient has a NYC S-LAMS score of ≥ 4, contact OLMC for Transport Decision to the closest Thrombectomy Stroke Center*, unless Stroke Exclusion Criteria are met:

- Total time from onset of patient's symptoms to EMS patient contact is greater than 5 (five) hours
- Patient is wheelchair or bed-bound
- Seizure is cause of symptoms
- Loss of Consciousness (LOC)
- Trauma is cause of symptoms
- Transport time to Thrombectomy Stroke Center is > 30 minutes

* See Appendix R for list of Thrombectomy Stroke Center Hospitals.

Major Trauma

If the mechanism of illness/injury and/or historical/physical findings indicate major trauma, transport the patient to the nearest New York City 911 System Trauma Center (see Appendix F), unless **one** of the following conditions is met:

- The patient is in cardiac arrest;
- An on-line medical control physician so directs.

Major Burns

If the mechanism of illness/injury and/or historical/physical findings indicate major burns, transport the patient to the nearest New York City 911 System Burn Center (see Appendix G), unless **one** of the following conditions is met:

- The patient is in cardiac arrest;
- The patient also has major trauma;
- An on-line medical control physician so directs.
- The event is declared a Burn MCI by FDNY-EMS, NYCOEM, NYSDOH, or NYCDOHMH in which case patients may be transported to New York City Burn Disaster Receiving Hospitals (BDRH) as per NYC Burn Disaster Plan (Refer to Appendix S)

NOTE: **Patients with major burns and major trauma must be taken to the nearest New York City 911 system trauma center.**

GENERAL OPERATING PROCEDURES

STEMI (ST Elevation) / Myocardial Infarction

For all adults, if the historical / physical findings indicate an acute myocardial infarction, and the 12 lead EKG reveals 1 mm ST elevation in 2 or more contiguous leads; transport the patient to the closest 24 hour NYS certified interventional cardiac catheterization facility, as per medical control, unless one of the following conditions is met:

- The patient has other medical conditions (Trauma, Burn, CVA) that warrant transport to the closest appropriate hospital emergency department as per protocol.

EMS Notification to a STEMI Center:	**Those patients with ST elevation >2mm should be noted as CODE STEMI.**

Specialty Care

If the mechanism of illness/injury and/or historical/physical findings indicates a need for another type of specialty care, transport the patient to the nearest New York City 911 Ambulance Receiving Facility with the specialty care capability. These capabilities may include:

- hyperbaric care,
- replantation capability,
- interventional cardiology for specific cases,
- left ventricular assist device (LVAD) care
- venomous bite care,
- sexual assault care,
- child abuse and neglect or
- other such specialty care that may be required.

See Appendix H for lists of facilities and the specialty care available.

Other Care

Definitions

Alternative Destination: A regionally-approved 911 system receiving facility that may have limited and/or specialized capabilities but is NOT a 911 system ambulance destination emergency department.

Online Medical Control (OLMC): Real time communication between a REMAC-certified physician and pre-hospital emergency medical personnel via radio, telephone, telemetry, video or face-to-face. The purpose is to provide medical control options, assist in the RMA process or assist in determining appropriate transportation decisions. OLMC approval is NOT required for the decision to begin Telehealth for treat-in-place with patient release or for transport to an alternative destination, but may occur if guidance is needed (GOP flowchart). High-index Refusal for Medical Aid (RMA) must be approved by OLMC.

NOTE: **For all New York City 911 participating units, OLMC contact must be made through FDNY OLMC.**

GENERAL OPERATING PROCEDURES

Telehealth: Real time two-way interactive communication between a patient and a distant site high-level medical provider (physician, nurse practitioner, physician-assistant). This interaction, which requires audio-visual communication, allows for a broad array of healthcare services that include treat-in-place with patient release and transport decisions to an alternative destination.

High Index of Suspicion: The concern that an individual may have an acute medical, traumatic, psychiatric, behavioral, or other condition that could result in a life-threatening or life-altering outcome. Indications for a high index of suspicion may include, but are not limited to:

- Mechanism of injury (the way in which traumatic injuries likely occurred. This would include the forces that act on the body to cause damage and/or the mechanism or cause of an illness or symptom)
- 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 a 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.

Medication Administration: Administration of ANY medication to a patient by pre-hospital personnel, other healthcare providers, bystanders, or the patient himself or herself during or just preceding the event for which the request for emergency medical aid was made.

- Oxygen is only considered a medication if it is used for the treatment of a patient condition that would be considered a high index of suspicion (e.g. congestive heart failure, major trauma)
- Bandages, gauze, ice packs, splints, immobilizers, cardiac monitors and oxygen are **NOT** considered medication/treatment **ONLY** when used for a case of low index of suspicion

Procedure

If the mechanism of illness/injury and/or historical/physical findings do not indicate major trauma, burns, or a need for other types of specialty care, the patient must be transported to the nearest New York City 911 System Ambulance Destination Emergency Department (see Appendix I), **unless one** of the following conditions is met:

- The patient is stable for and remains stable throughout transport, and the patient requests transport to an alternative 911 System Ambulance Destination Emergency Department, and the estimated transport time to the alternative 911 System Ambulance Destination Emergency Department is less than or equal to an additional ten minutes.

- The patient requires specialty care as described above that is available at an alternative 911 System Ambulance Destination Emergency Department, but is unavailable at the nearest New York City 911 System Ambulance Destination Emergency Department, or an on-line medical control (OLMC) physician so directs.
- Ambulances participating in the 911 system may provide treat-in-place with patient release or may bring patients to the nearest appropriate regionally- approved alternative destinations if the patient meets criteria established for that destination type or to an equivalent alternative destination less than or equal to an additional 10 minutes.

NOTE: **Patients who become critical or unstable must be transported to the nearest New York City 911 system ambulance destination emergency department.**

TREAT-IN-PLACE WITH PATIENT RELEASE

1. Medical Issue/Complaint (i.e. physical injury/illness/complaint):

    a. All patients considered for treat-in-place with patient release must be offered a choice between treat in place, transport to the nearest appropriate alternative destination, or transport to the nearest appropriate 911 receiving emergency department. Providers must not refuse a patient's request for transport. For patients agreeing to treat-in-place, the provider shall:

        i. Contact Telehealth if the patient meets criteria as specified in Appendix T: Patient Selection Criteria: Inclusion/Exclusion Criteria AND whom the provider thinks may be safely considered for this option.

        ii. Contact OLMC for approval to contact Telehealth for treat-in-place for patients who do not fulfill the criteria as specified in Appendix T: Patient Selection Criteria: Inclusion/Exclusion Criteria, but:
            A. Are otherwise considered low index of suspicion for illness or injury
            B. Have NOT received medications and/or treatments other than medications described above (oxygen, bandages, etc.)
            C. Have received medications for the treatment of hypoglycemia and who post-treatment have normal vitals and normal mental status

    b. If the Telehealth provider determines that the patient is not appropriate for treat-in-place then the Telehealth provider can direct the crew to follow their standard protocol, policy and procedures for transport. If the patient refuses transport, then the RMA shall be processed through OLMC.

    c. The provider is responsible for monitoring patient stability during the Telehealth interaction. If at any time the provider determines that the patient is unstable, the provider is to announce this to the Telehealth provider and immediately suspend Telehealth and follow 911 system protocol(s) to provide patient stabilization and transport to the nearest appropriate 911 System Ambulance

Destination Emergency Department. OLMC contact is not required unless the crew has questions or requires medical control direction.

NOTE: **Telehealth providers cannot provide medical control direction and cannot direct the providers to administer medications.**

d. Either the Telehealth or OLMC provider may refer patients to the other as appropriate.

2. Behavioral Health Issue/Complaint:

   a. If the provider believes that the patient meets behavioral health criteria as specified in Appendix T: Patient Selection Criteria: Inclusion/Exclusion Criteria AND whom the provider thinks may be safely considered for treatment in place; (On scene evaluation by a licensed mental health professional when available, details to be provided in a separate directive.)

   b. Behavioral health issues/complaints are not appropriate for Telehealth.

ALTERNATIVE DESTINATIONS

1. Patients who are critical, unstable, or require specialty care (STEMI, acute stroke, major trauma, etc.) must be transported to the nearest appropriate 911 receiving hospital.

2. All patients considered for alternative destinations must be offered a choice between transport to the nearest appropriate 911 receiving hospital and to the nearest appropriate alternative destination. Providers must not refuse a patient's request for transport to an appropriate 911 receiving hospital.

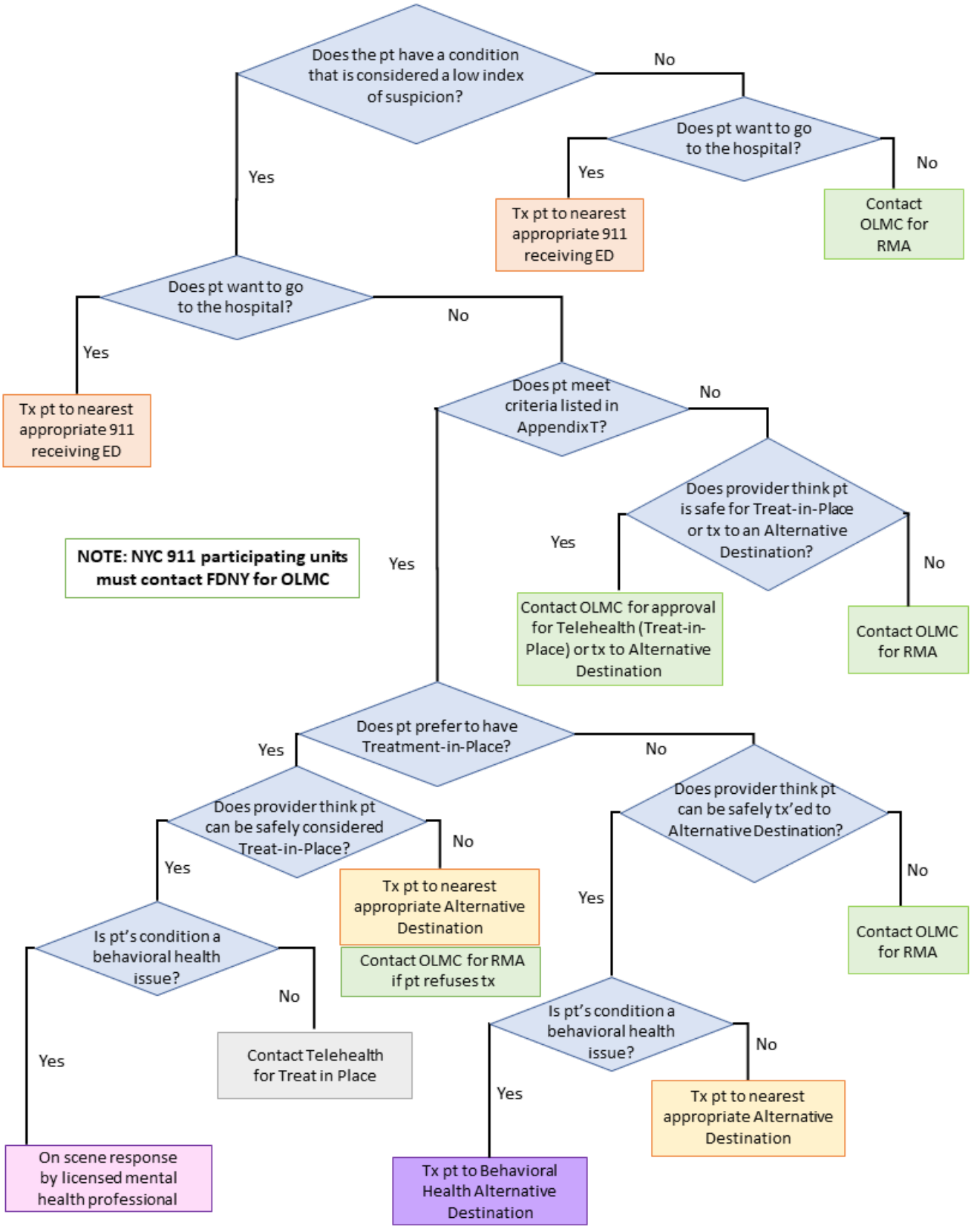
3. For patients that fulfill the criteria listed in Appendix T: Patient Selection Criteria: Inclusion/Exclusion Criteria, AND who the provider feels are not appropriate for treat-in-place with patient release or refuse treat-in-place may be transported to the nearest appropriate alternative destination without contacting OLMC.

4. For patients that do not fulfill the criteria as specified in Appendix T: Patient Selection Criteria: Inclusion/Exclusion Criteria, the provider must contact OLMC for consultation/approval to transport the following patients whom the provider thinks may still be appropriately transported to an alternative destination:

   a. Meet exclusion criteria but are otherwise considered low index of suspicion for illness or injury
   b. Have NOT received medications and/or treatments other than medications described above (oxygen, bandages, etc.)
   c. Have received medications for the treatment of hypoglycemia and who post-treatment have normal vitals and normal mental status

5. The provider must contact OLMC for RMAs.

GENERAL OPERATING PROCEDURES



GENERAL OPERATING PROCEDURES

Spinal Precautions & Spinal Injury Protection

All patients should have spinal cord injury precautions taken during their assessment. Transporting a patient without a rigid longboard will not be considered a deviation from the standard of care. Application of spinal injury precautions includes the following treatment modalities.

- Application of an appropriately-sized rigid cervical collar
- Maintenance of patient in a supine position; if the patient is unable to tolerate that, the head of the stretcher may be raised to position of comfort (maximum 45 degrees)
- Adequate security of the patient's trunk and limbs to a padded stretcher
- Minimal movement / transfers
- Maintenance of inline stabilization during any movement / transfers
- Extrication of and conveyance of patients may be accomplished with a rigid longboard, but should be removed via logroll maneuver with manual inline stabilization after the patient is moved to the EMS cot/stretcher. Patients in extremis may remain on the rigid longboard to expedite rapid transport.

The following patients, without evidence of spinal injury, have greater risk of harm than benefit if restrained to a rigid longboard:

- Ambulatory patients
- Patients with extended transport
- Inter-facility transfer patients
- Penetrating trauma to the head, neck or torso
- Patients with significant anatomical derangements (kyphosis, contractures)

NOTE: **SPINAL CORD INJURIES THAT ARE NOT CAUSED BY THE INITIAL FORCE ARE NOT LIKELY TO BE CAUSED BY THESE MINIMAL PATIENT MOVEMENTS BY EMS. DO NOT USE RAPID TAKE-DOWN.**

Cardiopulmonary Resuscitation

Basic Cardiac Life Support in adults, children, infants, and newborns, when not specifically described in these protocols, should conform to the current guidelines set by the American Heart Association and the American Red Cross. The following guidelines apply to the initiation and termination of CPR:

CPR should be initiated on all patients who are not breathing (apneic) and pulseless unless one of the following conditions exists:

- Extreme dependent lividity;
- Rigor mortis;
- Tissue decomposition;
- Obvious mortal injury; **or**
- A valid Do Not Resuscitate (DNR) order and/or MOLST / eMOLST is present. (See Appendix C)

NOTE: **Terminal illness is not a contraindication to CPR.**

NOTE: **Cardiac arrests secondary to drowning, hanging, electrocution, and smoke inhalation / cyanide toxicity should be treated as MEDICAL in nature. While addressing traumatic injuries (e.g., hemorrhage control), emphasis should be given**

to high quality CPR and interventions as specified in the Non-Traumatic Cardiac Arrest protocols, and, when appropriate, in the Smoke Inhalation and Cyanide Exposure protocols.

CPR should also be initiated in newborns, infants, and children under 9 years of age with heart rates less than 60 (severe bradycardia) and signs of inadequate central (proximal) perfusion (decompensated shock).

NOTE: CPR is necessary in unconscious newborns, infants, and children under 9 years of age with extremely slow heart rates and poor vital organ perfusion to ensure adequate circulation to the heart, lungs, and brain.

CPR should be continued until one of the following occurs:

- Spontaneous circulation has been restored;
- Resuscitative efforts have been transferred to providers of equal or higher level of training;
- A qualified, licensed physician assumes responsibility for the outcome of the patient;
- The crew is exhausted to the point of not being able to continue resuscitative efforts.
- CPR must be initiated if no Out of Hospital or facility DNR is presented. If a DNR order is presented after CPR has been started, stop CPR.

Airway Management

All patients require continuous monitoring of their airways to ensure airway patency. Wherever the term "Airway Management" is used throughout these protocols, the following elements shall be considered:

Position of the patient's head

Need for airway adjuncts

Need for oropharyngeal suctioning

Need for Advanced Life Support airway management techniques

Use of Pulse Oximetry (S_pO_2):

- Mandatory for Advanced Life Support
- Optional for Basic Life Support

Use of End Tidal Capnography ($ETCO_2$)

- Mandatory for Advanced Life Support

NOTE: Whenever Advanced Airway Management is implemented, the use of continuous end-tidal waveform Capnography is mandatory.

EXCEPTION: Suspension of the requirement for waveform capnography for supraglottic airway placement when there are insufficient resources to provide waveform capnography to all patients requiring advanced airway management. This is not limited to MCI events.

GENERAL OPERATING PROCEDURES

Oxygen Administration

NOTE: All patients who are in respiratory arrest must have ventilatory assistance unless a valid New York State Prehospital DNR Order / MOLST / eMOLST is presented (GOP).

Wherever the term “appropriate oxygen therapy” is used throughout these protocols, oxygen therapy should be administered via a non-rebreather mask (NRB) at 10-15 LPM, or a nasal cannula (NC) at 2-6 LPM:

- If oxygen saturation (SpO2) is less than 94%
- If SpO2 is unavailable
- To effectively manage other signs of dyspnea

Wherever the term “administer oxygen” is used throughout these protocols, administer high concentration oxygen via a non-rebreather mask set at 10 to 15 liters per minute. The reservoir bag must remain at least one-third full following inspiration. If a mask is not tolerated by the patient, a nasal cannula set at 6 liters per minute should be used and such use properly documented.

Patients who are chronically maintained on oxygen and do not require high concentration oxygen shall be administered oxygen at their prescribed rate of flow.

For Adult patients with signs of on-going hypoxia, inability to adequately protect their airway, and/or exhibiting signs of inadequate respiration, assisted ventilations may be required. This should be done utilizing one of the following methods:

- Pocket mask with supplemental oxygen set at 10-25 liters/minute
- Bag-Valve-Mask and reservoir with flow set at 10-25 liters/minute

Pediatric patients who require oxygen should receive high concentration oxygen via the mask that best fits around the mouth and nose, preferably a non-rebreather mask, or a nasal cannula (NC). Infant oxygen administration, if needed, should be provided at 0.5-2 LPM via an appropriately sized nasal cannula. Humidified oxygen is preferred. If a mask is not tolerated, then "blow by" oxygen is acceptable.

Pediatric patients exhibiting signs of respiratory failure require assisted ventilations via a mask that completely covers the mouth and nose, but not the eyes. This shall be done utilizing one of the following methods:

- Pocket mask with supplemental oxygen set at 10-25 liters/minute
- Bag-Valve-Mask and reservoir with flow set at 10-25 liters/minute

Definition Of Compensated Shock

Any adult patient having a mean arterial blood pressure above 65 mmHg (and a systolic BP of more than 90 mmHg) and exhibiting signs of inadequate perfusion, which may include:

- Changes in mental status such as agitation, confusion, other;
- Resting tachycardia
- Pallor

- Cool, clammy, diaphoretic skin
- Orthostatic vital sign changes (EMT and Paramedic ONLY)

Any pediatric patient with signs of inadequate peripheral (distal) perfusion, which may include:

- Altered mental status (e.g. agitation, confusion)
- Increased pulse rate (Tachycardia)
- Pale skin (Pallor)
- Cool, cyanotic lower extremities
- Delayed capillary refill
- “Blotchy” skin (mottling)
- Weak or absent peripheral (distal) pulses (radial, tibial, pedal)

NOTE: **The definition of shock in the pediatric patient does not depend upon blood pressure.**

Definition Of Decompensated Shock

Any adult patient having a mean arterial blood pressure below 65 mmHg, or a systolic BP less than 90 mmHg, AND exhibiting signs of inadequate perfusion, which may include:

- Profound altered mental status such as lethargy, unresponsiveness, or coma
- Unstable vital signs; hypotension, widened pulse pressure, severe tachycardia
- Mottling, cyanosis
- Cold extremities

Any pediatric patient having a **systolic** blood pressure **below** 70 mmHg + 2x age in years, or the following signs of inadequate **central** (proximal) perfusion:

- Altered mental status (e.g. lethargy, coma)
- Extensive cyanosis of all extremities
- Weak or impalpable central (proximal) pulses (femoral, brachial, carotid)

Control Of External Bleeding

Whenever the term "Control external bleeding" is used throughout these protocols, the following elements must be considered:

- Application of direct pressure with a sterile dressing.
- Application of a pressure dressing/bandage.
- If a severe extremity hemorrhage cannot be controlled by direct pressure, apply a tourniquet (see the Bleeding / Hemorrhage Control / Impaled Object (Adult and Pediatric) protocol).

Medication Administration

CFRs, EMTs and AEMT-Ps may allow a patient to self-administer the patient's own medication as prescribed by the patient's physician.

GENERAL OPERATING PROCEDURES

Maintenance of IVs by EMT – Basics

According to NYS Department of Health EMS Policy # 04-02 (issued 02/26/04) it is allowable for an EMT-B to transport a patient with a secured device in place as long as no fluids or medication are attached to the port. However, the EMT-B must ensure the venous access site is secured and dressed prior to leaving the health care facility.

Suspected Child/Spouse/Elder Abuse

Whenever child, spouse, or elder abuse is suspected, visually assess the scene for evidence of possible abuse, and record all appropriate information on the PCR/ACR. In addition to the written report, make a verbal report summarizing the above to the responsible medical personnel upon arrival at the Emergency Department.

New York State Social Services Law considers EMTs and AEMT-Ps, but not CFRs, to be mandatory child abuse reporters under New York State Social Services Law. Failure to report suspected cases of child abuse to the New York State Child Abuse and Maltreatment Register ("State Central Register") may subject the EMT or EMT-P to liability for criminal and civil prosecution and penalties. Notification of suspected child abuse is to be accomplished in accordance with agency policy. The State Central Register may be contacted by telephone at 1-800-635-1522.

NOTE: **Do not delay transport to obtain the information needed to complete the above reports. Do not make accusatory, confrontational, angry or threatening statements to the parties present, or attempt to conduct an investigation at the scene.**

Abandoned Infant Protection Act

New York State Social Services Law states that infants thirty (30) days of age or younger may be abandoned by their parents or caretakers in a suitable safe location, such as a hospital, ambulance, police station, or fire house, or with an appropriate person. Some of these parents or caretakers may wish to remain anonymous, but if they offer their name and address, they should be recorded in the comment section of the PCR/ACR.

If an infant is abandoned to the care of a CFR, EMT, or AEMT-P, the CFR, EMT, or EMT-P should refer to the Regional Protocol on Care of the infant, if appropriate, and transport the infant to the nearest appropriate hospital. The parents or caretakers should be informed of the hospital destination, and told they may contact the hospital for further information should they wish to do so.

NOTE: **The Abandoned Infant Protection Act does not relieve the EMT or EMT-P of the responsibility to report such abandonment to the New York State Child Abuse and Maltreatment Register ("State Central Register"). The State Central Register may be contacted by telephone at 1-800-635-1522.**
The Abandoned Infant Protection Act does provide the parent or caretaker with an acceptable defense against prosecution for infant abandonment.

GENERAL OPERATING PROCEDURES

Pediatric Patients

Any patient 15 years of age shall be considered an adult patient, and the appropriate protocols shall be used. To further define pediatric patients, the following age separations shall be used:

- Premature – birth prior to the eighth month of gestation;
- Neonate – Immediately following birth;
- Infant – from birth to 1 year;
- Child – from 1 year to less than 15 years of age.

Avoid agitating pediatric patients. Conducting an assessment or treatment procedure, which is not tolerated by the patient, may provoke or increase respiratory distress.

Obtaining a blood pressure is not necessary when it agitates the patient or delays transport.

When available, pediatric AED-capable pads and cables shall be used for all pediatric patients under 9 years of age.

If pediatric AED-capable pads and cables are not available, the adult AED and adult AED-capable pads and cables shall be used for all pediatric patients under 9 years of age.

Every attempt should be made to keep pediatric patients warm during transport.

NOTE: **Use infant or child techniques and rates for CPR and assisted ventilations in pediatric patients under 9 years of age.**
Automated external defibrillation should not be delayed or withheld for any reason in patients under 9 years of age who present with non-traumatic cardiac arrest.

Minors

A person under the age of 18 is a minor. Any minor with a life-threatening condition should be treated and transported without delay. A minor may request or refuse treatment without parental consent under the Laws of Emancipation if the minor:

- Is a mother;
- Is married;
- Has left home and is self-supporting;
- Is enlisted in the Armed Forces;
- Is requesting treatment for a sexually transmitted disease, drug abuse, or child abuse.

Minors are considered emancipated only during the period when they can be placed into one of the above categories.

NOTE: **Patients categorized as minors who are 15 years of age or older shall be treated under the adult protocols.**

GENERAL OPERATING PROCEDURES

Standard Approach To The Patient

1. Perform Initial Scene Survey.
   NOTE: **Refrain from making direct contact with patients exposed to hazardous materials until they have been decontaminated.**
2. Initiate Basic Cardiac Life Support, if appropriate.
3. Perform Initial Assessment (Primary Survey). (See Appendix B.)
4. Administer oxygen, if appropriate.
5. Monitor breathing for adequacy.
6. Determine if Advanced Life Support assistance is required.
7. Obtain at least two sets of vital signs and monitor as necessary.
   NOTE: **Obtaining vital signs should not interfere with treatment or delay transport of the critically ill or injured patient.**
8. Obtain a focused medical history.
9. Complete the detailed physical examination as the patient's condition dictates.
10. Treat the patient according to the appropriate REMAC of New York City protocol(s).
11. Provide continuous emotional support.
12. Maintain body temperature.
13. Transport the patient as soon as possible to the nearest appropriate facility.
14. 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!
15. Monitor and continue patient care enroute to the hospital, unless relieved by a provider with a higher level of training.
16. Document all findings and information, as they pertain to patient condition or care, on the PCR/ACR.

GENERAL OPERATING PROCEDURES

The following General Operating Procedures Apply To Paramedics (AEMT-P) Only

Interpretation Of Protocols

The Advanced Life Support (Paramedic) Treatment Protocols are for the use of the EMT-P in the field and the Medical Control physician. They have been developed to ensure high quality, standardized prehospital emergency medical care. The protocols are specific for Advanced Life Support treatment. Patient assessment and Basic Life Support treatment have not been enumerated herein. However, they are the foundation upon which these protocols are based, and are always to be performed as necessary. All references to Basic Life Support procedures refer to the appropriate Regional Emergency Medical Advisory Committee (REMAC) of New York City Basic Life Support Treatment Protocols.

Standing Orders

Standing Orders may be performed without contacting Medical Control. However, Medical Control may be used as a resource at any time prior to the implementation or completion of Standing Orders.

Unless specific conditions are outlined in a protocol, Endotracheal Intubation may be performed under Standing Orders whenever it is required for advanced airway management. Other methods of advanced airway management (e.g., Dual Lumen Esophageal/Tracheal Intubation) are permitted as an alternative to Endotracheal Intubation provided that they have been approved by the Regional Emergency Medical Advisory Committee (REMAC) of New York City.

Blood Drawing

Blood drawing by AEMT-Ps in the field is no longer routinely performed, but is permitted at the discretion of the EMS Agency Medical Director.

Medical Control Options

Medical Control Options require contact with Medical Control prior to their implementation. Once Medical Control has been contacted, only those options listed in the particular protocol(s) being utilized may be considered.

GENERAL OPERATING PROCEDURES

Prehospital Sedation

Definition of Prehospital Sedation:

Prehospital sedation is a fully monitored pharmacologic intervention applied in instances where conscious patients may need short-term analgesic and/or anxiolytic therapy for procedures that may be painful or anxiety-producing, such as Endotracheal Intubation, Synchronized Cardioversion, and Transcutaneous Pacing. Prior permission from Medical Control is required.

Indications for Prehospital Sedation:

Conscious patients requiring *Endotracheal Intubation*

a) Administer Diazepam 5 – 10 mg, IV bolus. Repeat doses of Diazepam 5 – 10 mg, IV bolus, may be given as necessary. (Maximum total dosage is 20 mg.)

OR

b) Administer Midazolam up to 5 mg, IV/IO bolus. After successful intubation, Midazolam up to 5 mg IV/IO may be repeated. (Maximum total dosage is 10 mg.)

OR

c) Administer Etomidate 0.3 mg/kg, IV bolus. (Maximum total dose is 40 mg.) After successful intubation, administer Diazepam 5 mg IV bolus or Lorazepam 2 mg, IV or IM, or midazolam up to 5 mg IV/IO for continued sedation.

d) Administer oxygen by nasal cannula at maximum flow rate during laryngoscopy and intubation.

Conscious patients requiring *Synchronized Cardioversion* OR *Transcutaneous Pacing*

a) Administer Diazepam 5 – 10 mg, IV bolus. Repeat doses of Diazepam 5 – 10 mg, IV bolus, may be given as necessary. (Maximum total dosage is 20 mg.)

OR

b) Administer Midazolam up to 5 mg, IV/IO bolus. Midazolam up to 5 mg IV/IO may be repeated. (Maximum total dosage is 10 mg.)

OR

c) For synchronized Cardioversion only, administer Etomidate, 0.15mg/kg, IV bolus. (Maximum total dose is 20 mg.)

NOTE: **Patients receiving prehospital sedation must be continuously administered high concentration oxygen and must be continuously monitored using cardiac monitoring and pulse oximetry.**

GENERAL OPERATING PROCEDURES

Advanced Airway Management

Where the term 'advanced airway management' is used in these protocols, this is meant to refer to the use of endotracheal intubation and/or alternative airways (i.e. dual-lumen esophageal / tracheal intubation, laryngotracheal tubes, and other non-visualized airways that have been approved for use by the Regional Emergency Medical Advisory Committee (REMAC) of New York City).

In the non-cardiac arrest situation, the use of alternative airways is not allowed.

In the cardiac arrest setting, no preference is given to the use of either airway type. However if endotracheal intubation is selected as the primary method of advanced airway management, CPR must not be interrupted for an extended period of time, and a total of no more than two attempts may be made. If after two attempts endotracheal intubation is unable to be performed, an alternative airway must be placed.

NOTE: **Nasal intubation is considered to be an <u>unacceptable</u> form of airway management within the New York City region.**

Definition of stable dysrhythmias

For the purpose of these protocols, a stable dysrhythmia is defined as follows:

- Any adult patient having a dysrhythmia NOT associated with signs of hypoperfusion
- Any pediatric patient having a dysrhythmia NOT associated with depressed mental status and absent peripheral pulses and/or hypotension, i.e., decompensated shock.

Definition of Unstable dysrhythmias

For the purposes of these protocols, an unstable dysrhythmia is defined as:

Any adult patient having a dysrhythmia associated with:

- Hypotension (systolic blood pressure BELOW 90 mm Hg), i.e., decompensated shock;
- Altered mental status (e.g., agitation, confusion);

Any pediatric patient having a dysrhythmia associated with:

- Depressed mental status and absent peripheral pulses
- Hypotension (systolic blood pressure BELOW 70 mm Hg + [2x age in years]), i.e., decompensated shock.

Discretionary Decisions

These protocols should be considered as the "model" guidelines by which all patients should be treated. Since patients do not always fit into a rigid formula approach, situations may occur which do not fit these guidelines. For patients who do not fit into a rigid formula approach, or where there is no existing protocol and a clear need for Advanced Life Support exists, the term "Discretionary Decision" shall be utilized between the EMT-P and the Medical Control physician.

The EMT-P shall initiate appropriate therapy (oxygen administration, cardiac monitoring, intravenous access, and/or transportation) and should contact Medical Control in order to differentiate the most emergent clinical problem and define the most suitable therapy. At that time, the Medical Control physician shall order the most appropriate treatment within the AEMT-P's scope of practice. AEMT-Ps should not exceed their level of training while carrying out a Discretionary Decision.

Discretionary decisions may include, but are not limited to:

Use of drugs contained in the REMAC Formulary at doses other than those described in the protocols, for specific reasons that must be documented both by the EMT-P administering the drug and the On-Line Medical Control Physician prescribing it, e.g., high dose Furosemide for acute pulmonary edema,

Use of drugs contained in the REMAC Formulary for purposes other than those described in the protocols, for specific reasons that must be documented both by the EMT-P administering the drug and the On-Line Medical Control Physician prescribing it, e.g., high dose Atropine for organophosphate poisoning.

Communications With Medical Control Facilities

In the event of failure of voice contact with Medical Control, AEMT-Ps will perform only those procedures which come under Standing Orders and will be required to transport the patient.

Endotracheal Drug Administration

Endotracheal drug administration **is no longer** the standard of care in this region.

Intraosseous (IO) Access and Drug Administration

In our protocols the word intravenous refers to IV or IO access in cases of adult cardiopulmonary arrest, patients in decompensated shock, or any pediatric patients, in which IV access is unable to be obtained after no more than two attempts, IO access should be attempted a maximum of two (2) times via an approved extremity approach.

1. If intraosseous access is established on a conscious adult or pediatric patient, administer 0.5 mg/kg of 2% preservative-free Lidocaine via IO port, slowly over 2-3 minutes, up to a maximum of 50 mg prior to any other administration.
2. For continued discomfort or pain due to infusion repeat 0.25 mg/kg Lidocaine via IO port, slowly over 30 seconds, up to a maximum of 25 mg.

NOTE: **When administering 2% preservative-free Lidocaine, it must be infused slowly to prevent it from being sent directly into the central circulation. Medications intended to remain in the medullary space, such as a local anesthetic, must be administered very slowly until the desired anesthetic effect is achieved.**

NOTE: **Drug administration via IO route will utilize doses identical to those used for IV administration. When an IO access is already in place, any drugs authorized for administration via the IV route may also be administered via the IO route. IO access via the sternum is considered to be unacceptable in the NYC region.**

GENERAL OPERATING PROCEDURES

Intranasal (IN) Drug Administration

In the absence of intravenous access, the following medications are approved for intranasal administration when an appropriate atomizer device is available: Glucagon, Fentanyl, Lorazepam, Midazolam, Naloxone and Ketamine. The route of administration is contraindicated in patients with epistaxis.

Use of pre-existing Central Venous Catheter

In cardiac arrest and in unstable patients who need IV access and in whom peripheral; IV access **cannot** be established rapidly, Paramedics (EMT-P) may, under Standing Order, consider using **PICC (Peripherally Inserted Central Catheter)** line in the upper extremities.

All other types of central lines, including those with ports extending from the neck or chest, shall not be used under Standing Order. If another type of central line is encountered, which the Paramedic feels could be used for patient care, the Paramedic must contact OLMC. The OLMC Physician may consider allowing the use of the central line on a case by case basis.

Any catheter port requiring breaking of skin by a needle shall not be used prehospitally. These ports, buried under the skin, are often called “Hickman Ports” or “Port-A-Caths”. Special needles and techniques beyond the EMS Scope of Practice are required to safely access these devices. Furthermore, Paramedics may not use the patient’s own needles or equipment to access such devices. Dialysis catheters or shunts shall not be accessed in the out-of-hospital environment.

It is beyond the EMS Scope of Practice to troubleshoot, maintain, remove, re-insert, or otherwise manipulate central lines. Patients with central line issues should be transported to the Emergency Department for further management. Under no circumstances shall EMS personnel attempt to clear an obstructed or clogged line. Any line that cannot be easily flushed with 10cc of sterile normal saline, should be considered NOT functional.

Pharmacology Table

The following are recommended doses for **adult** patients fifteen (15) years of age and **older** and **under** 40 kg in weight:

Amiodarone	5 mg/kg
Atropine Sulfate	0.02 mg/kg (minimum dose 0.1 mg)
Epinephrine	0.01 mg/kg/dose
Furosemide (Lasix)	1 mg/kg/dose
Sodium Bicarbonate	1 mEq/kg/dose

NOTE: The dose of Epinephrine 1:1,000 should not exceed 0.3 mg, IM.

NOTE: Dosing should not exceed dose from appropriate adult protocol.

Vasopressor Drug Administration

All vasopressor infusions must be administered using an IV flow regulating device. These infusions should be administered preferably via an 18 gauge or larger IV catheter, or an IO. Standard IV administration sets are not considered IV flow regulating devices.

Drug Advisory Guidelines

Aspirin should **not** be administered to patients with known hypersensitivity to aspirin. Gastrointestinal complaints are **not** a contraindication to aspirin administration.

Ondansetron has been associated with prolongation of the QT interval, possibly resulting in Torsades de Pointes. Therefore, this drug should be used with caution in patients with a history of cardiac disease and those taking other medications known to prolong the QT interval. This drug should not be administered to patients with a history of familial QT prolongation.

Diphenhydramine Hydrochloride has an atropine-like action and must be used with caution in patients with a history of increased intraocular pressure, hyperthyroidism, cardiovascular disease, and/or hypotension.

Normal Saline (0.9 NS) may be used interchangeably with **Ringer's Lactate (RL)** for intravenous or intraosseous infusion.

Diltiazem must be used with caution in patients with liver or kidney disease, congestive heart failure, atrioventricular conduction abnormalities, and/or hypotension. Medical Control should be alerted to these conditions, and the dose should be reduced to **half** the normal dose.

Nitroglycerine shall not be administered to patients who have used erectile dysfunction medications within the past 72 hours.

Controlled Substances

Refer to individual protocols for directions regarding the administration of controlled substances.

Pediatric Protocols

The numbers of encounters with children are far fewer than with adults. These protocols therefore address situations where Advanced Life Support in the field can directly affect a child's survival.

Control of the airway and rapid transport are the underlying principles of the pediatric protocols and best serve the needs of the pediatric patient. Since intravenous or intraosseous access are more difficult in small children, these and other Advanced Life Support interventions are carried out enroute, or during a transport delay, except for special circumstances as clearly noted in the protocols.

Airway and Ventilation

Airway management by mouth-to mask or bag-valve-mask ventilation should be used in neonates, infants, and children as a first maneuver for providing assisted ventilation. The above will be referred to throughout the pediatric protocols as "Assisted Ventilation." Remember that the correct position to maintain the optimal airway is age-dependent. In pediatric patients with suspected trauma, the airway

maneuver of choice is a modified jaw thrust combined with cervical spine stabilization.

Oxygen should always be provided at high concentration in the pediatric patient and should be humidified when feasible. There are **no contraindications** to high concentration oxygen in the pre-hospital setting for the pediatric patient.

Intubation

When noted in the protocols, or when other maneuvers used to ventilate the pediatric patient are inadequate, Endotracheal Intubation should be attempted. Suspicion of croup/epiglottitis is a contraindication to attempted Endotracheal Intubation.

Children suspected of having croup/epiglottitis may rapidly close off their airways during attempts at Endotracheal Intubation. Children with suspected croup/epiglottitis should be rapidly evacuated to the nearest 911 Ambulance Destination emergency department for definitive airway management. Children in cardiac arrest with upper airway obstruction should have attempts at high-pressure bag-valve-mask ventilation.

Intravenous (IV) or Intraosseous Access (IO)

IV or IO access to be started only enroute or during transport delay. There should be only one attempt of each method in obtaining access to pediatric patients. IV access should always precede IO access.

Nasogastric Tube/Orogastric Tube

Placement of a Nasogastric (NG) Tube or an Orogastric (OG) Tube is no longer the standard of care in this region.

Pediatric Drug Dosage and Fluid Administration

For drug dosage and fluid administration, refer to a regionally approved *Length Based Dosing Device*. When there is a discrepancy between the protocols and the Length Based Dosing Device with regard to a particular dose, administer the dose listed on the Length Based Dosing Device and note the reason for the drug dosing in the ACR / PCR.

- REMAC has approved the use of a Length Based Dosing Device.
- Initial fluid administration should not exceed 20 ml/kg.

NOTE: DOSES ON THE LENGTH BASED DOSING DEVICE MAY ONLY BE USED FOR THE SPECIFIC INDICATION LISTED ON THE DEVICE (E.G., THE DOSING OF MIDAZOLAM FOR INDUCTION (pre-Intubation) MAY NOT BE USED TO TREAT A SEIZURE IF THERE IS NO MIDAZOLAM DOSING LISTED SPECIFICALLY FOR SEIZURES).

Pediatric Values

Refer to Length Based Dosing Device for drug dosages. Patients who are hypotensive according to blood pressure should be examined for other signs of shock to support the diagnosis. Note that it may be technically difficult to obtain a blood pressure in a small or agitated child; in this case, clinical judgment should be used in assessing for hypovolemic shock, especially in a trauma patient.

GENERAL OPERATING PROCEDURES

COORDINATION OF PREHOSPITAL RESOURCES PROTOCOL

INTRODUCTION

The purpose of this protocol is to set forth New York City Regional guidelines for the coordination of prehospital resources at the scene when multiple Emergency Medical Service (EMS) Agencies are present. An EMS Agency is any NYS DOH or REMAC of New York City approved ambulance or first response service, including municipal, hospital, volunteer or commercial entities, authorized to provide patient care and/or transport in NYC.

The protocol addresses who has the authority to determine:

- who will provide patient care;
- who will accompany the patient;
- which ambulance(s) will provide transport;
- the appropriate destination(s); and
- the need for additional resources.

1. PARTICIPATION GUIDELINES

All providers must properly and reasonably identify themselves and their certification levels. The provider must provide his/her name, organization name, and provider number (shield or NYS DOH certification number). Written identification (i.e., patch, agency ID tag, etc.) is preferable to avoid confusion.

All providers present at an incident must function as part of a response by the EMS Agency with which they are affiliated and remain within their scope of training and practice.

The EMS Agency must be authorized to provide prehospital care within the New York City region and operate under regionally approved protocols specific to the agency's approved level(s) of care.

2. RESPONSIBILITY FOR PATIENT CARE

The prehospital emergency care provider with the highest level of certification who first establishes patient contact at the scene assumes responsibility for providing initial patient care. S/he retains responsibility for patient care, until relinquished to a prehospital emergency care provider as determined by patient condition/medical necessity, mutual consent, operational necessity, or patient request.

If an ALS provider assumes patient care responsibility from a BLS provider, the BLS provider should assist in the delivery of patient care as requested until such time as the primary ALS care provider determines that assistance is no longer required.

A BLS provider must relinquish patient care to an ALS provider who requests it.

In cardiac arrest situations, CFR-D or EMT-B units will be considered a higher level of patient care provider over units not equipped with a defibrillator.

When a patient requires ALS care and is on a BLS ambulance, and an ALS provider is present, the BLS unit shall assist the ALS provider and transport the patient with the ALS provider and equipment as soon as appropriate.

Under no circumstances should patients be transferred between units unnecessarily or transport be delayed.

3. COORDINATION OF PREHOSPITAL RESOURCES

The prehospital emergency care provider with the highest level of certification who first establishes patient contact at the scene assumes responsibility for decisions related to coordination of prehospital resources.

Higher level prehospital providers must assume responsibility for coordination of prehospital resources if they assume responsibility for patient care.

Responsibility for coordination of prehospital resources may be relinquished to later arriving prehospital providers based on mutual consent.

When a NYC “911 System” participating EMS Agency is not the first EMS Agency on the scene and is not acting in the role of primary care provider, it shall act as an operational resource for:

- Information regarding hospital diversions, specialty referral center bed availability and other specialized resources; and
- Incident scene safety (e.g., environmental conditions, crowd/traffic control in the absence of NYPD, potentially dangerous patient or family member to self and/or others).

FDNY shall be responsible for coordination of prehospital resources in situations involving:

- Multiple Casualty Incidents (MCIs);
- Unscheduled MEDEVAC transports;
- Hazardous Materials (HAZMAT) and/or Weapons of Mass Destruction (WMD) situations which require decontamination;
- Fires/Crimes in progress; or
- Unusual public health or safety emergencies.

At the point that FDNY assumes operational responsibility for coordination of prehospital resources, incident command procedures are in effect, incorporating all participating EMS Agencies and resources into the response, as appropriate.

4. MULTIPLE CASUALTY INCIDENTS (MCIs)

MCIs are generally defined as five (5) or more patients with the potential need for extraordinary resources. However, the criteria for the definition of MCIs are not primarily dependent upon the number of patients.

The Regional Emergency Medical Services Council of New York City and FDNY should include all EMS Agencies participating in MCIs into MCI planning, and should coordinate training in MCIs for all participating EMS Agencies.

GENERAL OPERATING PROCEDURES

5. PATIENT TRANSPORTATION

The provider who is responsible for patient care will determine who accompanies the patient and, except in MCI's, the appropriate destination, in accordance with state and regional protocol. In all practical circumstances the number of individuals in the patient compartment, excluding the patient, shall not exceed four (4). However, the provider who is responsible for patient care makes the ultimate decision regarding who is in the patient compartment.

6. IMPLEMENTATION / EVALUATION

Each EMS Agency shall develop guidelines, policies and procedures to ensure the implementation of this protocol, including continuing education in the use of the protocol. Complaints shall be first addressed agency to agency, secondly to the Regional EMS Council/REMAC Quality Assurance Committee. Evaluation of the effectiveness of the protocol shall be ongoing as part of each EMS Agency's QA processes and integrated into system-wide QA activities pursuant to Article 30 of the New York State Public Health Law.

GENERAL OPERATING PROCEDURES

MUTUAL AID MOBILIZATION PROTOCOL

INTRODUCTION

The purpose of this protocol is to provide a uniform procedure for the request and utilization of voluntary hospital, volunteer, and proprietary ambulance resources for mutual aid during times when these resources are needed to manage an incident within the New York City region.

To ensure a reliable and safe response by ambulance resources from New York City EMS Agencies to any incident within New York City.

PROTOCOL AUTHORITY

New York State Public Health Law.

PARTICIPATION GUIDELINES

Ambulance units or EMS personnel, in accordance with Regional Emergency Medical Services Council of New York City Coordination of Prehospital Resources protocol, will not respond to any incident outside of their community or primary operating territory without a specific request from Fire Department City of New York (FDNY) and/or the NYC Office of Emergency Management (OEM).

In the event of a major emergency when mutual aid is requested by FDNY and/or OEM, ambulance service participants will at the minimum, staff and field ambulance units to maintain or enhance service to the provider's primary operating territory, and then if possible provide units for Multiple Casualty Incident (MCI) response as follows:

- Voluntary hospitals – initially contact FDNY Resource Communication Center (RCC) to identify any need for additional 911 units. Ensure all essential and contract services are maintained. Additional units may be made available for mutual aid.
- Volunteer Services – staff a community based ambulance first, and log on the unit with FDNY RCC. Additional units may be made available for mutual aid.
- Proprietary Services – ensure all essential and contract services are maintained, and log on with FDNY RCC. Additional units may be made available for mutual aid.

Ambulance units shall respond to Mobilization Points identified by FDNY and are not to respond directly to any incident scene unless specifically directed to by the MCI Command structure. Ambulance units and/or EMS personnel will be dispatched from Mobilization Points to specific assignments as needed.

GENERAL OPERATING PROCEDURES

WEAPONS OF MASS DESTRUCTION PROCEDURE

INTRODUCTION

The purpose of this protocol is to set forth New York City Regional guidelines regarding Hazardous Materials and/or Weapons of Mass Destruction (Biological, Nuclear, Incendiary, Chemical, Explosive: B-NICE).

1. The safety of both crew and public is paramount. Do not endanger yourselves or others.
2. Patients must be decontaminated prior to being removed from the scene.
3. EMS personnel shall wear appropriate Personal Protective Equipment (PPE), as determined by the Incident Commander.
4. When a situation is identified where either the release of hazardous materials (HAZMAT), or the use of weapons of mass destruction (WMD) are suspected, ambulance units and/or EMS personnel shall:
   - Immediately notify 911 and agency dispatcher. Provide an initial scene survey report.
   - If not exposed or contaminated, immediately withdraw to a safe distance upwind.
   - If exposed or contaminated, isolate the unit and crew, and await decontamination instructions.
   - Operate within the Incident Command System and under FDNY's operational responsibility for the coordination of prehospital resources and patient care.
5. Only those resources specifically designated by the 911 FDNY incident command shall be initially utilized on-scene or within the immediate vicinity of the incident.
6. Ambulances not already on the scene shall report to an established mobilization or staging area as directed.
7. Any non-911 ambulance inadvertently responding to, or "flagged down" for such an event, will upon recognizing the situation as HAZMAT or WMD, immediately withdraw to a safe distance upwind and simultaneously notify 911 and their dispatcher.

GENERAL OPERATING PROCEDURES

SEVERE ACUTE RESPIRATORY SYNDROME

In the event that a competent authority determines that SARS or another severe communicable respiratory illness is being transmitted in the New York City region:

1. The safety of both the EMS crew and public is paramount. Do not endanger yourselves or others.
2. EMS personnel shall wear appropriate Personal Protective Equipment (PPE).
3. If possible, a surgical mask should be placed on the patient to contain droplets during coughing.
4. Oxygen delivery with a non-rebreather face mask may be used to provide oxygen support during transport.
5. In addition, **the following shall be implemented:**
   - Administration of all nebulized medications is **suspended;**
   - Endotracheal intubation should be **avoided**, if at all possible – utilize Bag Valve Mask when assisted ventilation is required.
   - Patients **ONLY** are to be transported in the ambulance; and
   - Healthcare facilities shall be notified **in advance** that they are receiving a patient with suspected SARS or other communicable respiratory illness.

NOTE: **This protocol shall not be utilized unless activated by NYC REMAC and/or the FDNY Office of Medical Affairs.**

GENERAL OPERATING PROCEDURES

ACUTE FEBRILE RESPIRATORY ILLNESS, INCLUDING INFLUENZA-LIKE-ILLNESS (ILI)

In the event that a competent authority determines that a severe communicable respiratory illness [acute febrile respiratory illness, including influenza-like-illness (ILI)] is being transmitted in the New York City region:

1. The safety of both the EMS crew and public is paramount. Do not endanger yourselves or others.
2. EMS personnel shall wear appropriate Personal Protective Equipment (PPE), which includes an N95 respirator, gloves and eye protection.
   - Fit-tested N-95 respirators, eye protection (goggles or face shields), and gowns should ALWAYS be worn by EMS personnel performing aerosol-generating procedures on patients with febrile respiratory illness
   - Aerosol-generating procedures include nebulized treatments, intubation, tracheal suctioning, and laryngoscopy performed on patients with acute febrile respiratory illness
3. If possible, a surgical mask should be placed on the patient to contain droplets during coughing.
4. Oxygen delivery with a non re-breather face mask may be used to provide oxygen support during transport.
5. In addition, **the following shall be implemented:**
   - Administration of nebulized (aerosolized) medications (e.g., Albuterol) may only be done via a nebulizer with a one-way valve or via a disposable metered dose inhaler (MDI) with spacer.
   - As an alternative, epinephrine IM (including via an epinephrine auto-injector for BLS providers) should be considered as a Medical Control Option.
   - Endotracheal intubation may continue (unless otherwise notified through a separate class order), but it is preferable to use a Bag Valve Mask when assisted ventilation is required.
   - **ONLY** the patient is to be transported in the ambulance (i.e., no other individuals besides the crew) unless the patient is a minor, in which case parents or guardians may accompany the patient, but should also wear a surgical mask.
   - When possible, an attempt should be made to notify healthcare facilities **in advance** that they are receiving a patient with suspected communicable respiratory illness.

NOTE: **This protocol shall not be utilized unless activated by NYC REMAC and/or the FDNY Office of Medical Affairs.**

Est. 1974

Regional Emergency Medical Advisory Committee Prehospital Treatment Protocols

© The Regional Emergency Medical Services Council of New York City, Inc. 2020

All rights are reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior permission of the publisher (The Regional Emergency Medical Services Council of New York City, Inc., 475 Riverside Drive, Room 1929, New York, New York 10115, 212-870-2301).

Printed in the United States

2020

Issued January 30, 2020, Implemented July 1, 2020

Acknowledgements

This first edition of the Regional Emergency Medical Advisory Committee (REMAC) of New York City Unified Prehospital Treatment Protocols is the culmination of the efforts of many individuals who have served on the Regional Emergency Medical Advisory Committee of New York City, the Medical Standards Committee and Protocol Committee. This document reflects the changing field of out-of-hospital emergency medicine and the continuous attempts of the emergency medical and trauma communities in all provider sectors (municipal, voluntary hospital, proprietary, and volunteer), acting in concert, to provide high-quality, state-of-the-art, out-of-hospital emergency medical care to emergently ill and injured adults and children in the New York City region.

The task of updating, editing, revising, and reconciling the Unified Protocols was accomplished by the following Committees and members:

NYC REMAC
Josef Schenker, MD, Chair
Bradley Kaufman, MD, 2nd Vice Chair
Jeffrey Rabrich, MD, 1st Vice Chair

Robert Ackerman, EMTP
Nikolaos Alexandrou, MD
Glenn Asaeda, MD
Barbara Aziz, EMTP
Paul Barbara, MD
Cindy Baseluos, MD
Dominick Battinelli, EMTP
Jonathan Berkowitz, MD
David Ben-Eli, MD
Cherisse Berry, MD
Joseph Bove, MD
Alison Burke
Grace Cacciola, EMTP
Reed Caldwell, MD
Wallace Carter, MD
Arthur Cooper, MD
Robert Crupi, MD
Matthew Fink, MD
William Fisher, MD
Christopher Graziano, MD
Dario Gonzalez, MD
Sean Graves, EMT
Laura Iavicoli, MD
Doug Isaacs, MD
Stuart Kessler, MD
Marc Kanter, MD
Yedidyah Langsam, PhD, EMTP
Samia McEachin
Lewis Marshall, JD, MD
Kevin Munjal, MD
Celia Quinn, MD, MPH
Michael Redlener, MD
Nathan Reisman, MD
Efrain Rendon, EMT
Anthony Shallash, MD
Timothy Styles, MD, MPH
Jessica van Voorhees, MD
Michael Vatch, EMTP
Kevin Ward, EMTP
Robert Winchell, MD
Peter Wyer, MD

Medical Standards Committee
David Ben-Eli, MD, Chair
Paul Barbara, MD, Vice Chair

Robert Ackerman, EMTP
Nicholas Alexandrou, MD
Glenn Asaeda, MD
Barbara Aziz, EMTP
Cindy Baseluos, MD
Joshua Bucklan, RN, EMTP
Grace Cacciola, EMTP
Reed Caldwell, MD
Wallace Carter, MD
Nail Cemalovic, MD
Arthur Cooper, MD
Robert Crupi, MD
Geoffrey Doughlin, MD
Madeline Fong, EMTP
Matt Friedman, MD
Robert Goldstein, EMTP
Dario Gonzalez, MD
Christopher Graziano, MD
Martin Grillo, EMTP
Doug Isaacs, MD
Harry Kopolvich, MD
Yedidyah Langsam, PhD, EMTP
Mordechai Lax, EMTP
Shi-Wen Lee, DO
David Lobel, MD
Lewis Marshall, MD, JD
Kevin Munjal, MD
Michael A. Redlener, MD
Anthony Shallash, MD
Rafael E. Torres, MD
Jessica van Voorhees, MD
Michael Vatch, EMTP
Jason Zimmerman, DO

Protocol Committee
Jessica van Voorhees, MD, Chair

Nicholas Alexandrou, MD
Barbara Aziz, EMTP
Paul Barbara, MD
David Ben-Eli, MD
Joshua Bucklan, EMTP
Grace Cacciola, EMTP
Scott Chiang, EMTP
Arthur Cooper, MD
Robert Crupi, MD
Eli Davis, EMTP
Marie Diglio, EMTP
Matt Friedman, MD
Sean Graves, EMT
Keith Herrera, EMTP
Doug Issacs, MD
Brad Kaufman, MD
Pamela Lai, MD
Yedidyah Langsam, PhD, EMTP
David Lobel, MD
Kevin Munjal, MD
Carol Ong, EMTP
Nathan Reisman, MD
Josef Schenker, MD
Meghan Williams, EMTP
Ben Zabar, MD
Pesach Zirkind, EMTP

The final editing was done by Josef Schenker, MD, Benjamin Zabar, MD, Pesach Zirkind, EMTP and Marie Diglio, EMTP.

Table of Contents

Associated REMAC Advisories:

2020-02 REMAC Advisory 2020 Protocol Revisions

Introduction

The Regional Unified Protocols of New York City include the Statewide Basic Life Support Adult and Pediatric Treatment Protocols as the current minimal standards for basic life support (BLS) delivered by Certified First Responders (CFR), and Emergency Medical Technicians (EMT) in New York State. Advanced Life Support (ALS) protocols have been included in the unified design to ensure a seamless transition from CFR through ALS care.

Advanced providers are also responsible for, and may implement, the Standing Orders indicated for BLS care. Protocols are listed for each provider level and STOP lines indicate the end of Standing Orders. Generally, BLS interventions should be completed before ALS interventions.

Numbered steps are used throughout this document. Protocols should be followed sequentially, using clinical judgement, and tasks should be performed as most appropriate for patient care.

The color-coded format of the protocols allows each level of EMS professional to easily follow the potential interventions that could be performed by level of certification.

CFR AND ALL PROVIDER LEVELS

1. Standing Order treatments start in this section, which applies to CFRs, and all higher levels of care.

CFR STOP

EMT

2. EMTs and Paramedics Standing Orders continue in this section after performing the treatments in the CFR .

EMT STOP

PARAMEDIC

3. This section of Standing Orders applies only to Paramedics, and should be performed after performing the CFR and EMT sections above it.

Paramedic STOP

MEDICAL CONTROL OPTIONS

1. These orders are typically available only for Paramedics.
   a. In some cases there will be orders for EMTs, these will be highlighted where they appear as applying to EMTs.

KEY POINTS / CONSIDERATIONS

1. This section applies to all providers, and may contain guidance, additional details, explanations, advisories, and appendices.
2. These protocols have been *Unified* to combine treatments for all Prehospital Emergency Medical Services provider levels in a single document.
   a. Each level provider should start from the top of any given protocol, and complete the treatments in the order listed. EMTs and Paramedics should complete the treatments for the lower provider levels before proceeding to the section for their level of care.
   b. Each provider level is formatted with a color-coded bar at the top, and a red **STOP** at the bottom indicating the end of Standing Orders for that provider level.

Pediatric Definition and Discussion

The period of human development from childhood to adulthood is a continuum with the transition occurring during puberty. Since the completion of this transition is not sharply demarcated and varies among individuals, it is difficult to set a precise age when childhood ends and adulthood begins. It follows that use of such a definition to determine when a pediatric or an adult protocol is to be used is also problematic.

The medical control agreement contained within these protocol document states, “providers are expected to utilize their best clinical judgment and deliver care and procedures according to what is reasonable and prudent for specific situations.” The determination of when to utilize an adult or pediatric protocol shall be no different and subject to the same Continuous Quality Improvement (CQI) review that is compulsory with any other aspect of prehospital emergency care.

As a general guideline for use with these protocols, the following definition has been established:

- **Pediatric protocols should be considered for patients who have not yet reached their 15th birthday**

General Cardiac Arrest Care (Non-Traumatic) (Adult)

CFR AND ALL PROVIDER LEVELS

1. Begin CPR as per AHA guidelines.
2. If patient is under **9 years of age**, see the Non-Traumatic Cardiac Arrest and Severe Bradycardia (Pediatric) protocol.
3. Apply an Automated External Defibrillator (AED), if available, with minimal disruption of CPR, until the AED is turned on.
4. Once an AED is applied, immediately turn the machine "On".
5. Analyze (do not perform CPR while the machine is analyzing).
6. Whenever the "NO SHOCK INDICATED" message appears, CPR should be performed for 2 minutes followed by AED voice prompts.
7. Until transport arrives, continue CPR, re-analyze every 2 minutes and shock as indicated.

CFR STOP

EMT

8. Request ALS assistance.
9. Transportation procedures should begin, after a total of three (3) cycles of CPR and AED analysis.

EMT STOP

Paramedic

10. Begin cardiac monitoring.
11. If an AED is in place, transition from AED to ALS monitor at the end of an AED analysis.
12. Analyze the cardiac rhythm, and commence with appropriate subprotocol for dysrhythmia management below:
    a. Ventricular Fibrillation / Pulseless Ventricular Tachycardia (Adult)
    b. Pulseless Electrical Activity (PEA) / Asystole (Adult)

    NOTE: In the event that the initial EKG rhythm changes, refer to the appropriate cardiac arrest sub-protocol. Complete Standing Orders without repetition of previously administered drugs and contact Online Medical Control for further orders.

Paramedic STOP

Key Points / Considerations

1. Minimize interruption in compressions for placement of a mechanical CPR device.
2. Do not delay beginning compressions to begin ventilations.
3. Do not delay ventilations to connect supplemental oxygen.
4. Adequate ventilation may require disabling the pop-off valve if the bag-valve mask unit is so equipped.
5. AED should be placed as soon as possible without interrupting compressions to do so.
6. Special considerations when applying pads:
    a. If a patient has a medication patch, it should be removed (use appropriate PPE).
    b. Prior to pad placement, the chest should be dry, and if needed, shave chest hair.
    c. Attach external chest pads.
    d. If the patient has a pacemaker, position the pads at least 1 inch away from the pacemaker device.

7. Artifact from vibrations in a moving ambulance may compromise the effectiveness of the AED.

Ventricular Fibrillation / Pulseless Ventricular Tachycardia (Adult)

Paramedic

1. Continue CPR and defibrillation cycles.
   a. Defibrillate using the maximum joule setting possible.
2. After second rhythm analysis, perform advanced airway management.
3. Intravascular access.
4. Administer Epinephrine 1 mg (10 ml of a 1:10,000 Solution) IV bolus.
5. If there is no change in the rhythm, administer Amiodarone 300 mg, IV bolus.
6. If there is no return of spontaneous circulation (ROSC) administer Epinephrine 1 mg (10 ml of a 1:10,000 solution) IV bolus, every 3 – 5 minutes.
7. After 20 minutes of ALS treatment, consider contacting Online Medical Control if contact has not already been made, for additional orders, or termination of resuscitation.

Paramedic STOP

Medical Control Options

If there is insufficient improvement in hemodynamic status:

1. If Ventricular Fibrillation or Pulseless Ventricular Tachycardia recurs, a repeat dose of Amiodarone 150 mg, IV bolus may be given.
2. Administer Sodium Bicarbonate 44-88 mEq IV bolus.
   a. Repeat doses of Sodium Bicarbonate 44 mEq, IV bolus, may be given every 10 minutes.
3. Administer Magnesium Sulfate 2 gm, IV bolus diluted in 10 ml of Normal Saline (0.9% NS), over 2 minutes.
4. In cases of suspected hyperkalemia or Calcium Channel Blocker overdose, administer Calcium Chloride ($CaCl_2$) 1 gm, **slowly**, IV bolus. Follow with a crystalloid fluid flush.

Key Points / Considerations

1. Do not interrupt compressions for placement of an advanced airway.
2. Maximum joule setting may vary depending on the defibrillator in use.
3. Calcium Chloride and Sodium Bicarbonate should be given in separate IV lines or separated by a flush of at least 20 ml of crystalloid fluid.

Pulseless Electrical Activity (PEA) / Asystole (Adult)

Paramedic

1. Continue CPR with minimal interruption.
2. For suspected tension pneumothorax, follow Appendix O (Needle Decompression of Tension Pneumothorax).
3. Perform advanced airway management.
4. Intravascular access.
5. Administer Epinephrine 1 mg (10 ml of a 1:10,000 Solution) IV bolus.
6. Obtain a blood glucose level.
   a. If the glucometer reading is below 60 mg/dL, administer up to 25 gm of Dextrose, IV bolus.
7. If there is no return of spontaneous circulation (ROSC), administer Epinephrine 1 mg (10 ml of a 1:10,000 solution), IV bolus, every 3-5 minutes.
8. After 20 minutes of ALS Standing Orders, consider contacting Online Medical Control if contact has not already been made, for additional orders, or termination of resuscitation.

Paramedic STOP

Medical Control Options

If there is insufficient improvement in hemodynamic status:

1. Administer Sodium Bicarbonate 44-88 mEq IV bolus.
   a. Repeat doses of Sodium Bicarbonate 44 mEq, IV bolus, may be given every 10 minutes.
2. In cases of suspected hyperkalemia or Calcium Channel Blocker overdose, administer Calcium Chloride ($CaCl_2$) 1 gm, **slowly**, IV bolus. Follow with a crystalloid fluid flush.
3. Crystalloid fluid, up to three (3) liters.

Key Points / Considerations

1. Do not interrupt compressions for placement of an advanced airway.
2. Consider the possibility of conditions masquerading as PEA/Asystole which require immediate treatment.
3. If the glucometer reading is above 60 mg/dL, Dextrose should be withheld.
4. Calcium Chloride and Sodium Bicarbonate should be given in separate IV lines or separated by a flush of at least 20 ml of crystalloid fluid.

Non-Traumatic Cardiac Arrest and Severe Bradycardia (Pediatric)

CFR AND ALL PROVIDER LEVELS

For infants and children in non – traumatic cardiac arrest, or infants and children under 9 years of age with a heart rate less than 60 beats per minute (severe bradycardia) and signs of inadequate central (proximal) perfusion (decompensated shock):

1. ***Bradycardia:*** A heart rate ***less*** than 60 beats per minute ***and*** signs of inadequate central perfusion (decompensated shock).
   a. Assist ventilation at a rate of 20 breaths per minute.
   b. Begin CPR, if the heart rate is not rapidly increasing following 30 seconds of assisted ventilation.
   c. Check for a pulse every 2 minutes.
2. ***If the Infant or Child is in cardiac arrest:***
   a. Immediately initiate CPR per AHA guidelines.
   b. If available, attach AED, analyze.
      i. Pediatric-capable AED pads and cables should be used if available and appropriate.
   c. Continue CPR until patient transported, or pulse returns at a rate greater than 60 beats per minute.
3. Continue assisted ventilation at a rate of 20 breaths per minute, once the heart rate is greater than 60 beats per minute.
4. Switch to high concentration mask or “blow by” oxygen once ALL of the following are true:
   a. The heart rate is greater than 100 beats per minute
   b. The respiratory rate is greater than 20 breaths per minute
   c. Central cyanosis resolves

CFR STOP

EMT

5. Request ALS assistance.
6. Transport, keeping child warm.

EMT STOP

Paramedic

7. Begin cardiac monitoring.
8. If in Ventricular Fibrillation or pulseless Ventricular Tachycardia:
   a. Immediately defibrillate at 4 joules/kg, using pads of appropriate size.
   b. Immediately resume CPR for 5 cycles while defibrillator is recharging.
9. If still in Ventricular Fibrillation or pulseless Ventricular Tachycardia:
   a. Immediately repeat defibrillation at 10 joules/kg, using pads of appropriate size.
   b. Immediately resume CPR for 5 cycles while defibrillator is recharging.
10. Perform Advanced Airway Management if less invasive methods of airway management are not effective.
11. During transport, or if transport is delayed:
    a. Intravascular access. (If two attempts at IV access are unsuccessful, obtain IO access.).
    b. Administer Epinephrine 0.01 mg/kg (0.1 ml/kg of a 1:10,000 solution) IV bolus.

c. If still in Ventricular Fibrillation or pulseless Ventricular Tachycardia:
    i. Immediately repeat defibrillation at 10 joules/kg, using paddles of appropriate size.
    ii. Immediately resume CPR for 5 cycles while the defibrillator is recharging.
    iii. Administer Amiodarone 5 mg/kg IV bolus.
d. Repeat Epinephrine 0.01 mg/kg (0.1 ml/kg of a 1:10,000 solution) IV bolus every 3 - 5 minutes.

Paramedic STOP

Medical Control Options

If there is insufficient improvement in hemodynamic status:

1. Repeat any of the above Standing Orders.
2. Administer Naloxone IV bolus:
    a. In patients two (2) years of age or older, 2 mg.
    b. In patients, less than two (2) years of age, 1 mg.
3. Administer Dextrose 0.5 mg/kg, IV bolus:
    a. Use 10% Dextrose in patients less than or equal to one (1) month of age.
    b. Use 25% Dextrose in patients greater than one (1) month of age and less than 15 years of age.
4. Administer Sodium Bicarbonate 1 mEq/kg, IV bolus.
5. If Torsades de Pointes is present, administer Magnesium Sulfate, 25 - 50 mg/kg IV bolus.
6. Crystalloid fluid, 20 ml/kg.

Key Points / Considerations

1. The IV dose of Epinephrine for pediatric patients is 0.01 mg/kg (0.1 ml/kg of a 1:10,000 solution).
2. Refer all weight based fluids/medications to a Length Based Dosing Device.
3. **GUIDELINES FOR INFANT AND CHILD RESUSCITATION:** Cardiopulmonary resuscitation in an infant is performed utilizing chest compressions with interposed ventilations in a ratio of 15:2 at a rate of 120 events (105 compressions, 15 ventilations) per minute.
4. Automated defibrillation should not be delayed or withheld for any reason.
5. If the defibrillator is unable to deliver the recommended dose, use the lowest available setting
6. Do not delay CPR to wait for the automated external defibrillator (AED).

Obstructed Airway (Adult)

CFR AND ALL PROVIDER LEVELS

1. If the patient is conscious and can breathe, cough, speak, or cry:
   a. Encourage coughing.
2. If the patient is unconscious or cannot breathe, cough, speak, or cry:
   a. Perform airway maneuvers or CPR, as per current AHA guidelines.
3. If airway obstruction is relieved:
   a. ABCs and vital signs.
   b. Airway management, and appropriate oxygen therapy.

CFR STOP

EMT

4. Request ALS assistance.
5. Transport.
6. Continue obstructed airway maneuvers enroute to the hospital until the foreign body is dislodged.

EMT STOP

Paramedic

7. Perform direct laryngoscopy, attempt to remove the foreign body with Magill Forceps.
8. Perform Advanced Airway Management.
9. If able to confirm intubation via direct visualization, but unable to ventilate:
   a. Note the Endotracheal Tube depth.
   b. Deflate the Endotracheal Tube cuff if using a cuffed tube.
   c. Advance the Endotracheal tube to its deepest depth.
   d. Return the Endotracheal Tube to its original depth.
   e. If using a cuffed tube, re-inflate the Endotracheal Tube cuff and attempt ventilation again.
   f. If unable to effectively ventilate the patient using the above maneuvers, immediately initiate transport.

Paramedic STOP

Obstructed Airway (Pediatric)

CFR AND ALL PROVIDER LEVELS

1. If the patient is conscious and can breathe, cough, speak, or cry:
   a. Encourage coughing.
2. If the patient is unconscious or cannot breathe, cough, speak, or cry:
   a. Perform airway maneuvers or CPR, as per current AHA guidelines.
3. If airway obstruction is relieved:
   a. ABCs and vital signs.
   b. Airway management, and appropriate oxygen therapy.

CFR STOP

EMT

4. Request ALS assistance.
5. Transport.
6. Continue obstructed airway maneuvers enroute to the hospital until the foreign body is dislodged.

EMT STOP

Paramedic

7. Perform direct laryngoscopy, attempt to remove the foreign body with Magill Forceps.
8. Perform Advanced Airway Management.
9. If able to confirm intubation via direct visualization, but unable to ventilate:
   a. Note the Endotracheal Tube depth.
   b. Deflate the Endotracheal Tube cuff if using a cuffed tube.
   c. Advance the Endotracheal tube to its deepest depth.
   d. Return the Endotracheal Tube to its original depth.
   e. If using a cuffed tube, re-inflate the Endotracheal Tube cuff and attempt ventilation again.
   f. If unable to effectively ventilate the patient using the above maneuvers, immediately initiate transport.

Paramedic STOP

Respiratory Distress / Failure / Acute Pulmonary Edema (Adult)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. If an obstructed airway is suspected, see the Obstructed Airway (Adult) protocol.
3. Airway management.
4. Administer oxygen.
5. Do **NOT** permit physical activity.
6. Place the patient in a position of comfort.

CFR STOP

EMT

7. For patients who are experiencing exacerbation of asthma or wheezing, see the Asthma / COPD / Wheezing (Adult) protocol.
8. Request Advanced Life Support assistance.
9. Initiate CPAP if available and if patient meets appropriate indication, as authorized by the service medical director (see Appendix P).

EMT STOP

Paramedic

10. Begin cardiac monitoring.
11. Intravascular access.
12. Monitor vital signs every 2 – 3 minutes.
13. For patients with acute pulmonary edema:
    a. Administer Nitroglycerin* Tablet 1/150 gr or Spray 0.4 mg, sublingually, every 5 minutes, as long as systolic blood pressure remains 100 mmHg or higher.

Paramedic STOP

Medical Control Options

1. Administer one of the following benzodiazepines for anxiolysis:
   a. Lorazepam 1-2 mg, IV/IN/IM bolus.
   b. Midazolam up to 5 mg, IV/IN/IM bolus.
2. Administer Furosemide 20-80 mg, IV bolus.

Key Points / Considerations

1. All patients who are in respiratory arrest must have ventilatory assistance unless a valid New York State Prehospital DNR Order and/or MOLST form is presented to the crew.
2. Monitor breathing continuously. Be alert for signs of hypoxia and/or increasing respiratory distress.
3. For adult patients with signs of on-going hypoxia, inability to adequately protect their airway, and / or exhibiting signs of inadequate respiration, assisted ventilations may be required. This should be done utilizing one of the following methods:
   a. Pocket mask with supplemental oxygen set at 10 – 15 liters/minute.
   b. Bag-valve-mask and reservoir with flow set at 10 – 15 liters/minute.
4. ***Drug Advisories:**
   a. **Nitroglycerin** – shall not be administered to patients who have used erectile dysfunction medications within the past 72 hours, unless otherwise directed by Online Medical Control.

Respiratory Distress / Failure / Arrest (Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs
2. Airway management.
   a. If an obstructed airway is suspected, see the Obstructed Airway (Pediatric) protocol.
3. Assess breathing:
   a. If respiratory distress is present:
      i. Administer oxygen and allow the patient to maintain a comfortable, upright position.
   b. If respiratory failure is present:
      i. Assist ventilations at a rate of 20 breaths per minute.
         1. Chest rise is the best indication of adequate ventilation in the pediatric patient.
         2. Do not over-inflate the lungs.
4. Keep the child warm.

CFR STOP

EMT

5. Request ALS assistance.
6. Transport, keeping the child warm.

EMT STOP

Paramedic

For patients in actual or impending respiratory arrest, or who are unconscious and cannot be adequately ventilated:

7. If overdose is suspected, refer to the Altered Mental Status (Adult and Pediatric) protocol.
8. Perform Endotracheal Intubation, if less invasive methods of airway management are not effective.
9. If a tension pneumothorax is suspected, perform Needle Decompression. (See Appendix O)

Paramedic STOP

Medical Control Options

If there is insufficient improvement in respiratory status:

1. Intravascular access. (Attempt IV access no more than twice.)

Key Points / Considerations

1. Respiratory Distress is characterized by:
   a. Increased respiratory effort ***without*** central cyanosis (anxiety, nasal flaring, or intercostal retractions).
2. Respiratory Failure is characterized by:
   a. Ineffective respiratory effort ***with*** central cyanosis (agitation, lethargy, severe dyspnea, labored breathing, bobbing, grunting, or marked intercostal and parasternal retractions).
3. Bradycardia is an ominous sign that indicates hypoxic cardiac arrest may be imminent.
4. High concentration oxygen should always be used in pediatric patients.
5. ***Do not*** allow the mask to press against the eyes.
6. ***Do not*** hyper-extend the neck.

7. Refer all weight based fluids/medications to a Length Based Dosing Device.
8. Tension pneumothorax in a child in respiratory arrest may develop after resuscitative efforts have begun.

Altered Mental Status (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. Assess the situation for potential or actual danger and establish a safe zone, if necessary.
2. If an underlying medical or traumatic condition causing an altered mental status is not apparent; the patient is fully conscious, alert, and able to communicate; and an emotional disturbance is suspected, see the Excited Delirium (Adult and Pediatric) protocol.
3. ABCs and vital signs.
4. Airway management, and appropriate oxygen therapy.
    a. If an overdose is strongly suspected, use high flow oxygen.
5. If an opioid overdose is suspected, and the patient's respiratory rate is less than 10/minute, Administer intranasal (IN) Naloxone, if available, via mucosal atomizer device (MAD):
    a. Adult patient:
        i. 1 mg/ml in each nostril for a total of 2 mg/2 ml.
    b. Pediatric Patient:
        i. 0.5 mg/0.5 ml in each nostril for a total of 1 mg/1 ml.
    c. If after 5 minutes, there is no improvement, administer a repeat dose of naloxone:
        i. Adult patient:
            1. 1 mg/ml in each nostril for a total of 2 mg/2 ml.
        ii. Pediatric Patient:
            1. 0.5 mg/0.5 ml in each nostril for a total of 1 mg/1 ml.

CFR STOP

EMT

6. Request ALS assistance.
7. A glucometer should be used to document blood glucose level prior to administration of glucose solution, fruit juice or non-diet soda.
    a. If the glucometer reading is above 60 mg/dL, withhold treatment for hypoglycemia.
8. For patients with a history of diabetes, who are conscious but confused and able to drink without assistance, then provide by mouth:
    a. A glucose solution
    b. Fruit juice
    c. Or non-diet soda
9. If an opioid overdose is suspected, and the patient's respiratory rate is less than 10/minute, Administer intranasal (IN) Naloxone, if available, via mucosal atomizer device (MAD):
    a. Adult patient:
        i. 1 mg/ml in each nostril for a total of 2 mg/2 ml.
    b. Pediatric Patient:
        i. 0.5 mg/0.5 ml in each nostril for a total of 1 mg/1 ml.
    c. If after 5 minutes, there is no improvement, administer a repeat dose of naloxone:
        i. Adult patient:
            1. 1 mg/ml in each nostril for a total of 2 mg/2 ml.
        ii. Pediatric Patient:
            1. 0.5 mg/0.5 ml in each nostril for a total of 1 mg/1 ml.
10. Transport.
11. Assess and monitor the Glasgow Coma Score.

a. Do not delay transport.

EMT STOP

Paramedic

12. Intravascular access.
13. If an opioid overdose is suspected, and the respiratory rate is less than 10/minute:
    a. For Adult patients administer Naloxone titrate to response in increments of 0.5 mg up to 4 mg IV/IN/IM.
    b. For pediatric patients administer Naloxone titrated to response in increments of 0.5 mg IV/IN/IM:
        i. In patients two (2) years of age or older, up to 2 mg.
        ii. In patients, less than two (2) years of age, up to 1 mg.
14. Administer Dextrose or Glucagon:
    a. For adult patients, administer up to 25 gm Dextrose IV bolus.
    b. For pediatric patients, administer Dextrose 0.5 gm/kg IV bolus.
        i. Use 10% Dextrose in patients less than or equal to one (1) month of age.
        ii. Use 25% Dextrose in patients greater than one (1) month of age and less than 15 years of age.
    c. In adult and pediatric patients if intravascular access is unavailable, administer Glucagon, 1 mg, IM/IN.
15. If there is still no change in mental status or it fails to improve significantly:
    a. Repeat administration of up to 25 gm Dextrose IV bolus.

Paramedic STOP

Medical Control Options

If there is still no change in mental status:

1. Repeat any of the above Standing Orders.

Key Points / Considerations

1. Consider underlying cause of AMS (e.g., trauma, medical, behavioral) and treat as necessary.
2. All suicidal or violent threats or gestures must be taken seriously.
    a. Utilize law enforcement personnel if the patient poses a danger to themselves, emergency personnel and/or others.
3. Do not administer any oral solutions to unconscious patients or to patients with head injuries.
4. Diabetic patients with a blood glucose level reading between 60 – 80 mg/dL may still be experiencing hypoglycemia.
    a. In the presence of such signs and symptoms, treat accordingly.
5. Refer all weight-based fluids/medications to a Length Based Dosing Device.
6. Each certification level provider may administer a maximum of two (2) Naloxone doses as described in their respective protocol sections.
7. All providers may substitute Naloxone Nasal Spray (Adult and Pediatric patients: 4 mg/0.1 ml in ONE nostril) for intranasal naloxone dose, if approved by agency medical director.

8. Relative Contraindications of Naloxone:
    a. Cardiopulmonary arrest
    b. Active seizure
    c. Evidence of nasal trauma, nasal obstruction and/or epistaxis

Anaphylaxis (Adult)

CFR AND ALL PROVIDER LEVELS

1. ABCs.
2. Airway management.
3. Administer oxygen.
4. Assess cardiac and respiratory status:
   a. If either is **abnormal (e.g. severe respiratory distress or shock)**:
      i. Assist the patient with administration of prescribed Epinephrine auto-injector.
      ii. If Epinephrine has not been prescribed, administer Epinephrine via auto-injector. (for CFR: Only if available and trained to do so.)
      iii. NOTE: Patients weighing more than 30 kg (66 lbs), use adult Epi-auto injector (0.3 mg); patients weighing less than 30 kg (66 lbs) use pediatric Epi-auto injector (0.15 mg).
5. Refer immediately to the Respiratory Distress / Failure / Acute Pulmonary Edema (Adult), Obstructed Airway (Adult), or Shock / Sepsis (Adult) protocols as appropriate.
6. If cardiac arrest occurs, refer immediately to the General Cardiac Arrest Care (Non-Traumatic) (Adult) protocol.

CFR STOP

EMT

7. Request ALS assistance.
   a. Do not delay transport for any reason, including waiting for a potential second dose of epinephrine.
8. Assess cardiac and respiratory status:
   a. If both are normal, initiate transport.
   b. If either is **abnormal (e.g. severe respiratory distress or shock)**:
      i. Administer Epinephrine as directed above. (Epinephrine may be administered IM using a syringe, if trained and approved by the agency medical director to do so.)
9. Initiate transport if not previously done.
10. Contact Online Medical Control for authorization to administer a second dose of Epinephrine IM, if needed and if available.
11. For wheezing, administer Albuterol Sulfate 0.083%, one (1) unit dose or 3 ml via nebulizer at a flow rate that will deliver the solution over 5 minutes to 15 minutes.
    a. If symptoms persist, Albuterol Sulfate 0.083%, one (1) unit dose or 3 ml via nebulizer at a flow rate that will deliver the solution over 5 minutes to 15 minutes, may be repeated twice for a total of three (3) doses.

EMT STOP

Paramedic

12. If the patient is exhibiting airway compromise:
    a. Perform Advanced Airway Management.
    b. Consider procedural sedation options, if appropriate. (see GOP: Prehospital Sedation.)

13. For patients with signs of shock OR history of anaphylaxis:

a. If not already given, administer Epinephrine 0.3 mg (0.3 ml of a 1:1,000 solution / 1 mg/ml), IM.
b. Intravascular access.
c. Crystalloid fluid, up to 3 liters, via a macro-drip.

14. For patients with NO Signs of shock, and who do not have a history of anaphylaxis:

a. Intravascular access.

15. Administer ONE of the following:
    a. Methylprednisolone 125 mg IV, slowly over 2 minutes.
       OR
    b. Dexamethasone, 12 mg IV, slowly over 2 minutes.
16. Administer Diphenhydramine* 50 mg IV/IM.
17. Administer Ipratropium Bromide 0.02% (1-unit dose of 2.5 ml), by nebulizer, in conjunction with the first three (3) doses of Albuterol Sulfate.
18. Monitor vital signs every 5 minutes.
19. Begin cardiac monitoring.

Paramedic STOP

Medical Control Options

1. **EMT:**
    a. Administration of a second dose of Epinephrine IM, if needed and if available.
        i. Patients weighing more than 30 kg (66 lbs), use adult Epinephrine (0.3 mg) IM.
        ii. Patients weighing less than 30 kg (66 lbs) use pediatric Epinephrine (0.15 mg) IM.
2. **Paramedic:**
    a. Repeat any of the above Standing Orders.
    b. For patients who remain in shock after the administration of crystalloid bolus, either by clinical symptoms or by persistent hypotension (mean arterial pressure less than 65 mmHg), see the Shock / Sepsis (Adult) protocol Medical Control Options for vasopressors.

Key Points / Considerations

1. Do not delay transport to the hospital.
2. Anaphylaxis can be a potentially life-threatening situation most often associated with a history of exposure to:
    a. An inciting agent/allergen (bee sting or other insect venom)
    b. Medications/drugs
    c. Foods such as peanuts, seafood, etc
3. Patients with an allergic reaction and signs of bronchospasm may require treatment for anaphylaxis.
4. Albuterol Sulfate and Ipratropium Bromide shall be mixed and administered simultaneously, for a maximum of three doses.
5. CFR administration of epinephrine via auto-injector must be reported to your agency's medical director as soon as possible.

6. The presence of any of the following symptoms characterizes the clinical findings that authorize and require treatment according to this protocol:
   a. Respiratory distress:
      i. Upper airway obstruction (Stridor)
      ii. Severe bronchospasm (wheezing)
   b. Cardiovascular collapse / hypotensive shock.
7. ***Drug Advisories:**
   a. **Diphenhydramine Hydrochloride** – has an atropine-like action and must be used with caution in patients with a history of increased intraocular pressure, hyperthyroidism, cardiovascular disease, and/or hypotension.

Anaphylaxis (Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs.
2. Airway management.
3. Administer oxygen.
4. Assess cardiac and respiratory status:
    a. If either is **abnormal (e.g. severe respiratory distress or shock)**:
        i. Assist the patient with administration of prescribed Epinephrine auto-injector.
        ii. If Epinephrine has not been prescribed, administer Epinephrine via auto-injector. (for CFR: Only if available and trained to do so.)
        iii. NOTE: Patients 9 years of age and older or weighing more than 30 kg (66 lbs), use adult Epi-auto injector (0.3 mg); patients younger than 9 years of age or weighing less than 30 kg (66 lbs) use pediatric Epi-auto injector (0.15 mg).
5. Refer immediately to the Respiratory Distress / Failure / Arrest (Pediatric), Obstructed Airway (Pediatric), or Shock / Sepsis (Pediatric) protocols as appropriate.
6. If cardiac arrest occurs, refer immediately to the /Non-Traumatic Cardiac Arrest and Severe Bradycardia (Pediatric) protocol.

CFR STOP

EMT

7. Request ALS assistance.
    a. Do not delay transport for any reason, including waiting for a potential second dose of epinephrine.
8. Assess cardiac and respiratory status:
    a. If both are normal, initiate transport.
        i. If either is **abnormal (e.g. severe respiratory distress or shock)**:
            1. Administer Epinephrine as directed above. (Epinephrine may be administered IM using a syringe, if trained and approved by agency medical director to do so.)
9. Initiate transport if not previously done.
10. Contact Online Medical Control for authorization to administer a second dose of Epinephrine IM, if needed and if available.
11. For wheezing, administer Albuterol Sulfate 0.083%, one (1) unit dose or 3 ml via nebulizer at a flow rate that will deliver the solution over 5 minutes to 15 minutes.
    a. If symptoms persist, Albuterol Sulfate 0.083%, one (1) unit dose or 3 ml via nebulizer at a flow rate that will deliver the solution over 5 minutes to 15 minutes, may be repeated twice for a total of three (3) doses.

EMT STOP

Paramedic

12. If the patient is exhibiting airway compromise:
    a. Perform Advanced Airway Management.
    b. Consider procedural sedation options, if appropriate. (see GOP: Prehospital Sedation.)

13. For patients with signs of shock OR history of anaphylaxis:

a. If not already given, administer Epinephrine (1:1,000 solution / 1 mg/ml) 0.01 mg/kg IM; max dose 0.3 mg.
b. Intravascular access.
c. Crystalloid fluid, 20 ml/kg (Maximum of 3 liters).

14. For patients with NO Signs of shock, and who do not have a history of anaphylaxis:

a. Intravascular access.

15. For patients over 2 years of age, administer ONE of the following:
    a. Methylprednisolone 2 mg/kg IV/IM. (Maximum dose is 125 mg.)
    OR
    b. Dexamethasone 0.6 mg/kg IV/IM. (Maximum dose is 12 mg.)
16. Administer Diphenhydramine*, 1 mg/kg IV/IM (maximum total dose is 50 mg).
17. Administer Ipratropium Bromide 0.02%, by nebulizer, in conjunction with the first three (3) doses of Albuterol Sulfate. Use the following doses of Ipratropium Bromide:
    a. For Children 6 years of age or older: one-unit dose of 2.5 ml.
    b. For children under 6 years of age: ½ unit dose of 2.5 ml (1.25 ml).
18. Monitor vital signs every 5 minutes.
19. Begin cardiac monitoring.

Paramedic STOP

Medical Control Options

1. EMT:

a. Administration of a second dose of Epinephrine IM, if indicated and if available.
    i. Patients 9 years of age and older or weighing more than 30 kg (66 lbs), use adult Epinephrine (0.3 mg) IM.
    ii. Patients younger than 9 years of age or weighing less than 30 kg (66 lbs) use pediatric Epinephrine (0.15 mg) IM.

2. Paramedic:

a. Repeat any of the above Standing Orders.
b. For patients less than 2 years old: Administer Dexamethasone 0.6 mg/kg IV/IM.
c. For patients who remain in shock after the administration of crystalloid bolus, either by clinical symptoms or by persistent hypotension (mean arterial pressure less than 65 mmHg), see the Shock / Sepsis (Pediatric) protocol Medical Control Options for vasopressors.

Key Points / Considerations

1. Do not delay transport to the hospital.
2. Anaphylaxis can be a potentially life-threatening situation most often associated with a history of exposure to:
    a. An inciting agent/allergen (bee sting or other insect venom)
    b. Medications/drugs
    c. Foods such as peanuts, seafood, etc
3. Patients with an allergic reaction and signs of bronchospasm may require treatment for anaphylaxis.
4. Albuterol Sulfate and Ipratropium Bromide shall be mixed and administered simultaneously, for a maximum of three doses.

5. CFR administration of epinephrine via auto-injector must be reported to your agency's medical director as soon as possible.
6. The presence of any of the following symptoms characterizes the clinical findings that authorize and require treatment according to this protocol:
    a. Respiratory distress:
        i. Upper airway obstruction (Stridor)
        ii. Severe bronchospasm (wheezing)
    b. Cardiovascular collapse / hypotensive shock.
7. Refer all weight based fluids/medications for pediatric patients to a Length Based Dosing Device.
8. ***Drug Advisories:**
    a. **Diphenhydramine Hydrochloride** – has an atropine-like action and must be used with caution in patients with a history of increased intraocular pressure, hyperthyroidism, cardiovascular disease, and/or hypotension.

Excited Delirium (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. Assess the scene for potential or actual danger and establish a safe zone, if necessary.
2. If the patient is agitated and presents a risk of physical harm to providers, public or self:
   a. Request law enforcement assistance.
   b. Attempt to verbally de-escalate the patient's condition.
3. If the patient continues to struggle while being physically restrained, request ALS assistance.
   a. Providers may participate in restraining a patient if a police officer requests assistance or when it becomes necessary for self-protection.
      i. Only the amount of force required to effectively restrain the patient may be used.
      ii. Only soft restraints, such as towels, triangular bandages, or commercially available soft medical restraints may be used by providers to restrain the patient to the stretcher, and only if necessary to protect the patient and others from harm.
4. ABCs and vital signs.
5. Airway management, and appropriate oxygen therapy.

CFR STOP

EMT

6. Determine Blood Glucose Level. If reading is below 60 mg/dL, refer to the Altered Mental Status (Adult and Pediatric) protocol.
7. Transport.

EMT STOP

Paramedic

8. Prehospital Chemical Restraint Procedure (For Adult Patients Only):
   a. If patient continues to struggle while being physically restrained:
      i. Administer Midazolam 10 mg IM/IN (IM is the preferred route).
   b. If the patient is not adequately sedated, contact Online Medical Control.
9. After adequate sedation:
   a. Intravascular access.
   b. Crystalloid fluid, up to 1 liter via macro-drip.
   c. Begin cardiac monitoring.
   d. Begin Pulse Oximetry monitoring.
   e. Obtain a blood glucose level. If the glucometer reading is below 60 mg/dL:
      i. Administer up to 25 gm of Dextrose, IV bolus.
      ii. If intravascular access is unavailable, administer Glucagon, 1 mg, IM/IN.

Paramedic STOP

Medical Control Options

If the patient continues to struggle while being physically restrained:

Option	Class	Medication	Route	Dose
1.	Dissociative Agents	Ketamine	IntraMuscular	2-4 mg/kg
			IntraNasal	1-2 mg/kg
2.	IM Benzodiazepines	Midazolam	IntraMuscular	Up to 10 mg
		Lorazepam	IntraMuscular	4 mg
3.	IV or IN Benzodiazepines	Diazepam	IV bolus	5-10 mg
		Midazolam	IV Bolus IntraNasal	Up to 5 mg
		Lorazepam	IV bolus IntraNasal	2 mg

Key Points / Considerations

1. Agitated patients must be presumed to have an underlying medical or traumatic condition.
2. All suicidal or violent threats or gestures must be taken seriously. Utilize law enforcement personnel if the patient poses a danger to themselves, emergency personnel, and/or others.
3. Diabetic patients with a blood glucose level reading between 60 – 80 mg/dL may still be experiencing hypoglycemia.
   a. In the presence of such signs and symptoms, treat accordingly.
4. If the patient is agitated, the preferred route of choice is IM.
   a. Once the patient is adequately sedated, IV access should be established in the event additional sedation is necessary.
5. Patient must NOT be transported in a face-down position.
6. If the patient is in police custody and/or has handcuffs on, a police officer should accompany the patient in the ambulance to the hospital. The provider must have the ability to immediately remove any mechanical restraints that hinder patient care at all times.

Suspected Myocardial Infarction (Adult)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management, and appropriate oxygen therapy.
3. Do not permit physical activity.
4. Place patient in a position of comfort.
5. Administer 324 mg chewable Aspirin*, orally (PO), if trained to do so.

CFR STOP

EMT

6. Request ALS assistance, Do NOT delay transport.
7. Begin transport procedures.
   a. If ALS arrival time exceeds transport time or is unknown, the patient should be transported.
8. During transport or while awaiting ALS:
   a. If the patient requests, assist the patient with their prescribed Nitroglycerin*, up to 3 doses, 5 minutes apart, provided the patient's systolic BP remains above 120 mmHg.

EMT STOP

Paramedic

9. Begin cardiac monitoring.
10. Perform, record and evaluate 12 lead EKG.
11. Initiate transport.
12. Intravascular access.
13. Monitor vital signs every 2-3 minutes.
14. If chest pain persists, administer a Nitroglycerin* Tablet 1/150 grain or Spray 0.4 mg, sublingually, every 5 minutes, as long as systolic blood pressure remains 100 mmHg or higher.

Paramedic STOP

Key Points / Considerations

1. Acute coronary syndrome is a term used for any condition brought on by sudden reduced blood flow to the heart.
2. Treat an unstable dysrhythmia prior to initiation of a 12 lead EKG.
3. For patients exhibiting ST-elevation, refer to General Operating Procedures – Transportation Decisions and Procedures: STEMI Patients
4. Aspirin should NOT be enteric coated.
5. ***Drug Advisories:**
   a. **Aspirin** – should **not** be administered to patients with known hypersensitivity to aspirin. Gastrointestinal complaints are **not** a contraindication.
   b. **Nitroglycerin** – shall not be administered to patients who have used erectile dysfunction medications within the past 72 hours, unless otherwise directed by Online Medical Control.

Dysrhythmia (Adult)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management, and appropriate oxygen therapy.
3. Begin CPR if patient is in cardiac arrest (see the General Cardiac Arrest Care (Non-Traumatic) (Adult) protocol).

CFR STOP

EMT

4. Request ALS assistance.
5. Transport.

EMT STOP

Paramedic

6. Begin cardiac monitoring.
7. Treat specific dysrhythmias, according to the following protocols:
   a. Atrial fibrillation / Atrial flutter (Adult)
   b. Bradydysrhythmia (Adult)
   c. Supraventricular Tachycardia (Adult)
   d. Ventricular Tachycardia with a Pulse / Wide Complex Tachycardia of Uncertain Type (Adult)
8. Intravascular access.
9. Monitor vital signs every 2-3 minutes.

Paramedic STOP

Key Points / Considerations

1. Stable Dysrhythmia:
   a. Any adult patient having a dysrhythmia **NOT** associated with signs of hypoperfusion.
   b. Any pediatric patient having a dysrhythmia **NOT** associated with depressed mental status and absent peripheral pulses and/or hypotension, i.e., decompensated shock.
2. Unstable dysrhythmia:
   a. Any adult patient having a dysrhythmia associated with:
      i. Hypotension (systolic blood pressure < 90 mmHg), i.e., decompensated shock.
      ii. Altered mental status (e.g., agitation, confusion).
   b. Any pediatric patient having a dysrhythmia associated with:
      i. Depressed mental status and absent peripheral pulses.
      ii. Hypotension (systolic blood pressure < 70 mmHg + [2 x age in years]), i.e., decompensated shock.
3. Consider Procedural Sedation prior to any electrical therapy for conscious patients.
4. When using a monitor for which the maximum joule setting is less than 360 joules, utilize biphasic equivalent synchronized energy setting.
5. Further repeated attempts at synchronized cardioversion should be performed using the monitor's maximum setting if device cannot deliver more than 200 joules in place of the consecutive joule settings.

Atrial Fibrillation / Atrial Flutter (Adult)

Paramedic

Unstable Atrial Fibrillation or Atrial Flutter:

1. Perform synchronized cardioversion using 100 joules.
2. Repeat synchronized cardioversion as necessary using 200, 300, 360 joules.

Paramedic STOP

Medical Control Options

1. If synchronized cardioversion fails to convert the dysrhythmia, or the patient has stable Atrial Fibrillation or Atrial Flutter (generally with a heart rate of 150 beats per minute or higher):
   a. Administer Diltiazem* 0.25 mg/kg IV bolus, slowly over 2 minutes, monitoring blood pressure continuously.
   b. Administer Amiodarone 150 mg, diluted in 100 ml D_5W over 10 minutes IV infusion.

Key Points / Considerations

1. **Refer to considerations above in the Dysrhythmia (Adult) protocol.**
2. ***Drug Advisories:**
   a. **Diltiazem** - must be used with caution in patients with liver or kidney disease, congestive heart failure, atrioventricular conduction abnormalities, and/or hypotension. Online Medical Control should be alerted to these conditions, and the dose should be reduced to **half** the normal dose.

Bradydysrhythmia (Adult)

Paramedic

If the patient has a ventricular rate of less than 60 beats/minute and signs of decompensated shock:

1. Administer Atropine Sulfate 0.5 mg, IV bolus.
2. Begin Transcutaneous Pacing.

Paramedic STOP

Medical Control Options

If there is insufficient improvement in cardiac status:

1. Repeat Atropine Sulfate 0.5 mg IV bolus, every 3-5 minutes. (Maximum total dosage is 3 mg).
2. Administer Dopamine 2 mcg/kg/min, IV infusion.
   a. Infusion rate may be increased until the desired therapeutic effects are achieved or adverse effects appears. (Maximum rate is 10 mcg /kg/min, IV infusion).
3. In cases of suspected hyperkalemia or Calcium Channel Blocker overdose, administer Calcium Chloride ($CaCl_2$) 1 gm, **slowly**, IV bolus. Follow with a crystalloid fluid flush.
4. For pre-existing acidosis, administer Sodium Bicarbonate 44-88 mEq IV bolus.
   a. Repeat Sodium Bicarbonate 44 mEq, IV, every 10 minutes.

Key Points / Considerations

1. **Refer to considerations above in the Dysrhythmia (Adult) protocol.**
2. Calcium Chloride and Sodium Bicarbonate should be given in separate IV lines or separated by a flush of at least 20 ml of crystalloid fluid.

Supraventricular Tachycardia (Adult)

Paramedic

1. For patients with unstable SVT:
   a. Perform synchronized cardioversion using 100 joules.
   b. Repeat synchronized cardioversion as necessary using 200, 300, 360 joules.
2. For patients with stable SVT:
   a. Administer Adenosine 6 mg, IV bolus, rapidly, followed by a crystalloid fluid flush.
   b. Observe EKG monitor for 1-2 minutes for evidence of cardioversion.
   c. If there is no change, administer Adenosine 12 mg, IV bolus, rapidly, followed by a crystalloid fluid flush.
   d. If there is no change, repeat Adenosine 12 mg, IV bolus, rapidly, followed by a crystalloid fluid flush.

Paramedic STOP

Medical Control Options

If Adenosine fails to convert the dysrhythmia:

1. If complex width is narrow and the patient is stable:
   a. Administer Diltiazem* 0.25 mg/kg IV, slowly over 2 minutes, monitoring blood pressure continuously.
2. If complex width is narrow and the patient is unstable:
   a. Perform synchronized cardioversion using 100 joules.
   b. Repeat synchronized cardioversion as necessary using 200, 300, 360 joules.
3. Administer Amiodarone 150 mg, diluted in 100 ml D_5W over 10 minutes IV Infusion.

Key Points / Considerations

1. **Refer to considerations above in the Dysrhythmia (Adult) protocol.**
2. ***Drug Advisories:**
   a. **Diltiazem** - must be used with caution in patients with liver or kidney disease, congestive heart failure, atrioventricular conduction abnormalities, and/or hypotension. Online Medical Control should be alerted to these conditions, and the dose should be reduced to **half** the normal dose.

Ventricular Tachycardia with a Pulse / Wide Complex Tachycardia of Uncertain Type (Adult)

Paramedic

1. For patients with Unstable Ventricular Tachycardia with a pulse:
   a. Perform synchronized cardioversion using 100 joules.
   b. Repeat synchronized cardioversion as necessary using 200, 300, 360 joules.
2. Administer Amiodarone 150 mg, diluted in 100 ml D_5W over 10 minutes IV infusion.

Paramedic STOP

Medical Control Options

If Amiodarone fails to convert the dysrhythmia:

1. Perform synchronized cardioversion using 100 joules.
2. Synchronized cardioversion may be repeated as necessary using 200, 300, 360 joules.
3. Administer Magnesium Sulfate 2 gm, IV bolus, diluted in 10 ml of Normal Saline (0.9% NS), over 2 minutes.
4. In cases of suspected hyperkalemia or Calcium Channel Blocker overdose, administer Calcium Chloride ($CaCl_2$) 1 gm, **slowly**, IV bolus. Follow with a crystalloid fluid flush.
5. For pre-existing acidosis, administer Sodium Bicarbonate 44-88 mEq IV bolus.
   a. Repeat Sodium Bicarbonate 44 mEq, IV, every 10 minutes.

Key Points / Considerations

1. **Refer to considerations above in the Dysrhythmia (Adult) protocol.**
2. Calcium Chloride and Sodium Bicarbonate should be given in separate IV lines or separated by a flush of at least 20 ml of crystalloid fluid.

Obstetric Emergencies

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management.
3. Administer oxygen.
4. If the mother is having contractions, has the sensation of a bowel movement, or the urge to push – check for crowning. If there is crowning, prepare for imminent delivery.
5. Place the patient in a LEFT lateral recumbent position.
6. If the patient is lying on an extrication device, elevate the right side of the extrication device a few inches.
7. Assess for shock and treat, if appropriate (see the Shock / Sepsis (Adult) protocol).
8. If delivery has begun do not permit mother to go to the bathroom.
9. If delivery has begun, see the Emergency Childbirth protocol.

CFR STOP

EMT

10. **Special Considerations:**
    - **a.** For any Special Considerations listed above, request ALS assistance.
    - b. If seizures occur, see the Seizures (Adult) protocol.
        - i. **Hypertension:**
            1. Keep the mother calm; avoid loud noises, and dim lighting.
        - ii. **Seizures:**
            1. If seizures occur, see the Seizures (Adult) protocol.
        - iii. **Imminent Delivery:**
            1. Do not permit mother to go to the bathroom.
            2. If delivery has begun, see the Emergency Childbirth protocol.
        - iv. **Post-Partum Hemorrhage:**
            1. Massage the mother's abdomen over the uterus.
            2. If available, place a sanitary napkin over the vaginal opening.
11. Transport.

EMT STOP

Paramedic

For patients with severe pre-eclampsia, eclampsia or post-partum hemorrhage:

12. Intravascular access.

Paramedic STOP

Medical Control Options

1. For severe pre-eclampsia:
    a. Administer Magnesium Sulfate 2 gm, IV infusion diluted in 50 – 100 ml of Normal Saline (0.9% NS) over 10 – 20 minutes.
2. For eclampsia (seizure):
    a. Administer Magnesium Sulfate 2-4 gm, IV infusion diluted in 50 - 100 ml of Normal Saline (0.9% NS), over 10 – 20 minutes. (Maximum total dose is 4 grams)

Key Points / Considerations

1. Consider Supine Hypotension Syndrome as a cause of shock.

2. Severe pre-eclampsia is characterized by any one of the following:
    a. Systolic blood pressure of 160 mmHg or higher
    b. Diastolic blood pressure of 110 mmHg or higher
    c. Severe headaches
    d. Visual disturbances
    e. Acute pulmonary edema
    f. Upper abdominal tenderness

Emergency Childbirth

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management.
3. Assess the mother for shock and treat, if appropriate.
4. If the mother is in active labor, visually inspect the perineum (area between the vagina and the anus) for bulging or crowning.
5. If delivery is imminent, proceed as follows:
   a. Administer oxygen if there are any complications with delivery.
   b. Apply gentle pressure against the neonate's head to prevent tearing of the perineum.
      i. **DO NOT** apply pressure to the soft spots (fontanels).
   c. As the head presents, clear the airway of secretions using the bulb syringe, as follows:
      i. Depress the bulb syringe prior to insertion
      ii. First suction the mouth, insert no more than 1 ½ inches
      iii. Then suction the nose, insert no more than ½ inch
      iv. Suctioning is critical
   d. Support the head and thorax as the neonate delivers.
      i. Momentarily position the head lower than the body to allow for drainage.
         1. Repeat suctioning as necessary prior to spontaneous or stimulated respirations.
   e. Gently guide the head downward until the shoulder appears, The other shoulder is delivered by gentle upward traction.
   f. Thoroughly but rapidly, dry the newborn with a clean, dry towel.
   g. Monitor the neonate's airway.
      i. To stimulate breathing, first rub the lower back, and then gently snap the soles of the feet.
         1. **Spontaneous respirations should begin within 30 seconds after birth.**
   h. Resuscitate if necessary (see the Neonatal Care / Resuscitation protocol).
   i. If proper equipment is available:
      i. Place the first clamp 8 to 10 inches from the neonate Place the second clamp 3 inches from the first clamp toward the mother.
      ii. Cut between the clamps and check both ends for bleeding.
      iii. If the equipment is not available, tie the umbilical cord with gauze at the same landmarks, but **DO NOT** cut the cord.
   j. If continuous bleeding is seen from either end of the cord, add a second clamp to the end that is bleeding.
   k. Wrap the infant in a dry, warm blanket or towels and a layer of foil or plastic wrap over the layer of blankets or towels or use a commercial-type infant swaddler, if one is provided with the OB kit. Do not use foil alone.
   l. Cover the infant's scalp with an appropriate warm covering.
   m. Re-assess the mother for shock and treat, if appropriate (see the Shock / Sepsis (Adult) protocol).
   n. If post-partum hemorrhage occurs, see the Obstetric Emergencies protocol.
   o. For care of the neonate, see the Neonatal Care / Resuscitation protocol.

CFR STOP

EMT

6. If delivery is imminent, request ALS assistance.
   a. ALS assistance **must** be requested for premature or multiple births, or if the amniotic fluid is meconium stained.
7. Transport.
   a. Do not delay transport waiting for the placenta to deliver.
   b. If miscarriage or stillbirth occurs, bring all expelled material to the hospital with the mother. If there is any doubt about viability, begin neonatal resuscitation.
8. **Special Considerations:**
   a. **Abnormal Presentations:**
      i. **Breech Presentation:**
         1. Place the mother in a face-up position with hips elevated.
         2. Support the thorax of the neonate as it delivers.
         3. A full delivery may occur.
         4. If the head does not deliver immediately:
            a. Place sterile, gloved fingers between the neonate's face and the wall of the birth canal to establish an air passageway.
            b. This position must be maintained until the head delivers.
      ii. **Prolapsed cord:**
         1. Place the mother in a face-up position with hips elevated.
         2. If the cord is not pulsating:
            a. Place sterile, gloved fingers into the birth canal and push the head back 1 to 2 inches towards the cervix until the cord begins to pulsate.
         3. Wrap saline-moistened, sterile dressings around the cord.
            a. Do not attempt to insert the cord back into the uterus. The cord should be continuously monitored for the presence of a pulse.
   b. **Complications During Birth:**
      i. **Cord Around the Neck:**
         1. If the cord is loose, gently slip the cord over the neonate's head.
         2. If this is not possible, immediately place 2 clamps on the cord and cut between them.
      ii. **Amniotic Sac Not Ruptured:**
         1. Immediately remove the sac from around the face using sterile, gloved fingers only.
      iii. **Wedged Shoulders:**
         1. Guide the head downward to aid in the delivery of the upper shoulder.
      iv. **Multiple Births:**
         1. Deliver each multiple birth according to the protocol for Emergency Childbirth, making sure to tie each umbilical cord between births.
         2. Clamp and cut the cord of the first neonate prior to the next birth.
         3. If the second birth does not occur within 10 minutes, begin transport.

EMT STOP

Paramedic

Paramedic STOP

Key Points / Considerations

1. Consider supine hypotension syndrome as a cause of shock.
2. Neonate's are subject to rapid heat loss and must be kept warm and dry.

Neonatal Care / Resuscitation

CFR AND ALL PROVIDER LEVELS

1. For Neonates: Minutes to 24 hours old.
2. Thoroughly but rapidly, dry the neonate with a clean, dry towel.
3. ABCs and vital signs.
4. Airway management.
5. Suction the mouth, and then nose using a bulb syringe.
6. If the infant is not breathing spontaneously or not crying vigorously:
   a. Gently rub the infant's lower back
   b. Gently tap the bottom of the infant's feet
7. a. Begin resuscitation if the neonate has any of the following:
      i. Persistent central cyanosis (longer than 15 – 30 seconds)
      ii. Respiratory rate less than 30 breaths per minute
      iii. Heart rate between 60 – 100 beats per minute
   b. Clear the infant's airway by suctioning the mouth and nose gently with a bulb syringe.
   c. Assist ventilations at a rate of 30 – 60 breaths per minute.
8. Start CPR immediately if the neonate has either one of the following conditions:
   a. A heart rate less than 60 beats per minute
   b. Cardiac arrest
9. Stop CPR and begin assisted ventilation at a rate of 30 – 60 breaths per minute once the heart rate is greater than 100 beats per minute.
   Note: Perform chest compressions with assisted ventilations at a 3:1 compression to ventilation ratio.
10. Switch to high concentration mask or "blow by" oxygen once all of the following are present:
    a. Respiratory rate is greater than 30 breaths per minute,
       AND
    b. Heart rate is greater than 100 beats,
       AND
    c. Central cyanosis disappears.
11. Monitor the umbilical cord for bleeding.
12. Wrap the infant in a dry, warm blanket or towels and a layer of foil or plastic wrap over the layer of blankets or towels or use a commercial-type infant swaddler, if one is provided with the OB kit. Do not use foil alone.

CFR STOP

EMT

13. Determine the APGAR Score at 1 and 5 minutes after delivery (see Appendix K).
14. Request ALS assistance if beginning neonatal resuscitation.
15. Transport, keeping the neonate warm.

EMT STOP

Paramedic

16. If CPR has been initiated, and the heart rate remains less than 60 beats per minute and not rapidly increasing after 30 seconds of CPR:

a. Perform Endotracheal Intubation.

17. During transport, or if transport is delayed:
    a. If the heart rate remains less than 60 beats per minute:
        i. Intravascular access. (Attempt IV access no more than twice.)
        ii. Administer Epinephrine 0.01 mg/kg (0.1 ml/kg of a 1:10,000 solution) IV, every 3 – 5 minutes.
        iii. Obtain a blood glucose level.
            1. If the glucometer reading is below 40 mg/dL, administer Dextrose 10% 5 ml/kg IV via syringe ***NOT*** via infusion.
        iv. Crystalloid fluid, 10 ml/kg.

Paramedic STOP

Key Points / Considerations

1. Cardiopulmonary resuscitation in a neonate is performed utilizing chest compressions with interposed ventilations at a ratio 3:1 at a rate of 120 (90 compressions, 30 ventilations) per minute.
2. Refer all weight based fluids/medications to a Length Based Dosing Device.
3. Each ventilation should be given gently, over one second per respiratory cycle, assuring that the chest rises with each ventilation.
4. Neonates are subject to rapid heat loss and must be kept warm and dry.
5. **Do not delay transport or resuscitation in order to obtain an APGAR Score.**

Asthma / COPD / Wheezing (Adult)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
   a. If patient exhibits signs of imminent respiratory failure, refer to the Respiratory Distress / Failure / Acute Pulmonary Edema (Adult) protocol.
2. Airway management.
3. Administer oxygen.
4. Limit the patient's physical activity.
5. Place the patient in a position of comfort.
6. If the patient is prescribed albuterol (either by inhaler or nebulizer), and they have their albuterol with them, assist them in taking their albuterol (if trained to do so).

CFR STOP

EMT

7. Assess the following prior to administration of the first nebulized bronchodilator treatment:
   a. Vital signs
   b. Patient's ability to speak in complete sentences
   c. Accessory muscle use
8. Administer Albuterol Sulfate 0.083%, in one (1) unit dose or 3 ml via nebulizer at a flow rate that will deliver the solution over 5 to 15 minutes.
   a. Do not delay transport to complete medication administration.
9. Begin transport.
10. After beginning transport; albuterol Sulfate 0.083%, in one (1) unit dose or 3 ml via nebulizer at a flow rate that will deliver the solution over 5 to 15 minutes, may be repeated twice for a total of three (3) doses if necessary.
11. For patients in severe respiratory distress or shock:
    a. Request ALS assistance.
    b. Administer Epinephrine, 0.3 mg (one dose only) IM.
12. Initiate CPAP if available and indicated, as authorized by the service medical director (see Appendix P).

EMT STOP

Paramedic

13. Administer Ipratropium Bromide 0.02% (1-unit dose of 2.5 ml), by nebulizer, in conjunction with the first three (3) doses of Albuterol Sulfate.
14. In patients with severe respiratory distress, respiratory failure, and/or decreased breath sounds:
    a. If not already administered, administer Epinephrine, 0.3 mg IM.
15. Continue administration of Albuterol Sulfate 0.083% (one-unit dose of 3 ml) by nebulizer until the patient shows improvement.

16. For patients with severe respiratory distress:
    a. Intravascular access.
    b. In patients with a history of dysrhythmia or cardiac disease: Begin cardiac monitoring.
    c. In patients whose symptoms are NOT suggestive of chronic obstructive pulmonary disease:
        i. Administer Magnesium Sulfate, 2 gm, IV infusion, diluted in 50-100 ml of Normal Saline (0.9% NS), over 10-20 minutes.
17. For patients with severe respiratory distress, administer one parenteral steroid medication:
    a. For Adult patients:
        i. Methylprednisolone 125 mg IV/IM.
        OR
        ii. Dexamethasone, 12 mg IV/IM.

Paramedic STOP

Medical Control Options

EMT & Paramedic:

1. Administer a second dose of Epinephrine 0.3 mg (0.3 ml of a 1:1,000 solution), IM if available and indicated.

Key Points / Considerations

1. Patients who require supplemental oxygen should receive high concentration oxygen via a non-rebreather mask set at 10-15 liters/minute:
    a. The reservoir must remain at least 1/3 full following inspiration.
    b. If a mask is not tolerated by the patient, a nasal cannula set at 6 liters/minute should be used and such use properly documented.
    c. There is no reason to withhold high concentration of oxygen when required in adult patients.
    d. Patients who are chronically maintained on oxygen and do not require high concentration oxygen shall be administered oxygen at their prescribed rate of flow.
2. Patients who need assisted ventilation may present with any one of the following:
        i. On-going hypoxia
        ii. Inability to adequately protect their airway
        iii. And/or exhibiting signs of inadequate respiration
    b. Utilize one of the following methods:
        i. Pocket mask with supplemental oxygen set at 10-15 liters/minute.
        ii. Bag-valve-mask and reservoir with supplemental oxygen set at 10-15 liters/minute.
3. Albuterol Sulfate and Ipratropium Bromide shall be mixed and administered simultaneously, for a maximum of three doses.
4. Do not delay transport to administer additional nebulized bronchodilator nebulizer treatments.
5. Epinephrine should be used with caution in patients with COPD.
6. A silent chest is an ominous sign that indicates respiratory failure and arrest are imminent.

Asthma / Wheezing (Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
   a. If patient exhibits signs of imminent respiratory failure, refer to the Respiratory Distress / Failure / Arrest (Pediatric) protocol.
2. Airway management
3. Administer oxygen.
4. Limit the patient's physical activity.
5. Place the patient in a position of comfort.
6. If the patient is prescribed albuterol (either by inhaler or nebulizer), and they have their albuterol with them, assist them in taking their albuterol (if trained to do so).

CFR STOP

EMT

7. Assess the following prior to administration of the first nebulized bronchodilator treatment:
   a. Vital signs
   b. Patient's ability to speak in complete sentences
   c. Accessory muscle use
8. Administer Albuterol Sulfate 0.083%, in one (1) unit dose or 3 ml via nebulizer at a flow rate that will deliver the solution over 5 to 15 minutes.
   a. Do not delay transport to complete medication administration.
9. Begin transport.
10. After beginning transport; albuterol Sulfate 0.083%, in one (1) unit dose or 3 ml via nebulizer at a flow rate that will deliver the solution over 5 to 15 minutes, may be repeated twice for a total of three (3) doses if necessary.
11. For patients in severe respiratory distress or shock:
    a. Request ALS assistance.
    b. Administer Epinephrine (one dose only) IM:
       i. For patients 9 years of age and older or weighing more than 30 kg (66 lbs).
          1. Adult Epinephrine (0.3 mg) IM.
       ii. For patients younger than 9 years of age or weighing less than 30 kg (66 lbs).
          1. Pediatric Epinephrine (0.15 mg) IM.

EMT STOP

Paramedic

12. Administer Ipratropium Bromide 0.02%, by nebulizer, in conjunction with the first three (3) doses of Albuterol Sulfate. Use the following doses of Ipratropium Bromide:
    a. For children 6 years of age or older: one-unit dose of 2.5 ml.
    b. For children under 6 years of age: ½ unit dose of 2.5 ml (1.25 ml).
13. In patients with severe respiratory distress, respiratory failure, and/or decreased breath sounds:
    a. If not already administered, give Epinephrine 0.01 mg/kg (0.01 ml/kg of a 1:1,000 solution), IM. Maximum dose is 0.3 mg.
14. Continue administration of Albuterol Sulfate 0.083% (one-unit dose of 3 ml) by nebulizer until the patient shows improvement. Maximum total of three (3) doses.

15. For patients over 2 years of age with severe respiratory distress, administer Dexamethasone 10 mg IV/IM.

Paramedic STOP

Medical Control Options

EMT:

1. Administer a second dose of Epinephrine IM.
   a. Patients 9 years of age and older or weighing more than 30 kg (66 lbs), use adult Epinephrine (0.3 mg).
   b. Patients younger than 9 years of age or weighing less than 30 kg (66 lbs) use pediatric Epinephrine (0.15 mg).

Paramedic:

2. **During transport, or if transport is delayed; if the patient develops or remains in severe respiratory distress or respiratory failure, and/or continues to have decreased breath sounds:**
   a. Administer or repeat Epinephrine 0.01 mg/kg (0.01 ml/kg of a 1:1,000 solution), IM. Maximum dose is 0.3 mg.
   b. Administer additional doses of albuterol 0.083%, in one (1) unit dose or 3 ml via nebulizer at a flow rate that will deliver the solution over 5 to 15 minutes.
   c. Intravascular access. (Attempt IV no more than twice)
   d. For patients less than 2 years old: Administer Dexamethasone 0.6 mg/kg IV/IM.

Key Points / Considerations

1. Patients who require oxygen should receive high concentration oxygen via the mask that best fits around the mouth and nose, preferably a non-rebreather mask.
   a. Humidified oxygen is preferred.
   b. If a mask is not tolerated, then “blow-by” oxygen is acceptable.
   c. High concentration oxygen should always be used in pediatric patients.
      i. There are no contraindications to the use of high concentration oxygen.
   d. If assisted ventilations via a mask are required, it must be ensured that the mask does not cover the eyes.
2. Patients who need assisted ventilations may present with any one of the following:
      i. On-going hypoxia
      ii. Inability to adequately protect their airway
      iii. And/or exhibiting signs of inadequate respiration
   b. Utilize one of the following methods:
      i. Pocket mask with supplemental oxygen set at 10-15 liters/minute.
      ii. Bag-valve-mask and reservoir with supplemental oxygen set at 10-15 liters/minute.
3. Albuterol Sulfate and Ipratropium Bromide shall be mixed and administered simultaneously, for a maximum of three doses.
4. Do not delay transport to administer additional nebulized bronchodilator nebulizer treatments.
5. Severe respiratory distress in a child is characterized by markedly increased respiratory effort, i.e., severe agitation, dyspnea, tripod position, and suprasternal and substernal retractions.

6. A silent chest is an ominous sign that indicates respiratory failure and arrest are imminent.
7. Refer all weight-based fluids/medications to a Length Based Dosing Device.

Stridor / Croup / Epiglottitis (Pediatric)

CFR AND ALL PROVIDER LEVELS

1. Administer oxygen.
   a. Administer high concentration blow-by oxygen (humidified if available) delivered by tubing or face mask held about 3-5 inches from face (as tolerated)
2. Assess for foreign body airway obstruction.
   a. Refer immediately to the Obstructed Airway (Pediatric) protocol, if indicated.
3. Assess for anaphylaxis.
   a. Refer immediately to the Anaphylaxis (Pediatric) protocol, if indicated.
4. Ongoing assessment of the effectiveness of breathing.
   a. Refer to the Respiratory Distress / Failure / Arrest (Pediatric) protocol, if necessary.

CFR STOP

EMT

5. If the child is unconscious request ALS assistance.
6. Transport.

EMT STOP

Paramedic

7. **DO NOT** attempt advanced airway management.
   a. Use bag-valve-mask ventilation.

Paramedic STOP

Key Points / Considerations

1. Croup should be suspected in a child with stridor, retractions, barking cough, normal or slightly elevated temperature, sternal retractions, and/or a history of upper respiratory infection.
2. Epiglottitis should be suspected in a child with stridor, retractions, muffled voice, high fever, tripod position and/or drooling.
3. Avoid agitating the child, particularly if there is concern for upper airway edema.
4. If the patient has stridor (inspiratory), it is often an upper airway problem (physiologic or mechanical obstruction).
5. A vaccination history should be obtained because unvaccinated children are at higher risk of epiglottitis.

Cold Emergencies (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management.
3. Remove the patient from the cold environment to a warm environment.
4. Prevent further loss of body heat.
5. Do **NOT** allow the patient to smoke or drink either alcohol or caffeinated beverages.
6. If the patient is conscious, able to swallow, and can drink without assistance, give warm liquids slowly by mouth.
7. **Special considerations:**
   a. **Localized Cold Injury:**
      i. Remove clothing and jewelry from affected area.
      ii. Protect areas from pressure,trauma,and friction. Wrap the area in dry, bulky dressings, digits should be wrapped individually.
      iii. Do **NOT** rub the area or break blisters.
   b. **Hypothermia (General):**
      i. Monitor airway.
      ii. Assess carotid pulse for 30 - 45 seconds.
      iii. Begin CPR, if appropriate.
      iv. Do not allow physical activity.
      v. Monitor breathing for adequacy.
      vi. Administer oxygen.
      vii. Gently remove any wet clothing and jewelry and dry the patient.
      viii. Place heat packs, if available, in the patient's groin area, lateral chest, and neck.
      ix. Wrap the patient in dry blankets.

CFR STOP

EMT

8. Transport.
9. If the patient has an altered mental status, request ALS assistance.

EMT STOP

Paramedic

Paramedic STOP

Key Points / Considerations

1. Vital signs may be extremely depressed.
2. Hypothermic patients remain viable for a longer period of time.
3. For infants and young pediatric patients, cover the head with a cap or towel to decrease heat loss.
4. CPR should be initiated on all pulseless and apneic hypothermic patients.
5. Avoid rough handling of the hypothermic patient so as to reduce the risk of inducing cardiac arrest.
6. For unconscious patients, use caution with heat packs to avoid burns.

Heat Emergencies (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management.
3. Move the patient to a cooler environment, or cool the environment.
4. Remove outer clothing.
5. Administer oxygen.
6. Restrict physical activity.
7. Place in recovery position, if altered mental status.
8. Assess for shock and treat, if appropriate.
9. Provide water if the patient is conscious and is able to drink without assistance. (If available).

CFR STOP

EMT

10. If the patient has an altered mental status, request ALS assistance.
11. Transport.
12. For patients presenting with hot, flushed, and dry skin: cool the patient rapidly.

EMT STOP

Paramedic

13. Intravascular access.
14. For Adult patients: Crystalloid fluid, 500 ml.
    a. Crystalloid fluid infusion may be repeated up to a maximum of 2 liters as needed, if there are no signs of pulmonary edema and no concern for water intoxication.

Paramedic STOP

Key Points / Considerations

1. Do not lower body temperature so as to produce shivering.
2. Cooling of the patient should NOT delay transport.
3. Patients who are experiencing a heat emergency and no longer sweating should be treated and transported rapidly.
4. Water intoxication occurs when patients ingest excessive water which causes potentially life-threatening electrolyte abnormalities.
    a. Suspect water intoxication in long distance runners who consume large amounts of water and present with collapse or confusion.
    b. Cool the patient, as indicated, and contact Online Medical Control before administering any oral fluid to a patient with suspected water intoxication.
5. Special populations who should be considered at high risk for adverse outcomes:
    a. Elderly patients
    b. Patients with comorbidities, on diuretics, or psychiatric medications
    c. Athletes

Poisoning or Drug Overdose (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management, and appropriate oxygen therapy.
3. Assess for shock and treat, if appropriate (see the Shock / Sepsis (Adult), or Shock / Sepsis (Pediatric) protocol).
4. Document the name of the substance(s) involved, the amount taken, and the time and duration of exposure.
5. Contact Online Medical Control, if available.
6. **Special Considerations:**
   - **a. Ingested Substance:**
     - **i.** Do not induce vomiting.
     - ii. Do not attempt to neutralize the substance.
   - b. **Inhaled Substance:**
     - i. Ensure that the scene is safe to enter.
     - ii. Remove the patient from the contaminated environment.
   - c. **Envenomation (Adult & Pediatric Patients):**

Insect Stings	Snakebite
Remove the stinger by scraping with an index card or credit card. Cover with sterile dressing. Apply cold compress, if available.	Keep injection site lower than heart. Cover with sterile dressing. Immobilize the area and restrict patient activity.

   - d. **Absorption:**
     - i. Take precautions to avoid contamination.
     - ii. Remove all contaminated clothing.
     - iii. Brush away any dry agents or blot away any excess liquids from the skin.
     - iv. Flush the area with sterile saline, sterile water, or plain water for at least 20 minutes.
     - v. Bandage any contact burns with a saline-moistened, sterile dressing.

CFR STOP

EMT

7. Request ALS assistance for patients with respiratory distress/failure or altered mental status, or if so directed by Online Medical Control.
8. For altered mental status, see the Altered Mental Status (Adult and Pediatric) protocol.
9. Transport.
10. **Special Considerations:**
    - **a. Inhaled Substance:**
      - **i.** Administer oxygen, especially if carbon monoxide is suspected.
    - b. **Envenomation/Venomous Bites:**
      - **i.** Request ALS assistance, DO NOT delay transport. Refer immediately to the protocols as appropriate:
        1. Anaphylaxis (Adult)
        2. Anaphylaxis (Pediatric)

3. Respiratory Distress / Failure / Acute Pulmonary Edema (Adult)
4. Respiratory Distress / Failure / Arrest (Pediatric)
5. Shock / Sepsis (Adult)
6. Shock / Sepsis (Pediatric)

ii. Move the patient to the ambulance with minimal patient movement, i.e. on a stretcher or wheeled stair chair.

iii. Do not attempt to capture the envenoming animal (snake, scorpion, spider, etc.), nor remove the venom with suction devices.

Marine	Snakebite
Remove stinging bristles by patting the area with adhesive tape, then wipe with alcohol. Remove stinging spine. Cover with sterile dressing. Transport should not be delayed for this treatment.	If the venomous bite occurred on an extremity immobilize the extremity. Transport to Venomous Bite Center (See Appendix H).

EMT STOP

Paramedic

Paramedic STOP

Key Points / Considerations

1. Be careful and aware of off gassing.

Seizures (Adult)

CFR AND ALL PROVIDER LEVELS

1. Protect the patient from injury.
2. ABCs.
3. Airway management:
   a. Position the patient to maintain airway patency.
   b. Do not attempt placement of OPA during convulsions.
   c. Consider use of NPA during active seizures, if available.
4. Avoid unnecessary or excessive restraint.
5. Administer oxygen.
6. Treat all injuries as appropriate.

CFR STOP

EMT

7. Measure blood glucose level.
   a. If the glucose reading is below 60 mg/dL, refer to the Altered Mental Status (Adult and Pediatric) protocol.
8. Request ALS assistance for ongoing seizures at time of patient contact.
9. Transport.

EMT STOP

Paramedic

For patients experiencing generalized seizures that are ongoing or recurring.

10. If the patient is actively seizing, administer **ONE** of the following:
    If intravascular access has already been established, utilize the intravascular route. If intravascular access is not established, utilize the most appropriate and quickest route of administration available (IM/IN), based on available resources.
    a. Administer Midazolam 5 mg, IV/IM/IN.
       OR
    b. Administer Lorazepam 2 mg IV/IM/IN.
       OR
    c. Administer Diazepam 5 mg, IV. (Rate of administration may not exceed 5 mg/min.)
11. After 5 minutes for generalized seizures that are ongoing or recurring, a single repeat of the same medication, at the same dose, may be given.
12. Intravascular access.
13. Begin cardiac monitoring.
14. Perform Advanced Airway Management in patients with GCS < 8, AND if less invasive methods of airway management are not effective.

Paramedic STOP

Medical Control Options

If seizure activity persists:

1. Administer any of the benzodiazepines listed above.

Key Points / Considerations

1. Do **NOT** force anything into the patient's mouth.
2. Avoid unnecessary or excessive restraint.

3. Status epilepticus (continuing seizure) is a critical medical emergency. Anticonvulsant medication should be administered as soon as possible, preferably starting no later than 5-10 minutes after the onset of the seizure.
4. Diabetic patients with a blood glucose level reading between 60 – 80 mg/dL may still be experiencing hypoglycemia.
   a. In the presence of such signs and symptoms, treat accordingly.

Seizures (Pediatric)

CFR AND ALL PROVIDER LEVELS

1. Protect the patient from injury.
2. ABCs.
3. Airway management:
   a. Position the patient to maintain airway patency.
   b. Do not attempt placement of OPA during convulsions.
   c. Consider use of NPA during active seizures, if available.
4. Avoid unnecessary or excessive restraint.
5. Administer oxygen.
6. Treat all injuries as appropriate.

CFR STOP

EMT

7. Measure blood glucose level.
   a. If the glucometer reading is below 60 mg/dL, refer to the Altered Mental Status (Adult and Pediatric) protocol.
8. Request ALS assistance for ongoing or recurring seizures at time of patient contact.
9. Transport.

EMT STOP

Paramedic

For patients experiencing seizures that are ongoing or recurring:

10. Determine blood glucose level prior to administration of Dextrose or Glucagon.
11. Administer Glucagon 1 mg IM/IN.
    a. NOTE: If the glucometer is above 60 mg/dL, Dextrose and Glucagon should be withheld.
12. If the patient is still seizing, administer Midazolam 0.2 mg/kg, IM or IN. (Maximum dose is 5 mg)
    a. IN is the preferred route of administration.
13. During transport, or if transport is delayed:
    a. Intravascular access. (Attempt IV access no more than twice.)
    b. Administer Dextrose 0.5 mg/kg IV bolus:
       i. Use 10% Dextrose in patients less than or equal to one (1) month of age.
       ii. Use 25% Dextrose in patients greater than one (1) month of age and less than 15 years of age.

Paramedic STOP

Medical Control Options

If seizures persist administer one of the following:

1. Lorazepam 0.1 mg/kg IV/IN bolus, slowly over 2 minutes.
   a. Repeat doses of Lorazepam 0.1 mg/kg, IV/IN, may be given if seizures persist.

   OR
2. Diazepam 0.2 mg/kg IV bolus slowly over 2 minutes.
   a. Repeat doses of Diazepam 0.2 mg/kg, IV bolus, may be given if seizures persist.

   OR

3. Midazolam 0.2 mg/kg IV bolus, slowly over 2 minutes, OR 0.2 mg/kg IN/IM when there is no intravascular access. (Maximum dose is 5 mg)
    a. Repeat doses of Midazolam 0.2 mg/kg, IV/IN/IM, may be given if seizures persist. (Maximum repeated dose is 5 mg) IN is the preferred route of administration when there is no intravascular access.

Key Points / Considerations

1. Refer all weight or size-based medications to a Length based dosing device.
2. Do not administer Lorazepam, Diazepam or Midazolam if the seizures have stopped.

Shock / Sepsis (Adult)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs, including blood pressure.
2. Airway management.
3. Administer oxygen.
4. Control external bleeding. See the Bleeding / Hemorrhage Control / Impaled Object (Adult and Pediatric) protocol.
5. Elevate the legs.
6. Maintain body temperature.
7. Treat injuries as appropriate.

CFR STOP

EMT

8. Request ALS assistance.
9. Obtain a blood glucose level.
10. Transport.

EMT STOP

Paramedic

11. If the patient is demonstrating signs of inadequate ventilation:
    a. Perform Advanced Airway Management.
    b. For conscious patients, use procedural sedation options.
12. For suspected tension pneumothorax, follow Appendix O (Needle Decompression of Tension Pneumothorax).
13. Intravascular access.
14. Crystalloid fluid:
    a. For non-cardiogenic shock: Administer up to 3 liters, via a macro-drip.
    b. For cardiogenic shock: Administer a 250 ml bolus.
        i. A 250 ml bolus may be repeated once for a total of 500 ml of crystalloid fluid.
15. Begin cardiac monitoring.
16. Perform, record & evaluate a 12 Lead EKG.
17. For patients who remain in shock after the administration of a crystalloid bolus, either by clinical symptoms, or by persistent hypotension (systolic BP < 90 mmHg or mean arterial pressure < 65 mmHg). Administer ONE of the following, titrated to a systolic BP greater than 90 mmHg or mean arterial pressure (MAP) greater than 65 mmHg:
    a. Epinephrine 10 mcg IV bolus, slowly over 1 minute. Repeat epinephrine 10 mcg IV every 5 minutes as needed.
    OR
    b. Norepinephrine 2 mcg/min IV infusion. Titrate as needed to a maximum dose of 20 mcg/min IV.
    OR
    c. Dopamine 5 mcg/kg/min IV infusion. Titrate as needed to a maximum dose of 20 mcg/kg/min IV.
18. Monitor vital signs every 2-3 minutes.

19. *For patients with illness of a presumed infectious source meeting Sepsis Criteria. (Refer to Key Points/Considerations):*
    a. Accurate documentation of pre-arrival fluid administration is required.
    b. Measure and record lactate level (if available).
    c. Measure and record oral temperature (if available), also consider using last temperature obtained at patient's facility (if available).

Paramedic STOP

Medical Control Options

1. Administer any of the above Standing Orders.

Key Points / Considerations

1. Prepare push-dose epinephrine by mixing 1 ml of epinephrine 1:10,000 with 9 ml of Normal Saline. Concentration will then be 1:100,000, and the 10 mcg dose will be 1 ml of this mixed solution.
2. An unstable dysrhythmia must be treated prior to initiation of a 12 lead EKG.
3. Vasopressor infusions must be administered using an IV flow regulating device. These infusions should be administered preferably via an 18 gauge or larger IV catheter, or an IO. Standard IV administration sets are not considered IV flow regulating devices.
4. Check lung sounds after each bolus of crystalloid. Stop IV fluid if patient develops rales or other signs of pulmonary edema.

CRITERIA FOR SEVERE SEPSIS / SEPTIC SHOCK

5. SBP < 90 mmHg OR MAP < 65 mmHg OR unexplained altered mental status
6. At least two (2) of the following must be present, without evidence of shock from cardiac or traumatic etiologies:
    a. Respiratory rate > 20 OR $PaCO_2$ < 32 mmHg
    b. HR > 110/min
    c. Temperature
        i. Skin: Tactile fever/hypothermia
        OR
        ii. Temperature > 100.4°F (38°C), if thermometer is available
    d. Point of care lactate > 4 mmol/L
    e. White blood count > 12,000 or < 4,000 cells/mm^3 or > 10% bands, if available.

Shock / Sepsis (Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management.
3. Administer high concentration oxygen.
4. Control external bleeding. See the Bleeding / Hemorrhage Control / Impaled object (Adult and Pediatric) protocol.
5. Keep the child warm.
6. Elevate the legs.
7. Treat all injuries as appropriate.

CFR STOP

EMT

8. Request ALS assistance.
9. Transport, keeping the child warm.

EMT STOP

Paramedic

For pediatric patients in decompensated shock:

10. If signs of hemorrhage or dehydration are not present, Begin cardiac monitoring.
    a. For patients in Supraventricular Tachycardia or Ventricular Tachycardia with a pulse and with evidence of low cardiac output, proceed to Medical Control Options.
11. During transport, or if transport is delayed:
    a. Intravascular access. (Attempt IV access no more than twice.)
    b. Crystalloid fluid, 20 ml/kg, via a large bore IV catheter.
    c. If signs of hemorrhage or dehydration are present, and the patient remains in decompensated shock, continue rapid infusion of crystalloid fluid, up to an additional 20 ml/kg (total of 40 ml/kg) via a second large bore catheter.

Paramedic STOP

Medical Control Options

For patients still remaining in decompensated shock:

1. If signs of hemorrhage or dehydration are still present, continue rapid infusion of crystalloid fluid, up to an additional 20 ml/kg (total of 60 ml/kg).
2. If in Supraventricular Tachycardia or Ventricular Tachycardia with a pulse, with evidence of low cardiac output, and the Defibrillator is able to deliver calculated dose:
    a. Perform Synchronized cardioversion at 0.5 mg - 1 joule/kg, using pads of appropriate size.
    b. If this fails to convert the dysrhythmia, Synchronized Cardioversion may be repeated at 1 - 2 joules/kg, using pads of appropriate size.
    c. **DO NOT** perform synchronized cardioversion in pediatric patients with Supraventricular Tachycardia or Ventricular Tachycardia with a pulse unless the defibrillator is able to deliver calculated dose.

3. If in Supraventricular Tachycardia with evidence of low cardiac output, but the Defibrillator is not able to deliver calculated dose:
    a. Administer Adenosine 0.1 mg/kg IV bolus (maximum initial dose 6 mg), rapidly, followed by 2 - 3 ml of crystalloid fluid flush.
    b. Observe EKG monitor for 1-2 minutes for evidence of synchronized cardioversion.
    c. If there is no change, administer Adenosine 0.2 mg/kg IV bolus (maximum dose 12 mg), rapidly, followed by 2 - 3 ml of crystalloid fluid flush.
    d. If there is no change, repeat Adenosine 0.2 mg/kg IV bolus (maximum dose 12 mg), rapidly, followed by 2 - 3 ml of crystalloid fluid flush.

Key Points / Considerations

1. High concentration oxygen should always be used in pediatric patients.
2. Refer all weight-based fluids/medications to a Length Based Dosing Device.

CRITERIA FOR SEVERE SEPSIS / SEPTIC SHOCK

1. Patients with at least one (1) symptom from each of the following categories, without evidence of shock from cardiac or traumatic etiologies:
    a. Abnormal temperature
        i. Skin: Tactile fever/hypothermia
        OR
        ii. Temperature > 100.4°F (38° C), if thermometer is available
    b. Elevated vital signs
        i. High heart rate (age dependent)
        OR
        ii. High respiratory rate (age dependent)
    c. Any of the following signs and symptoms
        i. Poor perfusion (capillary refill > 3 seconds, decreased peripheral pulses, distal extremity [hands/feet] coolness and dusky color, or age-dependent hypotension)
        OR
        ii. Need for oxygen
        OR
        iii. Altered mental status (lethargy, irritability)
        OR
        iv. Point of care lactate > 4 mmol/L

Stroke (Cerebrovascular Accident) (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management, and appropriate oxygen therapy.

CFR STOP

EMT

3. Use a Glucometer to measure blood glucose level.
   a. If the Blood Glucose Level is 60 mg/dL or above, proceed to NYC S-LAMS evaluation.
   b. If the Blood Glucose Level is less than 60 mg/dL, see the Altered Mental Status (Adult and Pediatric) protocol.
   c. If neurologic deficits persist after treatment and the Blood Glucose Level is 60 mg/dL or above, proceed to NYC S-LAMS evaluation per Appendix Q.
4. Determine NYC S-LAMS score (for each element and total score) in the prehospital care report, and the **"Last Known Well"**; the **exact time** the patient was **last in his or her usual state of health and/or seen without symptoms** by interviewing the patient, family, and bystanders (this may be different than the **"Time of Symptom Onset"**).
5. Transport per Appendix Q.

EMT STOP

Paramedic

Paramedic STOP

Key Points / Considerations

1. If the historical/physical findings indicate an acute stroke, transport the patient to the closest appropriate Stroke Center as determined by Appendix Q, unless:
   a. The patient is in cardiac arrest or has an unmanageable airway
   b. The patient has other medical conditions that warrant transport to the nearest appropriate New York City 911 system ambulance destination emergency department as per protocol
2. If the patient has a **NYC S-LAMS score of ≤ 3**, transport the patient to the closest appropriate Primary Stroke Center.
3. If the patient has a **NYC S-LAMS score of ≥ 4**, contact OLMC for Transport Decision to the closest Thrombectomy Stroke Center*, unless one or more of the Stroke Exclusion Criteria below are met:
   a. Total time from onset of patient's symptoms to EMS patient contact is greater than 5 (five) hours.
   b. Patient is wheelchair or bed-bound.
   c. Seizure is cause of symptoms.
   d. Loss of Consciousness (LOC).
   e. Trauma is cause of symptoms.
   f. Transport time to Thrombectomy Stroke Center is > 30 minutes.
4. *See Appendix R for a list of Thrombectomy Stroke Center Hospitals.
5. Do not delay transport.
6. Request ALS assistance if BLS airway management is not adequate.

Stroke Patient Assessment Triage And Transportation

1. NYC S-LAMS Scale
   a. For patients exhibiting signs and symptoms of a stroke (CVA), utilize the NYC S-LAMS Stroke Scale:
      i. Assess for ***Facial Droop*** – have the patient show teeth or smile.
         1. Absent – if both sides of the face move equally, the score is **0**.
         2. Present – if one side of the face does not move as well as the other, the score is **1**.
      ii. Assess for ***Arm Drift*** – have the patient close eyes and hold both arms straight out with palms facing up for 10 seconds.
         1. Absent – if both arms remain up or move the same, the score is **0**.
         2. Drifts down – if one arm drifts slowly down compared to the other arm, the score is **1**.
         3. Falls rapidly – if one arm falls rapidly, the score is **2**.
      iii. Assess for ***Speech Deficit*** – have the patient say a simple sentence, for example, “you can’t teach an old dog new tricks”
         1. Normal – if the patient uses correct words with no speech slurring, the score is **0**.
         2. Present – if the patient slurs words, uses the wrong words, or is unable to speak, the score is **1**.
      iv. Assess for hand ***Grip Strength*** – have the patient hold both of your hands and squeeze them at the same time.
         1. Normal – if they squeeze both hands equally, the score is **0**.
         2. Weak grip – if one hand has a weaker grip than the other, the score is **1**.
         3. No grip – if one hand does not grip at all, the score is **2**.
   b. Document the scores for each of the four S-LAMS elements and the total score in the PCR narrative (or PCR pre-assigned fields, if available).
   c. If any of the elements of the NYC S-LAMS Stroke Scale are positive, establish onset of signs and symptoms, and document in the PCR, by asking the following:
      i. To patient – “When was the last time you remember before you became weak, paralyzed, or unable to speak clearly?”
      AND / OR
      ii. To family or bystander – “When was the last time you remember before the patient became weak, paralyzed, or unable to speak clearly?”
      OR
      iii. If the patient woke with the deficit, the time of onset is the time patient went to sleep.

Abdominal Pain / Severe Nausea / Vomiting (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management, and appropriate oxygen therapy.
3. If a traumatic cause is suspected, see the Abdominal Injuries (Adult and Pediatric) protocol.
4. Do **not** allow the patient to eat or drink.

CFR STOP

EMT

5. Assess for shock and treat, if appropriate. (See the Shock / Sepsis (Adult), or Shock / Sepsis (Pediatric) protocol)
6. Place patient in position of comfort.
7. Transport.

EMT STOP

Paramedic

8. Intravascular access.
9. Monitor vital signs every 5 minutes.
10. Consider and treat, as per appropriate protocol, underlying causes of the patient's nausea/vomiting (e.g., poisoning, Myocardial Ischemia, etc.).
11. For patients over 2 years of age with severe nausea, or vomiting: Administer Ondansetron* 0.1 mg/kg (maximum dose is 4 mg), PO/IV/IM bolus. (May give the IV formulation orally (PO), if tolerated.)
    a. For continued severe nausea, or vomiting, repeat Ondansetron* 0.1 mg/kg (maximum dose is 4 mg), PO/IV/IM bolus once (1). Maximum total dose is 8 mg. (May give the IV formulation orally (PO), if tolerated.)

Paramedic STOP

Key Points / Considerations

1. ***Drug Advisories:**
    a. **Ondansetron** - has been associated with prolongation of the QT interval, possibly resulting in Torsades de Pointes.
        i. Should be used with caution in patients with:
            1. A history of cardiac disease
            2. Those taking other medications known to prolong the QT interval
        ii. Should **NOT** be administered to patients with a history of familial QT prolongation.
2. Consider cardiac monitoring and obtaining a 12-lead EKG, for detection of prolonged QT or cardiac etiology of symptoms.
3. Refer all weight based fluids/medications for pediatric patients to a Length Based Dosing Device.

Hyperglycemia (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. If signs of shock, treat under the Shock / Sepsis (Adult), or Shock / Sepsis (Pediatric) protocol.
2. ABCs and vital signs.
3. Airway management, and appropriate oxygen therapy.
4. Maintain body temperature.

CFR STOP

EMT

5. Determine Blood Glucose Level.
   a. Request ALS assistance for patients with a Blood Glucose Level above 300 mg/dL, **AND** altered mental status, tachypnea, or signs of dehydration.

EMT STOP

Paramedic

6. If patient is demonstrating signs of inadequate ventilation, perform Advanced Airway Management.
7. Intravascular access for patients with any of the following:
   a. A Blood Glucose Level above 300 mg/dL with altered mental status, tachypnea, or signs of dehydration
   b. A Blood Glucose Level above 500 mg/dL
   c. A glucometer reading of “high”, “HI”, or “check ketones”
8. For Adult patients:
   a. Crystalloid fluid, up to a maximum of 1 liter*.
9. For pediatric patients:
   a. Crystalloid fluid, 20 ml/kg, to a maximum of 1 liter*.
10. Begin cardiac monitoring.
11. Transport.

Paramedic STOP

Medical Control Options

1. Adult patients:
   a. Administer one (1) additional liter of crystalloid fluid.
2. Pediatric patients:
   a. Administer an additional bolus of 10 ml/kg (maximum of 1 liter) of crystalloid fluid.

Key Points / Considerations

1. *Accurate documentation of pre-arrival fluid administration is required.
2. Refer all weight based fluids/medications to a Length Based Dosing Device.

Drowning / Decompression Illness (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. Remove patient from water.
   a. Observe spinal injury precautions; if appropriate.
2. ABCs and vital signs.
3. Airway management.
4. Assist ventilations if appropriate (see the Respiratory Distress / Failure / Acute Pulmonary Edema (Adult), or Respiratory Distress / Failure / Arrest (Pediatric) protocol).
5. Begin CPR if patient is in cardiac arrest (see the General Cardiac Arrest Care (Non-Traumatic) (Adult) protocol).
6. Administer oxygen.
7. Assess for shock and treat, if appropriate (see the Shock / Sepsis (Adult), or Shock / Sepsis (Pediatric) protocol).
8. **If Cold Water Drowning (water temperature below 70°F), treat for hypothermia (See the Cold Emergencies (Adult and Pediatric) protocol).**

CFR STOP

EMT

9. For suspected decompression illness (dive injury):
   a. Place the patient in a LEFT lateral recumbent position.
   b. If possible, obtain the following information:
      i. Recent dive history
      ii. The maximum depth of the dive(s)
      iii. The total time spent underwater
      iv. The mixture of compressed gases used
   c. Transport the patient and companion divers via ground transportation to the nearest appropriate hospital (See Appendix H.)
10. Transport

EMT STOP

Paramedic

Paramedic STOP

Key Points / Considerations

1. Hypothermic patients remain viable for a longer period of time, therefore, if appropriate, initiate CPR.

Amputation (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. Refer immediately to the Bleeding / Hemorrhage Control / Impaled Object (Adult and Pediatric) protocol, as indicated.
2. ABCs and vital signs.
3. Elevate and wrap the stump with moist sterile dressings and cover with dry bandage.
4. Consider spinal motion restriction, refer to the Head, Neck, and Spine Injuries (Adult and Pediatric) protocol.
5. Provide or direct care for amputated part:
   a. Moisten sterile dressing with sterile saline solution and wrap amputated part.
   b. Place the severed part in a water-tight container, such as a sealed plastic bag.
   c. Label the bag with the patient's name and time of the injury.
   d. Place this container on ice or cold packs, using caution to avoid freezing the limb.

CFR STOP

EMT

6. Transport to the nearest appropriate hospital according to the patient's condition.

EMT STOP

Paramedic

Paramedic STOP

Key Points / Considerations

1. Distal amputations (those distal to wrist or ankle) do not typically require a trauma center.
2. Transport the amputated part with the patient, if possible, but do not delay transport to search for amputated part.
3. Consider contacting Online Medical Control for consultation if there is uncertainty regarding appropriate destination facility.

Avulsed Tooth (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

Criteria: Applies to permanent teeth only.

1. ABCs and vital signs.
2. Hold the tooth by the crown (not the root).
3. Quickly rinse the tooth with saline before reimplantation, but do not brush off or clean the tooth of tissue.
4. Remove the clot from the socket; suction the clot, if needed.
5. Reimplant the tooth firmly into its socket with digital pressure.
6. Have the patient hold the tooth in place using gauze and bite pressure.
7. Report to hospital staff that a tooth has been reimplanted.

CFR STOP

EMT

8. Transport.

EMT STOP

Paramedic

Paramedic STOP

Key Points / Considerations

1. The best transport medium for an avulsed tooth is in the socket, in the appropriate situation.
   a. The best chance for success is when reimplantation occurs within five minutes of the injury.
   b. If the patient has altered mental status, do not reimplant.
   c. If the patient must be transported in a supine position, do not reimplant.
   d. Do not reimplant if the alveolar bone/gingiva are missing, or if the root is fractured.
   e. Do not reimplant if the patient is immunosuppressed, or reports having cardiac issues that require antibiotics prior to procedures.
2. If the patient is not a candidate for reimplantation and avulsed a permanent tooth, place the avulsed tooth in interim storage media (commercial tooth preservation media, low fat milk, patient's saliva, or saline) and keep cool. Avoid tap water storage, if possible, but do not allow the permanent tooth to dry.

Bleeding / Hemorrhage Control / Impaled Object (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management, and appropriate oxygen therapy.
3. Immediate intervention for severe bleeding:
    a. Apply pressure directly on the wound with a dressing:
        i. Hemostatic dressing* may be applied with initial direct pressure.
            1. Rolled gauze may be used if hemostatic dressing is not available.
            2. Pack wound and hold pressure.
            3. If bleeding soaks through the dressing, apply additional dressings.
        ii. If bleeding is controlled, apply a pressure dressing to the wound.
        iii. If severe bleeding persists through conventional dressings and hemostatic dressing becomes available, remove all conventional dressings, expose site of bleeding, and apply hemostatic dressing*.
        iv. Cover the dressed site with a pressure bandage.
4. Immediate intervention for uncontrollable bleeding from an extremity:
    a. Place tourniquet 2-3 inches proximal to the wound.
    b. If bleeding continues, you may place a second tourniquet proximal to the first, or above the knee or elbow, if wound is distal to these joints
5. Note the time of tourniquet application and location of tourniquet(s)
6. Assess for shock and treat, if appropriate.
7. **Special considerations:**
    a. Impaled object:
        i. DO NOT remove the object.
            1. If the object is impaled in the cheek and is compromising the airway, remove it and bandage both sides of the wound.
        ii. Support and secure the object with bulky dressings.

CFR STOP

EMT

8. Transport to the nearest appropriate hospital according to the patient's condition.

EMT STOP

Paramedic

Paramedic STOP

Key Points / Considerations

1. Infection control precautions must be followed when making contact with all patients, especially the patient's blood or body secretions.
2. Hemostatic dressings* should be used according to manufacturer's instructions and training and may require removal of coagulated blood to directly access the source of bleeding.
    a. *If equipped and trained.
3. **Do not remove a tourniquet that was placed for life-threatening bleeding.**

   a. If a tourniquet had been placed for apparently non-life-threatening bleeding, the tourniquet may be released while maintaining the ability to immediately reapply and otherwise control the hemorrhage should significant bleeding occur.

4. These steps are not intended to be used in sequence; interventions should be taken using the best judgement of the EMS professional.
5. Hemodialysis access sites may result in life threatening hemorrhage. Direct digital pressure should be used first followed by tourniquet ONLY in the setting of life-threatening hemorrhage when other means of hemorrhage control have been unsuccessful.
6. When extremity bleeding sites cannot be rapidly determined, tourniquets may be placed high and tight in accordance with training.
7. Conventional and pressure splints may also be used to control bleeding.

Burns (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. Stop the burning process.
2. Observe spinal precautions, if appropriate.
3. ABCs and vital signs.
4. Airway management and appropriate oxygen therapy.
5. Remove smoldering clothing that is not adhering to the patient's skin.
6. Remove rings, bracelets, and constricting objects at or distal to burned area, if possible.
7. Cover the burn with dry sterile dressings.
8. Burns to the eye require copious irrigation with Normal Saline – do not delay irrigation.
   a. Other neutral fluid may be used, if needed, such as tap water.
9. Consider the potential for carbon monoxide poisoning and refer to the Carbon Monoxide (Adult and Pediatric) protocol, as indicated.

CFR STOP

EMT

10. Burns should be covered with dry, sterile dressings.
11. Moist sterile dressings may be used to augment pain management *only* if the burn is ≤ 10 % BSA (body surface area).
12. Transport.

EMT STOP

Paramedic

For Adult and Pediatric patients

13. If there is evidence of burns to the upper airway or upper airway compromise is anticipated, perform Advanced Airway Management.
    a. If the patient is alert prior to performing Advanced Airway Management, refer to General Operating Procedures – Prehospital Procedural Sedation.
14. Begin pulse oximetry monitoring.
15. Intravascular access.
16. Crystalloid fluid:
    a. Adult patients: rapid infusion of up to 2 liters, via a macro-drip.
       i. If transport is delayed or extended, administer one additional liter. (Maximum 3 liters.)
    b. For Pediatric patients:
       i. Administer 20 ml/kg with a repeat of 20 ml/kg (maximum of 2 liters) via macro-drip.
       ii. If transport is delayed or extended, administer an additional 20 ml/kg bolus (Maximum total of 3 liters.)

17. For patients who are experiencing severe pain administer **one** of the following:
    a. Administer Morphine Sulfate, for patients with a systolic blood pressure greater than 110 mmHg, 0.1 mg/kg (not to exceed 5 mg), IV/IM.
        i. For continued pain, Morphine Sulfate 0.1 mg/kg (not to exceed 5 mg), IV/IM, may be repeated after five minutes following the initial dose. (Maximum total dose is 10 mg.)
    b. Administer Fentanyl 1 mcg/kg (maximum dose is 100 mcg), IV/IN/IM, if available.
        i. For continued pain, Fentanyl 1 mcg/kg (not to exceed 100 mcg), IV/IN/IM, may be repeated after five minutes following the initial dose. (Maximum total dose is 200 mcg.)

    Note: For patients with burns involving the airway, consultation with Online Medical Control is required prior to administration of analgesics.

18. **Special Considerations:**
    a. Electrical burns:
        i. Begin cardiac monitoring.
    b. **Chemical Eye Injuries:**
        i. Assist the patient with removal of contact lens (if present).
        ii. If the patient is agitated or unable to hold eyelid open; instill of one of the following treatments. 1-2 gtts per eye, topically, into the affected eye(s) to facilitate irrigation. 1-2 gtts per eye, topically, into the affected eye(s) may be repeated once if needed:
            1. Proparacaine HCl 0.5% solution.
            2. Tetracaine HCl 0.5% solution.

Paramedic STOP

Key Points / Considerations

1. Assure scene safety and patient decontamination for chemical burns / HAZMAT Exposure.
    a. For liquid chemical burns, flush with copious amount of water or saline, ideally for a minimum of 20 minutes.
    b. For dry powder burns, brush powder off before flushing.
    c. Use caution to avoid the spread of the contaminant to unaffected areas (especially from one eye to the other).
    d. Consider other injuries, including cardiac dysrhythmias.
2. Consider smoke inhalation and airway burns.
    a. Administer high flow oxygen.
    b. Oxygen saturation readings may be falsely elevated.
3. If hazardous material involvement is suspected, immediately notify the destination hospital to allow for decontamination.
4. The whole area of the patient's hand is ~1% BSA (body surface area).
    a. When considering the total area of a burn, DO NOT count first degree burns.
5. Burns > 10% are *only* to be dressed with *dry* simple sterile dressings once the burning process has stopped.
6. Hypothermia is a significant concern in these patients

7. If the mechanism of illness/injury and/or historical/physical findings indicate major burns, transport the patient to the nearest New York City 911 System Burn Center, (refer to Burn Patient Criteria below), unless one of the following conditions is met:
   a. The patient is in cardiac arrest, or has an unmanageable airway.
   b. The patient also has major trauma.
   c. An Online Medical Control physician so directs.
   d. The event is declared a BURN MCI, in which case patients may be transported to New York City Burn Disaster Receiving Hospitals (BDRH) as per NYC Burn Disaster Plan.
8. If hypoventilation develops after the administration of opioid analgesics:
   a. Administer Naloxone, titrated in increments of 0.5 mg up to response, up to 4 mg, IV/IN/IM.
9. Accurate documentation of pre-arrival fluid administration is required.

Burn Patient Criteria

Adult and Pediatric Patients with 2nd and 3rd degree cutaneous burns:

1. ≥ 15% of body surface area (BSA) burns
2. 3rd degree burns involving ≥5% of BSA
3. ≥ 9% of BSA in persons:
   a. < 5 or > 60 years of age
   OR
   b. With a pre-existing disease, which may complicate or retard recovery
4. Respiratory burns
5. Electrical burns
6. Burns with associated trauma
7. Burns involving any one of the following:
   a. Eyes
   b. Ears
   c. Face
   d. Hands
   e. Feet
   f. Genitalia

Chest Injuries (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. Observe spinal injury precautions, if appropriate.
2. ABCs and vital signs
3. Airway management, and appropriate oxygen therapy.
4. Position the patient on the affected side unless it will complicate the injury.
5. If there is a sucking chest wound, cover with occlusive dressing; if dyspnea increases, release the dressing, momentarily, during exhalation.

CFR STOP

EMT

6. Transport.

EMT STOP

Paramedic

7. For suspected tension pneumothorax, follow Appendix O (Needle Decompression Of Tension Pneumothorax).
8. Begin cardiac monitoring.

Paramedic STOP

Key Points / Considerations

1. Decreased breath sounds and muffled heart sounds indicate life-threatening chest injuries. The patient should be transported immediately.

Eye Injuries (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management, and appropriate oxygen therapy.
3. **DO NOT** apply pressure to the globe of the eye.
4. Bandage both eyes loosely.
5. **Special Considerations:**
   a. **Non-penetrating Foreign Object / Chemical Eye Injury:**
      i. Immediately and continuously flush the affected eye(s) with Normal Saline (0.9% NS) for a minimum of 20 minutes.
   b. **Impaled Object:**
      i. Stabilize (or limit movement of) any object lodged in the eye, and cover both eyes to prevent consensual movement.
   c. **Avulsed Eye:**
      i. **DO NOT** attempt to replace the eye back into the socket.
      ii. Wrap the eye with saline-moistened, sterile dressings.
      iii. Stabilize this with a paper cup or similar object.

CFR STOP

EMT

6. Remove contact lens(es), if possible.
7. **Special Considerations:**
   a. **Non-penetrating Foreign Object:**
      i. Continue flushing the affected eye(s) enroute to the hospital.
8. Transport.

EMT STOP

Paramedic

9. **Special Considerations:**
   a. **Non-penetrating Foreign Object / Chemical Eye Injury (Adult and Pediatric):**
      i. If the patient is agitated or unable to hold eyelid open; instill one of the following treatments. 1-2 gtts per eye, topically, into the affected eye(s) to facilitate irrigation. 1-2 gtts per eye, topically, into the affected eye(s) may be repeated once if needed:
         1. Proparacaine HCl 0.5% solution.
         2. Tetracaine HCl 0.5% solution.

Paramedic STOP

Bone and Joint Injuries (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management, and appropriate oxygen therapy.
3. Assess for shock and treat, if appropriate.
4. Manually stabilize the injury.
5. Cover protruding bones and associated wounds with dry, sterile dressings.
6. Check for peripheral (distal) pulses, motor function, and sensation in the injured extremity.
7. Apply cold pack(s) to closed injury sites.

CFR STOP

EMT

8. Avoid excess pressure over injury sites.
9. Immobilize the injury:
    a. Check for peripheral (distal) pulses, motor function and sensation in the injured extremity before and after immobilization.
    b. If the distal extremity is cyanotic, ***or*** lacks a pulse, ***or*** if a long bone is severely deformed, align the extremity by applying gentle manual traction prior to splinting. Stop and splint in position found if increase in pain, or resistance is felt.
    c. Apply a splint:
        i. Traction splinting is indicated if there is an isolated, closed mid-thigh fracture, and no suspected injury to the pelvis, knee, lower leg, or ankle on the same side (depending on particular device).
    d. Joints above and below the deformity should be immobilized.
    e. An injured joint should be immobilized in the position of function. If unable to move to position of function due to increased pain or resistance, splint in the position found.
    f. Stabilize potentially unstable pelvic fractures with a pelvic binder, if available.
10. Elevate the injury site after splinting.
11. Transport.

EMT STOP

Paramedic

For Adult and Pediatric patients with an isolated extremity injury, if there is severe pain.

12. Begin cardiac monitoring.
13. Begin Pulse Oximetry monitoring.
14. Intravascular access.
15. Monitor vital signs every 5 minutes.

16. Administer **one** of the following:
    a. Morphine Sulfate, for patients with a systolic blood pressure greater than 110 mmHg, 0.1 mg/kg (not to exceed 5 mg), IV/IM.
        i. For continued pain, Morphine Sulfate 0.1 mg/kg (not to exceed 5 mg), IV/IM, may be repeated after five minutes following the initial dose. (Maximum total dose is 10 mg.)
    b. Administer Fentanyl 1 mcg/kg (maximum dose is 100 mcg), IV/IN/IM, if available.
        i. For continued pain, Fentanyl 1 mcg/kg (not to exceed 100 mcg), IV/IN/IM may be repeated after five minutes following the initial dose. (Maximum total dose is 200 mcg.)

Paramedic STOP

Medical Control Options

1. **Patella Dislocation:**
   *For isolated, clinically obvious, medial or lateral dislocation of the patella**.***
   a. If obvious medial or lateral patella dislocation, gradually extend the knee while, at the same time, a second provider applies pressure on the patella towards the midline of the knee.
   b. **Note: If unsure of patella dislocation, or if body habitus (e.g. large body build or obesity) prevents accurate assessment, immobilize in position found.**
   c. When straight, place the entire knee joint in a knee immobilizer or splint.

Key Points / Considerations

1. Splinting should not delay transport of the critical or unstable patient.
2. Refer all weight based fluids/medications for pediatric patients to a Length Based Dosing Device.
3. If hypoventilation develops after the administration of opioid analgesics:
   a. Administer Naloxone, titrated in increments of 0.5 mg up to response, up to 4 mg, IV/IN/IM.
4. Patella Dislocation:
   a. May be described as “knee went out”.
   b. Intra-articular and superior dislocations are not reducible in the prehospital environment.
   c. If there is severe increased pain or resistance, stop and splint in the position found.
   d. Patient usually feels significantly better after reduction, but they still need transport to a hospital for further evaluation and possible treatment.

Head, Neck, and Spine Injuries (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs while stabilizing the cervical spine.
2. Airway management, and appropriate oxygen therapy.
3. Seal open neck wounds with an occlusive dressing.
   a. **DO NOT** bandage completely around the neck.
4. Assess for shock and treat, if appropriate. Observe spinal injury precautions and apply a rigid cervical collar if potential mechanism for spinal injury.

CFR STOP

EMT

5. 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 precautions during care and transport:
   a. Altered mental status for any reason, including possible intoxication due to drugs or alcohol
   b. GCS < 15
   c. Complaint of, or inability of the provider to assess for neck and/or spine pain or tenderness
   d. Weakness, paralysis, tingling, or numbness of the trunk or extremities at any time since the injury
   e. Deformity of the spine not present prior to the injury
   f. Distracting injury or circumstances, including anything producing an unreliable physical exam or history
   g. High risk mechanism (axial loading such as diving or tackling, high-speed motor vehicle collisions, rollover collisions, falls greater than standing height)
   h. Provider concern for potential spinal injury
6. If the patient meets any of the above criteria for spinal precautions, is not awake, or is unstable, then apply a rigid collar.
7. Continue to monitor the Glasgow Coma Score. (See Appendix F.)
8. Transport.

EMT STOP

Paramedic

In patients with head trauma with a GCS of 13 or lower:

9. Perform Advanced Airway Management in patients with a Glasgow Coma Scale is less than eight (8) AND if less invasive methods of airway management are not effective.
   a. Consider procedural sedation if patient is alert prior to performing Advanced Airway Management.
10. Begin cardiac monitoring.
11. Intravascular access.
12. If a seizure is witnessed, treat with parenteral benzodiazepines per the Seizures (Adult), or Seizures (Pediatric) protocol.

Paramedic STOP

Medical Control Options

If seizure activity persists:

1. Repeat or administer parenteral benzodiazepines per the Seizures (Adult), or Seizures (Pediatric) protocol's Online Medical Control Options.

Key Points / Considerations

1. Do not use a nasopharyngeal airway in patients with facial burns or if severe head injury has occurred.
2. Hyperventilation should not be performed.

Abdominal Injuries (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management, and appropriate oxygen therapy.
3. Assess for shock and treat, if appropriate.
4. **Special Considerations:**
    a. **Evisceration:**
        i. Do **NOT** replace the protruding organ.
        ii. Place saline-moistened, sterile dressings over the organ.
        iii. Do **NOT** pour fluid directly onto the wound.
        iv. Secure dry, bulky dressings over the moistened dressings.
        v. An occlusive dressing may be placed as the final layer to maintain body heat.
        vi. Position the patient appropriately with knees slightly bent.

CFR STOP

EMT

5. Transport.

EMT STOP

Paramedic

Paramedic STOP

Traumatic Cardiac Arrest (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. Begin CPR as per AHA guidelines.
2. Apply an Automated External Defibrillator (AED), if available, with minimal disruption of CPR, until the AED is turned on.
3. Once a defibrillator is applied, immediately turn the machine "On".
4. Analyze (do not perform CPR while the machine is analyzing).
5. Whenever the "NO SHOCK INDICATED" message appears, CPR should be performed for 2 minutes followed by the next analysis.
6. Until transport arrives, continue CPR, re-analyze every 2 minutes and shock as indicated.

CFR STOP

EMT

7. Simultaneously begin transportation of the patient and Basic Cardiac Life Support procedures, as circumstances permit.
8. Request ALS assistance.

EMT STOP

Paramedic

9. For suspected tension pneumothorax, follow Appendix O (Needle Decompression Of Tension Pneumothorax).
10. Perform Advanced Airway Management if other methods of airway control are not effective.
11. Begin cardiac monitoring, record and evaluate EKG rhythm while enroute to the hospital:
    a. If the EKG demonstrates Ventricular fibrillation or pulseless ventricular tachycardia, see the Ventricular Fibrillation / Pulseless Ventricular Tachycardia (Adult), or Non-Traumatic Cardiac Arrest and Severe Bradycardia (Pediatric) protocol.
12. Intravascular access. (Attempt intravascular access no more than twice.)
13. Crystalloid fluid:
    a. For Adult patients: up to 3 liters, via one or two large bore (14-16) gauge catheters using a macro drip.
    b. For Pediatric patients:
        i. 20 ml/kg via a large bore IV.
        ii. If the patient remains in traumatic cardiac arrest: Give additional 20 ml/kg (for a total of 40 ml/kg) rapid infusion of crystalloid fluid. Start a second large bore IV catheter (if necessary).
        NOTE: Attempt second IV no more than twice.

Paramedic STOP

Medical Control Options

1. Continue rapid IV infusion of crystalloid fluid up to an additional 20 ml/kg (total of 60 ml/kg).

Key Points / Considerations

1. **Traumatic cardiac arrest is a critical, life-threatening emergency and should be transported immediately.**
2. Refer all weight or size-based medications/fluids to a Length based dosing device for pediatric patients.

Carbon Monoxide (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. Ensure that the scene is safe to enter.
2. Remove the patient from the contaminated environment.
3. ABCs and vital signs.
4. Airway management.
5. Administer oxygen via non-rebreather.
6. Assess for shock and treat, if appropriate (see the Shock / Sepsis (Adult), or Shock / Sepsis (Pediatric) protocol).

CFR STOP

EMT

7. Obtain patient's carbon monoxide level (SpCO) if available and trained to do so.
8. Transport.

EMT STOP

Paramedic

Paramedic STOP

Key Points / Considerations

1. Patients who are pregnant, symptomatic, or have a SpCO level > 25% are considered high risk and must be taken to the hospital for evaluation.
2. Symptoms of Carbon Monoxide poisoning include:
   a. Syncope
   b. Headache
   c. Chest pain
   d. Nausea / vomiting

Smoke Inhalation (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management.
3. Administer oxygen.
4. Treat any burns according to the Burns (Adult and Pediatric) protocol.

CFR STOP

EMT

EMT STOP

Paramedic

This protocol should be utilized ONLY for the management of symptomatic patients after exposure to smoke in an enclosed space and cyanide exposure is suspected.

5. Perform Advanced Airway Management, if necessary.
6. Begin cardiac monitoring.
7. Begin pulse oximetry monitoring.
8. Begin SpCO monitoring, if available.
9. Obtain at least two (2) sites of intravascular access.
10. Administer Hydroxocobalamin and Sodium Thiosulfate IV for patients with any of the following symptoms according to Table 1, if available:
    a. Cardiac arrest
    b. Respiratory arrest
    c. Altered mental status
    d. Seizures
    e. Hypotension not attributable to other obvious causes

NOTE: Prior to administration of Hydroxocobalamin, obtain three blood samples using the tubes provided in the cyanide toxicity kit.

TABLE 1: Cyanide Toxicity Kit (Hydroxocobalamin 5 g in 250 ml bottle, Sodium Thiosulfate 12.5 g in 50 ml vial).

Age Group	Hydroxocobalamin[A]	Sodium Thiosulfate[B]
Pediatric (0 - 14 years)	75 mg/kg (3 ml/kg of the prepared Hydroxocobalamin solution) IV over 15 minutes Maximum dose 5 g If needed may repeat 75 mg/kg IV over 15 minutes	250 mg/kg (3 ml/kg of the prepared Sodium Thiosulfate) solution IV over 10 minutes
Adult (≥ 15 years)	5 g (250 ml of the prepared Hydroxocobalamin solution) IV over 15 minutes. If needed may repeat 5 g IV over 15 minutes	12.5 g (150 ml of the prepared Sodium Thiosulfate solution) IV over 10 minutes

11. Hydroxocobalamin solution is prepared by adding 200 ml of NS / D_5W to Hydroxocobalamin 5 g powder in the bottle provided. Due to the volume of Hydroxocobalamin powder, the total volume of Hydroxocobalamin solution will be 250 ml.

    The vented macro drip tubing that accompanies the Cyanide Toxicity Kit should be used to administer the Hydroxocobalamin solution in the wide open position to ensure the correct administration time of approximately 15 minutes.
12. Sodium Thiosulfate solution is prepared by adding Sodium Thiosulfate 12.5 g (50 ml) to a 100 ml bag of NS or D_5W for a total volume of 150 ml.

NOTE: In the event that only one intravascular access line is established, administer Hydroxocobalamin BEFORE Sodium Thiosulfate as Sodium Thiosulfate will inactivate Hydroxocobalamin.

NOTE: Whenever Hydroxocobalamin is administered, follow with a 20 ml flush of crystalloid fluid prior to administration of any other medication.

13. For patients who remain in shock after the administration of a crystalloid bolus, administer vasopressors per the Shock/Sepsis (Adult) protocol.

Paramedic STOP

Key Points / Considerations

1. Vasopressor infusions should be administered, preferably via an 18 gauge or larger IV catheter, or an IO, using an an IV flow regulating device. Standard IV administration sets are not considered IV flow regulating devices.
2. For patients with smoke inhalation who have signs and symptoms consistent with carbon monoxide poisoning, refer to the Carbon Monoxide (Adult and Pediatric) protocol.

CYANIDE TOXICITY KIT (if available)	
One (1) 5 g bottle of crystalline powder Hydroxocobalamin	One (1) 2 ml fluoride oxalate whole blood tube
One (1) 12.5 g bottle of Sodium Thiosulfate (50 ml of 25% solution)	One (1) 2 ml K2 EDTA tube
Three (3) 100 ml bags 0.9% NS, D_5W	One (1) 2 ml lithium heparin tube
20 ml syringe	Three way stopcock connector

Cyanide Exposure (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs.
2. Airway management.
3. Administer oxygen.
4. Treat any burns according to the Burns (Adult and Pediatric) protocol.

CFR STOP

EMT

EMT STOP

Paramedic

This protocol should be utilized ONLY for the management of critical patients with suspected exposure to cyanide.

If operating at a scene with suspected cyanide exposure where the total patient count is greater than 5, a class order is required. Refer to GOP WMD protocol management decisions. The class order may be issued by a FDNY-OMA Medical Director who is on-scene or as relayed through an FDNY-OMA Medical Director through Online Medical Control (Telemetry) or through FDNY Emergency Medical Dispatch.

NOTE: The issuance of any class order shall be conveyed to all regional Online Medical Control facilities for relay to units in the field.

If operating at a scene with suspected cyanide exposure where the total patient count is 5 or less at one time, the following protocol remains as a Standing Order.

NOTE: Treatment within the "hot" and "warm" zones may be performed only by appropriately trained personnel wearing appropriate chemical protective clothing (CPC) as determined by the FDNY Incident Commander.

NOTE: If providers encounter a patient who has not been appropriately decontaminated from liquid cyanide, the providers should leave the area immediately until appropriate decontamination has been performed.

5. Perform Advanced Airway Management, if necessary.
6. Begin cardiac monitoring.
7. Begin pulse oximetry monitoring.
8. Begin SpCO monitoring, if available.
9. Obtain at least two (2) sites of intravascular access.
10. Administer Hydroxocobalamin and Sodium Thiosulfate IV for patients with any of the following symptoms according to Table 1, if available:
    a. Cardiac arrest
    b. Respiratory arrest
    c. Altered mental status
    d. Seizures
    e. Hypotension not attributable to other obvious causes

NOTE: Prior to administration of Hydroxocobalamin, obtain three blood samples using the tubes provided in the cyanide toxicity kit, as soon as possible.

TABLE 1::Cyanide Toxicity Kit (Hydroxocobalamin 5 g in 250 ml bottle, Sodium Thiosulfate 12.5 g in 50 ml vial)		
Age Group	**Hydroxocobalamin[A]**	**Sodium Thiosulfate[B]**
Pediatric (0 - 14 years)	75 mg/kg (3 ml/kg of the prepared Hydroxocobalamin solution) IV over 15 minutes Maximum dose 5 g If needed may repeat 75 mg/kg IV over 15 minutes	250 mg/kg (3 ml/kg of the prepared Sodium Thiosulfate solution) IV over 10 minutes.
Adult (≥ 15 years)	5 g (250 ml of the prepared Hydroxocobalamin solution) IV over 15 minutes. If needed may repeat 5 g IV over 15 minutes	12.5 g (150 ml of the prepared Sodium Thiosulfate solution) IV over 10 minutes

11. Hydroxocobalamin solution is prepared by adding 200 ml of NS / D_5W to Hydroxocobalamin 5 g powder in the bottle provided. Due to the volume of Hydroxocobalamin powder, the total volume of Hydroxocobalamin solution will be 250 ml. The vented macro drip tubing that accompanies the Cyanokit® should be used to administer the Hydroxocobalamin solution in the wide open position to ensure the correct administration time of approximately 15 minutes.
12. Sodium Thiosulfate solution is prepared by adding Sodium Thiosulfate 12.5 g (50 ml) to a 100 ml bag of NS or D_5W for a total volume of 150 ml.

NOTE: In the event that only one intravascular access line is established, administer Hydroxocobalamin BEFORE Sodium Thiosulfate as Sodium Thiosulfate will inactivate Hydroxocobalamin.

NOTE: Whenever Hydroxocobalamin is administered, follow with a 20 ml flush of crystalloid fluid prior to administration of any other medication.

13. For patients who remain in shock after the administration of a crystalloid bolus, administer vasopressors per the Shock/Sepsis (Adult) protocol.

Paramedic STOP

Key Points / Considerations

1. Class Order - A general order given by a FDNY-OMA Medical Director to perform a specific intervention or interventions at a specific location/s during a specified time period. This order is generally reserved for disaster situations.
2. If the patient is alert prior to performing Advanced Airway Management, refer to the General Operating Procedures – Prehospital Sedation.
3. Vasopressor infusions should be administered, preferably via an 18 gauge or larger IV catheter, or an IO, using an an IV flow regulating device. Standard IV administration sets are not considered IV flow regulating devices.

CYANIDE TOXICITY KIT (if available)	
One (1) 5 g bottle of crystalline powder Hydroxocobalamin	One (1) 2 ml fluoride oxalate whole blood tube
One (1) 12.5 g bottle of Sodium Thiosulfate (50 ml of 25% solution)	One (1) 2 ml K2 EDTA tube
Three (3) 100 ml bag 0.9% NS, D_5W	One (1) 2 ml lithium heparin tube
20 ml syringe	Three way stopcock connector

Weapons of Mass Destruction Nerve Agent Exposure (Adult and Pediatric)

CFR AND ALL PROVIDER LEVELS

ONLY the FDNY Office of Medical Affairs (OMA) may authorize the use of the DuoDote® through a Class Order issued by a FDNY OMA Medical Director who is on-scene or as relayed by a FDNY OMA Medical Director through Online Medical Control (Telemetry) or through FDNY Emergency Medical Dispatch.

NOTE: The issuance of any class order shall be conveyed to all regional Online Medical Control facilities for relay to the units in the field.

Treatment within the "hot" and "warm" zones may be performed only by appropriately trained personnel wearing appropriate chemical protective clothing (CPC) as determined by the FDNY Incident Commander.

RED TAG may be treated simultaneously with decontamination.
YELLOW / ORANGE TAG will be treated as soon as possible following decontamination.
GREEN TAG (asymptomatic) will be decontaminated and receive close observation.

Patients Older Than 8 Years of Age Initial Treatment (Table 1)			
Tag Color	**Signs & Symptoms**	**Auto-injector Administration**	**Atropine Dose and Monitor Interval**
RED	SLUDGEM and ONE of the following: Respiratory distress, or Agitation	3 DuoDote® kits	6 mg Monitor every 5 minutes
YELLOW / ORANGE	SLUDGEM, or Respiratory distress	2 DuoDote® Kits	4 mg Monitor every 10 minutes
GREEN	Asymptomatic None	None	None Monitor every 15 minutes

1. The goal of treatment is drying of secretions and resolution of other symptoms.
2. Do not give more than three auto-injector kits to any patient.
3. Record on the triage tag the number of Atropine and DuoDote® kits used.
4. Asymptomatic patients do not require treatment.
5. Monitor every 15 minutes.
6. All treatment subsequent to the initial doses shall comply with Table 2 and includes:
   - Extended on-scene operations
   - Transport to ambulance destinations, and
   - Treatment at casualty collection points

Patients Older Than 8 Years of Age Extended Re-Evaluation & Treatment (Table 2)				
Tag Color	**Signs & Symptoms**	**Monitor Interval**	**Auto-injector Administration**	**Atropine Repeat Dosing Frequency**
RED	SLUDGEM and ONE of the following: Respiratory distress, or Agitation	Monitor every 5 minutes	Up to a total maximum of 3 DuoDote® kits	2 mg every 3-5 minutes as needed
YELLOW / ORANGE	SLUDGEM, or Respiratory distress	Monitor every 5 to 15 minutes	Up to a total maximum of 2 DuoDote® kits	2 mg every 5-10 minutes as needed
GREEN	Asymptomatic	Monitor every 15 minutes	None	None

NOTE: In the setting of a nerve agent exposure, all symptomatic children age 0-8 years shall be assigned a **RED** tag.

Pediatric Patients				
Tag Color	**Exposure AND Signs & Symptoms**	**Atropine & Antidote Kit Doses Monitor Interval**		**Atropine Repeat Dosing Frequency**
RED (Peds)	Severe Respiratory Distress, or Agitation, or SLUDGEM	Age < 1 year	1 **Peds** Atropine Auto-injector (**0.5 mg**) No DuoDote® kit Monitor every 3 minutes	Atropine every 3 minutes as needed
		Age 1 - 8 years	1 DuoDote® kit Monitor every 3 minutes	
GREEN (Peds)	No	None Monitor every 10 minutes for symptoms of exposure		

CFR STOP

EMT

EMT STOP

Paramedic

Paramedic STOP

Key Points / Considerations

1. Class Order - A general order given by a FDNY-OMA Medical Director to perform a specific intervention or interventions at a specific location/s during a specified time period. This order is generally reserved for disaster situations.
2. If enough resources are available, begin treatment of Yellow and Orange tagged patients prior to decontamination. Do not delay decontamination of these patients.

REGIONAL EMERGENCY MEDICAL ADVISORY COMMITTEE

NEW YORK CITY

PREHOSPITAL TREATMENT PROTOCOLS

APPENDICES

Effective July 1, 2020
Version 01302020

TABLE OF CONTENTS

© The Regional Emergency Medical Services Council of New York City, Inc. 1991

All rights are reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior permission of the publisher (The Regional Emergency Medical Services Council of New York City, Inc., 475 Riverside Drive, Room 1929, New York, New York 10115, 212-870-2301).

Printed in the United States

1991, 1996, 1997, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2014, 2015, 2017, 2019, 2020

Issued January 1997
Revised July 2002
Revised March 2003
Revised January 2004
Revised July 2004
Revised January 2005
Revised July 2005
Revised January 2006
Revised July 2006
Revised January 2007
Revised January 2008
Revised January 2009
Revised July 2009
Revised January 2010, Implemented April 1, 2010
Revised June 2011, Implemented August 2011
Revised January 1, 2014, Implemented May 1, 2014
Revised May 2015, Implemented August 1, 2015
Revised July 1, 2016
Revised July 1, 2017, Implemented September 1, 2017
Re-issued January 1, 2019 with no changes, Updated April 1, 2019, Updated August 22, 2019
Revised January 30, 2020, Implemented July 1, 2020

Associated REMAC Advisories:

2020-02 REMAC Advisory 2020 Protocol Revisions

PROTOCOL APPENDICES

APPENDIX A: TELEPHONE DIRECTORY AND REFERRALS

EMS OFFICES	
Regional EMS Council of NYC	(212) 870-2301
Regional Emergency Medical Advisory Committee (REMAC) of NYC	(212) 870-2301
NYS Dept. of Health (Central Office)	(518) 402-0996
NYS Dept. of Health – NYC Field Office	(212) 417-4455

FDNY BUREAU OF EMERGENCY MEDICAL SERVICES	
Telemetry	(718) 899-5062
Toll Free	(800) 281-TELM (8356)
EMS Operations	(718) 999-2770
Division of Training	(718) 281-8325
REMAC Testing	(718) 999-2671
EMD POSITIONS	
ADMINISTRATION 1	(347) 250-6363
ADMINISTRATION 2	(347) 250-6364
ADMINISTRATION 3	(347) 250-6365
ADMINISTRATION FAX	(347) 250-6091
ARD SUPERVISOR (RM 306)	(347) 253-6422
ARD SUPERVISOR (RM 310)	(347) 250-6423
BRONX ASSIST	(347) 250-6352
BRONX NORTH	(347) 250-6353
BRONX SOUTH	(347) 250-6351
BROOKLYN ASSIST 1	(347) 250-6344
BROOKLYN ASSIST 2	(347) 250-6346
BROOKLYN CENTRAL	(347) 250-6345
BROOKLYN NORTH	(347) 250-6347
BROOKLYN SOUTH/S.I.	(347) 250-6343
CBEMS	(347) 250-6329
CITYWIDE 1	(347) 250-6334
CITYWIDE 1 ASSIST	(347) 250-6335
CITYWIDE 2	(347) 250-6337
CITYWIDE 2 ASSIST	(347) 250-6336
COMMANDING OFFICER	(347) 250-6361
DEPUTY CHIEF	(347) 250-6360
DISPATCH COMMANDER	(347) 250-6362
DISPATCH COMMANDER FAX	(347) 250-6090
DIVERSIONS DESK	(347) 250-6332

PROTOCOL APPENDICES

APPENDIX A *(continued)*: TELEPHONE DIRECTORY AND REFERRALS

DIVERSIONS DESK FAX	(347) 250-6083
FIRE DESK	(347) 250-6330
INQUIRY/TRACKING DESK	(347) 250-6331
INQUIRY/TRACKING DESK FAX	(347) 250-6082
MANHATTAN ASSIST 1	(347) 250-6339
MANHATTAN ASSIST 2	(347) 250-6341
MANHATTAN CENTRAL	(347) 250-6340
MANHATTAN NORTH	(347) 250-6342
MANHATTAN SOUTH	(347) 250-6338
QUEENS ASSIST	(347) 250-6349
QUEENS EAST	(347) 250-6350
QUEENS WEST	(347) 250-6348
RELAY DESK	(347) 250-6333
SUPERVISOR BK/SI	(347) 250-6324
SUPERVISOR BX	(347) 250-6325
SUPERVISOR MN	(347) 250-6326
SUPERVISOR QN	(347) 250-6327

ABUSE/DOMESTIC VIOLENCE	
NYS Child Abuse/Maltreatment Register (Mandated Reporter Express Line)	**(800) 635-1522**
NYS 24 Hour Child Abuse Hot-Line	(800) 342-3720
Domestic Violence 24 Hour HOT-LINE	(800) 621-4673 (HOPE)

CRIME VICTIMS	
Crime Victims 24 Hour Hot-Line	(212) 577-7777
State Crime Victims Compensation Board	(212) 417-5160
Sex Crimes Report Line (NYCPD)	(212) 267-7273

AGING	
NYC Department for the Aging Central Information and Referral	(212) 442-1000
Social Security (MEDICARE)	(800) 772-1213
Alzheimer's Resource Center	(212) 442- 3086

CPR TRAINING	
Regional EMS Council of NYC	(212) 870-2301
New York Heart Association	(212) 661-5335
American Red Cross	(212) 787-1000

PROTOCOL APPENDICES

APPENDIX A *(continued)*: TELEPHONE DIRECTORY AND REFERRALS

SOCIAL SERVICES	
Human Resources Administration General Information	(877) 474-8411
Utility Cut-Off Emergencies (Public Service Assistance)	(800) 342-3355
Legal Services (Legal Aid Society)	(212) 577-3300

OTHER SERVICES	
ASPCA (Injured Animals)	(718) 649-8600
Transportation (NYC Transit Authority)	(718) 330-1234
Gas Leaks	(718) 643-4050
POISON Control	(212) POISONS (764-7667)

APPENDIX B: PATIENT ASSESSMENT

General Approach to the EMS Call

Applies to adult and pediatric patients

CRITERIA

This general approach guidance document is intended to provide a standardized framework for approaching the scene. Follow common sense, apply good clinical judgment, and follow regionally approved policies and protocols.

CFR AND ALL PROVIDER LEVELS

Consider dispatch information while responding:

- Type of response (emergency/non)
- Prevailing weather
- Road conditions
- Time of day
- Location of call
- EMD determinant/mechanism of illness/injury
- Number of anticipated patients
- Need for additional resources

Survey the scene – do not approach the scene unless acceptably safe to do so. Stage proximate to the scene until scene is rendered acceptably safe:

- Environmental hazards
- CBRNE hazards
- Evidence of unknown powders / other unknown substances / sharps
- Indicators of a chemical suicide
- Mechanical hazards
- Violence / threat of violence
- Traffic hazards
- Number of actual patients
- Activate local MCI plan as necessary

Consider shelter-in-place or evacuation based on hazards; consider additional support resources:

- ALS intercept
- Additional ambulance
- Air medical services
- EMS physician
- Fire department / heavy rescue
- Law enforcement
- Utilities

Ensure universal precautions/personal protective equipment appropriate to the task.

APPENDIX B *(continued)*: PATIENT ASSESSMENT
ADULT PRIMARY SURVEY

	Assessment	Management
Scene size-up	▪ Body Substance Isolation ▪ Scene safety ▪ Mechanism of Injury/Nature of Illness ▪ Consider C-spine	▪ Goggles, gloves, gown, mask – as needed ▪ Ensure safety of **self** & **partner**, patient & bystanders
Initial	▪ General impression of the patient ▪ Level of Consciousness ▪ Chief complaint	▪ **A-**Alert ▪ **V**-Responds to Verbal stimuli ▪ **P**-Responds to Painful stimuli ▪ **U**-Unresponsive – no gag or cough
Airway and Breathing	▪ Manage airway ▪ O2, as needed ▪ Ensure adequate ventilation ▪ Treat any life threatening airway or breathing problems	▪ Modified Jaw Thrust ▪ Suction, as needed ▪ OPA/NPA, as needed ▪ CPR, as needed
Circulation	▪ Skin color ▪ Assess for pulses (BP estimation) *-Radial = 80+* *-Femoral = 70+* *-Carotid = 60+* ▪ Major Bleeding	▪ Control any obvious bleeding ▪ Elevation of legs, as needed ▪ Support circulation
Transport Decision	▪ Identify urgency of transport	▪ Immediate or continued assessment

PROTOCOL APPENDICES

APPENDIX B *(continued)*: PATIENT ASSESSMENT
PEDIATRIC PRIMARY SURVEY

	Assessment	Management
Scene size-up	▪ Body Substance Isolation ▪ Scene safety ▪ Mechanism of Injury/Nature of Illness ▪ Consider C-spine	▪ Goggles, gloves, gown, mask – as needed ▪ Ensure safety of **self** & **partner**, patient & bystanders
Initial	▪ General impression of the patient ▪ Level of Consciousness ▪ Chief complaint	▪ **A-**Alert ▪ **V**-Responds to Verbal stimuli ▪ **P**-Responds to Painful stimuli ▪ **U**-Unresponsive – no gag or cough
Airway and Breathing	▪ Manage airway ▪ O2, as needed ▪ Ensure adequate ventilation ▪ Treat any life threatening airway or breathing problems	▪ Modified Jaw Thrust ▪ Suction, as needed ▪ OPA/NPA, as needed ▪ CPR, as needed
Circulation	▪ Skin color ▪ Assess for pulses (BP estimation) ▪ Major Bleeding	▪ Control any obvious bleeding ▪ Elevation of legs, as needed ▪ Support circulation
Transport Decision	▪ Identify urgency of transport	▪ Immediate or continued assessment

Assess respiratory effort
- ⇒ **Use of accessory muscles**
- ⇒ **Sternal retractions**
- ⇒ **Stridor/grunting**
- ⇒ **Posturing**

Normal BP estimate: 90+ (2 x child's age)

APPENDIX B *(continued)*: PATIENT ASSESSMENT

ALTE / BRUE – Pediatric

Applies to pediatric patients under 2 years of age

CRITERIA

Apparent Life-Threatening Event (ALTE)/Brief Resolved Unexplained Events (BRUE)

ALTE/BRUE is an episode in an infant or child less than 2 years old which is frightening to the observer, has now resolved and is characterized by one or more of the following:

- Apnea (central or obstructive)
- Skin color change: cyanosis, erythema (redness), pallor, plethora (fluid overload)
- Marked change in muscle tone
- Choking or gagging not associated with feeding or a witnessed foreign body aspiration
- Seizure-like activity

CFR AND ALL PROVIDER LEVELS

- Airway management and appropriate oxygen therapy
- Check pupils and, if constricted, consider “Altered Mental Status (Adult and Pediatric)” protocol
- Check blood glucose level, if equipped
    - Refer to “Altered Mental Status (Adult and Pediatric)” protocol, if necessary
- Ongoing assessment of the effectiveness of breathing
    - Refer to “Respiratory Distress / Failure / Arrest (Pediatric)” protocol, if necessary

CFR STOP

KEY POINT / CONSIDERATIONS

NOTE: Most patients will appear stable and exhibit a normal physical exam. However, this episode may be a sign of underlying serious illness or injury and further evaluation by medical staff is strongly recommended

APPENDIX B *(continued)*: PATIENT ASSESSMENT

General Approach to Safety Restraining Devices

Applies to adult and pediatric patients

CRITERIA

This general approach guidance document is intended to provide a standardized framework for patient transport. Follow common sense, apply good clinical judgment, and follow regionally approved policies and procedures.

CFR AND ALL PROVIDER LEVELS

All passengers including patients and EMS personnel should be restrained

- It is not permissible or safe to have a parent or caregiver hold a child in his or her arms or lap. The child and parent/caregiver should each be restrained appropriately
- All patients on the stretcher must be secured when the vehicle is in motion or the stretcher is being carried or moved; stretcher harness straps should always be used
- A child's own safety seat – when available and intact – can be used to restrain a child during transport. He or she should be placed in the device and the device should be belted to an ambulance seat. If the child is the patient, the seat should be secured onto the stretcher and the child belted in the child safety seat
- If the ambulance service does not have an ambulance equipped with child safety seats or restraint, it is recommended that the agency purchase approved child safety seat(s) or restraint(s) for each ambulance. More than one size seat/restraint may be needed as location of the restraint (i.e., stretcher, or captain's chair) may not accommodate all size children
- Agencies should routinely train EMS personnel in the use of various child safety seats/restraints available and have a policy for how injured and uninjured children will be transported
- As an agency considers the purchase of new vehicles, or is retrofitting current vehicles, design considerations, such as integrated child restraints, should be considered
- All safety seats/restraints should be used according to manufacturer's recommendations

KEY POINT / CONSIDERATIONS

If a patient chooses to refuse safety restraints, please refer to agency and regional policy

APPENDIX C: DO NOT RESUSCITATE ORDER / MOLST

Applies to adult and pediatric patients

CRITERIA

The following procedure is to be used in determining course of action for all patients

CFR AND ALL PROVIDER LEVELS

- For conscious and alert patients, their wishes are to be followed in accordance with standard consent procedures
- For patients unable to consent, including the unconscious, determine the presence of valid MOLST, eMOLST or DNR forms at the scene:
    - Signed “Medical Orders for Life Sustaining Treatment” (MOLST) form
    - Electronically signed eMOLST form
    - Signed New York State approved document, bracelet, or necklace
    - Properly documented nursing home or nonhospital DNR form
- If MOLST, eMOLST, or DNR (document, bracelet, or necklace) is not present – begin standard treatment, per protocol
- If MOLST, eMOLST, or DNR (document, bracelet, or necklace) is present, and is valid for the patient’s clinical state (e.g. cardiac arrest), follow the orders as written, ***inclusive of either terminating or not beginning resuscitation***
- If advanced directives not mentioned above are present (living will or health care proxy), contact medical control for direction

CFR STOP

MEDICAL CONTROL OPTIONS

- Direction regarding wishes expressed via other forms of advanced directives including living wills, health care proxies, and in-hospital do not resuscitate orders

KEY POINT / CONSIDERATIONS

- Any appropriate directive indicated on the MOLST or eMOLST should be honored, including the directive for the patient not to be transported to the hospital
- A MOLST is still valid even if the physician signature has expired
- A copy of the original MOLST is a valid document
    - The eMOLST form may be printed and affixed with electronic signatures. Electronic signatures on the eMOLST form are considered valid signatures
- A copy of the DNR, MOLST, or eMOLST form should be attached to the PCR and retained by the agency whenever possible
- Reference DOH Policy Statement 08-07 or its updated replacement, if superseded
- If a patient with a DNR (stand-alone DNR form, or as directed by a MOLST or eMOLST form) is a resident of a nursing home (or a patient of an interfacility transport) and expires during transport, contact the receiving staff to determine if they are willing to accept the patient to that facility. If not, return the patient to the sending facility. A copy of the DNR, MOLST, or eMOLST must be attached to the PCR and retained by the agency for all transports from a sending facility to a nursing home

APPENDIX D: Advanced Medical Technologies

NOTE: The following appendix on "Advanced Medical Technologies" includes a discussion of supportive measures of medical devices. No New York City EMS providers (including CFR) should attempt to modify, tape, clamp, or otherwise troubleshoot any of these medical devices unless specifically trained and authorized to do so by their agency and medical director.

APPENDIX D *(continued)*: Advanced Medical Technologies

Technology Assisted Children

CRITERIA

- Children with special health care needs requiring technological assistance for life support:
  - Tracheostomy
    - Breathing tube in neck
  - Central venous catheters (tunneled catheter, Broviac catheter, Mediport, PICC)
    - Catheters that enter a large (central) vein
  - CSF shunt (e.g. ventriculoperitoneal or V-P shunt)
    - Internal tube that drains spinal fluid from the brain into the abdomen
  - Gastrostomy (PEG tube, MIC-KEY® "button") or J-tube
    - Feeding tube that goes through the abdominal wall
  - Colostomy or ileostomy
    - Bowel connected through abdominal wall for collection of waste in a bag
  - Ureterostomy or nephrostomy tube
    - Connection of the urinary system through the abdominal wall or through the back for collection of urine in a bag
  - Foley catheter
    - Catheter in urethra to collect urine from the bladder into a bag

CFR AND ALL PROVIDER LEVELS

- ABCs and vital signs including blood pressure
- Basic airway management if needed, give high flow oxygen (non-rebreather) if needed
- Supportive measures (device-specific):
  - Tracheostomy
    - If on ventilator and there are respiratory concerns, disconnect and attempt to ventilate via tracheostomy adapter using BVM
    - If tracheostomy tube is fully or partially dislodged, remove it, cover tracheostomy stoma with an occlusive dressing, and ventilate via mouth and nose using BVM
  - Central venous catheters: if catheter is broken or leaking, clamp (pinch off) catheter between patient and site of breakage or leakage
  - Gastrostomy tube or button, ureterostomy or nephrostomy tube: if tube or button is fully dislodged, cover the site with an occlusive dressing; if partially dislodged, tape in place
  - Gastrostomy, colostomy, ileostomy, or nephrostomy: if stoma site is bleeding, apply gentle direct pressure with a saline-moistened gauze sponge
  - Foley catheter: if catheter is dislodged, tape in place

CFR STOP

EMT

- Notify the destination hospital ASAP and state that the patient has special health care needs that requires technological assistance (be specific)
- Obtain frequent vital signs, including blood pressure

EMT STOP

KEY POINT / CONSIDERATIONS

- Listen to the caregivers; they know their child best. Allow them to assist with care.

APPENDIX D *(continued)*: Advanced Medical Technologies

Technology Assisted Children

- Inquire about:
  - Presence of a Patient Care Plan (PCP)
  - Syndromes/diseases
  - Devices/medications
  - Child's baseline abilities
  - Usual vital signs
  - Symptoms
  - What is different today
  - Best way to move the child
- Look for MedicAlert® jewelry, Emergency Information Form (EIF), or Patient Care Plan (PCP), or other health care forms, if usual caregiver is not available
- Take Emergency Information Form (EIF), Patient Care Plan, or other health care forms to the hospital with the patient
- Assess and communicate with the child based on developmental, not chronological, age
- Take necessary specialized equipment (e.g. patient trach/ventilator pack, G-tube connectors, etc.) to the hospital with the patient, if possible

APPENDIX D *(continued)*: Advanced Medical Technologies

Total Artificial Heart (TAH)

CRITERIA

- Any request for service that requires evaluation and transport of a patient with a Total Artificial Heart.

CFR AND ALL PROVIDER LEVELS

- Assess airway and breathing. Hypertension or volume overload can quickly cause pulmonary edema to develop
- Do **not** use an AED or cardiac monitor.
- Assess pulse and artificial heart function:
  - If no pulse present:
    - Consider early consult with TAH coordinator or medical control
    - Check for severed or kinked TAH driveline (address if possible)
    - Check battery position and power status (replace if possible)
    - Use the backup driver, or hand pump, if available
    - Do **not** perform chest compressions or place an AED
- Assess blood pressure: goal blood pressure is >90 mmHg and <150 mmHg
- Perform a secondary assessment and treat per protocol
  - If unresponsive with a pulse, evaluate for noncardiac etiologies
- **Notify the receiving hospital that your patient has a TAH while on scene or promptly after initiation of transport regardless of patient's complaint**
- Assure that patient has both drivers (compressors), hand pump, all batteries, and power cords for transport
- Any trained support member should remain with patient

CFR STOP

MEDICAL CONTROL OPTIONS

- Termination of resuscitation
- Consultation with a TAH program provider

KEY POINT / CONSIDERATIONS

- TAH patients have had their heart removed and replaced with a rigid device which pneumatically pumps blood throughout the body
- As these patients do not have a heart, there is no indication for an ECG or cardiac monitoring. A functioning TAH will not result in any measurable electrical activity
- TAH patients are on anticoagulation and may have significant bleeding with minor injuries
- The TAH patient has normal pulse and blood pressure detectable by conventional methods and are highly preload and afterload sensitive:
  - Target blood pressure is <150 mmHg and > 90 mmHg
  - Pulse rate is set and regular, between 120-135 bpm

APPENDIX D *(continued)*: Advanced Medical Technologies

Ventricular Assist Device (VAD)

CRITERIA

- Any request for service that requires evaluation and/or transport of a patient with a Ventricular Assist Device (VAD)

CFR AND ALL PROVIDER LEVELS

- Assess airway and breathing. Treat airway obstruction or respiratory distress per protocol. Treat medical or traumatic conditions per protocol.
- Assess circulation:
  - Auscultate (listen with a stethoscope) over the precordial/epigastric (heart/upper stomach) area for a motorized "hum" and simultaneously visualize the controller for a green light or lit screen
  - Assess perfusion based on mental status, capillary refill, and skin color
  - In continuous flow VAD patients (HeartMate II©, Heartware©, or axial flow device), the absence of a palpable pulse is normal even in the setting of a normally functioning device. Patients may not have a readily measurable blood pressure
  - In pulsatile flow VAD patients with a HeartMate 3© centrifugal device, patients may have a palpable pulse (pulse is generally set to 30 BPM) in the setting of a normally functioning device, yet may not have a readily measurable blood pressure
  - Perform CPR **only** when there are no signs of flow or perfusion (the person is unresponsive, pulseless, and there is no evidence of the pump functioning [eg: no motor "hum"])
- Assess pump function:
  - Ascertain, and make note of pump model, installing institution, and institution VAD coordinator phone number from a tag located on the pocket controller. Patients may also have a medical bracelet, necklace, or wallet card with this information
- Perform a secondary assessment and treat per appropriate protocol
- **Notify the receiving facility promptly and consider early consultation with the VAD coordinator or medical control,** *regardless* of the patient's complaint
- Assure that patient has the power unit, extra batteries, and backup controller for transport
- A trained support member should remain with patient

CFR STOP

EMT

- Unless otherwise directed by medical control, transport patient to a facility capable of managing VAD patients

EMT STOP

KEY POINT / CONSIDERATIONS

- Community patients with VADs are typically entirely mobile and independent
- Trained support members include family and caregivers who have extensive knowledge of the device, its function, and its battery units. They may act as a resource to the EMS provider when caring for a VAD patient
- One set of fully charged batteries provides 8-10 hours of power:
  - If the battery or power is low, the batteries need to be replaced immediately
  - Assist with the replacement of batteries if directed by patient/caregiver

APPENDIX D *(continued)*: Advanced Medical Technologies

Ventricular Assist Device (VAD)

  - **Never disconnect both batteries at once as this can cause complete loss of VAD power**
- Keep the device components dry
- The most common complication in VAD patients is infection. VAD patients are susceptible to systemic illness, sepsis, and septic shock due to their abdominal driveline as a conduit of infection
- Patients with a VAD are highly preload dependent and afterload sensitive. Low flow alarms are frequently due to MAP >90 mmHg. The devices are sensitive to alterations in volume status and careful volume resuscitation is often necessary
- VAD patients are heavily anticoagulated and susceptible to bleeding complications
- Patients may have VF/VT and be asymptomatic

Controller Device Normal Values:

	Heartmate II©	Heartmate 3©	HVAD©
Speed	8,000-10,000 RPM	5,000-6,000 RPM	2400-3200 RPM
Power	4-7 watts	3-7 watts	3-6 watts
Flow	4-8 L/min	3-6 L/min	3-6 L/min
Pulsatility Index (PI)	4-6	1-4	N/A

APPENDIX D *(continued)*: Advanced Medical Technologies

Automatic Transport Ventilator

This is a general resource document on the use of automatic transport ventilators, not a protocol. It is intended only for those who are separately equipped and trained. This does not supersede device-specific practice guidelines provided through agency education.

GENERAL PARAMETERS

FiO2: Maintain SaO2 >=94%
PEEP: 5 cm H2O (increase up to 10 cm H2O as needed to improve oxygenation).
Mode: A/C or SIMV
Pressure Support: 5 – 10 cmH2O, if in SIMV (if available)
Volume Control: Tidal volume (Vt) 6 – 8 mL/kg ideal body weight (maintain plateau pressure [Pplat]< 30 cm H2O or PIP < 35 cm H2O)
Rate: Child: 16 – 20 breaths/min; Adult: 12 – 14 breaths/min
I-Time: Child:0.7 – 0.8 seconds; Adult:0.8 – 1.2 seconds

Please refer to the manufacturer's ventilator operation manual for specific directions on how to operate your ventilator.

RECOMMENDED MINIMUM REQUIREMENTS FOR AUTOMATED VENTILATOR

- Pressure limit / safety relief at a maximum of 40 cm H2O
- Ability to adjust volume to 4-8 mL/kg ideal body weight
- Ability to adjust rate in the minimum range of 10-30 breaths/min
- Ability to add PEEP or PEEP valve in the minimum range of 5 - 10 cm H2O
- Ability for patient triggered breaths (complete control ventilation is prohibited)

INITIATING MECHANICAL VOLUME VENTILATION

- Use EtCO2 detection and pulse oximetry to evaluate the effectiveness of the ventilation technique and to verify artificial airway patency and position
- Prepare the BVM device for emergent use in case of a ventilator failure
- Assure a secondary oxygen source with a minimum of 1000psi in a D tank
- Attach a ventilator to appropriate oxygen/air source
- Attach a disposable ventilator circuit to ventilator
- Attach a gas outlet, pressure transducer, and exhalation valve tubes to corresponding connectors
- Select the appropriate mode, if applicable
- Select the appropriate respiratory rate (RR). Titrate to appropriate EtCO2
    - Adult: 12 – 14 breaths/min
    - Child: 16 – 20 breaths/min
- Select the appropriate tidal volume (Vt) of 6 – 8 mL/kg ideal body weight
- Select the appropriate inspiratory time (It), if applicable

- Select the desired FiO2 if applicable. An FiO2 of 1.0 (100% O2) is a standard start and then should be titrated down to maintain SpO2 ≥ 94%
- Verify a high pressure alarm no higher than 40 cm H2O
- Set PEEP to 5 cm H2O
- Observe the delivery of several breaths
    - Evaluate the patient for adequate chest rise, ETCO2 and SpO2
    - Adjust the ventilator settings, as necessary, to improve clinical parameters
- Record all set parameters on the patient transport record
- Monitor and record PIP, if applicable

KEY POINTS

- If at any time the ventilator should fail, or an alarm is received that cannot be corrected, the patient should be immediately ventilated with a BVM device attached to a 100% oxygen source

APPENDIX E: GLASGOW COMA SCALES / TRAUMA SCORES

ADULT GLASGOW COMA SCALE

RESPONSE		POINTS
Eye Opening	Spontaneous	4
	To Voice	3
	To Pain	2
	None	1
Verbal Response	Oriented	5
	Confused	4
	Inappropriate words	3
	Incomprehensible words	2
	None	1
Motor Response	Obeys commands	6
	Localizes pain	5
	Withdraws to pain	4
	Flexion	3
	Extension	2
	None	1
Total Glasgow Coma Scale		**3 – 15 Points**

ADULT TRAUMA SCORE

RESPONSE		POINTS
Respiratory Rate	10-29/min	4
	> 29/min	3
	6-9/min	2
	1-5/min	1
	None	0
Systolic BP	> 89 mmHg	4
	76-89 mmHg	3
	50-75 mmHg	2
	1-49 mmHg	1
	None	0
Glasgow Coma Scale Points	13-15	4
	9-12	3
	6-8	2
	4-5	1
	3	0
Total Trauma Score		**0 – 12 Points**

PROTOCOL APPENDICES

APPENDIX E *(continued)*: GLASGOW COMA SCALES / TRAUMA SCORES

INFANT GLASGOW COMA SCALE

RESPONSE		POINTS
Eye Opening	Spontaneous	4
	To Voice	3
	To Pain	2
	None	1
Verbal Response	Coos, Babbles	5
	Irritable Cries	4
	Cries To Pain	3
	Moans To Pain	2
	None	1
Motor Response	Normal Spontaneous Movement	6
	Withdraws To Touch	5
	Withdraws to pain	4
	Abnormal Flexion	3
	Abnormal Extension	2
	None	1
Total Glasgow Coma Scale		**3 – 15 Points**

PEDIATRIC TRAUMA SCORE

RESPONSE		POINTS
Size	> 20 Kg	+2
	10-20 Kg (22-44 lbs)	+1
	< 10 Kg (22 lbs)	-1
Airway	Normal	+2
	Maintainable	+1
	Unmaintainable	-1
Systolic BP	> 90 mmHg	+2
	50-90 mmHg	+1
	<50 mmHg	-1
CNS	Awake	+2
	Obtunded / LOC	+1
	Coma / Cerebrate	-1
Open Wounds	None	+2
	Minor	+1
	Major / Penetrating	-1
Skeletal	None	+2
	Closed Fractures	+1
	Open / Multiple fractures	-1
Total Trauma Score		**-6 – +12 Points**

APPENDIX F: TRAUMA PATIENT CRITERIA

Adult Major Trauma

Major trauma present if the patient's physical findings or the mechanism of injury meets **any one** of the following criteria:

PHYSICAL FINDINGS

1. Glasgow Coma Scale is less than or equal to 13
2. Respiratory rate is less than 10 or more than 29 breaths per minute
3. Pulse rate is less than 50 or more than 120 beats per minute
4. Systolic blood pressure is less than 90 mmHg
5. Penetrating injuries to head, neck, torso or proximal extremities
6. Two or more suspected proximal long bone fractures
7. Suspected flail chest
8. Suspected spinal cord injury or limb paralysis
9. Amputation (except digits)
10. Suspected pelvic fracture
11. Open or depressed skull fracture

MECHANISM OF INJURY

1. Ejection or partial ejection from an automobile
2. Death in the same passenger compartment
3. Extrication time in excess of 20 minutes
4. Vehicle collision resulting in 12 inches of intrusion in to the passenger compartment
5. Motorcycle crash >20 MPH or with separation of rider from motorcycle
6. Falls from greater than 20 feet
7. Vehicle rollover (90 degree vehicle rotation or more) with unrestrained passenger
8. Vehicle vs. pedestrian or bicycle collision above 5 MPH

HIGH RISK PATIENTS – **DOES NOT REQUIRE TRANSPORT TO A TRAUMA CENTER**

If a patient does not meet the above criteria for Major Trauma, but has sustained an injury and has one or more of the following criteria, they are considered a "High Risk Patient".
CONSIDER transportation to a Trauma Center.
CONSIDER contacting medical control.

1. Bleeding disorders or patients who are on anticoagulant medications
2. Cardiac disease and/or respiratory disease
3. Insulin dependent diabetes, cirrhosis, or morbid obesity
4. Immuno-suppressed patients (HIV disease, transplant patients, and patients on chemotherapy treatment)
5. Age >55

APPENDIX G: BURN PATIENT CRITERIA

For adults and pediatric patients with 2nd and 3rd degree cutaneous burns:

1. Burns involving 15% or more of the total body surface area.
2. Third degree burns involving 5% or more of the total body surface area.
3. Burns involving 9% or more of the total body surface area in persons:
   - Under 5 or over 60 years of age

   OR

   - With a pre-existing disease which may complicate or retard recovery
4. Respiratory burns.
5. Electrical burns.
6. Burns involving the eyes, ears, face, hands, feet, or genitalia.
7. Burns with associated trauma.

NOTE: **MAJOR BURN PATIENTS SHOULD BE TRANSPORTED TO A BURN CENTER. (SEE APPENDIX H.)**

PATIENTS IN CARDIAC ARREST OR WITH OBSTRUCTED OR UNMANAGEABLE AIRWAYS SHOULD BE TRANSPORTED TO THE NEAREST 911 AMBULANCE DESTINATION EMERGENCY DEPARTMENT. (SEE APPENDIX I.)

APPENDIX H: FACILITIES PROVIDING SPECIALTY CARE
TRAUMA and BURN

Hospital Number	Hospital Full Name	Pediatric Trauma	Adult Trauma	Burn
2	Bellevue Hospital Center	X	X	
7	Harlem Hospital Center		X	X
7P	*Harlem Hospital Center*	X		
14	New York Presbyterian Hospital - New York Weill Cornell Campus	X	X	X
17P	*New York Presbyterian Hospital - Columbia Campus*	X		
20	St. Luke's - Roosevelt Hospital Center - St. Luke's Hospital Division		X	
23P	*Bronx Lebanon Hospital Center - Concourse Division*	X		
25	Jacobi Medical Center		X	X
25P	*Jacobi Medical Center*	X		
27	Lincoln Medical and Mental Health Center		X	
27P	*Lincoln Medical and Mental Health Center*	X		
31	New York Hospital Medical Center of Queens		X	
32	Elmhurst Hospital Center		X	
32P	*Elmhurst Hospital Center*	X		
34	Jamaica Hospital	X	X	
35P	*North Shore - Long Island Jewish Medical Center*	X		
41	Brookdale University Hospital Medical Center		X	
48	Kings County Hospital Center		X	
48P	*Kings County Hospital Center*	X		
51	Lutheran Medical Center	X	X	
53	Maimonides Medical Center	X	X	
54	New York Methodist Hospital		X	
60	Richmond University Medical Center		X	
62	Staten Island University Hospital - Ocean Breeze Campus (North)		X	X
78	North Shore University Hospital Center - Manhasset	X	X	
82	Nassau County University Medical Center			X
83	St. Barnabas Hospital		X	

APPENDIX H *(continued)*: FACILITIES PROVIDING SPECIALTY CARE

Other Specialties

Hospital Number	Hospital Full Name	Stroke Center	Hyperbaric	Replant	SAFE	Hypothermia Center	STEMI-PCI Center
1	New York Presbyterian - Lower Manhattan	X				X	
2	Bellevue Hospital Center	X		X	X	X	X
3	Beth Israel Medical Center - Petrie Division	X			X	X	X
7	Harlem Hospital Center	X			X	X	
11	Lenox Hill Hospital	X				X	X
12	Metropolitan Hospital Center				X	X	
13	Mount Sinai Medical Center	X			X	X	X
14	New York Presbyterian Hospital - New York Weill Cornell Campus	X	X			X	X
16	New York Presbyterian Hospital - Allen Pavilion	X			X		
17	New York Presbyterian Hospital - Columbia Campus	X			X	X	X
18	St. Luke's - Roosevelt Hospital Center - Roosevelt Hospital Division	X			X	X	
20	St. Luke's - Roosevelt Hospital Center - St. Luke's Hospital Division	X			X	X	X
22	Montefiore Medical Center - Weiler Division	X				X	X
23	Bronx Lebanon Hospital Center - Concourse Division	X				X	X
25	Jacobi Medical Center	X	X		X	X	
27	Lincoln Medical and Mental Health Center	X			X	X	
29	Montefiore Medical Center	X		X		X	X
31	New York Hospital Medical Center of Queens	X					X
32	Elmhurst Hospital Center	X			X	X	X
33	Flushing Hospital Medical Center	X				X	
33P	*Flushing Hospital Medical Center*						
34	Jamaica Hospital	X				X	X
35	North Shore - Long Island Jewish Medical Center	X		X		X	X
38	Queens Hospital Center				X	X	
40	St. John's Episcopal Hospital South Shore Division	X				X	

APPENDIX H *(continued)*: FACILITIES PROVIDING SPECIALTY CARE

Other Specialties

Hospital Number	Hospital Full Name	Stroke Center	Hyperbaric	Replant	SAFE	Hypothermia Center	STEMI-PCI Center
41	Brookdale University Hospital Medical Center	X				X	X
42	Coney Island Hospital	X			X	X	
44	SUNY Downstate Medical Center	X					X
45	Woodhull Medical and Mental Health Center	X			X	X	
47	Kingsbrook Jewish Medical Center	X				X	
48	Kings County Hospital Center	X			X	X	
50	Long Beach Medical Center	X					
51	Lutheran Medical Center	X				X	X
53	Maimonides Medical Center	X				X	X
54	New York Methodist Hospital	X				X	X
58	Wyckoff Heights Medical Center	X					
59	Staten Island University Hospital - Prince's Bay Campus (South)					X	
60	Richmond University Medical Center	X			X	X	
62	Staten Island University Hospital - Ocean Breeze Campus (North)	X				X	X
70	North Central Bronx Hospital				X	X	
71	Mount Sinai Hospital of Queens	X				X	
74	Franklin Hospital Medical Center	X					
77	North Shore - Forest Hills	X					
78	North Shore University Hospital Center - Manhasset	X			X	X	X
80	Sound Shore Medical Center of Westchester	X					
82	Nassau County University Medical Center	X	X				
83	St. Barnabas Hospital	X				X	X
88	New York Westchester Square Hospital Medical Center	X					
92	New York Community Hospital of Brooklyn	X				X	
93	Beth Israel Medical Center - Kings Highway Division	X				X	
95	Brooklyn Hospital Center	X				X	
96	St. Joseph's Medical Center	X					

PROTOCOL APPENDICES

APPENDIX I: HOSPITAL LISTINGS (AMBULANCE DESTINATIONS)

MANHATTAN

FDNY Hospital #	FACILITY	ADDRESS	Upper Pediatric Age Limits
02	Bellevue Hospital Center	472 First Avenue New York, NY 10016	25
03	Beth Israel Medical Center – Petrie Campus	10 Nathan D. Perlman Place New York, NY 10003	17
07	Harlem Hospital Center	506 Lenox Avenue New York, NY 10037	18
11	Lenox Hill Hospital	100 East 77th Street New York, NY 10021	17
05	*Manhattan Eye/Ear/Throat Hospital*	210 East 64th Street New York, NY 10021	
10	*Department of Veterans Affairs Harbor Health Care- New York Campus*	1st Avenue & 23rd Street New York, NY 10016	
08	*Memorial Sloan Kettering Hospital*	1275 York Avenue New York, NY 10021	
12	Metropolitan Hospital Center	1901 First Avenue New York, NY 10029	18
13	Mount Sinai Medical Center Hospital	One Gustave L. Levy Plaza New York, NY 10029	21
61	*New York Eye & Ear Infirmary*	Second Avenue & 14th Street New York, NY 10003	
14	New York Presbyterian Hospital - New York Weill Cornell Campus	525 East 68th Street New York, NY 10021	Pending
01	New York University Downtown Hospital	170 William Street New York, NY 10038	Not listed
15	New York University Medical Center – Tisch Hospital	550 First Avenue New York, NY 10016	Not listed
17	New York Presbyterian Hospital-Columbia Presbyterian Medical Center	622 West 168th Street New York, NY 10032	19
16	New York Presbyterian Hospital - Allen Pavilion	5141 Broadway New York, NY 10034	Not listed
18	St. Luke's/Roosevelt Hospital Center St. Luke's Hospital Division	Amsterdam Avenue and 114th Street New York, NY 10025	Not listed
20	St. Luke's/Roosevelt Hospital Center Roosevelt Hospital Division	428 West 59th Street New York, NY 10019	21

Italics indicate non-911 destination facility

APPENDIX I (continued): HOSPITAL LISTINGS (AMBULANCE DESTINATIONS)

BRONX

FDNY Hospital #	FACILITY	ADDRESS	Upper Pediatric Age Limits
23	Bronx Lebanon Hospital Center – Concourse Division	1650 Grand Concourse Bronx, NY 10457	18
24	*Bronx Lebanon Hospital Center – Fulton Division*	1276 Fulton Avenue Bronx, NY 10456	
26	*Bronx VA Medical Center*	Sedgewick Avenue Bronx, NY 10400	
25	Jacobi Medical Center	1400 Pelham Parkway South Bronx, NY 10461	18
27	Lincoln Medical & Mental Health Center	234 East 149th Street Bronx, NY 10451	18
29	Montefiore Medical Center – Moses Division	111 East 210th Street Bronx, NY 10467	Not listed
70	North Central Bronx Hospital	3424 Kossuth Avenue Bronx, NY 10467	18
28	Montefiore Medical Center – North Division (formerly OLOM)	600 East 233rd Street Bronx, NY 10466	21
83	St. Barnabas Hospital	4422 Third Avenue Bronx, NY 10457	17
22	Montefiore Medical Center – Weiler Division (Albert Einstein)	1825 Eastchester Road Bronx, NY 10467	21
88	NY Westchester Square Hospital Medical Center	2475 Raymond Avenue Bronx, NY 10401	

WESTCHESTER

FDNY Hospital #	FACILITY	ADDRESS	Upper Pediatric Age Limits
99	*Lawrence Hospital*	55 Palmer Avenue Bronxville, NY 10708	
97	*Saint John's Riverside Hospital*	967 North Broadway Yonkers, NY 10701	
96	*Saint Joseph's Medical Center*	127 South Broadway Yonkers, NY 10701	
80	*Sound Shore Medical Center of Westchester*	16 Guion Place New Rochelle, NY 10802	
89	*The Mount Vernon Hospital*	12 North 7th Avenue Mount Vernon, NY 10550	

Italics indicate non-911 destination facility

APPENDIX I *(continued)*: HOSPITAL LISTINGS (AMBULANCE DESTINATIONS)

BROOKLYN

FDNY Hospital #	FACILITY	ADDRESS	Upper Pediatric Age Limits
93	Beth Israel Medical Center – Kings Highway Division	3201 Kings Highway Brooklyn, NY 11234	
41	Brookdale University Hospital Medical Center	Linden Boulevard at Brookdale Plaza Brooklyn, NY 11212	18
90	*Department of Veterans Affairs Harbor Health Care- Brooklyn Campus*	Poly Place & 7th Avenue Brooklyn, NY 11213	
42	Coney Island Hospital	2601 Ocean Parkway Brooklyn, NY 11235	18
55	Interfaith Medical Center - St. John's Division	1545 Atlantic Avenue Brooklyn, NY 11213	
48	Kings County Hospital Center	451 Clarkson Avenue Brooklyn, NY 11203	18
47	Kingsbrook Jewish Medical Center	585 Schenectady Avenue Brooklyn, N. Y. 11203	18
51	Lutheran Medical Center	150 55th Street Brooklyn, NY 11220	17
53	Maimonides Medical Center	4802 Tenth Avenue Brooklyn, NY 11220	17
92	New York Community Hospital of Brooklyn	2525 Kings Highway Brooklyn, NY 11229	Not listed
54	New York Methodist Hospital	506 Sixth Street Brooklyn, NY 11215	20
95	The Brooklyn Hospital Center	121 DeKalb Avenue Brooklyn, NY 11201	Not listed
44	University Hospital of Brooklyn-SUNY Downstate Medical Center	445 Lenox Road Brooklyn, NY 11203	18
45	Woodhull Medical & Mental Health Center	760 Broadway Brooklyn, NY 11206	
58	Wyckoff Heights Medical Center	374 Stockholm Street Brooklyn, NY 11237	

Italics indicate non-911 destination facility

PROTOCOL APPENDICES

APPENDIX I *(continued)*: HOSPITAL LISTINGS (AMBULANCE DESTINATIONS)

QUEENS

FDNY Hospital #	FACILITY	ADDRESS	Upper Pediatric Age Limits
32	Elmhurst Hospital Center	79-01 Broadway Elmhurst, NY 11373	
33	Flushing Hospital Medical Center	45-00 Parsons Boulevard Flushing, NY 11355	17
34	Jamaica Hospital	89th Avenue & Van Wyck Expressway Jamaica, NY 11418	17
35	Long Island Jewish Hillside Medical Center	270-05 76th Avenue New Hyde Park, NY 11042	18
31	New York Hospital Medical Center of Queens	56-45 Main Street Flushing, NY 11355	21
77	North Shore University Hospital – Forest Hills	102-01 66th Road Forest Hills, NY 11375	Not listed
38	Queens Hospital Center	82-68 164th Street Jamaica, NY 11432	
40	St. John's Episcopal Hospital – South Shore Division	327 Beach 19th Street Far Rockaway, NY 11691	
71	Mount Sinai Hospital of Queens	25-10 30th Avenue Long Island City, N. Y. 11102	Permanent Diversion

NASSAU

FDNY Hospital #	FACILITY	ADDRESS	Upper Pediatric Age Limits
74	Franklin Hospital Medical Center	900 Franklin Avenue Valley Stream, NY 11580	Not listed
68	Mercy Medical Center	1000 North Village Avenue Rockville Centre, NY 11571	
82	*Nassau University Medical Center*	2201 Hempstead Turnpike East Meadow, NY 11501	
78	North Shore University Hospital Center Manhasset	300 Community Drive Manhasset, NY 11030	18
66	*Saint Francis Hospital*	100 Port Washington Blvd. Roslyn, NY 11576	
67	*Winthrop University Hospital*	259 First Street Mineola, NY 11501	

Italics indicate non-911 destination facility

APPENDIX I *(continued)*: HOSPITAL LISTINGS (AMBULANCE DESTINATIONS)

RICHMOND

FDNY Hospital #	FACILITY	ADDRESS	Upper Pediatric Age Limits
60	Richmond University Medical Center	355 Bard Avenue Staten Island, NY 10310	18
62	Staten Island University Hospital – North Ocean Breeze Campus	475 Seaview Avenue Staten Island, NY 10305	21
59	Staten Island University Hospital – South Prince's Bay Campus	375 Seguine Avenue Staten Island, NY 10309	Not listed

Italics indicate non-911 destination facility

APPENDIX I *(continued)*: HOSPITAL LISTINGS (AMBULANCE DESTINATIONS)

Services Available by Hospital *(*Italics indicate non-911 destination facility)*

Hospital Number	Hospital Full Name	General Emergency Department	Critical Adult	OBS	Adult Psych Patient	Critical Pediatric	Pediatric General Emergency Department
1	New York Presbyterian - Lower Manhattan	X	X	X		X	
2	Bellevue Hospital Center	X	X	X	X	X	
3	Beth Israel Medical Center - Petrie Division	X	X	X	X	X	
7	Harlem Hospital Center	X	X	X	X		
7P	Harlem Hospital Center (Pediatrics)					X	X
11	Lenox Hill Hospital	X	X	X		X	
12	Metropolitan Hospital Center	X	X	X	X	X	
13	Mount Sinai Medical Center	X	X	X	X	X	
14	New York Presbyterian Hospital - New York Weill Cornell Campus	X	X	X	X	X	
16	New York Presbyterian Hospital - Allen Pavilion	X	X	X			
17	New York Presbyterian Hospital - Columbia Campus	X	X	X	X		
17P	New York Presbyterian Hospital - Columbia Campus (Pediatrics)					X	X
18	St. Luke's - Roosevelt Hospital Center - Roosevelt Hospital Division	X	X	X	X		
20	St. Luke's - Roosevelt Hospital Center - St. Luke's Hospital Division	X	X		X		
22	Montefiore Medical Center - Weiler Division	X	X	X		X	
23	Bronx Lebanon Hospital Center - Concourse Division	X	X	X	X		
23P	Bronx Lebanon Hospital Center - Concourse Division (Pediatrics)					X	X
24*	*Bronx Lebanon Hospital Center - Fulton Division*				X		
25	Jacobi Medical Center	X	X	X	X		
25P	Jacobi Medical Center (Pediatrics)					X	X
27	Lincoln Medical and Mental Health Center	X	X	X	X		
27P	Lincoln Medical and Mental Health Center (Pediatrics)					X	
28	Montefiore Medical Center - North Division	X	X	X	X	X	

APPENDIX I *(continued)*: HOSPITAL LISTINGS (AMBULANCE DESTINATIONS)

Services Available by Hospital *(*Italics indicate non-911 destination facility)*

Hospital Number	Hospital Full Name	General Emergency Department	Critical Adult	OBS	Adult Psych Patient	Critical Pediatric	Pediatric General Emergency Department
29	Montefiore Medical Center	**X**	**X**		**X**		
29P	Montefiore Medical Center (Pediatrics)					**X**	**X**
31	New York Hospital Medical Center of Queens	**X**	**X**	**X**		**X**	
32	Elmhurst Hospital Center	**X**	**X**	**X**	**X**		
32P	Elmhurst Hospital Center (Pediatrics)					**X**	**X**
33	Flushing Hospital Medical Center	**X**	**X**	**X**			
33P	Flushing Hospital Medical Center (Pediatrics)					**X**	**X**
34	Jamaica Hospital	**X**	**X**	**X**	**X**	**X**	
35	North Shore - Long Island Jewish Medical Center	**X**	**X**	**X**	**X**		
35P	North Shore - Long Island Jewish Medical Center (Pediatrics)					**X**	**X**
38	Queens Hospital Center	**X**	**X**	**X**	**X**	**X**	
40*	*St. John's Episcopal Hospital South Shore Division*	**X**	**X**	**X**	**X**	**X**	
41	Brookdale University Hospital Medical Center	**X**	**X**	**X**	**X**		
41P	Brookdale University Hospital Medical Center (Pediatrics)					**X**	**X**
42	Coney Island Hospital	**X**	**X**	**X**	**X**	**X**	
44	SUNY Downstate Medical Center	**X**	**X**	**X**			
44P	SUNY Downstate Medical Center (Pediatrics)					**X**	**X**
45	Woodhull Medical and Mental Health Center	**X**	**X**	**X**	**X**		
47	Kingsbrook Jewish Medical Center	**X**	**X**				
48	Kings County Hospital Center	**X**	**X**	**X**	**X**		
48P	Kings County Hospital Center (Pediatrics)					**X**	**X**
50	Long Beach Medical Center		**X**	**X**	**X**		
51	Lutheran Medical Center	**X**	**X**	**X**	**X**	**X**	
53	Maimonides Medical Center	**X**	**X**	**X**	**X**		
53P	Maimonides Medical Center (Pediatrics)					**X**	**X**

APPENDIX I *(continued)*: HOSPITAL LISTINGS (AMBULANCE DESTINATIONS)

Services Available by Hospital *(*Italics indicate non-911 destination facility)*

Hospital Number	Hospital Full Name	General Emergency Department	Critical Adult	OBS	Adult Psych Patient	Critical Pediatric	Pediatric General Emergency Department
54	New York Methodist Hospital	X	X	X	X		
54P	New York Methodist Hospital (Pediatrics)					X	X
55	Interfaith Medical Center	X	X		X	X	
58	Wyckoff Heights Medical Center	X	X	X			
58P	Wyckoff Heights Medical Center (Pediatrics)					X	X
59	Staten Island University Hosp - Prince's Bay Campus (South)	X	X			X	
60	Richmond University Medical Center	X	X	X		X	
62	Staten Island University Hosp - Ocean Breeze Campus (North)	X	X	X		X	
67*	*Winthrop University Hospital*	X	X	X	X		
68*	*Mercy Medical Center*	X	X	X	X		
70	North Central Bronx Hospital	X	X	X	X	X	
71	Mount Sinai Hospital of Queens	X	X				
74*	*Franklin Hospital Medical Center*	X	X		X		
77	North Shore - Forest Hills	X	X	X		X	
78	North Shore University Hospital Center - Manhasset	X	X	X	X	X	
80*	*Sound Shore Medical Center of Westchester*	X	X	X	X	X	
82*	*Nassau County University Medical Center*	X	X	X	X	X	
83	St. Barnabas Hospital	X	X	X	X	X	
88	New York Westchester Square Hospital Medical Center	X	X				
89*	*The Mount Vernon Hospital*	X	X		X		
92	New York Community Hospital of Brooklyn	X	X				
93	Beth Israel Medical Center - Kings Highway Division	X	X	X			
95	Brooklyn Hospital Center	X	X	X		X	
96*	*St. Joseph's Medical Center*	X	X		X		
97*	*St. John's Riverside Hospital*	X					
99*	*Lawrence Hospital*	X					

APPENDIX J: PEDIATRIC VITAL SIGNS

For Pediatric equipment and dosing values, refer to Length Based Dosing Device.

Normal Vital Signs for Infants/Children

Age	Respirations	Pulse	Systolic BP
Newborn (<28 days)	30 – 60	100 – 180	>60
Infant (< 1 year)	30 – 60	100 – 160	>60
Toddler (1 – 3 years)	24 – 40	90 – 150	>70
Preschooler (3 – 5 yrs)	22 – 34	80 – 140	>75
School-aged (6 – 8 yrs)	18 – 30	70 – 120	>80

From: American Academy of Pediatrics, Pediatric Education for Prehospital Professionals

APPENDIX K: APGAR SCORING SYSTEM

The patient is scored 0 - 2 points for each clinical sign. Maximum total score is 10. The score is determined at 1 and 5 minutes of life. The higher the score, the better.

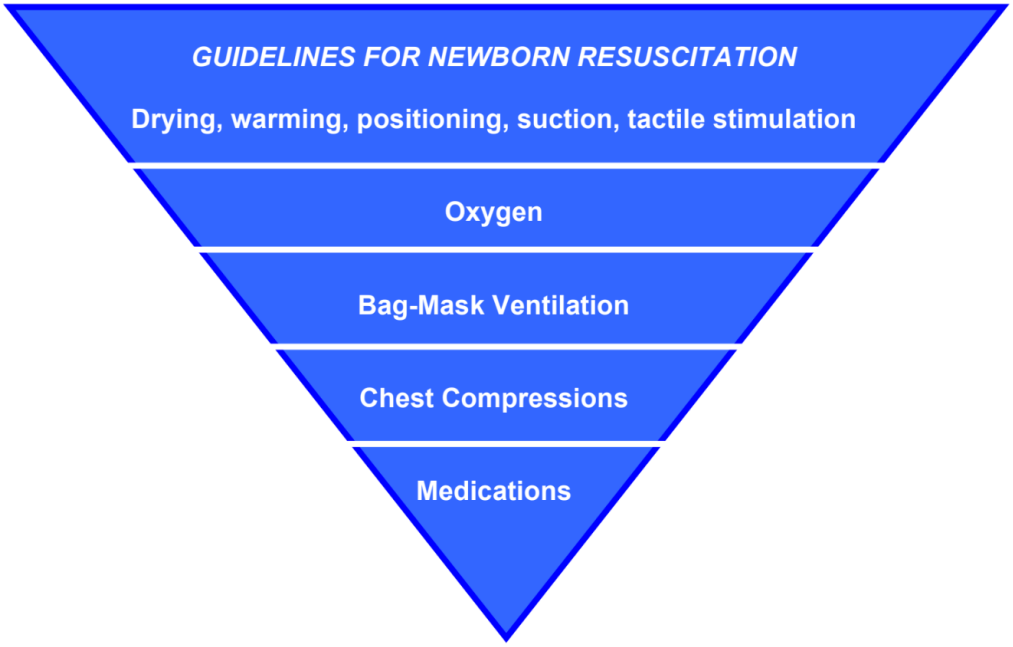
SIGN	0	1	2
Heart Rate	Absent	Below 100	Over 100
Respiration (effort)	Absent	Slow and irregular	Normal; crying
Muscle Tone	Limp	Some flexion - extremities	Active; good motion in extremities
Irritability	No Response	Crying: some motion	Crying; vigorous
Skin Color	Bluish or pale	Pink or typical newborn color; hands and feet are blue	Pink or typical newborn color; entire body

A score of:

8 - 10 is generally normal
5 - 7 indicates a need for supplemental oxygen
3 - 4 indicates a need for Bag-Valve-Mask ventilation
0 - 2 generally indicates a need for CPR

NOTE: **A SCORE OF 7 OR LESS REQUIRES IMMEDIATE INTERVENTION. (SEE THE NEONATAL CARE / RESUSCITATION PROTOCOL).**

THE MANAGEMENT OF RESPIRATORY DISTRESS OR CARDIOVASCULAR INSTABILITY TAKES PRIORITY OVER OBTAINING APGAR SCORE.



APPENDIX L: TRIAGE / *MODIFIED* S. T. A. R. T.

TRIAGE / *MODIFIED* S. T. A. R. T. (Simple Triage and Rapid Treatment)

This plan allows EMTs and Paramedics to triage patients (children and adults) at an MCI in 60 seconds or less.

It is based on four (4) observations:
1. Respirations;
2. Work of breathing,
3. Circulation; and,
4. Mental Status.

Review of MCIs and Triage

An MCI is any sudden event or situation that has produced, is believed to have produced, or experience indicates, may produce a minimum of five (5) patients.

Triage is a French word meaning to sort. Its purpose is to identify patients with life threatening injuries and give them immediate treatment and transportation.

Aim of Triage: GREATEST GOOD FOR THE GREATEST NUMBER

Principles of *Modified* S. T. A. R. T.

The triage plan calls for rescuers to correct immediate threats to life:
- blocked airways; and
- severe arterial bleeding.

The triage plan utilizes the Triage Tag, which classifies patients into five (5) distinct areas for treatment.

It is a system that quickly and accurately triages victims into Treatment-Transport groups.

The plan is simple to learn and retain. It is extremely useful in the MCI setting in that it maximizes the efficiency of the rescuers until additional resources arrive.

Prior to the *Modified* S. T. A. R. T. plan, triage was solely based on individual judgment. If the injury appeared serious, the patient was placed in a critical treatment area. *Modified* S. T. A. R. T. provides specific criteria for triage of patients.

APPENDIX L *(continued)*: TRIAGE / *MODIFIED* S. T. A. R. T.

How *Modified* S. T. A. R. T. Works

The Triage Team must evaluate and place the patient's injuries into one of five categories:

DECEASED (BLACK TAG):	ADULT: No spontaneous effective respirations present after one attempt to reposition the airway. CHILD: No signs of life or spontaneous effective respirations. BVM x 5. No response, then BLACK TAG.
IMMEDIATE (RED TAG):	ADULT: Respirations present only after repositioning of the airway. CHILD: Responds to BVM x 5. Applies to: ● Patients with respiratory rates greater than 30 per minute or less than 10. ● Patients without a radial pulse. ● Patients who fail to follow simple commands.
URGENT (ORANGE TAG)	Applies to patients that exhibit any of the following: ● Respiratory Distress ● Increased work of breathing ● Labored respiration ● Change in mental status ● Chest pain ● Tourniquet or hemostatic dressing applied and bleeding is controlled. These patients should be transported after the RED TAG patients. ● Patients may be up-triaged to this level from GREEN and YELLOW. Patients may NOT be down-triaged. ● Applies to infants less than one (1) year old if triaged by age only (vs. clinical criteria). ● Other patients that may be triaged as Orange are those who, in the experience of the provider, the patient's condition suggests a need for treatment and transport that is more urgent than other patients assigned to the YELLOW and/or GREEN triage categories. ● Head Trauma and Chest Trauma may be triaged as Orange based on *provider discretion*.
DELAYED (YELLOW TAG):	Any patient who does not fit into the IMMEDIATE category or the MINOR category. Applies to all non-ambulatory patients that do not meet the RED or ORANGE criteria.
MINOR (GREEN TAG):	Patients who are separated from the general group at the beginning of the triage operation. These patients are also called the "walking wounded". These patients are directed to walk away from the scene to a designated safe area. These patients can also be utilized to control severe bleeding and assist in maintenance of patent airways on those "IMMEDIATE" patients who require it.

APPENDIX L *(continued)*: TRIAGE / *MODIFIED* S. T. A. R. T.

PROCEDURE

Respiratory Assessment

1. Every patient will be quickly assessed for respiratory rate, effort and adequacy.
2. If a patient is not breathing, check for foreign objects causing obstruction in the mouth. Remove dentures if they are loose.
3. Reposition the head, using cervical spine precautions if required and if this does not delay assessment.
4. If the above maneuvers do not result in effective spontaneous respirations, **TAG THE PATIENT BLACK.**
5. CHILD: No spontaneous respirations, BVM x 5.
    - No Response – BLACK TAG
    - Responds – RED TAG.
6. If the patient's respiratory rate is greater than 30 per minute **or less than 10 per minute**, **TAG THE PATIENT RED.**
7. Patients who have respirations less than 30 per minute are **NOT TO BE TAGGED AT THIS TIME. THEY ARE TO BE ASSESSED IN THE NEXT CATEGORY.**

Perfusion

1. Hemorrhage control techniques will be incorporated into this section. Control significant bleeding by direct pressure and elevate the lower extremities, hemostatic agent or tourniquet.
2. If life threatening hemorrhage control intervention is required with the application of a tourniquet or insertion of a hemostatic dressing, and the patient does not meet RED Tag criteria, then the patient MUST be triaged with an ORANGE Tag.
3. In most cases, if the radial pulse cannot be felt, the systolic blood pressure will be below 80 mmHg.
4. Utilize the "walking wounded" to assist with hemorrhage control on themselves or other patients.

Mental Status

1. An evaluation of mental status is performed on patients whose respirations and perfusion are adequate. To test mental status, the rescuer should ask the patient to follow a simple command, e.g., "open and close your eyes" or, "squeeze my hands."
2. If the patient **cannot** follow these commands, s/he is **TAGGED RED.**
3. If the patient **can** follow these commands, but is NON-AMBULATORY, s/he is **TAGGED YELLOW.**

ONLY AFTER ALL PATIENTS HAVE BEEN TRIAGED CAN PATIENTS BE TREATED. THE ABOVE TECHNIQUES SHOULD TAKE NO MORE THAN 60 SECONDS PER PATIENT.

APPENDIX L *(continued)*: TRIAGE / *MODIFIED* S. T. A. R. T.

Triage Tags

Triage tags are completed during transportation to the hospital or in the Staging Area, if possible.

To fill out the triage tag properly, follow these instructions:

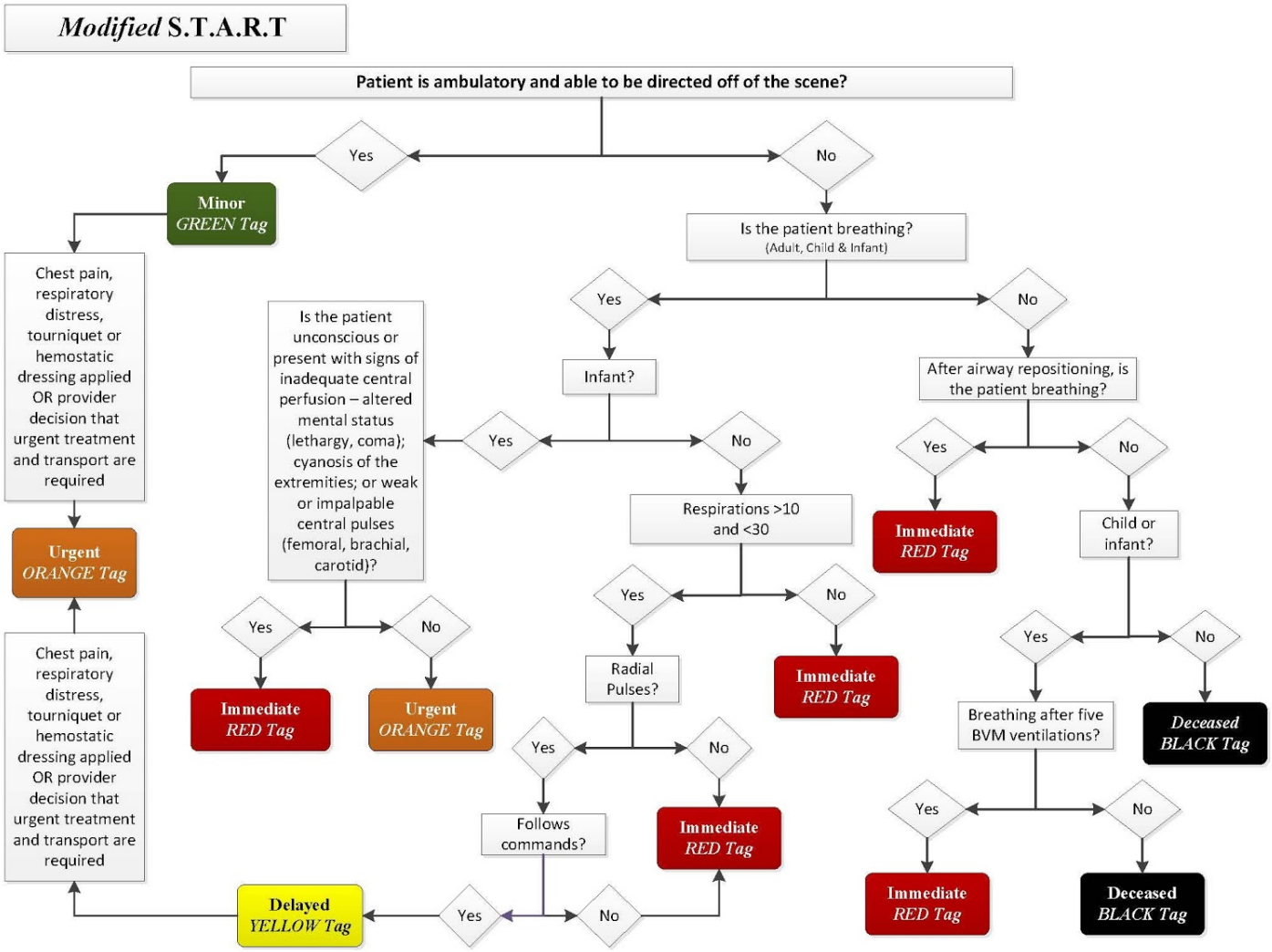
1. record time of triage
2. record the date
3. *record the name of the patient if s/he is conscious and coherent*
4. *record the home address of the patient if possible*
5. *record the home city and state of the patient if possible*
6. record other important information, i.e. medical treatment, history
7. record your shield number or EMT number on the bottom line and on the yellow corners
8. on the reverse side, record injuries on the diagram
9. record vital signs and the time taken in the indicated areas
10. paramedics will record IVs and any drugs given
11. tear off all colored areas **BELOW** the determined priority and retain
12. attach tag securely to clothing or body so that it is clearly visible

Left and right corners (Ambulance & Cross) are perforated along the lines.

1. Make sure that your shield or EMT number appears on both corners.
2. The corner marked with the **CROSS** is removed in the treatment area prior to removal to a medical facility. These should be given to the person or Supervisor in charge of the Treatment Area.
3. The corner marked with the **AMBULANCE** is to be removed prior to the actual transfer of the patient from the Treatment Area to a medical facility. It is to be retained by the crew until the end of the MCI. These are then given to the person or Supervisor in charge of the Transportation Area.
4. All the initial triage portions of the tags must be retained by the Triage Team and given to the person, or Supervisor, in charge of the Triage Team at the end of the MCI.

* **Items 3, 4, and 5 may be delayed or accomplished by others while awaiting transportation.**

APPENDIX L *(continued)*: TRIAGE / *MODIFIED* S. T. A. R. T.



APPENDIX M: AGENCY ADDRESSES

REGIONAL EMERGENCY MEDICAL SERVICES COUNCIL OF NEW YORK CITY 475 Riverside Drive, Suite 1929 New York, NY 11015	**REGIONAL EMERGENCY MEDICAL ADVISORY COMMITTEE (REMAC) OF NEW YORK CITY** 475 Riverside Drive, Suite 1929 New York, NY 11015
NEW YORK CITY FIRE DEPARTMENT BUREAU OF EMERGENCY MEDICAL SERVICES 9 MetroTech Center Brooklyn, NY 11201	**NEW YORK CITY POLICE DEPARTMENT** 1 Police Plaza New York, NY 10038
AMTRAK POLICE 400 North Capital Street Washington, DC 20002	**LONG ISLAND RAILROAD SERVICE** Jamaica Station Jamaica, NY 11435
METRO-NORTH COMMUTER POLICE Grand Central Station Room #1750 New York, NY 10017	**NEW YORK STATE POLICE** c/o Principal Clerk Troop L Headquarters 3045 Sunrise Highway Islip Terrace, NY 11752
NEW YORK STATE DEPARTMENT OF HEALTH Bureau of Emergency Medical Services 433 River Street, Suite 303 Troy, NY 12180-2299	**NEW YORK CITY FIELD OFFICE EMS** New York State Department of Health & Systems Management 90 Church Street, 15th Floor New York, NY 10007

APPENDIX N: LANDMARKS AND PROCEDURE FOR NEEDLE CRICOTHYROIDOTOMY

Appendix N has been deleted.

NEEDLE CRICOTHYROIDOTOMY HAS BEEN REMOVED FROM THE PREHOSPITAL TREATMENT PROTOCOLS

APPENDIX O: NEEDLE DECOMPRESSION OF TENSION PNEUMOTHORAX

1. **Identify signs of a tension pneumothorax**:

   a) **Absent** or **decreased breath sounds** on the affected side

   AND

   b) **One or more of the following:**

      i) Severe dyspnea/tachypnea

      ii) cyanosis/hypoxia

      iii) hypotension

2. Identify the site for needle decompression on the same side as the pneumothorax:

   a) The second intercostal space on the mid-clavicular line.

   or

   b) The fifth intercostal space on the anterior axillary line.

3. Cleanse the overlying skin with antiseptic solution.

4. For adults, use a 14 gauge, 3.25 inch (8.25cm) over-the-needle catheter. For children, use a 18-20 gauge, 0.8-1.6 inch (2 - 4 cm) over-the-needle catheter. Insert catheter through the skin, perpendicular to the chest wall, **above** the rib and direct it just **over** the rib. Hold in place for 5-10 seconds to allow for air decompression.

5. Remove the needle, advance the catheter to the hub, and secure in place for patient transportation.

6. If first attempt is **not** successful in decompressing the tension pneumothorax, a second attempt should be made at the other site on the same side.

7. If first attempt **is** successful, but the tension pneumothorax recurs, perform a second decompression, using a new catheter.

8. If second attempt of needle decompression does not resolve signs of the tension pneumothorax, begin rapid transport and consider other etiologies for clinical findings.

APPENDIX P: USE OF THE CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP) DEVICE

Scope: EMTs and Paramedics may utilize Continuous Positive Airway Pressure (CPAP), for any appropriate indication as authorized by the service medical director.

INCLUSION CRITERIA

1. 15 years of age or older.
2. Be Alert, cooperative, and able to maintain an open, patent airway on their own.
3. Respiratory distress.

EXCLUSION CRITERIA

4. Respiratory failure or need for immediate Endotracheal Intubation.
5. Systolic blood pressure less than 100 mmHg.
6. Airway Obstruction.
7. Facial burns with possible airway involvement.
8. Trauma.
9. Suspected pneumothorax.
10. Active vomiting, upper GI bleeding or other aspiration risks.
11. Inability to tolerate the mask due to pain or discomfort.
12. An adequate mask seal is unobtainable.

NOTE: CPAP IS TO BE IMMEDIATELY DISCONTINUED IF ANY OF THE EXCLUSION CRITERIA DEVELOP.

APPENDIX Q: STROKE PATIENT ASSESSMENT TRIAGE AND TRANSPORTATION

1. NYC S-LAMS Scale

NYC S-LAMS		
Element	**Finding**	**Score**
Facial Droop	Absent	0
	Present	1
Arm Drift	Absent	0
	Drifts Down	1
	Falls Rapidly	2
Speech Deficit	Absent	0
	Present	1
Grip Strength	Normal	0
	Weak Grip	1
	No Grip	2
Total Score		0 → 6

A. For patients exhibiting signs and symptoms of a stroke (CVA), utilize the NYC S-LAMS Stroke Scale:

1) Assess for ***Facial Droop*** – have the patient show teeth or smile

Absent – if both sides of the face move equally, the score is **0**

Present – if one side of the face does not move as well as the other, the score is **1**

2) Assess for ***Arm Drift*** – have the patient close eyes and hold both arms straight out with palms facing up for 10 seconds

Absent – if both arms remain up or move the same, the score is **0**

Drifts down – if one arm drifts slowly down compared to the other arm, the score is **1**

Falls rapidly – if one arm falls rapidly, the score is **2**

3) Assess for ***Speech Deficit*** – have the patient say a simple sentence, for example, ”you can’t teach an old dog new tricks”

Normal – if the patient uses correct words with no speech slurring, the score is **0**

Present – if the patient slurs words, uses the wrong words, or is unable to speak, the score is **1**

APPENDIX Q *(continued)*: STROKE PATIENT ASSESSMENT TRIAGE AND TRANSPORTATION

4) Assess for hand ***Grip Strength*** – have the patient hold both of your hands and squeeze them at same time

   Normal – if they squeeze both hands equally, the score is **0**

   Weak grip – if one hand has a weaker grip than the other, the score is **1**

   No grip – if one hand does not grip at all, the score is **2**

B. Document the scores for each of the four S-LAMS elements and the total score in the PCR narrative (or PCR pre-assigned fields, if available).

C. If any of the elements of the NYC S-LAMS Stroke Scale are positive, establish onset of signs and symptoms, and document in the PCR, by asking the following:

1) To patient – "When was the last time you remember before you became weak, paralyzed, or unable to speak clearly?"

   And / or

2) To family or bystander – "When was the last time you remember before the patient became weak, paralyzed, or unable to speak clearly?"

   Or

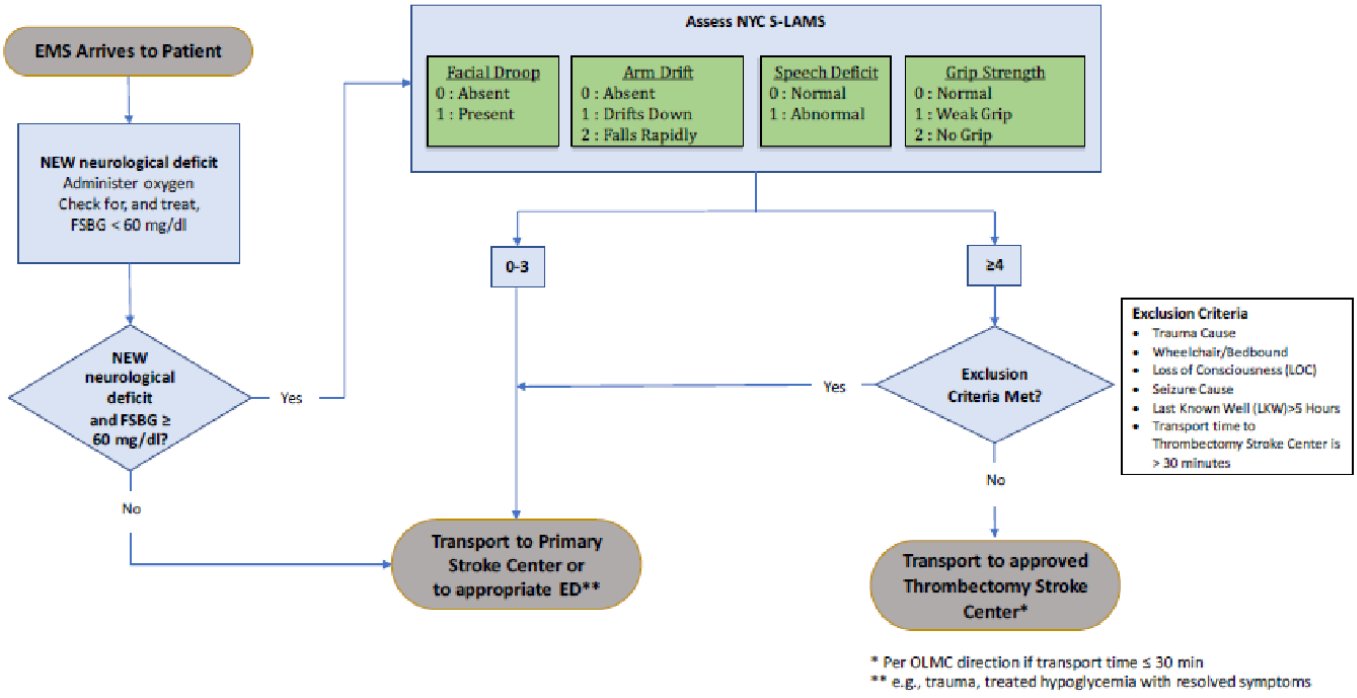
3) If the patient woke with the deficit, the time of onset is the time patient went to sleep.

APPENDIX Q *(continued)*: STROKE PATIENT ASSESSMENT TRIAGE AND TRANSPORTATION

2. Stroke Exclusion Criteria for NYC S-LAMS ≥ 4

If any of the criteria to the right are present on a patient with **NYC S-LAMS score ≥ 4**, transport should be to the closest appropriate New York City 911 system ambulance Primary Stroke Center	Total time from onset of patient's symptoms to EMS patient contact is greater than 5 (five) hours
	Patient is wheelchair or bed-bound
	Seizure is cause of symptoms
	Loss of Consciousness (LOC)
	Trauma is cause of symptoms
	Transport time to Thrombectomy Stroke Center is > 30 minutes

3. Stroke Triage & Transportation Algorithm



APPENDIX R: THROMBECTOMY STROKE CENTER DESTINATIONS

NYC Thrombectomy Stroke Centers as of August 22, 2019

BROOKLYN
● Brookdale Hospital and Medical Center
● Kings County / NYC Health + Hospitals
● Maimonides Medical Center
● New York Presbyterian/Brooklyn Methodist Hospital
● NYU Langone Hospital - Brooklyn
BRONX
● BronxCare Hospital Center
● Jacobi / NYC Health + Hospitals
● Montefiore Medical Center (Moses Division)
QUEENS
● Jamaica Hospital Center
● Mount Sinai Queens Hospital
● New York Presbyterian/Queens
MANHATTAN
● Bellevue / NYC Health + Hospitals
● Lenox Hill Hospital
● Mount Sinai Beth Israel
● Mount Sinai Hospital
● Mount Sinai West
● New York Presbyterian/Columbia
● New York Presbyterian/Cornell
● NYU Langone Tisch Hospital
STATEN ISLAND
● Staten Island University Hospital – North
NASSAU
● North Shore University Hospital

APPENDIX S: New York City Burn Disaster Receiving Hospitals

Current List of New York City Burn Disaster Receiving Hospital (BDRH) Locations and Tier

Name of Hospital	BDRH Tier
Jacobi Medical Center	1
Harlem Hospital Center	1
New York Presbyterian/Weill Cornell	1
Staten Island University Hospital (North)	1
Lincoln Medical and Mental Health Center	2
St. Barnabas Hospital	2
Brookdale University Hospital Medical Center	2
Kings County Hospital	2
Lutheran Medical Center	2
Bellevue Hospital Center	2
New York Presbyterian/Children's Hospital	2
St. Luke's Roosevelt Hospital Center	2
Elmhurst Hospital Center	2
Jamaica Hospital Medical Center	2
New York Hospital Queens	2
Richmond University Medical Center	2
Montefiore Medical Center	3
North Central Bronx Hospital	3
Coney Island Hospital	3
Kingsbrook Jewish Medical Center	3
Maimonides Medical Center	3
Wyckoff Heights Medical Center	3
Metropolitan Hospital Center	3
Mount Sinai Medical Center	3
NYP/Columbia	3
NYU Hospitals Center	3
Flushing Hospital Medical Center	3
Forest Hills Hospital	3

APPENDIX T: ALTERNATE DESTINATION PATIENT INCLUSION / EXCLUSION CRITERIA

NOTE: Based on the criteria below, if the patient agrees, treat-in-place or transport to the nearest appropriate alternative destination can occur without contacting OLMC. OLMC contact is required for approval for treat-in-place or transport to an alternative destination if the patient does NOT fulfill the inclusion criteria listed below, but who otherwise are considered low index of suspicion for illness or injury and have:

i. NOT received medications and/or treatments other than (bandages, gauze, ice packs, splints, immobilizers, cardiac monitors and oxygen) or
ii. Received medications for the treatment of hypoglycemia and who post-treatment have normal vitals and normal mental status

For all New York City 911 participating units, OLMC contact must be made through FDNY OLMC

MEDICAL INCLUSION CRITERIA:

- Asymptomatic hypertension
- Skin rash without respiratory distress or fever
- Joint pain without fever
- Injuries to the elbow and below (e.g. sprains, contusions)
- Injuries to the knee and below (e.g. sprains, contusions)
- Superficial/First degree thermal burns < 5%
- Minor wounds/lacerations (including needing sutures)
- Suture or staple removal
- Needlestick injury
- Upper respiratory symptoms without dyspnea and no known cardiac history
- Dysuria without fever and age < 65
- Resolved epistaxis without anticoagulants
- Toothache/dental pain
- Ear pain, difficulty hearing, tinnitus
- Eye complaints without acute visual changes
- STD exposure or genital lesions (excluding testicular pain)
- Medication refills

BEHAVIORAL HEALTH INCLUSION CRITERIA:

- Depression
- Anxiety or panic symptoms
- Behavioral complaints without violent or self-destructive thoughts or symptoms
- Substance use without intoxication or withdrawal

APPENDIX T *(cont')*: ALTERNATE DESTINATION PATIENT INCLUSION / EXCLUSION CRITERIA

MEDICAL EXCLUSION CRITERIA:

Patient characteristics:

- Age < 5 years
- Patients unable to ambulate without assistance
- Patients without decision-making capacity
- Patients requesting transport to an ED
- Paramedic or EMT considers the patient critical or unstable
- Pregnancy with related complaints
- History of malignancy or immunosuppression (e.g. HIV, chemotherapy)
- Surgery within the last 3 months

ADULT VITAL SIGN EXCLUSION	
SBP	< 90 mmHg or > 200 mmHg
DBP	> 120 mmHg
HR	< 50 or > 100 bpm
RR	< 10 or > 24 bpm
SpO_2*	< 92% on room air
BGL	< 60 or > 300 mg/dL

*If available

PEDIATRIC VITAL SIGN EXCLUSION
Any vital signs outside the normal range for the patient. See Appendix J for normal Pediatric Vital Signs

Complaints:

- Abdominal or pelvic pain
- Nausea or vomiting
- Chest pain or shortness of breath
- Suspected intoxication with alcohol or other drugs
- Altered mental status or lethargy
- New onset of neurological symptoms
- Suspected spinal injury
- Dizziness or lightheadedness
- Loss of consciousness within 24 hours
- Seizures within 24 hours
- Head injury/trauma
- GI bleeding
- Sickle cell crisis

BEHAVIORAL HEALTH EXCLUSION CRITERIA

- Agitation
- Violence or homicidal ideation
- Suicidal ideation or self-destructive behaviors
- Hallucinations or other symptoms of psychosis
- Intoxication and/or withdrawal from substances (i.e. alcohol, opiates, or other drugs)

APPENDIX U: ADDITIONAL RESOURCES

NOTE: **The following Appendix is from the New York Statewide Basic Life Support Adult and Pediatric Treatment Protocols.They are included as a reference for providers. They are not protocols but are good educational guidelines.**

Any information in the following pages that is in conflict with regional policies, procedures or protocols should be considered educational use only and are an informational resource to improve patient care.

Appendix U *(continued)*: ADDITIONAL RESOURCES
NEEDLESTICK / INFECTIOUS EXPOSURE

CRITERIA

- This resource outlines the immediate actions to be taken following any percutaneous, non-intact skin, or mucous membrane contact with blood or body secretions

CLEANSING FOR A PUNCTURE WOUND

- Immediately cleanse with Betadine or chlorhexidine
- Follow-up by soaking the site for five minutes in a solution of Betadine and sterile water

CLEANSING FOR SKIN CONTACT

- Wash the area with soap and water then clean the area with Betadine or chlorhexidine

CLEANSING FOR MUCOUS MEMBRANES

- If in the mouth, rinse mouth out with a large volume of tap water
- If in the eyes, flush with water from an eyewash station. If an eyewash station is not available, use tap water

KEY POINTS / CONSIDERATIONS

- Thoroughly cleanse the area of exposure
- Decontamination may be limited because of the lack of available resources
- Report the exposure to a supervisor, immediately
- Seek immediate medical attention and post-exposure evaluation at the hospital the source patient was transported to, if possible

Appendix U *(continued)*: ADDITIONAL RESOURCES

Prescribed Medication Assistance

Applies to adult and pediatric patients

CRITERIA

- This protocol is intended to provide assistance to patients or caregivers of patients who require help with emergency medication that they, or people in their care, are prescribed

CFR AND ALL PROVIDER LEVELS

- Sublingual nitroglycerin for patients with chest pain
- Inhalers (albuterol* or other beta-agonists) for patients with asthma or COPD
- Rectal diazepam (Diastat) for children or adults with seizures or special needs
- Epinephrine autoinjectors for treatment of anaphylaxis
- Naloxone (Narcan®) via autoinjector or intranasal device

CFR STOP

MEDICAL CONTROL OPTIONS

- Approval of assisted medication administration within the scope of practice for administration route of an CFR or EMT as needed

KEY POINT / CONSIDERATIONS

- This protocol is designed to assure that the EMS provider and medical control provider are best prepared to assist patients with ongoing disease processes that are not covered by these protocols, and who have already been given therapy by their prescribers.
- *Common brand names for albuterol include Ventolin®, Proventil®, and ProAir®
    - Levalbuterol (Xopenex) is a beta agonist and, therefore, a levalbuterol inhaler may be utilized in this protocol
    - A combination inhaler that contains albuterol and ipratropium (Atrovent®), such as Combivent®, that is prescribed to the patient may be substituted for an albuterol inhaler in this protocol

Appendix U *(continued)*: ADDITIONAL RESOURCES

Responsibilities of Patient Care

The provision of patient care is a responsibility given to certified individuals who have completed a medical training and evaluation program specified by the NYS Public Health or Education Laws and subject to regional and State regulations or policy. Prehospital providers are required to practice to the standards of the certifying agency (DOH) and the medical protocols authorized by the local REMAC.

Patient care takes place in many settings, some of which are hazardous or dangerous. The equipment and techniques used in these situations are the responsibility of locally designated, specially trained, and qualified personnel. Emergency incident scenes may be under the control of designated incident commanders who are not emergency medical care providers. These individuals are generally responsible for scene administration, safe entry to a scene, or decontamination of patients or responders.

Pursuant to the provisions of Public Health Law, the individual having the highest level of prehospital medical certification, and who is responding with authority (duty to act) is responsible for providing and/or directing the emergency medical care and the transportation of a patient. Such care and direction shall be in accordance with all NYS standards of training, applicable state and regional protocols, and may be provided under medical control.

Appendix U *(continued)*: ADDITIONAL RESOURCES
Transfer of Patient Care

CRITERIA

- Providers are responsible for the patient while in their care. Transferring or receiving providers will not be responsible for his or her counterpart's actions
- Patients may be transferred to a provider with the same or higher level of certification
- Patients may be transferred to a provider with a lower level of certification provided the patient is not anticipated to require higher-level care and the lower level provider has formally accepted the transfer of care

CFR AND ALL PROVIDER LEVELS

When transferring patients, both the receiving and transferring providers should:

- Ensure that all patient information is transferred to the receiving provider, such as chief complaint, past medical history, current history, vital signs, and care given prior to the transfer of care
- Assist the receiving provider until they are ready to assume patient care
- Be willing to accompany the receiving provider to the hospital, if the patient's condition warrants or if the receiving provider requests it, as resources allow

All personnel and agencies must comply with NYSDOH BEMS policy statement 12-02 (or updated version) regarding documentation:

- Both providers will complete a Patient Care Report (PCR), as appropriate, detailing the care given to the patient while in their care
- The receiving provider must briefly document care given prior to receiving the patient
- Providers within the same agency may utilize the same PCR (as technology and agency / regional / state policy allow)

MEDICAL CONTROL OPTIONS

- Resolution of any disagreements between transferring and transporting providers

KEY POINT / CONSIDERATIONS

- Any disparity between the providers must be resolved by on-line medical control or the provider of higher certification must transport with the patient
- In situations involving multiple patients or mass casualty incidents, EMS providers may field-triage patients to care and transportation by EMS providers of lower level of certification as resources allow
- A standardized process of transfer of care may be implemented by regional systems