REGIONAL EMERGENCY MEDICAL ADVISORY COMMITTEE

NEW YORK CITY

PREHOSPITAL TREATMENT PROTOCOLS

APPENDICES

Effective January 1, 2022

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Appendix A: Telephone Directory

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

Abuse / Domestic Violence	
NYS Child Abuse/Maltreatment Register (Mandated Reporter Express Line)	800-635-1522
NYS 24 Hour Child Abuse Hotline	800-342-3720
Domestic Violence 24 Hour Hotline	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 (NYPD)	212-267-7273

Geriatric	
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

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
NYC Transit Authority	718-330-1234
Gas Leaks	718-643-4050
Poison Control	212-764-7667 (POISONS)

Appendix B: Universal Approach to the EMS Call

- The following is intended to provide a standardized framework to the EMS call
- Follow common sense, apply good clinical judgment, and follow regional policies and protocols
- Consider dispatch information when responding, including:
    - Type of response (emergency vs. non-emergency)
    - Weather
    - Road conditions
    - Time of day
    - Location of call
    - EMD determinant/mechanism of illness or injury
    - Number of anticipated patients
    - Potential need for additional resources
- Survey the scene
    - Do not approach the scene unless acceptably safe to do so
    - Stage proximate to the scene until the scene is rendered acceptably safe from any of the following:
        - Environmental hazards
        - Chemical, biological, radiological, nuclear, and high yield explosives hazards (CBRNE)
        - Evidence of unknown powders, unknown substances or sharps
        - Indicators of a chemical suicide
        - Mechanical hazards
        - Violence or threat of violence
        - Traffic hazards
        - Number of actual patients
        - Activation of local multiple casualty incident (MCI) plan as needed
    - Consider shelter-in-place or evacuation based on hazards
- Consider additional support resources:
    - Additional prehospital providers (CFRs, EMTs, Paramedics)
    - Additional ambulance(s)
    - EMS physician
    - FDNY Special Operations
    - Law enforcement
    - Utilities
- Ensure universal precautions/personal protective equipment appropriate to the task

PRIMARY PATIENT ASSESSMENT

	Assessment	Management
Scene Size-Up	• Body substance isolation • Scene safety • Mechanism of injury/nature of illness • Spinal precautions as needed	• Goggles, gloves, gown, mask as needed • Ensure safety of self, partner, patient and bystanders
General	• General patient impression • 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	• Airway management • Oxygen therapy as needed • Ensure adequate ventilation • Treat any life threatening airway or breathing problems	• Modified jaw thrust • Suction as needed • Airway adjuncts (OPA/NPA) as needed • CPR as needed
Circulation	• Skin color • Assess pulses • Estimation of systolic blood pressure • Major bleeding	• Control any external bleeding • Elevate legs as needed • Support circulation
Transport Decision	• Identify urgency of transport	• Immediate or continued assessment

SAFETY RESTRAINING DEVICES

- All passengers including patients and EMS personnel should be restrained
- It is not acceptable or safe to have a parent or caregiver hold a child in their arms or lap. The child and parent/caregiver should each be restrained appropriately
- All patients on the stretcher must be secured using harness straps when the vehicle is in motion or when the stretcher is being carried or moved
- For the transportation of pediatric patients:
    - Pediatric patients shall ideally be transported using a size-appropriate child restraint system secured appropriately onto the stretcher
    - If a size-appropriate child restraint system is not available, secure the patient using one of the following methods:
        - If available and intact, use the pediatric patient's own safety seat to restrain the patient during transport
            - If the child is the patient, the device should be secured onto the stretcher with the child belted in the safety seat
            - If the child is not the patient, they should be placed in the safety seat with the device belted to an ambulance seat
        - Transport the child in the rear-facing EMS provider's seat/captain's chair in a size-appropriate child restraint system. This system can be a convertible or combination seat using a forward-facing belt path. Do not use a rear-facing-only seat in the rear-facing EMS provider's seat
        - Secure the pediatric patient to the stretcher with three horizontal restraints across the chest, waist, and knees, and one vertical restraint across each shoulder
- Agencies shall routinely train prehospital personnel in the use of various child safety seats/restraints and have a policy for how pediatric patients will be transported
- As an agency considers the purchase of new vehicles, or retro-fitting of current vehicles; design considerations, such as integrated child restraints, should be considered
- All safety seats/restraints should be used according to manufacturer's recommendations
- If a patient chooses to refuse safety restraints, refer to agency and regional policy

Appendix C: Do Not Resuscitate (DNR)/Medical Orders for Life Sustaining Treatment (MOLST)

- The wishes for conscious and alert patients are to be followed in accordance with standard consent procedures
- For patients unable to provide consent, including unconscious patients, determine the presence of a valid DNR or MOLST:
  - Signed MOLST form
  - Signed electronic MOLST (eMOLST)
  - Signed New York State approved document, bracelet, or necklace
  - Properly documented nursing home or nonhospital DNR form
- If any form of DNR or MOLST/eMOLST is not present, begin standard treatment per protocol
- If any form of DNR or MOLST/eMOLST is present and valid for the patient's clinical state (e.g. cardiac arrest), follow the orders as written, including not beginning or terminating resuscitation
- If other forms of advanced directives are present (i.e. living will, presence of a health care proxy, hospital DNR order), contact online medical control for further direction
- Any appropriate directive indicated on the MOLST/eMOLST shall be honored, including the directive for the patient not to be transported to the hospital
- A MOLST/eMOLST is valid even if the physician signature has expired
- A copy of the original MOLST is considered a valid document
- The eMOLST may be printed and affixed with electronic signatures and is considered valid
- A copy of the DNR or MOLST/eMOLST form should be attached to the patient care record and retained by the agency whenever possible
- Reference DOH Policy Statement 08-07 or its updated replacement
- If a patient with a DNR or MOLST/eMOLST 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 or MOLST/eMOLST must be transported with the patient

Appendix D: Glasgow Coma Scale

ADULT GLASGOW COMA SCALE		
Response		**Points**
Eye Opening	Spontaneous	4
	Responsive to voice	3
	Responsive 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 to pain	5
	Withdraws to pain	4
	Flexion	3
	Extension	2
	None	1
Total Glasgow Coma Scale		3-15

INFANT GLASGOW COMA SCALE		
Response		**Points**
Eye Opening	Spontaneous	4
	Responsive to voice	3
	Responsive 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	5
	Withdraws to touch	4
	Withdraws to pain	3
	Abnormal flexion	2
	Abnormal extension	1
Total Glasgow Coma Scale		3-15

Appendix E: Trauma Center Transport Criteria (Adult)

- An **ADULT** patient is considered to have major trauma that requires transport to a Trauma Center if the patient has ANY of the following criteria:
  - Physical finings
    - Glasgow Coma Scale ≤ 13
    - Respiratory rate < 10 breaths/min OR respiratory rate > 29 breaths/min
    - Heart rate < 50 beats/min OR Heart rate > 120 beats/min
    - Systolic blood pressure < 90 mmHg
    - Penetrating injuries to head, neck, torso or proximal extremities
    - Two or more suspected proximal long bone fractures
    - Suspected flail chest
    - Suspected spinal cord injury or limb paralysis
    - Amputation (except digits)
    - Suspected pelvic fracture
    - Open or depressed skull fracture
  - Mechanism of injury
    - Ejection or partial ejection from an automobile
    - Death in the same passenger compartment
    - Extrication time > 20 minutes
    - Vehicle collision with 12 inches of intrusion to the passenger compartment
    - Motorcycle crash > 20 MPH OR separation of rider from motorcycle
    - Falls > 20 feet
    - Vehicle rollover (≥ 90° vehicle rotation) with unrestrained passenger
    - Vehicle vs. pedestrian or bicycle collision > 5 MPH
- Patients are considered high risk if they have ANY of the following conditions:
  - Bleeding disorders or patients who are on anticoagulant medications
  - Cardiac disease and/or respiratory disease
  - Insulin-dependent diabetes, cirrhosis, or morbid obesity
  - Immunosuppressed patients (HIV disease, transplant patients, and patients on chemotherapy treatment)
  - Age > 55 years
- Consider transporting high risk patients to a trauma center
- Consider contacting online medical control for further guidance as needed

Appendix F: Burn Center Transport Criteria (Adult and Pediatric)

- A patient is considered to have major burns that requires transport to a Burn Center if they have ANY of the following conditions:
  - Partial (2nd degree burns) or full thickness burns (3rd degree burns or higher) with the following conditions:
    - Burns ≥ 15% of the total body surface area (TBSA)
    - Full thickness burns (3rd degree burns or higher) ≥ 5% TBSA
    - Burns ≥ 9% TBSA in the following patients:
      - Age < 5 years
      - Age > 60 years
      - Presence of pre-existing diseases that may complicate recovery
  - Respiratory burns
  - Electrical burns
  - Burns involving the eyes, ears, face, hands, feet or genitalia

Appendix G: Stroke Patient Assessment Triage and Transportation

NYC S-LAMS SCALE

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

STROKE ASSESSMENT

1. For patients exhibiting signs and symptoms of a stroke (cerebrovascular accident [CVA]), utilize the NYC S-LAMS scale and assess the patient as follows:
   - 1.1 Facial droop: Have the patient show their teeth or smile
     - Absent (score 0): If both sides of the face move equally
     - Present (score 1): If one side of the face does not move as well as the other
   - 1.2 Arm drift: Have the patient close their eyes and hold both arms straight out with their palms facing up for 10 seconds
     - Absent (score 0): If both arms remain up or move the same
     - Drifts down (score 1): If one arm drifts down slowly compared to the other arm
     - Falls rapidly (score 2): If one arm falls rapidly
   - 1.3 Speech deficit: Have the patient say a simple sentence (e.g. “you can’t teach an old dog new tricks”)
     - Normal (score 0): If the patient uses correct words with no speech slurring
     - Present (score 1): If the patient slurs words, uses incorrect words or is unable to speak
   - 1.4 Grip strength: Have the patient hold both of your hands and squeeze them at the same time
     - Normal (score 0): If the patient squeezes both hands equally
     - Weak grip (score 1): If one hand has a weaker grip than the other
     - No grip (score 2): If one hand does not grip at all

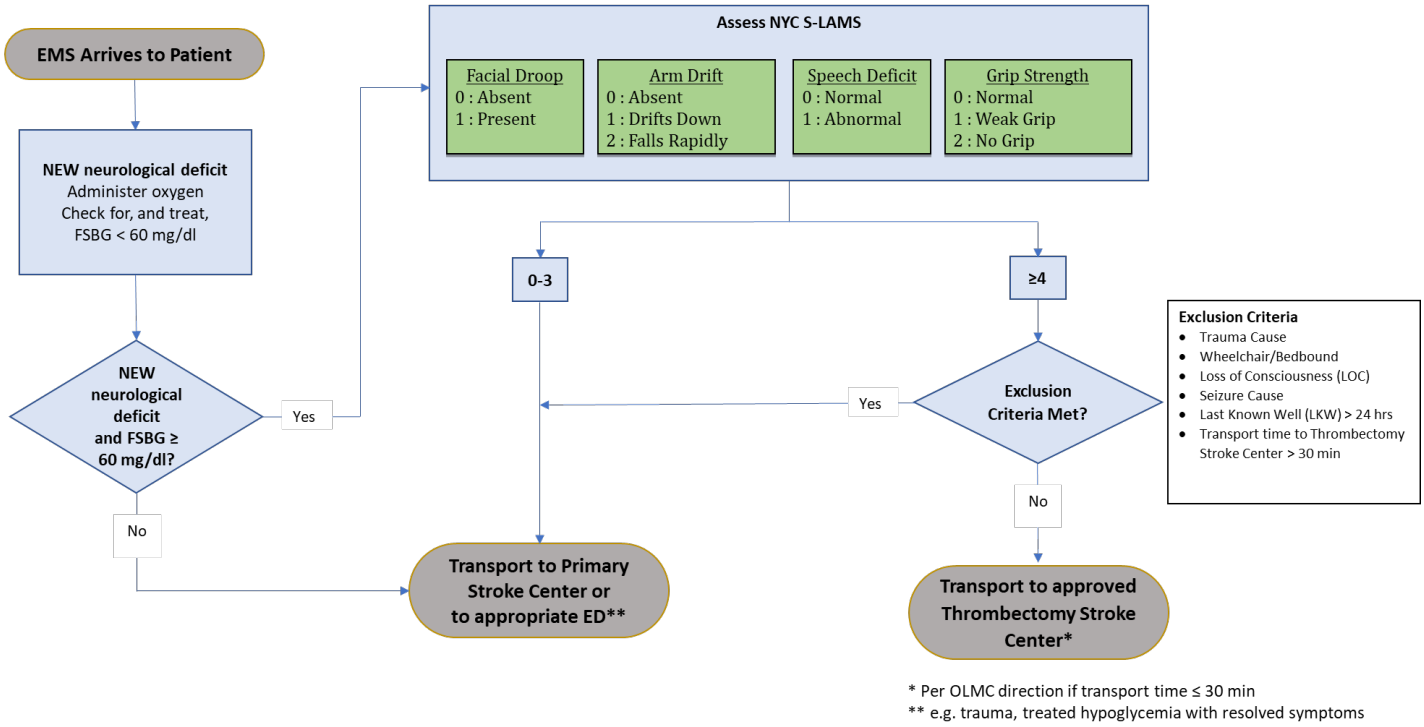
2. Document the scores for each of the four S-LAMS components and the total score in the ePCR narrative (or ePCR pre-assigned fields, if available)
3. If any of the elements of the NYC S-LAMS Stroke Scale are positive, establish onset of signs and symptoms, and document in the ePCR, by asking the following:
    - For the patient: “When was the last time you remember before you became weak, paralyzed, or unable to speak clearly?”
    - For the patient, family members, or bystanders: “When was the last time you remember before the patient became weak, paralyzed, or unable to speak clearly?”
    - For the above questions, if the patient woke from sleep with the deficit, the time of onset is the time the patient went to sleep

EXCLUSION CRITERIA

- Transport the patient to the closest appropriate Primary Stroke Center if the patient has a NYC S-LAMS score ≥ 4 with ANY of the following exclusion criteria:
    - Total time from onset of patient’s symptom to EMS patient contact > 24 hours
    - Patient is wheelchair or bed-bound
    - Seizure
    - Loss of consciousness (LOC)
    - Trauma
    - Transport time to Thrombectomy Stroke Center > 30 minutes

STROKE TRIAGE AND TRANSPORT ALGORITHM

NYC Stroke Triage Protocol



* Per OLMC direction if transport time ≤ 30 min
** e.g. trauma, treated hypoglycemia with resolved symptoms

Appendix H: Hospital Addresses

BRONX		
911 Hospital Designation	**Facility**	**Address**
27	NYC Health + Hospitals – Lincoln Medical & Mental Health Center	234 East 149th St Bronx, NY 10451
24	BronxCare Health System – Fulton Division	1276 Fulton Ave Bronx, NY 10456
23	BronxCare Health System – Concourse Division	1650 Grand Concourse Bronx, NY 10457
88	NY Westchester Square Hospital Medical Center	2475 Raymond Ave Bronx, NY 10401
22	Montefiore Medical Center – Einstein Campus	1825 Eastchester Rd Bronx, NY 10467
83	St. Barnabas Hospital	4422 Third Ave Bronx, NY 10457
26	Bronx VA – James J. Peters VA Medical Center	130 W Kingsbridge Rd Bronx, NY 10400
25	NYC Health + Hospitals – Jacobi	1400 Pelham Parkway South Bronx, NY 10461
70	NYC Health + Hospitals – North Central Bronx Hospital	3424 Kossuth Ave Bronx, NY 10467
29	Montefiore Medical Center – Moses Campus	111 East 210th St Bronx, NY 10467
28	Montefiore Medical Center – Wakefield Campus	600 East 233rd St Bronx, NY 10466

BROOKLYN		
911 Hospital Designation	**Facility**	**Address**
90	Department of Veterans Affairs – Harbor Healthcare – Brooklyn Campus	800 Poly Place Brooklyn, NY 11213
49	New York University Langone – Cobble Hill	83 Amity Street Brooklyn, NY 11201
93	Mount Sinai – Brooklyn	3201 Kings Highway Brooklyn, NY 11234
92	New York Community Hospital	2525 Kings Highway Brooklyn, NY 11229
53	Maimonides Medical Center	4802 10th Ave Brooklyn, NY 11220
51	New York University Langone – Brooklyn	150 55th St Brooklyn, NY 11220
44	University Hospital of Brooklyn – SUNY Downstate Medical Center	445 Lenox Rd Brooklyn, NY 11203
41	Brookdale University Hospital Medical Center	1 Brookdale Plaza Brooklyn, NY 11212
47	Kingsbrook Jewish Medical Center	585 Schenectady Ave Brooklyn, NY 11203
48	NYC Health + Hospitals – Kings County	451 Clarkson Ave Brooklyn, NY 11203
54	NewYork-Presbyterian Hospital – Brooklyn Methodist Hospital	506 Sixth St Brooklyn, NY 11215
55	Interfaith Medical Center	1545 Atlantic Ave Brooklyn, NY 11213
95	The Brooklyn Hospital Center	121 DeKalb Ave Brooklyn, NY 11201
45	NYC Health + Hospitals – Woodhull	760 Broadway Brooklyn, NY 11206
58	Wyckoff Heights Medical Center	374 Stockholm St Brooklyn, NY 11237
42	NYC Health + Hospitals – Coney Island	2601 Ocean Parkway Brooklyn, NY 11235

MANHATTAN		
911 Hospital Designation	**Facility**	**Address**
01	NewYork Presbyterian – Lower Manhattan Hospital	170 William St New York, NY 10038
61	New York Eye & Ear Infirmary	310 East 14th St New York, NY 10003
03	Mount Sinai – Beth Israel	10 Nathan D. Perlman Place New York, NY 10003
06	Lenox Health Greenwich Village	30 Seventh Ave New York, NY 10011
10	Department of Veterans Affairs – Harbor Healthcare – New York Campus	423 East 23rd St New York, NY 10016
02	NYC Health + Hospitals – Bellevue	472 First Ave New York, NY 10016
15	New York University Langone – Tisch Hospital	550 First Ave New York, NY 10016
14	NewYork Presbyterian Hospital – Weill Cornell Medical Center	525 East 68th St New York, NY 10021
08	Memorial Sloan Kettering Hospital	1275 York Ave New York, NY 10021
05	Manhattan Eye/Ear/Throat Hospital	210 East 64th St New York, NY 10021
18	Mount Sinai – West	315 West 57th St New York, NY 10019
11	Lenox Hill Hospital	100 East 77th St New York, NY 10021
12	NYC Health + Hospitals – Metropolitan	1901 First Ave New York, NY 10029
13	Mount Sinai Hospital	1 Gustave L. Levy Plaza New York, NY 10029
20	Mount Sinai – Morningside	1111 Amsterdam Ave New York, NY 10025
07	NYC Health + Hospitals – Harlem	506 Lenox Ave New York, NY 10037
17	NewYork Presbyterian Hospital – Columbia University Irving Medical Center	622 West 168th St New York, NY 10032
16	NewYork Presbyterian Hospital – Allen Pavilion	5141 Broadway New York, NY 10034

QUEENS		
911 Hospital Designation	**Facility**	**Address**
71	Mount Sinai – Queens	25-10 30th Ave Long Island City, NY 11102
35	Long Island Jewish Medical Center	270-05 76th Ave New Hyde Park, NY 11042
33	Flushing Hospital Medical Center	45-00 Parsons Boulevard Flushing, NY 11355
31	NewYork Presbyterian Hospital – Queens	56-45 Main St Flushing, NY 11355
32	NYC Health + Hospitals – Elmhurst	79-01 Broadway Elmhurst, NY 11373
77	Long Island Jewish Forest Hills	102-01 66th Rd Forest Hills, NY 11375
38	NYC Health + Hospitals – Queens	82-68 164th St Jamaica, NY 11432
34	Jamaica Hospital Medical Center	8900 Van Wyck Expy Jamaica, NY 11418
40	St. John's Episcopal Hospital – South Shore Division	327 Beach 19th St Far Rockaway, NY 11691

RICHMOND		
911 Hospital Designation	**Facility**	**Address**
60	Richmond University Medical Center	355 Bard Ave Staten Island, NY 10310
62	Staten Island University Hospital – North Campus	475 Seaview Ave Staten Island, NY 10305
59	Staten Island University Hospital – South Campus	375 Seguine Ave Staten Island, NY 10309

NASSAU		
911 Hospital Designation	**Facility**	**Address**
74	Long Island Jewish Valley Stream	900 Franklin Ave Valley Stream, NY 11580
68	Mercy Medical Center	1000 North Village Ave Rockville Centre, NY 11571
82	Nassau University Medical Center	2201 Hempstead Turnpike East Meadow, NY 11501
78	North Shore University Hospital	300 Community Dr Manhasset, NY 11030
66	Saint Francis Hospital	100 Port Washington Blvd Roslyn, NY 11576
67	New York University Langone – Long Island	259 First St Mineola, NY 11501

WESTCHESTER		
911 Hospital Designation	**Facility**	**Address**
99	NewYork Presbyterian – Lawrence Hospital	55 Palmer Ave 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	Montefiore Medical Center – New Rochelle Hospital	16 Guion Place New Rochelle, NY 10802
89	Montefiore Medical Center – The Mount Vernon Hospital	12 North 7th Ave Mount Vernon, NY 10550

Appendix I: Hospital Specialty Capabilities

Hospital #	Hospital Name	ADULT ED	PEDS ED	ADULT TRAUMA	PEDS TRAUMA	BURN	STEMI	PRIMARY STROKE	LVO STROKE	OB	ADULT EDP	PEDS EDP	HBARIC	RPLANT	LVAD	VENOM	SAFE
1	NewYork-Presbyterian - Lower Manhattan Hospital	X	X					X		X							
2	NYC Health + Hospitals - Bellevue	X	X	X			X	X	X	X	X	X		X			X
3	Mount Sinai - Beth Israel	X	X				X	X	X		X	X			X		X
5	Manhattan Eye / Ear / Throat Hospital																
6	Lenox Health Greenwich Village	X															X
7	NYC Health + Hospitals - Harlem	X	X	X	X	X		X		X	X	X					X
8	Memorial Sloan Kettering Hospital																
10	Dept. of Veteran's Affairs Harbor Healthcare - NY Campus																
11	Lenox Hill Hospital	X					X	X	X	X					X		
12	NYC Health + Hospitals - Metropolitan	X	X					X		X	X	X					X
13	Mount Sinai Hospital	X	X				X	X	X	X	X	X			X		X
14	NewYork-Presbyterian Hospital - NY Weill Cornell Medical Center	X	X	X	X	X	X	X	X	X	X	X	X		X		X
15	NYU Langone Medical Center - Tisch Hospital	X	X				X	X	X	X					X		
16	NewYork-Presbyterian - Allen Pavilion	X	X					X		X							X
17	NewYork-Presbyterian - Columbia University Irving Medical Center	X	X		X		X	X	X	X	X	X			X		X
18	Mount Sinai - West	X	X					X	X	X	X	X					X
20	Mount Sinai - Morningside	X	X	X			X	X			X	X					X
22	Montefiore Medical Center - Einstein Campus	X	X				X	X		X							
23	BronxCare Health System - Concourse Division	X	X				X	X		X	X	X					
24	BronxCare Health System - Fulton Division										X	X					
25	NYC Health + Hospitals - Jacobi	X	X	X	X	X		X		X	X	X	X			X	X
26	Bronx VA - James J. Peters VA Medical Center																
27	NYC Health + Hospitals - Lincoln Medical & Mental Health Center	X	X	X				X	X	X	X	X					X
28	Montefiore Medical Center - Wakefield Campus	X	X							X	X	X					

Hospital #	Hospital Name	ADULT ED	PEDS ED	ADULT TRAUMA	PEDS TRAUMA	BURN	STEMI	PRIMARY STROKE	LVO STROKE	OB	ADULT EDP	PEDS EDP	HBARIC	RPLANT	LVAD	VENOM	SAFE
29	Montefiore Medical Center - Moses Campus	X	X				X	X	X		X	X		X	X		
X	Westchester Medical Center	X	X	X				X		X	X	X			X		
31	NewYork-Presbyterian - Queens	X	X	X			X	X	X	X							
32	NYC Health + Hospitals - Elmhurst	X	X	X			X	X		X	X	X					X
33	Flushing Hospital Medical Center	X	X					X		X							
34	Jamaica Hospital Medical Center	X	X	X			X	X	X	X	X						
35	Long Island Jewish Medical Center	X	X		X		X	X		X	X	X					
38	NYC Health + Hospitals - Queens	X	X							X	X	X					X
40	St. John's Episcopal Hospital - South Shore Division	X	X					X		X	X	X					
41	Brookdale University Hospital Medical Center	X	X	X			X	X	X	X	X	X					
42	NYC Health + Hospitals - Coney Island	X	X				X	X		X	X	X					X
44	University Hospital of Brooklyn - SUNY Downstate Medical Center	X	X				X	X		X							
45	NYC Health + Hospitals - Woodhull	X	X					X		X	X	X					X
47	Kingsbrook Jewish Medical Center	X	X					X									
48	NYC Health + Hospital - Kings County	X	X	X				X	X	X	X						X
49	NYU Langone - Cobble Hill	X	X														
51	NYU Langone - Brooklyn	X	X	X			X	X	X	X	X						X
52	South Nassau Communities Hospital	X	X					X		X	X						
53	Maimonides Medical Center	X	X	X	X		X	X	X	X	X	X			X		
54	NewYork-Presbyterian - Brooklyn Methodist Hospital	X	X	X			X	X	X	X	X	X					
55	Interfaith Medical Center	X	X								X						
58	Wyckoff Heights Medical Center	X	X					X		X							
59	Staten Island University Hospital - South Campus	X	X					X									
60	Richmond University Medical Center	X	X	X	X		X	X	X	X	X	X					X
61	New York Eye & Ear Infirmary																
62	Staten Island University Hospital - North Campus	X	X	X	X	X	X	X	X	X						X	
66	Saint Francis Hospital	X						X							X		
67	New York University Langone - Long Island	X		X				X	X	X	X	X					
68	Mercy Medical Center	X	X					X		X							

Hospital #	Hospital Name	ADULT ED	PEDS ED	ADULT TRAUMA	PEDS TRAUMA	BURN	STEMI	PRIMARY STROKE	LVO STROKE	OB	ADULT EDP	PEDS EDP	HBARIC	RPLANT	LVAD	VENOM	SAFE
70	NYC Health + Hospitals - North Central Bronx	X	X							X	X						X
71	Mount Sinai - Queens	X	X					X	X								
74	Long Island Jewish Valley Stream	X	X					X			X	X					
77	Long Island Jewish Forest Hills	X	X					X		X							
78	North Shore University Hospital	X	X	X			X	X	X	X	X	X			X		X
80	Montefiore Medical Center - New Rochelle Hospital	X	X							X	X	X					
82	Nassau University Medical Center	X		X		X				X	X	X	X				
83	St. Barnabas Hospital	X	X	X			X	X		X	X						
87	White Plains Hospital	X						X		X	X						
88	NY Westchester Square Hospital Medical Center	X	X					X									
89	Montefiore Medical Center - The Mount Vernon Hospital	X	X								X						
90	Dept of Vertans Affairs - Harbor Healthcare - Brooklyn Campus																
92	New York Community Hospital	X						X									
93	Mount Sinai - Brooklyn	X	X					X									
95	The Brooklyn Hospital Center	X	X				X	X		X							
96	Saint Joseph's Medical Center	X	X					X			X	X					
97	Saint John's Riverside Hospital	X	X														
99	NewYork-Presbyterian - Lawrence Hospital	X	X														

Appendix J: Normal Pediatric Vital Signs

Age	Pulse (beats/min)	Minimum SBP (mmHg)	Respirations (breaths/min)
< 28 days	100-180	60	30-60
< 1 year	100-160	60	30-60
1-3 years	90-150	70	24-40
3-5 years	80-140	75	22-34
6-8 years	70-120	80	18-30

Appendix K: Appearance, Pulse, Grimace, Activity, Respiration (APGAR) Scoring System

- The newborn's APGAR score is based on assigning up to two points for each clinical sign with a maximum score of 10
- The APGAR score is to be obtained at one (1) and five (5) minutes after birth

SIGN	APGAR SCORE		
	0	1	2
Appearance (skin color)	Blue or pale	Acrocyanotic (peripheral cyanosis)	Completely pink or typical color for newborn
Pulse (heart rate)	Absent	< 100	> 100
Grimace (muscle tone)	Limp	Some flexion	Active motion
Activity	No response	Grimace (minimal response to stimuli)	Prompt response to stimuli
Respirations	Absent	Slow and irregular	Vigorous crying

- APGAR score interpretation:
  - 8-10: Normal
  - 5-7: Need for supplemental oxygen
  - 3-4: Need for assisted ventilation with BVM
  - 0-2: Need for CPR
- An APGAR score ≤ 7 requires immediate intervention
- The management of respiratory distress and/or cardiovascular instability take priority over obtaining an APGAR score

Appendix L: Modified START Triage

- Modified START triage allows prehospital providers to quickly sort adult and pediatric patients at an MCI based on treatment and transport priority
- This triage system assigns treatment priorities to patients based on respiratory rate, perfusion status and mental status
- Patients shall be assigned a tag color based on the following:

Tag Color	Patient Presentation
BLACK (Deceased)	**ADULT:** No spontaneous or effective respirations present after one (1) attempt to reposition the airway **PEDIATRIC:** No signs of life or spontaneous or effective respirations Perform 5 breaths via BVM. If no response, then patient is a Black Tag
RED (Immediate)	**ADULT:** Respirations present only after repositioning the airway **PEDIATRIC:** Respirations after BVM breaths Includes patients with the following conditions: • Respiratory rate > 30 breaths/min OR respiratory rate < 10 breaths/min • Absent radial pulse • Failure to follow simple commands
ORANGE (Urgent)	Includes patients with the following conditions: • Respiratory distress • Chest pain • Bleeding controlled with tourniquet or hemostatic dressing • Infants (age < 1 year) who do not meet Red or Black Tag criteria • Other clinical conditions the prehospital provider considers to be more urgent
YELLOW (Delayed)	• Patients who do not meet Red Tag or Green Tag criteria • Non-ambulatory patients who do not meet Red Tag or Orange Tag criteria
GREEN (Minor)	Ambulatory patients (walking wounded) that are able to follow commands and be directed to walk from the scene to a designated safe area

TRIAGE PROCEDURE

1. Assess patients and assign triage tags as follows:
    - **Green Tag:** Ambulatory patients who are able to follow commands and are able to be directed to a designated safe area

Respiratory

- Assess the patient's breathing and triage patients as follows:
    - If the patient is not breathing:
        - Remove foreign objects or other obstructions, including any loose dentures
        - Reposition the head using spinal precautions as needed
        - Reassess breathing and triage patients as follows:
            - **ADULT:**
                - **Red Tag**: Spontaneous respirations
                - **Black Tag**: No spontaneous respirations
            - **PEDIATRIC:** Administer five (5) breaths via BVM
                - **Red Tag**: Spontaneous respirations
                - **Black Tag**: No spontaneous respirations
    - **Red Tag:** If the patient is spontaneously breathing with a respiratory rate > 30 breaths/min OR respiratory rate < 10 breaths/min

Perfusion

- Control external hemorrhage as needed
- Assess the patient's radial pulse and triage patients as follows:
    - **Red Tag:** No palpable radial pulse
    - **Orange Tag:** Life-threatening external hemorrhage was controlled using a tourniquet or hemostatic dressing AND the patient does not meet other Red Tag criteria

Mental Status

- Assess the patient's mental status by testing their ability to follow simple commands
- Triage patients as follows:
    - **Red Tag:** Cannot follow simple commands
    - **Yellow Tag:** Able to follow simple commands

Special Considerations

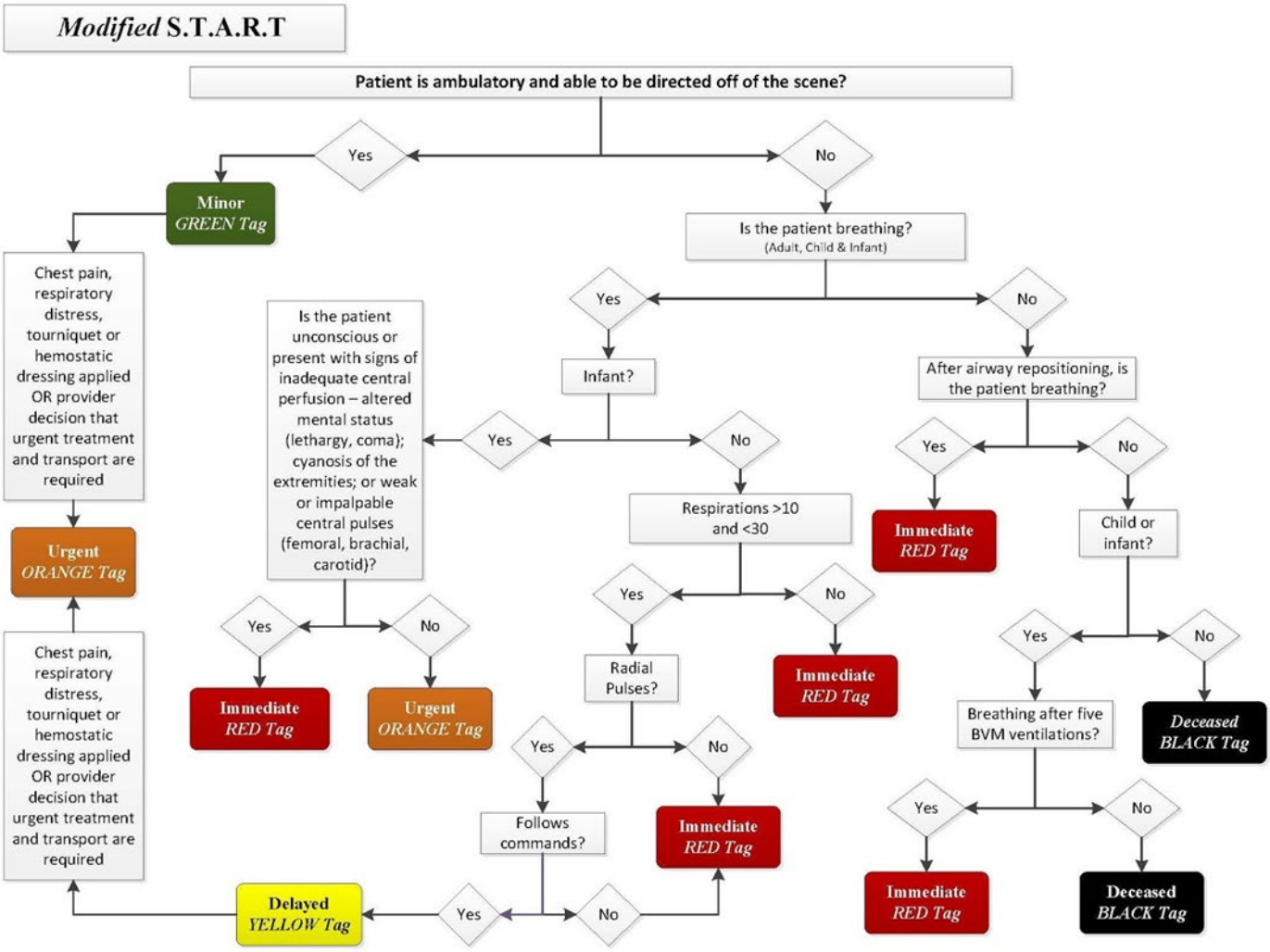
- Infants (age < 1 year):
    - Shall be triaged according to respiratory criteria for Red and Black Tag patients

    - Infants shall be triaged as follows:
        - **Red Tag:** Infants who have ANY of the following conditions: altered mental status (e.g. unconscious, lethargic), peripheral cyanosis, weak or non-palpable central pulses (femoral, brachial, carotid)
        - **Orange Tag:** Infants who do not have any of the above Red Tag criteria
- Orange Tag:
    - For patients who have chest pain, respiratory distress, altered mental status or other symptoms that the prehospital provider feels who require urgent treatment and/or transport
    - Patients may be upgraded to an Orange Tag from Green or Yellow categories at any time of assessment
    - Patients CANNOT be downgraded to an Orange Tag or any other lower priority level

DOCUMENTING TRIAGE TAGS

- Complete triage tags in the staging area or during transport, if possible
- Document on the triage tag as follows:
    - Triage time
    - Date
    - Patient's name, if possible
    - Patient's home address including city and state, if possible
    - Any medications or treatments administered to the patient
    - Patient's medical history, if possible
    - Prehospital provider's shield number or EMT number on the bottom line and on the yellow corners (marked with an ambulance and cross)
    - Any injuries on the diagram on the reverse side
    - Vital signs and time obtained
    - Tear off all **ALL COLORED AREAS BELOW THE ASSIGNED TRIAGE PRIORITY LEVEL AND RETAIN**
- Attach triage tag securely to the patient so that it is clearly visible
- Yellow triage tag corners (marked with an ambulance and cross)
    - Shield number or EMT number must be marked on BOTH corners
    - Remove both corners PRIOR to the patient being transported from the scene
    - Corner marked with cross: Hand off this corner to the treatment area supervisor
    - Corner marked with ambulance: Retain this corner and hand off to the treatment area supervisor at the conclusion of the MCI
- Retain top portions of the triage tags and hand off to the treatment area supervisor at the conclusion of the MCI

MODIFIED START TRIAGE ALGORITHM



Appendix M: Needle Decompression of a Tension Pneumothorax

1. Patients are considered to have a tension pneumothorax if they have the following criteria:
    - Absent or decreased breath sounds on the affected side **AND**
    - ANY of the following:
        - Severe dyspnea or tachypnea
        - Cyanosis or hypoxia
        - Hypotension
2. Identify one of the following appropriate sites for needle decompression on the AFFECTED side:
    - Second intercostal space on the mid-clavicular line
    - Fifth intercostal space on the anterior axillary line
3. Use the appropriate-sized over the needle catheter as follows:
    - **ADULT:** 14 gauge 3.25 inch (8.25 cm)
    - **PEDIATRIC:** 18-20 gauge 0.8-1.6 inch (2-4 cm)
4. Insert catheter through the skin perpendicular to the chest wall ABOVE and directly OVER the rib
5. Hold catheter in place for 5-10 seconds to allow for air decompression
6. Remove the needle and advance the catheter to the hub; secure in place
7. If the first attempt is NOT successful in decompressing the tension pneumothorax, a second attempt shall be made at the needle decompression site not previously used
8. If second needle decompression attempt does not resolve signs of the tension pneumothorax, begin rapid transport and consider other etiologies for the observed clinical findings
9. If the tension pneumothorax recurs, perform a second needle decompression using a new catheter

Appendix N: Continuous Positive Airway Pressure Therapy (CPAP)

- EMTs and Paramedics may utilize continuous positive airway pressure (CPAP) as detailed in the REMAC Prehospital Treatment Protocols if available and as authorized by their agency Medical Director
- CPAP must be immediately discontinued if ANY of the exclusion criteria develop

- **INCLUSION CRITERIA**
  - Age ≥ 15 years
  - Alert, cooperative and be able to maintain a patent airway
  - Respiratory distress

- **EXCLUSION CRITERIA**
  - Respiratory failure and/or need for immediate advanced airway management
  - SBP < 100 mmHg
  - Airway obstruction
  - Facial burns with possible airway involvement
  - Trauma
  - Suspected pneumothorax
  - Aspiration risk (i.e. active vomiting, upper GI bleeding)
  - Inability to tolerate the mask due to pain or discomfort
  - Inadequate mask seal

Appendix O: Vasopressor Infusion Rates via Flow-Regulating Devices

EPINEPHRINE (4 mcg/ml solution)

DOSE (mcg/min)	FLOW RATE (ml/hr)
2	30
4	60
6	90
8	120
10	150

NOREPINEPHRINE (4 mcg/ml solution)

DOSE (mcg/min)	FLOW RATE (ml/hr)
2	30
4	60
6	90
8	120
10	150
12	180
14	210
16	240
18	270
20	300

VASOPRESSIN (1 unit/100 ml solution)

DOSE (units/min)	FLOW RATE (ml/hr)
0.02	120
0.03	180
0.04	240

DOPAMINE (800 mcg/ml solution)

PATIENT WEIGHT (kg)	DOSE (mcg/kg/min)			
	5	10	15	20
	FLOW RATE (ml/hr)			
40	15	30	45	60
50	19	38	56	75
60	23	45	68	90
70	26	53	79	105
80	30	60	90	120
90	34	68	101	135
100	38	75	113	150
110	41	83	124	165
120	45	90	135	180
130	49	98	146	195
140	53	105	158	210
150	56	113	169	225
160	60	120	180	240
170	64	128	191	255
180	68	135	203	270

Appendix P: Alternate Destination / Treat-In-Place Patient Selection Criteria

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 years
- 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

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 beats/min
RR	< 10 or > 24 breaths/min
SpO_2	< 92% on room air
BGL	< 60 or > 300 mg/dl

PEDIATRIC VITAL SIGN EXCLUSION
Any vital signs that are not within the expected age-appropriate values (Appendix J: 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 Q: Vaccines

- Below are the NYC REMAC approved vaccinations recommended by the Centers for Disease Control and Prevention (CDC). This appendix will be updated as new vaccines are approved by the NYC REMAC and is to be used as a reference. The type of vaccine, including concentration and dose, is to be determined by an agency Medical Director

INFLUENZA

1. Indications: assess the need of vaccination against influenza
    - **ADULT:**
        - All adults are recommended to receive influenza vaccination each year
        - Women who are or will be pregnant during the influenza season: administer any recommended, age-appropriate trivalent or quadrivalent inactivated influenza vaccine (IIV) or recombinant influenza vaccine (RIV4) to pregnant women in any trimester
        - People who do not recall whether they received influenza vaccine in the current vaccination season should be vaccinated
    - **PEDIATRIC:**
        - All children and teens 6 months of age and older are recommended to receive the influenza vaccination each year
        - A second dose of influenza vaccine is recommended 4 weeks or more after the first dose for children age 6 months through 8 years of age if they have not or do not know if they have received 2 doses in prior years (not necessarily in the same season)
        - A second dose is needed for a 9-year-old child who received one dose in the current season when they were age 8 years, if they have not or do not know if they have received 2 doses in prior years
2. Screen for Contraindications and Precautions:
    - **Contraindications for use of all influenza vaccines**

      Do not administer the influenza vaccine to a person who has experienced a serious systemic or anaphylactic reaction to a prior dose of any influenza vaccine or to any of its components (except egg). For a list of vaccine components, refer to the manufacturer's package insert (www.immunize.org/fda) or

      www.fda.gov/vaccines-blood-biologics/vaccines/vaccines-licensed-use-united-states
    - **Contraindications only for use of live attenuated influenza vaccine (LAIV4, FluMist® Quadrivalent, nasal spray)**
        - Do not administer LAIV4 to a person who is:

- Pregnant
- Functional or anatomic asplenia, CSF leak, cochlear implant, or is immunocompromised due to any cause (including immunosuppression caused by medications or HIV infection)
- Age 50 years or older
- Received influenza antivirals *before* scheduled vaccination (Zanamivir or Oseltamivir within 48 hours; Peramivir within 5 days; Baloxavir within 17 days). If any of these antiviral drugs are taken within 14 days *after* LAIV, revaccinate with IIV or RIV4.
- In close contact of or who provides care for a severely immunosuppressed person who requires a protective environment
- Age 2 through 4 years who has received a diagnosis of asthma or who has experienced wheezing or asthma within the past 12 months, based on a healthcare provider's statement or medical record
- Age 6 months through 17 years and is receiving aspirin- or salicylate-containing medicine

- **Precautions for use of all influenza vaccines**
  - Moderate or severe acute illness with or without fever
  - History of Guillain-Barré syndrome within 6 weeks of a previous influenza vaccination
- **Precautions for use of LAIV4 only**
  - Age 5 years or older with Asthma
  - Other chronic medical conditions that might predispose the person to complications of influenza infection (e.g., other chronic pulmonary, cardiovascular [excluding isolated hypertension], renal, hepatic, neurologic, hematologic, or metabolic disorders [including diabetes mellitus])

For patients with egg allergy: People with egg allergy of any severity can receive any recommended and age-appropriate influenza vaccine (i.e., any IIV, RIV4, or LAIV4) that is otherwise appropriate for their health status. Most influenza vaccines (except RIV4 and cell-cultured IIV4) are egg cultured and may have trace amounts of egg protein. If a vaccine other than cell-cultured IIV (Flucelvax® Quadrivalent; Seqirus) or RIV (Flublok® Quadrivalent; Sanofi Pasteur) is used, people with a history of severe allergic reaction to egg involving any symptom other than hives (e.g., angioedema or swelling, respiratory distress, lightheadedness, or recurrent emesis), or who required epinephrine or another emergency medical intervention, the selected vaccine should be administered in a medical setting (e.g., health department or physician office). Vaccine administration should be super- vised by a healthcare provider who is able to recognize and manage severe allergic conditions

Note: For children aged 6 months-8 years who are receiving influenza vaccine for the first time; have had fewer than two prior doses of influenza vaccine in all previous years; or don’t know their influenza vaccine history, administer two doses separated by at least 4 weeks

ADULT				
Vaccine	**Age**	**Dose**	**Route**	**Administration**
Inactivated influenza vaccine (IIV)	All ages	0.5 ml	IM	Deltoid muscle
IIV-high dose	≥ 65 years old	0.7 ml	IM	
Adjuvanted inactivated influenza vaccine (aIIV4)		0.5 ml	IM	
Cell culture-based IIV (ccIIV4)	All ages	0.5 ml	IM	
Recombinant influenza vaccine (RIV4)	≥18 years old			
Live attenuated influenza vaccine (LAIV4)	< 50 years old (except pregnant women)	0.2 ml	IN	Spray 0.1 ml into each nostril while the patient is in an upright position

PEDIATRIC				
Vaccine	**Age**	**Dose**	**Route**	**Instructions**
Inactivated influenza vaccine (IIV)	6–35 months	Afluria®: 0.25 ml Fluarix®: 0.5 ml FluLaval®: 0.5 ml Fluzone®: 0.25 ml or 0.5 ml	IM	Anterolateral thigh; alternatively, children aged 12-35 months old may receive injections in deltoid muscle
Inactivated influenza vaccine (IIV)	≥ 3 years	0.5 ml	IM	Deltoid muscle or anterolateral thigh
Cell culture-based IIV (ccIIV4)	≥ 4 years			Deltoid muscle
Recombinant influenza vaccine (RIV4)	≥ 18 years			
Live attenuated influenza vaccine (LAIV4)	≥ 2 years	0.2 ml	IN	Spray half of vaccine into each nostril while the patient is in an upright position

PFIZER BIO-N-TECH COVID-19 VACCINE

Pfizer-BioNTech COVID-19 Vaccine is authorized for use under an Emergency Use Authorization (EUA) for active immunization to prevent coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in individuals 16 years of age and older

1. Indications: assess the need of vaccination against COVID-19
    - **ADULT:**
        - FDA has authorized the emergency use of the Pfizer-BioNTech COVID-19 vaccine in individuals 12 years of age or older
2. Screen for Contraindications and Precautions:
    - **Contraindications for use**

      Do not administer the Pfizer-BioNTech COVID-19 vaccine to a person who has experienced a serious systemic or anaphylactic reaction to any component of the Pfizer-BioNTech COVID-19 vaccine. For a list of vaccine components, refer to the manufacturer's package insert
    - **Precautions for use**
        - Severe allergic reaction
        - Fever
        - Bleeding disorder or are taking anticoagulants
        - Immunocompromised
        - Pregnancy
        - Breastfeeding
        - Having received another COVID-19 vaccine
3. Dosage and Administration
    - The Pfizer-BioNTech COVID-19 vaccine is administered intramuscularly of a 0.3 ml prepared solution to be administered as two doses three weeks apart. There are no data available on the interchangeability of the Pfizer-BioNTech COVID-19 Vaccine with other COVID-19 vaccines to complete the vaccination series. Individuals who have received one dose of Pfizer-BioNTech COVID-19 Vaccine should receive a second dose of Pfizer-BioNTech COVID-19 Vaccine to complete the vaccination series

4. Preparation for Administration

4.1 Prior to dilution

- The Pfizer-BioNTech COVID-19 Vaccine Multiple Dose Vial contains a frozen suspension that does not contain preservative and must be thawed and diluted prior to administration
- Pfizer-BioNTech COVID-19 vaccine may be thawed by either:
  - Allowing vial(s) to thaw in the refrigerator [2ºC to 8ºC (35ºF to 46ºF)]. A carton of vials may take up to 3 hours to thaw, and thawed vials can be stored in the refrigerator for up to five days (120 hours)
  - Allowing vial(s) to sit at room temperature [up to 25ºC (77ºF)] for 30 minutes
- Using either thawing method, vials must reach room temperature before dilution and must be diluted within 2 hours

4.2 Dilution

- Before dilution, invert vaccine vial gently 10 times. Do not shake
- Inspect the liquid in the vial prior to dilution. The liquid is a white to off-white suspension and may contain white to off-white opaque amorphous particles
- Do not use if the liquid is discolored or if other particles are observed
- Dilute the vial contents using 1.8 ml of 0.9% Sodium Chloride Injection, USP to form the Pfizer-BioNTech COVID-19 Vaccine
- ONLY use 0.9% Sodium Chloride Injection, USP as the diluent. This diluent is not packaged with the vaccine and must be sourced separately. Do not use bacteriostatic 0.9% Sodium Chloride Injection or any other diluent
- Equalize vial pressure before removing the needle from the vial by withdrawing 1.8 ml air into the empty diluent syringe
- Gently invert the vial containing the Pfizer-BioNTech COVID-19 vaccine ten times. Do not shake
- Inspect the vaccine in the vial. The vaccine will be an off-white suspension. Do not use if vaccine is discolored or contains particulates
- Record the date and time of dilution on the vial label
- Store between 2°C to 25°C (35°F to 77°F)
- Discard any unused vaccine 6 hours after dilution

5. Administration

- Visually inspect each dose in the dosing syringe prior to administration. The vaccine will be an off-white suspension. Confirm there are no particulates and that no discoloration is observed. Do not administer if vaccine is discolored or contains particulates

- Using aseptic technique, cleanse the vial stopper with a single-use antiseptic swab and withdraw 0.3 ml of the Pfizer-BioNTech COVID-19 vaccine
- Administer the vaccine intramuscularly immediately

6. Adverse reactions
   - Reported adverse reactions in clinical trials include injection site pain, fatigue, headache, muscle pain, chills, joint pain, fever, injection site swelling, injection site redness, nausea, malaise, and lymphadenopathy (see Full EUA Prescribing Information)
   - Severe allergic reactions have been reported following the Pfizer-BioNTech COVID-19 vaccine during mass vaccination outside of clinical trials
   - Additional adverse reactions, some of which may be serious, may become apparent with more widespread use of the Pfizer-BioNTech COVID-19 vaccine

MODERNA COVID-19 VACCINE

Moderna COVID-19 Vaccine is authorized for use under an Emergency Use Authorization (EUA) for active immunization to prevent coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in individuals 16 years of age and older

1. Indications: assess the need of vaccination against COVID-19
    - **ADULT:** FDA has authorized the emergency use of Moderna COVID-19 vaccine in individuals 18 years of age or older
2. Screen for Contraindications and Precautions:
    - Contraindications for use:
    - Do not administer the Moderna COVID-19 vaccine to a person who has experienced a serious systemic or anaphylactic reaction to any component of the Moderna COVID-19 vaccine. For a list of vaccine components, refer to the manufacturer's package insert
    - Precautions for use
    - Severe allergic reaction
    - Fever
    - Bleeding disorder or are taking anticoagulants
    - Immunocompromised
    - Pregnancy
    - Breastfeeding
    - Having received another COVID-19 vaccine

3. Dosage and Administration
    - The Moderna COVID-19 vaccine is administered intramuscularly of a 0.5 ml solution to be administered as two doses four weeks apart. There are no data available on the interchangeability of the Moderna COVID-19 Vaccine with other COVID-19 vaccines to complete the vaccination series. Individuals who have received one dose of Moderna COVID-19 Vaccine should receive a second dose of Moderna COVID-19 Vaccine to complete the vaccination series

4. Preparation for Administration

    4.1 Thawing
    - The Moderna COVID-19 Vaccine Multiple Dose Vial contains a frozen suspension that does not contain preservative and must be thawed prior to administration.
    - Moderna COVID-19 vaccine may be thawed by either:
        - Allowing vial(s) to thaw in the refrigerator [2ºC to 8ºC (35ºF to 46ºF)] for 2.5 hours. After thawing, allow vial(s) to stand at room temperature for 15 minutes before administering

        - Allowing vial(s) to sit at room temperature [15ºC to 25ºC (59ºF to 77ºF)] for 1 hour
    - After thawing, do not refreeze
    - Swirl vial gently after thawing and between each withdrawal. Do not shake. Do not dilute the vaccine
    - The Moderna COVID-19 vaccine is a white to off-white suspension. It may contain white or translucent particulates. Visually inspect the Moderna COVID-19 vaccine vials for other particulate matter and/or discoloration prior to administration. If either of these conditions exist, the vaccine should not be administered
    - After the first dose has been withdrawn, the vial should be stored between 2ºC to 25ºC (35ºF to 77ºF). Record the date and time of first use on the Moderna COVID-19 vaccine vial label. Discard vial after 6 hours. Do not refreeze

5. Administration
    - Visually inspect each dose in the dosing syringe prior to administration. The white to off-white suspension may contain white or translucent particulates. Do not administer if vaccine is discolored or contains other particulate matter
    - Using aseptic technique, cleanse the vial stopper with a single-use antiseptic swab and withdraw 0.5 ml of the Moderna COVID-19 vaccine
    - Administer the vaccine intramuscularly
6. Adverse reactions
    - Reported adverse reactions in clinical trials include injection site pain, fatigue, headache, myalgia, arthralgia, fever/chills, nausea/vomiting, axillary swelling/tenderness, swelling at the injection site, and erythema at the injection site (see Full EUA Prescribing Information)
    - Additional adverse reactions, some of which may be serious, may become apparent with more widespread use of the Moderna COVID-19 vaccine

THE FOLLOWING APPENDIX IS INFORMATION FROM THE NEW YORK STATE BASIC LIFE SUPPORT ADULT AND PEDIATRIC TREATMENT PROTOCOLS. THESE ARE INCLUDED AS AN EDUCATIONAL REFERENCE FOR NYC PREHOSPITAL PROVIDERS

ANY INFORMATION CONTAINED IN THE FOLLOWING APPENDIX THAT IS IN CONFLICT WITH REGIONAL POLICIES, PROCEDURES OR PROTOCOLS SHALL BE TREATED AS EDUCATIONAL INFORMATION ONLY AND SHALL NOT BE USED AS PROTOCOLS

NYC PREHOSPITAL PROVIDERS SHALL NOT ATTEMPT TO MODIFY OR TROUBLESHOOT ANY OF THE LISTED MEDICAL DEVICES UNLESS SPECIFICALLY TRAINED AND AUTHORIZED TO DO SO BY THEIR AGENCY MEDICAL DIRECTOR

Appendix R: New York State BLS Prehospital Protocol Educational References

NEEDLESTICK / INFECTIOUS EXPOSURE

- This section outlines the immediate actions to be taken following any mucous membrane or open skin contact with blood or other body secretions
    - Puncture wounds
        - Immediately cleanse with betadine or chlorhexidine and then soak the affected area for five (5) minutes in a solution of betadine and sterile water
    - Skin exposure
        - Wash the area with soap and water then clean the area with Betadine or chlorhexidine
    - Mucous membrane exposure
        - Mouth: Rinse mouth out with a large volume of tap water
        - Eyes: Flush with water from an eyewash station. If an eyewash station is not available, use tap water
- Thoroughly cleanse the area of exposure
- Decontamination may be limited because of the availability of resources
- Immediately report the exposure to a supervisor
- Seek immediate medical attention and post-exposure evaluation at the same hospital where the source patient was transported, if possible

PRESCRIBED MEDICATION ASSISTANCE (ADULT AND PEDIATRIC)

- This section is to guide prehospital providers when providing assistance to patients or caregivers of patients who require assistance with their previously prescribed medication
- The following medications, as stated in the NYS BLS Prehospital Protocols, may be administered by prehospital providers in accordance with the NYS BLS Prehospital Protocols:
    - Nitroglycerin SL
    - Beta-agonist inhalers

- Diazepam per rectum (PR)
- Epinephrine auto-injector IM
- Naloxone auto-injector IM or IN
- OLMC approval of assisted medication administration within the prehospital provider's scope of practice

PROVISION OF MEDICAL 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 are 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

TRANSFER OF PATIENT CARE

- Providers are responsible for the patient while in their care
- Patients may be transferred to a provider with the equivalent or higher level of certification
- Patients may be transferred to a provider with a lower level of certification, only if the patient is not anticipated to require higher-level care and the lower level provider has formally accepted the transfer of care
- When transferring patients, both the receiving and transferring providers shall:
  - Ensure that all patient information is transferred to the receiving provider (i.e. chief complaint, past medical history, current history, vital signs, and any treatments or medications administered prior to transfer)
  - 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, if possible
- All personnel and agencies must comply with NYSDOH BEMS policy statement 12-02 (or updated version) regarding documentation:

    - Both providers will complete an ePCR, as appropriate, detailing the care administered 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 ePCR as technology, agency, regional and state policy allow
- Contact OLMC for assistance with any disagreements between transferring and transporting providers
- Any disparity between prehospital providers shall be resolved by OLMC or the provider with higher certification must transport the patient
- In situations involving multiple patients or mass casualty incidents, prehospital providers may triage patients to other providers with lower level of certification as resources allow
- A standardized process of transfer of care may be implemented by regional systems

ADVANCED MEDICAL TECHNOLOGIES

Technology-Assisted Pediatric Patients

- Pediatric patients' special health care needs that require technological assistance for life support including the following:
    - Tracheostomy: Breathing tube in neck
    - Central venous catheters (i.e. 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 (i.e. PEG tube 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
- When treating these patients, prehospital providers shall perform the following:
    - ABCs and vital signs
    - Airway management and appropriate oxygen therapy
- Device-specific supportive measures:
    - Tracheostomy
        - If patient is ventilator-dependent and there are respiratory concerns, disconnect and attempt to ventilate with a BVM via tracheostomy adapter
        - Remove the tracheostomy tube if it is fully or partially dislodged and cover the tracheostomy stoma with an occlusive dressing; ventilate via mouth and nose via 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: Cover the site with an occlusive dressing if tube or button is fully dislodged; and tape the device in place if it is partially dislodged
    - Gastrostomy, colostomy, ileostomy, or nephrostomy: Apply gentle direct pressure with a saline-moistened dressing if stoma site is bleeding,
    - Foley catheter: Tape dislodged catheter in place
- Notify the destination hospital and specify the patient's health care need that requires technological assistance
- Obtain frequent vital signs
- Allow caregivers to assist with patient care as needed
- Inquire caregivers about the following:
    - 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 medication-alert jewelry, emergency information form (EIF), or patient care plan (PCP), or other health care forms, if the patient's usual caregiver is not available
  - Ensure to take the EIF, PCP, or other health care forms with the patient to the hospital
  - 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

TOTAL ARTIFICIAL HEART (TAH)

- For any request for service that requires evaluation and transport of a patient with a total artificial heart (TAH), prehospital providers are to perform the following:
    - Assess airway and breathing as 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 is present:
            - Consider early consult with TAH coordinator or medical control
            - Check for severed or kinked TAH driveline (troubleshoot 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 with a goal SBP between 90-150 mmHg
    - Perform a secondary assessment and treat per protocol
        - If the patient is unresponsive with a pulse, evaluate for noncardiac etiologies
- Notify the receiving hospital that a 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, batteries, and power cords for transport
- Any trained support member should be transported with the patient
- Contact OLMC for termination of resuscitation or for consultation with a TAH program provider
- 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
- A patient with a TAH has normal pulse and blood pressure detectable by conventional methods and are highly preload and afterload sensitive:
    - Target SBP between 90-150 mmHg
    - Pulse rate is set and regular, between 120-135 beats/min

VENTRICULAR ASSIST DEVICE (VAD)

- For any request for service that requires evaluation and transport of a patient with a ventricular assist device (VAD), prehospital providers are to perform the following:
    - Assess airway and breathing
    - Treat medical or traumatic conditions per protocol
    - Assess circulation:
        - Auscultate over the precordial/epigastric 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 (i.e. HeartMate II©, Heartware©, 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 beats/min) in the setting of a normally functioning device, but may not have a readily measurable blood pressure

        - Perform CPR only when there are no signs of flow or perfusion (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 as needed
- Notify the receiving facility promptly and consider early consultation with the VAD coordinator or OLMC, 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 be transported with the patient
- Unless otherwise directed by OLMC, transport patient to a facility capable of managing VAD patients
- Community patients with VADs are typically ambulatory and independent
- Trained support members include family and caregivers who have extensive knowledge of the device, its function, and its battery units and are useful resources to prehospital providers when caring for a VAD patient
- One set of fully charged batteries typically 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
    - Never disconnect both batteries at once as this can cause complete loss of power to the VAD
    - 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 source 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 (RPM)	8000-10,000	5000-6000	2400-3200
Power (watts)	4-7	3-7	3-6
Flow (L/min)	4-8	3-6	3-6
Pulsatility Index (PI)	4-6	1-4	n/a

AUTOMATIC TRANSPORT VENTILATOR (ATV)

- The following are general parameters and information regarding the use of automatic transport ventilators and does not supersede device-specific practice guidelines provided through individual agency education

General Parameters

- FiO_2: Maintain $SaO_2 \geq 94\%$
- PEEP: 5 cmH_2O (increase up to 10 cmH_2O as needed)
- Mode: A/C or SIMV
- Pressure Support (SIMV): 5-10 cmH_2O, if available
- Volume Control: Tidal volume (V_t) 6-8 ml/kg ideal body weight (maintain plateau pressure [P_{plat}] < 30 cmH_2O or PIP < 35 cmH_2O)
- Rate: Pediatric: 16-20 breaths/min; Adult: 12-14 breaths/min
- I-Time: Pediatric :0.7-0.8 sec; Adult: 0.8 – 1.2 sec
- Refer to the manufacturer's ventilator operation manual for specific directions

Recommended Minimum Parameters for ATV

- Pressure limit/safety relief with 40 cm H_2O maximum
- Ability to adjust volume to 4-8 ml/kg of ideal body weight
- Ability to adjust rate with a minimum range of 10-30 breaths/min
- Ability to add PEEP or PEEP valve with a minimum range of 5-10 cmH_2O
- Ability for patient triggered breaths (complete control ventilation is prohibited)

Initiating Mechanical Volume Ventilation

- Use $ETCO_2$ 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 1000 psi in the D tank
- Attach a ventilator to an 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 and titrate to appropriate $ETCO_2$
    - Adult: 12-14 breaths/min
    - Pediatric: 16-20 breaths/min
- Select the appropriate tidal volume (V_t) of 6-8 ml/kg of ideal body weight
- Select the appropriate inspiratory time (I_t), if applicable

- Select the desired FiO_2 if applicable. It is standard to set FiO_2 = 1.0 (100% O_2) and then titrate to maintain SpO_2 ≥ 94%
- Verify a high pressure alarm no greater than 40 cmH_2O
- Set PEEP = 5 cm H_2O
- Observe the delivery of several breaths
- Evaluate the patient for adequate chest rise, $ETCO_2$, and SpO_2
- Adjust the ventilator settings as needed to improve clinical parameters
- Record all set parameters on the ePCR
- Monitor and record PIP, if applicable
- 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 with high concentration oxygen

PEDIATRIC ASSESSMENT: APPARENT LIFE-THREATENING EVENT (ALTE) / BRIEF RESOLVED UNEXPLAINED EVENT (BRUE)

- Applies to pediatric patients age < 2 years
- ALTE/BRUE are episodes in infants or children age < 2 years which may be frightening to the observer, but has resolved and are characterized by any 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
- Prehospital providers shall provide the following to their certification level:
    - Airway management and appropriate oxygen therapy
    - Assess for suspected opiate overdose and treat as needed
- Most patients will appear stable and have an unremarkable physical exam
- An ALTE/BRUE may be a sign of an underlying serious illness or injury and further evaluation by medical staff is strongly recommended