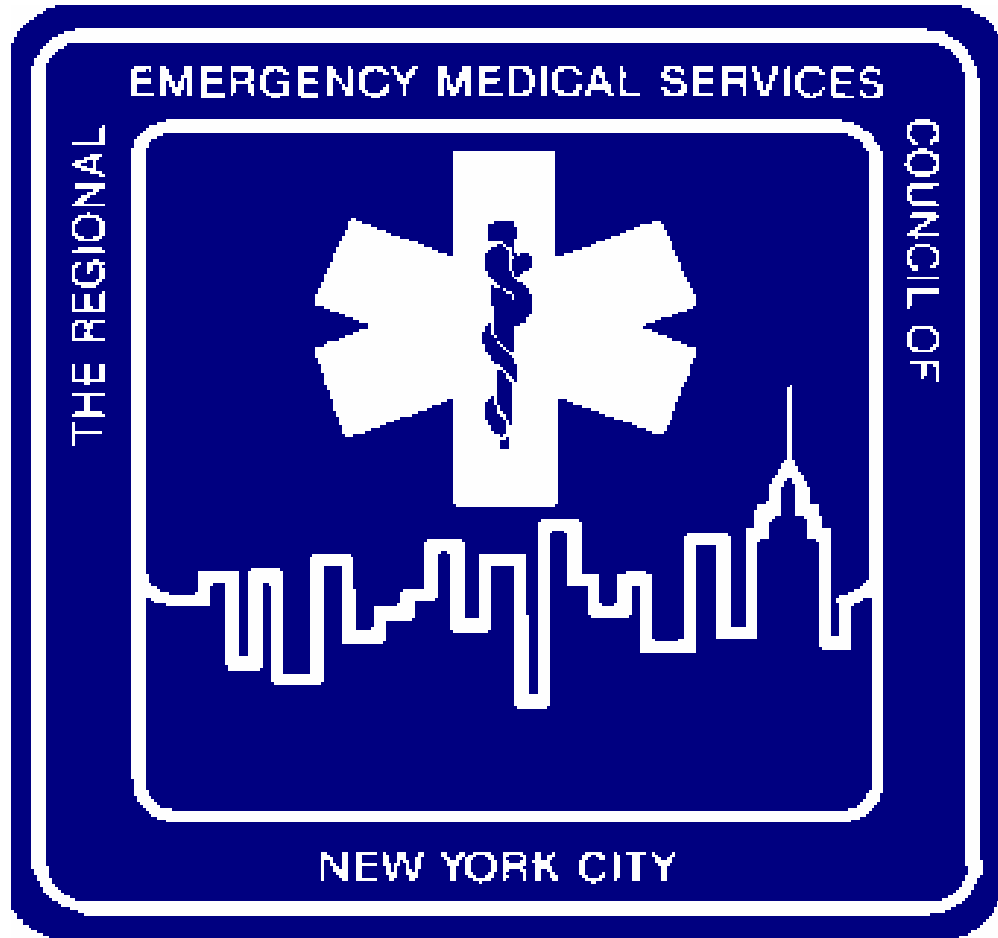


**CERTIFIED FIRST RESPONDER PROTOCOLS**

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**REGIONAL EMERGENCY MEDICAL ADVISORY COMMITTEE**

**NEW YORK CITY**



**PREHOSPITAL TREATMENT PROTOCOLS**

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**January 2008**

Version 010108b

**CERTIFIED FIRST RESPONDER PROTOCOLS**

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1991

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Printed in the United States

1991, 1996, 1997, 2002, 2003, 2004, 2005, 2006, 2007, 2008

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: July 2007, Implemented January 2008

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**300**

**WEAPONS OF MASS DESTRUCTION / NERVE AGENT EXPOSURE**

*Authorization for the use of the Antidote kits comes ONLY from the FDNY Office of Medical Affairs (OMA) through a class order\* issued by a FDNY-OMA Medical Director who is on-scene or as relayed by an FDNY-OMA Medical Director through On-Line Medical Control (Telemetry) or through FDNY Emergency Medical Dispatch.*

**NOTE: The issuance of any class order shall be conveyed to all regional medical control facilities for relay to 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 TAG - will be treated as soon as possible following decontamination.
- GREEN TAG (asymptomatic) - will be decontaminated and receive close observation.

**Initial Treatment (Table 1)**

<b>Tag Color</b>	<b>Signs &amp; Symptoms</b>	<b>Auto-injector Administration</b>	<b>Atropine Dose and Monitor Interval</b>
<b>RED</b>	Severe Respiratory Distress, Agitation SLUDGEM	3 Auto-injector Kits	None Monitor every 5 minutes.
<b>YELLOW</b>	Respiratory Distress, SLUDGEM	1 Auto-injector Kits	2mg Monitor every 10 minutes
<b>GREEN</b>	Asymptomatic None	None	None Monitor every 15 minutes.

**NOTE: Do not give more than three auto-injector kits to any patient.**

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\* **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.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

All treatment subsequent to the initial doses shall follow Table 2. This will include extended on-scene operations, transport to ambulance destinations, and treatment at casualty collection points. The goal of treatment is drying of secretions and resolution of other symptoms.

**Extended Re-Evaluation & Treatment (Table 2)**

Tag Color	Signs & Symptoms	Monitor Interval	Auto-injector Administration	Atropine Repeat Dosing Frequency
<b>RED</b>	Severe Respiratory Distress, Agitation, SLUDGEM	Monitor every 5 minutes	Up to a total maximum of 3 auto-injectors	2mg every 3-5 minutes as needed
<b>YELLOW</b>	Respiratory Distress SLUDGEM	Monitor every 5 to 15 minutes	Up to a total maximum of 1 auto-injector	2mg every 5-10 minutes as needed
<b>GREEN</b>	Asymptomatic	Monitor every 15 minutes	None	None

**NOTE: Do not give more than three auto-injector kits to any patient.**

- Record on the Triage Tag the number of Atropine and Auto-injector Kits used
- **ASYMPTOMATIC PATIENTS DO NOT REQUIRE TREATMENT**  
– monitor every 15 minutes

**PEDIATRIC PATIENTS**

Tag Color	Exposure, and/or Signs of Respiratory Distress, Agitation, SLUDGEM	Atropine and Antidote Kit Doses Monitor Interval		Atropine Repeat Dosing Frequency
<b>RED (Peds)</b>	Yes	Age <1 years	1 <b>Peds</b> Atropine Auto-injector (0.5 mg) No Antidote Kit Monitor every 3 minutes	Atropine every 3 minutes as needed
		Age 1-8 years	1 Antidote Kit Monitor every 3 minutes	
<b>GREEN (Peds)</b>	No	None Monitor every 10 minutes for evidence of exposure		

**NOTE: Pediatric patients older than 8 years old should be treated via the adult protocol.**

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**301**

**RESPIRATORY DISTRESS / FAILURE**

1. Monitor the airway.
2. If an obstructed airway is suspected (see Protocol #302).
3. Administer oxygen.
4. Do NOT permit physical activity.
5. Update dispatch of a high priority patient.
6. Monitor breathing for adequacy.
7. Place the patient in a position of comfort.
8. Monitor breathing continuously for signs of hypoxia and / or increasing respiratory distress.
9. If the respiratory rate is less than 8 or greater than 24 times per minute and/or exhibiting signs of inadequate respiration, assisted ventilations may be required utilizing one of the ventilation devices.
  - If unable to maintain an open airway and if tolerated, an airway adjunct may be required.
10. If respiratory arrest, ventilate using one of the ventilation devices and an airway adjunct, if tolerated.

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

**Ventilation Devices**

- Pocket Mask with supplemental oxygen set at 10-15 liters/minute.
- Bag-Valve-Mask with reservoir with supplemental oxygen set at 10-15 liters/minute.
- Mouth-to-Mouth or Mouth-to-Mouth/Nose (at provider option, only when adjuncts are not available).

**NOTE: Do not use a Demand Valve Resuscitator**

**CERTIFIED FIRST RESPONDER PROTOCOLS**

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**302**

**OBSTRUCTED AIRWAY**

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1. If the patient is conscious and *can* breathe, cough, speak, or cry:
  - Encourage coughing.
2. If the patient is unconscious or *cannot* breathe, cough, speak, or cry:
  - Perform CPR, as per current AHA guidelines.
3. Update dispatch of a high priority patient.
4. If airway obstruction is relieved:
  - Monitor the airway.
  - Monitor breathing for adequacy.
  - Administer oxygen.
  - If patient is in cardiac arrest (see Protocol #303).

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**303**

**CARDIAC ARREST**

1. Begin Basic Cardiac Life Support procedures.
2. Update dispatch of a high priority patient.
3. If an automated external defibrillator is available,
  - In CFR witnessed arrests, perform CPR until defibrillator is attached.
  - In arrests not witnessed by CFR, perform two (2) minutes of CPR prior to defibrillator use.
  - If pediatric patient, under 9 years of age, see Protocol #353
4. Once a defibrillator is applied, immediately turn the machine 'On.'
5. Analyze (do not perform CPR while the machine is analyzing).
  - Whenever the "NO SHOCK INDICATED" message appears, CPR should be performed for 2 MINUTES followed by the next analysis.
5. Until transport arrives, continue CPR, re-analyze every 2 minutes and shock as indicated.

**Special Considerations When Using an AED**

- If present, remove Nitroglycerin patch and wipe off remaining paste; avoid contact with your skin.
- Prior to pad placement, the chest should be dry and, if needed, shave chest hair
- Attach automated external defibrillator pads
- If the patient has a pacemaker, position the pads at least one (1) inch away from the pacemaker device.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**304**

**NON-TRAUMATIC CHEST PAIN**

1. Monitor the airway.
2. Monitor breathing for adequacy.
3. Administer oxygen.
4. DO NOT permit physical activity.
5. Update dispatch of a high priority patient.
6. Place patient in a position of comfort.
7. If chest pain is still present, assist the patient with self-administration of the patient's own Nitroglycerin, if available. One (1) time only.
  - Systolic pressure must be at least 120 mm Hg.
8. Continue to monitor initial assessment.

CERTIFIED FIRST RESPONDER PROTOCOLS

311

ALTERED MENTAL STATUS

**NOTE: Emotionally disturbed patients must be presumed to have an underlying medical or traumatic condition causing an altered mental status.**

**Assess such patients for an underlying medical or traumatic condition, treat as necessary.**

1. Assess the situation for potential or actual danger and establish a safe zone, if necessary.

**All suicidal or violent threats or gestures must be taken seriously. These patients should be in police custody if they pose a danger to themselves, emergency personnel and/or others.**

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 Protocol #330).

3. Observe spinal injury precautions; if appropriate (see Protocol #321).

4. Monitor the airway.

5. Administer oxygen.

6. Update dispatch of a high priority patient.

7. If the patient is conscious, is able to swallow, and is able to drink **without** assistance, provide a glucose solution, fruit juice, or non-diet soda by mouth.

- DO NOT give oral solutions to unconscious patients.
- DO NOT give oral solutions to patients with head injuries.

8. Continue to monitor initial assessment.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**313**

**SEIZURES**

1. Protect the patient from injury.
2. Monitor the airway.
  - DO NOT place anything into the patient's mouth.
3. Attempt to position the patient to maintain airway patency.
4. Observe spinal injury precautions, if appropriate (see Protocol #321)
5. Avoid unnecessary or excessive restraint.
6. Monitor breathing for adequacy.
7. Administer oxygen.
8. Update dispatch of a high priority patient if patient is actively seizing upon arrival.
9. Treat all injuries as appropriate.
10. Continue to monitor initial assessment.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**314**

**POISONING OR DRUG OVERDOSE**

1. Monitor the airway.
2. Administer oxygen.
3. Update dispatch of a high priority patient for patients with respiratory distress/failure or altered mental status, or if so directed by Medical Control.
4. Assess for shock and treat, if appropriate (see Protocol #315)
5. For Special Considerations, see below.
6. Identify and if possible obtain a sample of the substance or the container(s).
7. Continue to monitor initial assessment.
8. Contact Medical Control, if available

**Special Considerations**

**Ingested Substance:**

- DO NOT induce vomiting.
- DO NOT attempt to neutralize the substance.

**Inhaled Substance:**

**NOTE: Ensure that the scene is safe to enter.**

- Remove the patient from the contaminated environment.
- Administer oxygen, especially if carbon monoxide poisoning is suspected.

**Envenomation:**

<b>Insect Stings</b>	<b>Snakebite</b>
<ul style="list-style-type: none"> <li>• Remove stinger by scraping</li> </ul>	<ul style="list-style-type: none"> <li>• Keep injection site lower than heart</li> </ul>
<ul style="list-style-type: none"> <li>• Cover with sterile dressing</li> </ul>	<ul style="list-style-type: none"> <li>• Cover with sterile dressing</li> </ul>
<ul style="list-style-type: none"> <li>• Apply cold compress, if available</li> </ul>	<ul style="list-style-type: none"> <li>• Immobilize the area and restrict patient activity</li> </ul>

**Absorption:**

**NOTE: Take precautions to avoid contamination of yourself and others.**

- Remove all contaminated clothing.
- Brush away any dry agents or blot away any excess liquids from the skin.
- Flush the area with sterile saline, sterile water, or plain water for at least 10 minutes.
- Bandage any contact burns with a saline-moistened, sterile dressing.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

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**315**

**SHOCK**

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1. Observe spinal injury precautions; if appropriate (see Protocol #321).
2. Monitor the airway.
3. Administer oxygen.
4. Control external bleeding.
5. Elevate the legs.
6. Maintain body temperature.
7. Update dispatch of a high priority patient.
8. Monitor vital signs.
9. Treat all injuries as appropriate.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**320**

**TRAUMATIC CARDIAC ARREST**

1. Observe spinal injury precautions, if appropriate (see Protocol #321)
2. Begin Basic Cardiac Life Support procedures.
3. Update dispatch of a high priority patient.
4. If an automated external defibrillator is available,
  - In CFR witnessed arrests, perform CPR until defibrillator is attached.
  - In arrests not witnessed by CFR, perform CPR while immediately applying a defibrillator.
  - If pediatric patient, under 9 years of age, see Protocol #353
5. Once a defibrillator is applied, immediately turn the machine 'On.'
6. Analyze (do not perform CPR while the machine is analyzing).
  - Whenever the "NO SHOCK INDICATED" message appears, CPR should be performed for 2 MINUTES followed by the next analysis.
7. Until transport arrives, continue CPR, re-analyze every 2 minutes and shock as indicated.
8. Update dispatch of a high priority patient.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

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**321**

**HEAD AND SPINE INJURIES**

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1. Establish and maintain airway control while stabilizing the cervical spine.

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

2. Utilize the Rapid Takedown Technique if the patient is standing.

3. Monitor breathing for adequacy.

4. Administer oxygen, if needed.

5. Assess for shock and treat, if appropriate (see Protocol #315)

6. Immobilize the patient's head and spine with a rigid collar and appropriate immobilization device, if available.

7. Continue to monitor initial assessment.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

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**322**

**NECK INJURIES**

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**NOTE: Be alert for airway problems and cervical spine injuries.**

1. Monitor the airway.
2. Observe spinal injury precautions (see Protocol #321)
3. Monitor breathing for adequacy.
4. Administer oxygen.
5. Seal open wounds with an occlusive dressing.
  - DO NOT bandage completely around the neck.
6. Assess for shock and treat, if appropriate (see Protocol #315)
7. Continue to monitor initial assessment.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**323**

**CHEST INJURIES**

1. Observe spinal injury precautions, if appropriate (see Protocol #321)
2. Monitor the airway.
3. Monitor breathing for adequacy.
4. Administer oxygen.
5. For Special Considerations, see below.
6. Assess for shock and treat, if appropriate (see Protocol #315)
7. Position the patient on the affected side unless it will complicate the injury.
8. Continue to monitor initial assessment.

**Special Considerations**

**Open Chest Wound:**

- Place an occlusive dressing over the wound and tape on three sides.

**Closed Chest Injury:**

- If the patient's condition worsens, update dispatch of a high priority patient.

**Flail Chest:**

- Secure bulky dressings with tape over the flail segment.

**Impaled Objects:**

- DO NOT remove the object, unless it interferes with CPR.
- Support and secure the object with bulky dressings.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**324**

**ABDOMINAL INJURIES**

1. Monitor the airway.
2. Monitor breathing for adequacy.
3. Administer oxygen.
4. Assess for shock and treat, if appropriate (see Protocol #315)
5. For Special Considerations, see below.
6. Continue to monitor initial assessment.

**Special Considerations**

**Evisceration:**

- Do NOT replace the protruding organ.
- Position the patient appropriately with knees slightly bent.
- Place saline-moistened, sterile dressings over the organ.
- DO NOT pour fluid directly onto the wound.
- Secure dry, bulky dressings over the moistened dressings.
- An occlusive dressing may be placed as the final layer to maintain body heat.

**Impaled Objects:**

- DO NOT remove the object.
- Support and secure the object with bulky dressings.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**325**

**BONE AND JOINT INJURIES**

1. Monitor the airway.
2. Administer oxygen, if appropriate.
3. Assess for shock and treat, if appropriate (see Protocol #315)
  - Avoid excessive pressure over injury sites.
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.
  - Update dispatch of a high priority patient if no pulse, or if motor or sensory deficits exist.
7. Elevate the injury site, if possible.
8. Apply cold pack to closed injury sites
9. Continue to monitor initial assessment.

CERTIFIED FIRST RESPONDER PROTOCOLS

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SOFT TISSUE INJURIES

**NOTE: Infection control precautions must be followed when making contact with all patients. Especially their blood or body secretions.**

1. Monitor the airway.
2. Administer oxygen, if appropriate.
3. Assess for shock and treat, if appropriate (see Protocol #315)
4. For Special Considerations, see below.
5. Continue to monitor initial assessment.

**Special Considerations**

**Impaled Object:**

1. Do NOT remove the object.
2. Support and secure the object with bulky dressings.

**NOTE: If the object is impaled in the cheek and is compromising the airway, remove it and bandage both sides of the wound.**

**Amputated or Completely Avulsed Tissue:**

1. Wrap the part in saline-moistened, sterile dressings.
  - DO NOT soak.
2. Place the part into a plastic bag and seal the bag.
3. Label the bag with the patient's name and time of injury.
4. Place the bag in ice water, or a cooled area.
5. Protect the stump with a saline-moistened, sterile dressing.

**NOTE: Avoid freezing the tissue. DO NOT use dry ice.**

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**327**

**EYE INJURIES**

1. Monitor the airway.
2. Administer oxygen, if appropriate.
3. DO NOT apply pressure to the globe of the eye.
4. For Special Considerations, see below.
5. Bandage both eyes loosely.
6. Continue to monitor initial assessment.

**Special Considerations**

**Foreign Object:**

1. Immediately flush the affected eye(s) for a minimum of 20 minutes

**Impaled Object:**

1. Do NOT remove the object.
2. Support and secure the object with bulky dressings.

**Avulsed Eye:**

1. Do NOT attempt to replace the eye back into the socket.
2. Wrap the eye with saline-moistened, sterile dressings.
3. Stabilize this with a paper cup or similar object.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**328**

**BURNS**

1. Stop the burning process.
2. Observe spinal injury precautions, if appropriate (see Protocol #321)
3. Monitor the airway.

**NOTE: For patients with inhalation injury – update dispatch of high priority patient.**

4. Monitor breathing for adequacy.
5. Administer oxygen.
6. Prevent contamination of the wound. Avoid making contact with non-sterile materials if possible. Do not remove clothing adherent to the wound.
7. Assess for shock and treat, if appropriate (see Protocol #315)
8. For Special Considerations, see below.
9. Cover the affected areas with saline-moistened, sterile dressings, then wrap in dry, sterile sheets.
10. Maintain body temperature:
  - **Large Body Surface Area (BSA) involvement may lead to rapid heat loss**
11. Continue to monitor initial assessment.

**Special Considerations**

**Thermal Burns:**

1. Cool hot or smoldering skin (up to 20% of the body surface area at a time) with cool water, Normal Saline (0.9% NS), or saline-moistened, sterile dressings.

**Chemical Burns:**

**NOTE: Take precautions to avoid contamination of yourself and others.**

1. Remove any contaminated clothing or personal articles.
2. Brush dry agents off the skin, then flush with water for at least 10 minutes.
3. Blot any excessive liquids from the skin, then flush liquid chemical agents with water:
  - From the skin for at least 10 minutes.
  - From the eyes for at least 20 minutes.
4. Obtain the name of the product, if possible.

**Electrical Burns:**

**NOTE: Be alert for cervical spine and other skeletal injuries.**

1. Begin Basic Cardiac Life Support procedures, if appropriate (see Protocol #303)
2. Observe spinal injury precautions, if appropriate (see Protocol #321)

**CERTIFIED FIRST RESPONDER PROTOCOLS**

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3. Update dispatch of a high priority patient.
4. Locate and bandage the obvious entrance and exit wounds.
5. Treat skeletal injuries, if appropriate (see Protocol #325)

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**330**

**EMOTIONALLY DISTURBED PATIENT**

1. Assess the situation for potential or actual danger and establish a safe zone, if necessary.

**NOTE: All suicidal or violent threats or gestures must be taken seriously. These patients should be in police custody if they pose a danger to themselves, emergency personnel and/or others.**

2. Assess for an underlying medical or traumatic condition causing an altered mental status and treat as necessary.

3. 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, proceed as follows:

- Request police assistance, if appropriate.
- Open communications with the patient.
- Attempt to determine the cause of the immediate crisis.
- Attempt to obtain a past medical history.
- Document the exact nature of the problem, including the patient's own words.
- The CFR may participate in restraining a patient if a police officer requests assistance or when it becomes necessary for self-protection.

**NOTE: Only the amount of force required to effectively restrain the patient may be used.**

4. Continue to monitor initial assessment.

**CERTIFIED FIRST RESPONDER PROTOCOLS**

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**331**

**HEAT RELATED EMERGENCIES**

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1. Move the patient to a cooler environment or cool the environment.
2. Remove excessive clothing.
3. Administer oxygen.
4. Restrict physical activity.
5. Place in recovery position if altered mental status.
6. Assess for shock and treat, if appropriate (see Protocol #315)
7. Continue to monitor initial assessment.

**NOTE: Do not lower body temperature so as to produce shivering.**

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**332**

**COLD RELATED EMERGENCIES**

1. Warm the environment or move the patient to a warmer environment.
2. Prevent further loss of body heat.
3. DO NOT allow the patient to smoke, or drink either alcohol or caffeinated beverages.

If the patient is conscious, able to swallow, and can drink without assistance, give warm liquids slowly by mouth.

4. For Special Considerations, see below.

**Special Considerations**

**Localized Cold Injury:**

1. Remove clothing from the affected area.
2. Manually stabilize.
3. Wrap the area in dry, bulky dressings. Digits should be wrapped individually.
4. DO NOT rub the area or rupture blisters.

**Hypothermia (General):**

1. Monitor the airway.
2. Avoid rough handling of the hypothermic patient so as to reduce the risk of inducing cardiac arrest.
3. Assess carotid pulse for 30 – 45 seconds.
4. Begin CPR, if appropriate (see Protocol #303)

**NOTE: Vital signs may be extremely depressed. Hypothermic patients remain viable for a longer period of time. Therefore, CPR should be initiated on all pulseless and apneic hypothermic patients.**

5. Do not allow physical activity.
6. Monitor breathing for adequacy.
7. Administer oxygen.
8. Update dispatch of a high priority patient.
9. Gently remove any wet clothing and jewelry.
10. Wrap the patient in dry blankets.

CERTIFIED FIRST RESPONDER PROTOCOLS

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DROWNING OR NEAR-DROWNING

1. Remove patient from water,
  - Observe spinal injury precautions; if appropriate (see Protocol #321).
  - Consider spinal immobilization prior to removal from water
2. Monitor the airway
3. Assist ventilations; if appropriate (see Protocol #401)
4. Begin Basic Cardiac Life Support procedures, if appropriate (see Protocol #303)

**NOTE: Hypothermic patients remain viable for a longer period of time therefore, if appropriate, initiate CPR**

5. Administer oxygen
6. Monitor breathing for adequacy
7. Assess for shock and treat, if appropriate (see Protocol #415)

**NOTE: If Cold Water Drowning (water temperature below 70° F), treat for hypothermia (see Protocol #332).**

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OBSTETRIC EMERGENCIES

1. Monitor the airway.
2. Administer oxygen.
3. 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 (see below).
4. Place the patient in a LEFT lateral recumbent position.
5. If the patient is immobilized, elevate the right side of the long board a few inches.
6. Assess for shock and treat, if appropriate (see Protocol #315)

**NOTE: Consider Supine Hypotension Syndrome as a cause of shock.**

***Definition:*** *Supine Hypotension Syndrome is a problem due to compression by the pregnant uterus on the inferior vena cava when the mother lies supine, resulting in low blood pressure. This problem can be alleviated or prevented by transporting the mother on her left side*

7. Update dispatch of a high priority patient.

**Special Considerations**

**Hypertension:**

- Keep the mother calm, avoid loud noises, and dim lighting

**Seizures:**

- If seizures occur, see Protocol #313.

**Imminent Delivery:**

- Do not permit mother to go to the bathroom.
- If delivery has begun, see Protocol #341

**Post-Partum Hemorrhage:**

- Massage the mothers abdomen over the uterus
- If available, place a sanitary napkin over the vaginal opening

**CERTIFIED FIRST RESPONDER PROTOCOLS**

**341**

**EMERGENCY CHILDBIRTH**

1. Update dispatch of a high priority patient.
2. Assess the mother for shock and treat, if appropriate (see Protocol #315)
3. If the mother is in active labor, visually inspect for crowning.
4. If delivery is imminent, proceed as follows:
5. If any of the following are present, **administer oxygen to the mother** and refer to the Special Conditions section:
  - Prolapsed umbilical cord (cord protruding through vaginal opening)
  - Umbilical cord wrapped around the neonate's neck
  - Breech Birth:
    - Buttocks presentation
    - Limb (extremity) presentation
  - Multiple births
  - Premature births
  - Amniotic sac not ruptured
  - Amniotic fluid that is meconium stained
6. Apply gentle pressure against the neonate's head to prevent tearing of the perineum (*area between the vagina and the anus*).
  - DO NOT apply pressure to the soft spots (fontanelles).
7. As the head presents, clear the airway of secretions using the bulb syringe, as follows:

**NOTE: Depress the bulb syringe prior to insertion**

  - First suction the mouth, insert no more than 1½ inches
  - Then the nose, insert no more than ½ inch.

**NOTE: Suctioning is critical**
8. Support the head and thorax as the neonate delivers.
  - Momentarily position the head lower than the body to allow for drainage. Repeat suctioning as necessary prior to spontaneous or stimulated respirations.
9. Thoroughly but rapidly dry the newborn with a clean, dry towel.
10. Monitor the neonate's airway.
  - To stimulate breathing, first rub the lower back, then gently snap the soles of the feet.

**NOTE: Spontaneous respirations should begin within 30 seconds after birth.**

**CERTIFIED FIRST RESPONDER PROTOCOLS**

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11. Resuscitate if necessary (see Protocol #343).
12. If proper equipment is available, place the first clamp 8 to 10 inches from the neonate and the second clamp approximately 3 inches from the neonate. Cut between the clamps and check both ends for bleeding.

**NOTE: If equipment is not available, tie off the umbilical cord with gauze at the same landmarks, but DO NOT cut the cord.**

13. If continuous bleeding is seen from either end of the cord, add a second clamp to the end that is bleeding.
14. Cover the neonate with a clean, dry towel or blanket, then wrap in a silver swaddler, exposing only the neonate's face.

**NOTE: Neonate's are subject to rapid heat loss and must be kept warm and dry.**

15. Re-assess the mother for shock and treat, if appropriate (see Protocol #315).

If postpartum hemorrhage occurs, see Protocol #340.

16. For care of the neonate, see Protocol #342.

17. Continue to monitor initial assessment.

**NOTE: If miscarriage or stillbirth occurs, package all expelled material to be carried to the hospital with the mother.**

**Special Considerations**

**An abnormal delivery should be treated as an emergency with transport being a priority while providing appropriate care.**

**Complicated Childbirth**

**A. Breech Birth**

**1. If the buttocks presents first:**

- a. Update the responding EMS unit **immediately**.
- b. Administer high concentration oxygen to the mother.
- c. Place the mother in a face-up position with her hips elevated.

**2. If a limb presents first:**

- a. Update the responding EMS unit **immediately**.
- b. Administer high concentration oxygen to the mother.
- c. Place the mother in a face-up position with her hips elevated.

**B. Prolapsed Umbilical Cord**

- a. Update the responding EMS unit **immediately**.
- b. Administer high concentration oxygen to the mother.
- c. Place the mother in a face-up position with her hips elevate.

**C. Multiple Births**

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- a. Update the responding EMS unit immediately.
- b. Deliver each multiple birth according to the protocol for Uncomplicated Childbirth, making sure to tie each umbilical cord between births.
- c. If the anticipated second birth does not occur after 10 minutes, update the responding EMS unit!

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CARE OF THE NEONATE

*For neonate, minutes to 24 hours old*

1. Thoroughly but rapidly dry the neonate with a clean, dry towel.
2. Monitor the neonate's airway.
3. Suction the mouth and nose using a bulb syringe.
4. Monitor breathing for adequacy.
5. Administer oxygen to the neonate if:
  - the neonate is unresponsive or limp
  - persistent central cyanosis (longer than 15 to 30 seconds)
  - respiratory rate is less than 30 breaths per minute (hypoventilation)
  - heart rate is less than 100 beats per minute (bradycardia)

Proceed to Protocol #343.

6. Assess for shock and treat, if appropriate (see Protocol #358).
7. Monitor the umbilical cord for bleeding.
8. Cover the neonate with a clean, dry towel or blanket, then wrap in a silver swaddler, if available, exposing only the neonate's face.
9. Continue to monitor initial assessment. keeping the neonate warm.

**NOTE: Neonate infants are subject to rapid heat loss and must be kept warm and dry.**

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NEONATE RESUSCITATION

**If the neonate has:**

- Persistent Central Cyanosis (longer than 15 to 30 seconds)
- A Respiratory Rate less than 30 breaths per minute **or**  
A Heart Rate between 60 and 100 beats per minute:

1. Assist ventilations at a rate of 30 to 60 breaths per minute.
2. Update dispatch of a high priority patient.
3. Switch to high concentration mask or “blow by” oxygen once the respiratory rate is greater than 30 breaths per minute, the heart rate is greater than 100 beats per minute, and central cyanosis disappears.

**If the neonate has:**

- A Heart Rate less than 60 beats per minute; **or**
- Cardiac Arrest:

1. Start CPR immediately.

**NOTE: Cardiopulmonary resuscitation in a neonate is performed utilizing chest compressions with interposed ventilations in a ratio of 3:1 at a rate of 120 (90 compressions, 30 ventilations) per minute.**

2. Update dispatch of a high priority patient.
3. Stop CPR and begin assisted ventilation at a rate of 30 to 60 breaths per minute once the heart rate is greater than 100 beats per minute.
4. Switch to high concentration mask or “blow by” oxygen once the heart rate is greater than 120 beats per minute, the respiratory rate is greater than 30 breaths per minute, and central cyanosis disappears.

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PEDIATRIC RESPIRATORY DISTRESS/FAILURE

**Respiratory Distress** is characterized by:

- Increased respiratory effort *without* central cyanosis (anxiety, nasal flaring, and accessory muscle use)

**Respiratory Failure** is characterized by:

- Ineffective respiratory effort *with* central cyanosis (agitation or lethargy, labored breathing, bobbing or grunting, and accessory muscle use.)

**A slow pulse rate is an ominous sign that indicates hypoxic cardiac arrest may be imminent.**

1. Monitor the airway.

- If an obstructed airway is suspected, see Protocol #351.
- If Respiratory Distress is present:

Administer oxygen and allow patient to maintain a comfortable, upright position.

**NOTE: High concentration oxygen should always be used in pediatric patients.**

**DO NOT allow the mask to press against the eyes.**

- If Respiratory Failure is present:

Assist ventilations at a rate of 20 breaths per minute.

**NOTE: DO NOT use a demand valve resuscitator due to the possibility of causing severe life threatening complications.**

**Chest rise is the best indication of adequate ventilation in the pediatric patient; DO NOT over inflate the lungs.**

2. Update dispatch of a high priority patient.

3. Monitor breathing for adequacy.

4. Continue to monitor initial assessment. Keep the child warm.

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**PEDIATRIC OBSTRUCTED AIRWAY**

1. If the patient is conscious and can breathe, cough, speak, or cry:

- Administer oxygen.

**NOTE: Avoid agitating the patient.**

2. If the patient is unconscious or cannot breathe, cough, speak, or cry:

- Perform CPR, in accordance with current AHA guidelines.

3. Update dispatch of a high priority patient.

4. Continue obstructed airway maneuvers until the obstruction is relieved.

5. If airway obstruction is relieved:

- Monitor the airway.
- Monitor breathing for adequacy.
- Administer oxygen.
- Continue to monitor initial assessment, keeping the child warm

**NOTE: The patient must be taken to the hospital for evaluation even if the airway is cleared.**

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PEDIATRIC NON-TRAUMATIC CARDIAC ARREST AND SEVERE BRADYCARDIA

**Non-Traumatic Cardiac Arrest**, under 9 years of age.

1. Initiate CPR
2. Update dispatch of a high priority patient.
3. If available, attach AED, analyze
  - If available use pediatric pads and cables
  - If pediatric pads and cables are not available, the adult AED, pads and cables shall be used. Consider anterior, posterior pad placement if patient is too small for standard placement
4. Follow AED voice prompts
  - If “Shock” is indicated, defibrillate
  - If “No Shock” is indicated, perform 2 minutes of CPR, then analyze

**NOTE: Automated Defibrillation should not be delayed or withheld for any reason.**

5. Continue Step 4 until transported, or pulse returns.
6. Stop CPR once the heart rate is greater than 60 beats per minute, and rapidly increasing, and begin assisted ventilation at a rate of 20 breaths per minute.
7. Switch to high concentration mask or “blow by” oxygen once the heart rate is greater than 100 beats per minute, the respiratory rate is greater than 20 breaths per minute, and central cyanosis disappears.

**Bradycardia**

Under 9 years of age, heart rate *less than* 60 beats per minute **and** signs of inadequate central perfusion (decompensated shock)

1. Assist ventilation at a rate of 20 breaths per minute.
2. Begin CPR, if the heart rate is not rapidly increasing following 30 seconds of assisted ventilation.
3. Monitor pulse, if pulseless see Non-Traumatic Cardiac Arrest Protocol above.
4. Stop CPR and resume assisted ventilation at a rate of 20 breaths per minute once the heart rate is greater than 60 beats per minute and rapidly increasing.
5. Switch to high concentration mask or “blow by” oxygen once the heart rate is greater than 100 beats per minute, the respiratory rate is greater than 20 breaths per minute, and central cyanosis disappears.

**Mandatory Quality Assurance Component**

**For every application of an AED on a pediatric patient (even if no shock is delivered), the ACR/PCR documentation must be reviewed by the service medical director, who is**

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then responsible for forwarding a copy of the ACR/PCR to the NYC REMAC for system-wide QA purposes. This QA component is effective immediately.

For the purposes of patient confidentiality, copies of the ACR/PCR can be mailed to:

**The Regional EMS Council of NYC**

**475 Riverside Drive, Suite 1929**

**New York, New York 10115.**

**Please label the envelope “Confidential QA”**

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**PEDIATRIC SHOCK**

Shock in the child is characterized by signs of inadequate peripheral (distal) perfusion, which may include altered mental status, rapid pulse, pale cool skin, cyanotic lower extremities, mottling, delayed capillary refill, and weak or absent peripheral (distal) pulses.

The definition of shock in the child *does not* depend upon blood pressure.

1. Monitor the airway.
2. Observe spinal injury precautions; if appropriate (see Protocol #321)
3. Administer oxygen.

**NOTE: High concentration oxygen should always be used in pediatric patients.**

4. If patient has an altered mental status, the patient must be ventilated at the rate of at least 20 breaths per minute.
5. Control external bleeding.
6. Update dispatch of a high priority patient.
7. Continue to monitor initial assessment, keeping the child warm.
8. Elevate the legs.
9. Treat all injuries as appropriate.