

Statewide Standard Treatment Protocols

**Paramedic Standing
Orders:
Chemical Terrorism, Bioterrorism
and Pandemic Illness**



Effective: November 2008

Approved by the EMS Medical Directors: July 16, 2008

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Medical Practice: August 6, 2008

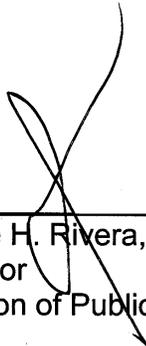
Approved by the Board of Medical Practice: September 9, 2008

State of Delaware
Department of Health and Social Services
Division of Public Health
Office of Emergency Medical Services

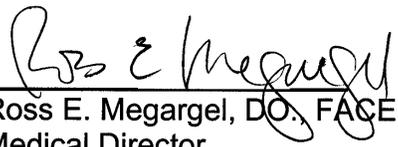
Statewide Standard Treatment Protocols:

Chemical Terrorism, Bioterrorism
and Pandemic Illness

Paramedic Standing Orders



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Purpose:

To delineate a process to maximize the utilization of paramedics during potential future bioterrorism events or pandemics.

Justification:

During a bioterrorism event or pandemic, Public Health will need to maximize health care resources. To provide additional resources, Public Health will utilize Delaware Certified Paramedics for roles that may exceed the scope of practice currently approved by the Board of Medical Practice. These out of scope roles may include the home, clinic or special operations delivery of vaccines, laboratory testing, oral, intramuscular and intravenous antibiotics and other medical procedures specific to the bio-event. The recent Anthrax bioterrorism event within the United States has revealed our previously flawed ideas of bio-agent dissemination, infection, prophylaxis and treatment. It is now apparent that developing specific protocols for specific disease processes prior to the event will be of low yield, as our enemies find new agents and modes of delivery of bioterror agents.

MARK I kits and DuoDotes™

As of January 2008, Meridian Medical Technologies™ is discontinuing the manufacture of MARK I kits. They have introduced the DuoDote™. This is a single auto-injector containing both nerve agent antidotes (Atropine and Pralidoxime). Agencies currently carrying MARK I kits may continue to use them following this protocol. Once these existing kits expire they will be replaced by, and services new to the Public Safety Nerve Agent Antidote Program will receive the DuoDote™ autosyringes.

Note: One DuoDote™ equals one Mark I kit

Protocol:

1. This protocol will only become effective upon the declaration of a Public Health Emergency by the Governor of Delaware or the Director of Public Health.
2. Upon Declaration of a Public Health Emergency, the State Emergency Medical Services Medical Director, with the approval of the Director of Public Health will develop a specific protocol for the paramedics to follow
3. All protocols will be presented to the Delaware Board of Medical Practice as soon as practical for review, comment, modification, revocation or approval.
4. Bioterrorism protocols may include vaccine delivery, medication delivery, laboratory testing, minor surgical procedures, etc. as may be routinely appropriate for the specific bio-event.

5. The State Emergency Medical Services Medical Director is responsible for the paramedic practice under this protocol and will be responsible for insuring that all paramedics are appropriately trained in the protocols, that they are monitored, remedied as required and that a report of paramedic activity is submitted to the Board of Medical Practice, as soon as practical.

Nerve Agents

Background:

Nerve agents are the most toxic of the known chemical agents. They are hazards in their liquid and vapor states and can cause death within minutes after exposure. Nerve agents inhibit acetylcholinesterase in tissue, and their effects are caused by the resulting excess acetylcholine. Nerve agents are considered to be major military and terrorist threats. Common names for nerve agents include Tabun (GA), Sarin (GB), Soman (GD), GF and VX. Nerve agents are liquids under normal temperate conditions. When dispersed, the more volatile ones constitute both a vapor and liquid hazard.

- With suspicion of nerve agent notify the communications center immediately and contact medical control as soon as practical.

History:

- Setting
- Exposure - length, type of exposure
- Concentration of gas

Suspicion / Detection:

- Multiple patients with miosis, rhinorrhea, difficulty breathing, convulsions or paralysis
- May smell odor of fruit or fish but this is not reliable.
- Liquid "G" turns M8 paper gold-yellow
- VX turns M8 paper olive green
- M9 paper will turn reddish brown to purple when exposed to liquid nerve agents
- Personnel are to **immediately extricate themselves** from the area and initiate personal protection

Exam:

- ABC's
- Vital signs
- Level of consciousness

Vapor:

- Small exposure: miosis, rhinorrhea, mild difficulty breathing.
- Large exposure: sudden loss of consciousness, convulsions, apnea, flaccid paralysis, copious secretions, miosis.

Liquid on skin:

- Small to moderate exposure: localized sweating, nausea, vomiting, feeling of weakness.
- Large exposure: sudden loss of consciousness, convulsions, apnea, flaccid paralysis, copious secretions

Triage:

- **Immediate (Red Tape):** severe exposure i.e., respiratory distress, cyanosis, muscular fasciculations, unconscious but with a pulse and blood pressure.
- **Non-salvageable (Black tape):** no blood pressure obtainable.
- **Delayed (Yellow Tape):** walking and talking, may still require self-administered MARK I kits.

Self-Treatment:

- Protect yourself with appropriate Personal Protective Clothing for vapor and liquid exposure.
- General guidelines:
 - **MILD SYMPTOMS**(miosis, blurred vision, watery eyes, rhinorrhea and/or mild dyspnea): immediately give one nerve agent antidote kit.
 - If, after 10-15 minutes, no SEVERE symptoms develop, no further antidote is indicated. Seek evaluation by an ALS provider.
 - **If, at any time, SEVERE symptoms develop, administer two additional MARK I kits or two DuoDotes and immediately seek ALS care.**
 - **SEVERE SYMPTOMS**(respiratory distress, respiratory arrest, cyanosis, muscular fasciculations, unconscious):
 - Give three nerve agent antidote kits, intubate and suction frequently.
 - If available, administer 10 mg Valium via Autoinjector
 - Administer atropine 2 mg every 3 – 5minutes as needed for reduction of severe secretions and to reduce ventilatory resistance (may require between 10 and 20 mgs of atropine).
- Decontamination of skin is not necessary with vapor exposure but remove all clothing to remove trapped vapors.
- Decontamination of skin exposure: hypochlorite and large amounts of water. Patient will require observation for toxicity for at least three hours after decontamination.

Treatment of the Public:

- Agencies authorized to carry Nerve Agent Antidotes for self-protection can provide aid to the public when authorized by an on-line Medical Control physician via radio contact.
- Providers will be given a laminated wallet sized card with signs and symptoms of nerve agent exposure for rapid reference and the appropriate treatment of varying levels of severity.

- Signs and symptoms will be communicated to the on-line physician by the on-scene providers.
- The on-line Medical Control physician will authorize the use of Nerve Agent Antidotes (if appropriate).
- The Nerve Agent Antidotes will be obtained from existing supplies or supplemental supplies, which can be released in mass casualty situations.
- Existing protocols for self-treatment of providers will be followed when treating adult patients with suspected exposure
 - The number of nerve agent antidote kits utilized will be the same as in the self-treatment protocol.
- Pediatric patients (less than or equal to age 12) will be treated using pediatric Nerve Agent Antidotes (if available)
 - The number of pediatric nerve agent antidote kits utilized will be identical to the number recommended for an adult with corresponding symptoms however, these kits contain a lower dosage of medication.

In the event pediatric nerve agent antidote kits are not available, patients with severe symptoms should be given one adult nerve agent antidote kits. Those with mild or moderate symptoms should be evacuated and an alternative method to deliver medication should be attempted.

Bioterrorism and Pandemic Illness

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