



GENERAL ORDER

GENERAL ORDER 320.13

WMD Nerve Agent Antidote Kits

EMERGENCY SERVICES BUREAU

Issue Date: January 10, 2007
Revision Date: September 21, 2020

1 APPLICABILITY

2 All Operational Personnel

3 POLICY

4 In an effort to protect operational personnel in the event of a terrorist attack utilizing nerve
5 agents, the Howard County Department of Fire and Rescue Services (Department) strategically
6 deploys Weapons of Mass Destruction (WMD) Nerve Agent Antidote Kits.

7 DEFINITIONS

- 8 ➤ **Nerve Agents** - A group of highly toxic chemicals that are potent, long acting, and bind
9 to acetylcholine irreversibly unless antidote(s) are given.
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- 11 ➤ **MARK I** - An antidote given for nerve agent poisoning consisting of two (2) auto-
12 injectors containing Atropine and two (2) Pam-Chloride.
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- 14 ➤ **CANA** - A medication administered in severe poisonings to relax muscle tissue and
15 eliminate seizures.

16 PROCEDURES

17 GENERAL:

- 18 • WMD Nerve Agent Antidote Kits will be strategically distributed by EMS Operations to
19 field apparatus and command vehicles based on medication availability. Kits will include
20 MARK1 and CANA antidotes, when available from manufacturers, for Department
21 operational personnel assigned to the given apparatus or vehicle. Additional and/or
22 higher numbers of antidote kits may be placed on specific apparatus or command
23 vehicles based on medication availability.
- 24 • All operational personnel shall review the “Maryland Medical Protocols for Emergency
25 Medical Services Clinicians” with respect to protocols governing administration of MARK
26 1 and CANA Kits. Note: MMP requires the auto-injector of CANA be administered only
27 by an ALS provider when three MARK I/DuoDote kits are administered in a severe
28 exposure.



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- Attachment A outlines potential signs and symptoms and treatment for nerve agent incidents. A guide is also included in each WMD Antidote Kit.

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WMD ANTIDOTE KIT STORAGE AND SECURITY:

- The WMD Nerve Agent Antidote Kits shall be placed in an interior storage area or compartment. This is required to minimize degradation of the medications and to provide the additional security requirement of the medications.
- The WMD Nerve Agent Antidote Kits will be secured by the supplied combination padlock and a numbered inventory control tag. All padlocks will have the same combination and personnel can contact a Medical Duty Officer if forgotten.
- The exterior of the WMD Nerve Agent Antidote Kits will be labeled as follows: WMD KIT, Unit assigned, and MARK1 and CANA expiration dates. Example: WMD KIT, SQD-1, MARK1 EXP. MM/YY, CANA EXP. MM/YY.

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WMD ANTIDOTE KIT TRACKING LOG:

- All WMD Nerve Agent Antidote Kits carried on apparatus will be checked as outlined:
 - During the daily DOT inspection of the apparatus, the WMD Antidote Kit will be inspected to ensure that the WMD Antidote Kit (Pelican case) is labeled, secured with the padlock, and that the numbered inventory control tag is correct and in place.
 - The number on the inventory control tag should be recorded daily on the WMD Nerve Agent Antidote Kit Tracking Log (Attachment B). If for any reason the numbered control tag is broken or missing, the WMD Nerve Agent Antidote Kit must be inventoried, retagged, and noted on the Tracking Log. Medical Duty Officers carry additional tags if needed.
- The Tracking Logs shall be collected by the Station Captain at the end of each month for apparatus and command vehicles assigned to their station. All Tracking Logs will be maintained at the station level for review by Emergency Services on demand for a period of three years.
- Any incomplete QA logs, or logs with unreported discrepancies, will be investigated with appropriate disciplinary actions, as needed.

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REFERENCES

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- None

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SUMMARY OF DOCUMENT CHANGES

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- Updated to current GO format
- Language revised to reflect WMD kits will be strategically deployed instead of every apparatus and vehicle



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69 **FORMS/ATTACHMENTS**

- 70 • Attachment A: Signs, Symptoms, and Treatment of Nerve Agents
- 71 • Attachment B: WMD Nerve Agent Antidote Tracking Log

72 **APPROVED**

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Attachment A

Signs, Symptoms and Treatment of Nerve Agents

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- **PRESENTATION:** “SLUDGE”
 - S- Salivation
 - L- Lacrimation (tearing)
 - U- Urination
 - D- Defecation
 - G- Gastrointestinal; pain/gas
 - E- Emesis (vomiting)
- Also possible are pinpoint pupils, muscle twitching, and convulsions.
- NOTE: If WMD is suspected, IMMEDIATELY don appropriate level of PPE (Structural FF gear with SCBA is considered to be a minimal level for WMD).

SEVERITY OF EXPOSURE:

- Vapor Poisoning- Effects start within seconds to a minute or two.
 - Mild to Moderate: Small or Pinpoint Pupils, Redness and/or, Eye pain, Dim or blurred vision, Trouble Breathing, Vomiting, Diarrhea, Discharge from nasal mucous membrane (Runny nose).
 - Severe: Loss of Consciousness, seizures, apnea, and flaccid paralysis. Provider will not be able to self-treat, due to severity.
- Liquid Poisoning- Effects start in minutes to hours.
 - Mild to Moderate: Sweating and Fasciculation’s at site of Exposure, Nausea, Vomiting, Diarrhea, Weakness.
 - Severe: Same as for Vapor, but after a 1 to 30 minute asymptomatic interval

TREATMENT:

- Remove patient from contaminated area and remove contaminated clothing. **DO NOT TREAT** If the only symptoms are miosis (unless eye pain is severe), or rhinorrhea (runny nose unless severe).
- **MILD TO MODERATE POISONING:**
 - Administer **one** MARK 1 antidote kit (2 auto-injectors).
 - Repeat with **second** MARK1 Kit in 10 minutes, if symptoms remain.
 - Failure to respond (no dry mouth, no decrease in secretions) confirms the need to administer the additional dose(s).
 - Provide Oxygen and supportive care.
- **SEVERE POISONING:**
 - Administer **three** MARK I antidote kits (6 auto-injectors). Provider **will not** be able to self-treat (buddy care needed), due to severity.
 - Provide intubation and ventilation with Oxygen (Initial ventilation will be difficult because of airway resistance; atropine will relieve this).



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- 135 ○ Administer CANA (Diazepam), 10mg auto-injector if the patient is convulsing
- 136 (ALS only, no consult required) after 3 MARK I kits have been administered.
- 137 ○ Additional doses of 2mg of Atropine may be repeated every 5 minutes until
- 138 secretions diminish or airway resistance is less or normal.
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140 **MONITORING:**

- 141 ● Provide supportive care including pulse oximeter and cardiac monitoring, IV therapy,
- 142 and consult as soon as possible.



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Attachment B

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WMD Kit Tracking Log					
Attachment B: General Order 320.13					
Instructions: Log shall be completed during each daily/weekly check as per General Order.					
Logs shall be maintained as specified in order.					
UNIT:		MONTH:		YEAR:	
DATE	TIME	INVENTORY CONTROL #	SIGNATURE	EID #	COMMENTS
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