

CHEMPACK 101:

State & Local Interface

Agenda

- Introductions: 5 min
- CHEMPACK Overview & Future Plans: 10-15 min
- LFHD Training & Exercises: 10-15 min
- CSHD Planning & Training: 10-15 min

CHEMPACK Program Overview

What is CHEMPACK?

CHEMPACKs are federally owned, locally managed packages of pharmaceuticals to treat patients following a chemical/nerve agent exposure. These containers are stored in secure locations in local jurisdictions around the country to enable rapid response to an incident.

Three drugs are included in the CHEMPACK to treat the effects of nerve agent exposure:

- Atropine Sulfate
- Pralidoxime (2PAM)
- Diazepam – treats seizure activity

Benefits of CHEMPACK:

- State, local governments, and hospitals, typically have limited chemical/nerve agent antidote stocks. The forward placement and position of CHEMPACKs allows for a much faster deployment of antidotes for local use versus the SNS twelve-hour time.
- Federal assets are available to the locality at little to no cost other than the maintenance storage requirements.
- Assets are maintained and replenished as they're needed.
- CHEMPACK participates in the extended shelf-life program.

Configurations

EMS Containers:

- Geared towards field use
- 85% autoinjectors
- Estimated number of doses - 454
- For VA, there are 42 EMS containers

Hospital Containers:

- Geared to clinical care environments
- 85% multi-dose vials
- Estimated number of doses - 1,000
- For VA, there are 8 hospital containers

Note - the two can be used interchangeably*



When is CHEMPACK Needed/Who can Request?

CHEMPACK resources should be deployed in the event of a suspected nerve agent/organophosphate incident that could:

- Potentially overwhelm local supplies of antidotes
- Put lives at risk
- Threaten the health of the community

CHEMPACK resources can be requested or opened at the discretion of a competent authority.

- Ultimately, the request is at the discretion of the on-scene incident commander, hospital physician, or hospital pharmacist
 - Can be Fire, EMS, HazMat (field).
 - Can be deployed for internal hospital use.
 - Can be deployed to another hospital.
- Approval from VDH/ASPR is **not** required to open the container in the event of an emergency.

Nerve Agents / Organophosphate Pesticides

Nerve Agents:

- One of several categories of potentially harmful chemicals
- Can be inhaled, swallowed, or absorbed through the skin
- Attack the nervous system, can result in severe injury or death
- Antidotes can reverse symptoms if administered in a timely manner

Organophosphates:

- Common routes of exposure: Ingestion, inhalation, and absorption.
- Amount of time until symptoms present: within minutes.
- Symptoms include: increased saliva and tear production, diarrhea, nausea, vomiting, small pupils, sweating, muscle tremors, headaches, wheezing, runny nose, abdominal pain, chest tightness, shortness of breath, and confusion.

Type	Names	Extra Information
Chemical Weapons	<ul style="list-style-type: none"> -GB (Sarin) -GA (Tabun) -GD (Soman) -GF (Cyclosarin) -VX -Fourth Generation Agents (FGA) 	<ul style="list-style-type: none"> -Extremely toxic -Most lethal and fast acting -FGAs are low volatility nerve agents -Highly persistent; pose a significant cross contamination hazard -Do not easily evaporate; unlikely to present vapor hazard -Most likely to be encountered as a liquid
Organophosphate Pesticides	<ul style="list-style-type: none"> -Parathion -Malathion -Chlorpyrifos -Diazinon, and more 	<ul style="list-style-type: none"> -Commonly used in agricultural practices to kill insects -Far less potent than those classified as chemical weapons -A class of insecticides

Roles and Responsibilities

State Level

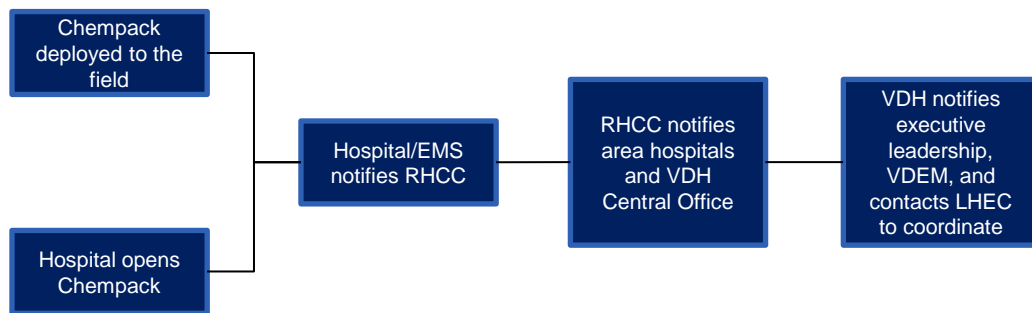
- Maintain state program guidance
- Coordinate with ASPR/SNS on agreements, product sustainment, and security measures
- Develop backup deployment plans
- Make appropriate notifications in the event of a deployment
- Coordinate non-emergency container moves
- Support local/regional training and exercises

Local Level

- Develop, maintain, and exercise local deployment plans in conjunction with local fire, LE, EM, and hospital partners.
- Conduct quarterly inspections
- Coordinate SLEP drop shipments
- Coordinate STMS site visits for upgrades and calibration
- Maintain partnerships and meet regularly to maintain awareness of Chempack resources

Notification Protocols & Deployment

The central office is currently working with the Healthcare Coalitions (HCC) and Regional Healthcare Coordination Centers (RHCC) to develop a notification tree if a container is opened



Training & Exercises

Lord Fairfax HD 2023

In 2023, The Lord Fairfax Health District's Emergency Coordinator and MRC Coordinator collaborated with the Northwest Regional Emergency Coordinator and OEPs Assistant State Planning and SNS Coordinator to develop, facilitate, evaluate, and observe a CHEMPACK training course and tabletop exercise at both facilities within LFHD who house a CHEMPACK unit. The training and tabletop exercises were open to all six localities that comprise LFHD, stakeholders and partners alike were invited and encouraged to attend the training.

The CHEMPACK training/tabletop exercises were designed to create/provide a learning environment for players to jointly discuss, exercise and evaluate existing CHEMPACK plans and procedures as they pertain to recognition, response, and recovery associated with an intentional or accidental release of nerve agents or organophosphate materials.

Moving forward, an annual training will be provided at the two hospitals to ensure new staff are educated on the program and processes it entails, as well as to continually meet with partners to work on plan updates and maintain program familiarity.

Who Was Involved?

Winchester Medical Center (July 2023)

- Winchester Fire and Rescue Department
- Winchester Police Department
- Winchester Emergency Communications Center
- Winchester City Emergency Management
- Frederick County Emergency Management
- Clarke County Emergency Management
- Northern Virginia Emergency Response System (NVERS)
- Valley Health/Winchester Medical Center
- Virginia Department of Emergency Management (VDEM) – Region 2
- Virginia Department of Health – Lord Fairfax Health District
- Virginia Department of Health – Central Shenandoah Health District
- Virginia Department of Health – Northwest Region
- Virginia Department of Health – Central Office

Shenandoah Memorial Hospital (January 2023)

- Shenandoah County Fire and Rescue
- Shenandoah County Sheriff's Office
- Strasburg Police Department
- Woodstock Police Department
- Woodstock Fire Department
- Shenandoah County Emergency Management
- Page County Emergency Management
- Lord Fairfax EMS Council Northwest Region Healthcare Coalition
- Valley Health – Shenandoah Memorial Hospital
- Virginia Department of Emergency Management
- Virginia Department of Health – Lord Fairfax Health District
- Virginia Department of Health – Northwest Region

TTX Details

There is an accidental organophosphate release which will trigger a multi-agency CHEMPACK deployment response.

- A train derailment with 2 overturned train cars carrying organophosphate pesticide
- First responders on scene find many spectators experiencing medical issues; several spectators self-referring to the ER
- 15 individuals overall presenting symptoms; SLUDGEM

Mission Area: Response

Core Capabilities:

- Planning
- Operational Coordination
- Operational Communications
- Public Health, Healthcare and Emergency Medical Services
- Intelligence and Information Sharing

Public Health Preparedness Capabilities:

- Community Preparedness
- Emergency Operations Coordination
- Information Sharing
- Medical Material Management & Distribution

Strengths & Areas for Improvement

Strengths:

- Willingness of agencies to collectively come together to learn about CHEMPACK in order to create or improve a jurisdictional plan for response.
- Authority of who will respond, how they will respond, and who can request the CHEMPACK was discussed and understood, dependent upon the situation.
- Hospital representatives (nursing ED and pharmacy) were all familiar with the CHEMPACK and the location of the CHEMPACK container key
- High level of turn-out and interest from participants about the exercise.
- Interest in continuing education and exercising nerve agent response.

Areas for Improvement:

- Hospital staff maintaining on-going familiarity and awareness of the Chempack, its contents, intended use and location. This is especially important amid staff turnover and/or new leadership.
- Clarify the request process to expedite the deployment time of CHEMPACK assets (field personnel, once aware of a nerve agent event, can start the request process).
- Coordination of transport of CHEMPACK assets to the field-setting.
- Sharing of each agency's plans to ensure everyone is aware of their contents. Additionally, all plans should be reviewed to be ensure they align.
- Engaging elected officials so they are aware of how first responders would respond to nerve agent events.
- Training for first responders on signs and symptoms of nerve agent exposure.
- Training on the administration of CHEMPACK assets, both for hospital staff and EMS providers.

Moving Forward...

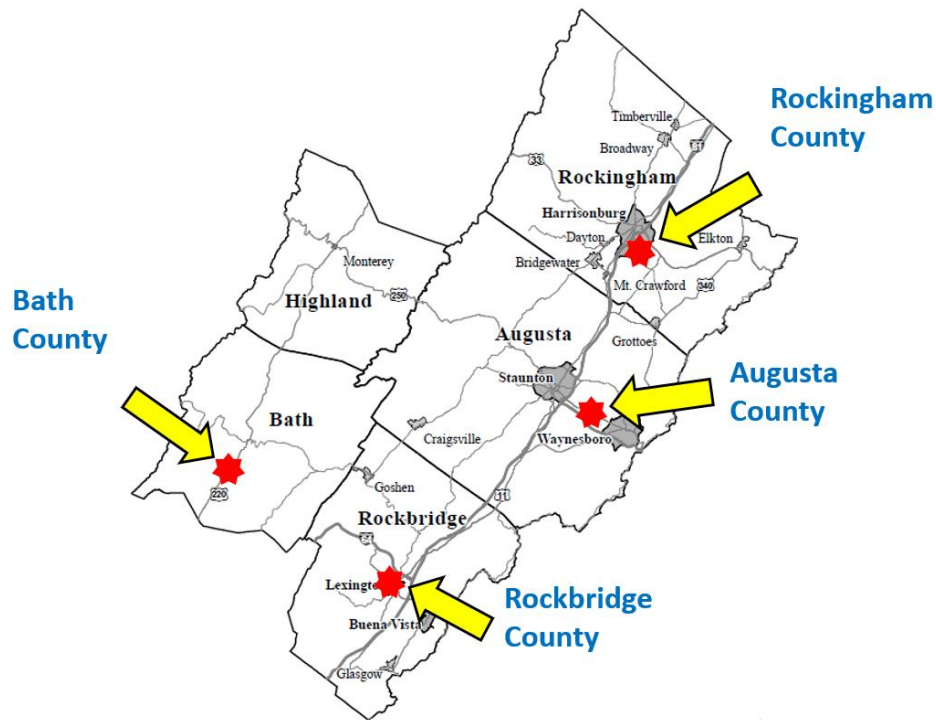
The Lord Fairfax Health District is currently writing a local CHEMPACK plan that encompasses all aspects of the CHEMPACK program and what the role is of all stakeholders within the district, should the need to deploy nerve agent antidotes arise.

To adequately incorporate all responsible parties and provide an opportunity for partners to voice their concerns or questions, once a rough draft has been written, there will be a meeting with local Emergency Management, Fire and Rescue, Police Departments, Fire Departments, Hospital representatives, etc. To collaborate over the plan's necessary edits.

There will also be a functional exercise taking place on April 5th, 2024, at the Winchester Medical Center. The finalized plan will have been implemented and all should be familiarized at that point, hopefully leading to a well-executed response to the exercise scenario.

Local Engagement and Planning

Central Shenandoah Health District – 4 CHEMPACKs



2016 - Training

- Presentation Developed
 - Nerve Agent Overview
 - Dosing Recommendations
 - CHEMPACK Program Overview
- Provided to:
 - Augusta Health
 - Pharmacy
 - Bath County Community Hospital
 - Emergency Department
 - Security
 - Carilion Stonewall Jackson
 - LEPC
 - Sentara RMH
 - Emergency Department
 - Security

Chempack Overview



Hilary Jacobson
Local Health Emergency Coordinator
Central Shenandoah Health District

2018 - Protocol Planning

- Updates Needed in Multiple Locations
 - Toxicology Section (8.6 Organophosphates (and Nerve Agents), Carbamates, and Nicotine)
 - Drug Formulary
 - ATNAA Autoinjector
 - Atropen Autoinjector
 - Diazepam Autoinjector

Central Shenandoah EMS



8.6 ORGANOPHOSPHATES (AND NERVE AGENTS), CARBAMATES, AND NICOTINE

1. Ensure personal safety before attempting to provide patient care.
2. Perform general patient management ([SECTION 1](#))
3. Support life-threatening problems associated with airway, breathing, and circulation.
4. Administer oxygen as necessary. Support respirations as necessary with bag-mask ventilation. Ensure the use of a bacterial/viral filter if providing positive pressure ventilations.

For serious signs and symptoms (respiratory distress, SLUDGE syndrome, seizures, or heart rate less than 60 bpm):

5. Give [ATROPINE](#) 2 mg IV. Repeat every 5 minutes if needed.

E	E	A	I	P
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R	1	2	T	
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Key Points: ORGANOPHOSPHATES, CARBAMATES, AND NICOTINE

- Pesticides (organophosphates, carbamates) and nerve gas agents (sarin, soman) are the most common exposures.
- Nicotine overdose/exposure presents and is treated the same as the above. There is an increased risk due to the prevalence of vaping pods/liquid)
- In the event of suspected WMD or commercial (i.e. railcar or tractor-trailer) exposure, contact CHEMTREC at 1-800-424-9300

S - Salivation
L - Lacrimation
U - Urination
D - Defecation
G - Gastrointestinal cramping
E - Emesis

2019/2020 - Planning

- Augusta Health & Augusta County Fire & Rescue interested in developing a plan for deployment and training plan after CBERS
- Two Meetings
 - Conducted – August 2019
 - Scheduled – March 2020
- Result - Draft Plan; awaiting additional stakeholders

2023 - Workshops

- **Known** - some organizations and jurisdictions in the area have their own CHEMPACK deployment plans, there is currently no comprehensive plan with all stakeholders.
- **Desired Outcome** - Development of a CHEMPACK deployment plan in coordination with stakeholders for each of the facilities housing CHEMPACKs within the Central Shenandoah Health District.
- Included in this planning group invitation:
 - Hospital
 - Emergency Management
 - Pharmacy
 - Locality Emergency Managers
 - May invite Fire/EMS, Law Enforcement, and/or Dispatch if desired
 - Northern Virginia Emergency Response System
 - Virginia Department of Emergency Management
 - Virginia Department of Health
 - Regional Coordinator
 - State Assistant Planning and Strategic National Stockpile Coordinator

Field Deployment CHEMPACK Plan (Sentara RMH) – Workshop

October 3rd, 2023 @ 1:30p-3p

Sentara RMH – Facilities Conference Room & Virtual Teams

Agenda

1. Introductions
2. CHEMPACK Review
3. Sentara RMH Deployment Plan Discussion
 - Deployment
 1. Trigger Points
 2. Process for Deployment In-House
 3. Process for Deployment to Field
 - Usage and Reporting
 1. Use in Hospital/Field
 2. Reporting to Appropriate Entities
 3. Ensuring Activation at Other Facilities

Objectives

- Review basic CHEMPACK information necessary for proper response to a nerve agent event.
- Examine and review notification and activation protocols for medical materiel and equipment
- Examine and demonstrate local, state, & federal notification and information sharing procedures.
- Ensuring activation at other facilities

2023 - Workshop Placemat

CENTRAL SHENANDOAH HEALTH DISTRICT CHEMPACK DEPLOYMENT WORKSHOP (AUGUSTA HEALTH)

WORKSHOP SCHEDULE – OCT 3, 2023

Welcome and Introductions	10 minutes
Review CHEMPACK	15 minutes
Module 1: Deployment	30 minutes
Module 2: Usage & Reporting	30 minutes
Closing Remarks	5 minutes

WORKSHOP OBJECTIVES

1. Review basic CHEMPACK information necessary for proper response to a nerve agent event.
2. Examine and review notification and activation protocols for medical material and equipment
3. Examine and demonstrate local, state, & federal notification and information sharing procedures.

CHEMPACK REVIEW

Chempack is an initiative of the U.S. Department of Homeland Security (DHS) and the U.S. Department of Health and Human Services' Centers for Disease Control's (CDC) Strategic National Stockpile Program (SNS).

- CHEMPACK program began as an initiative of CDC's Division of Strategic National Stockpile (SNS) and has since moved to the Administration for Strategic Preparedness and Response (ASPR)
- Intent: Forward placed medications throughout the country available to hospitals and local first responders to quickly treat persons exposed to nerve agents
- Benefits:
 - State, local governments, and hospitals typically have limited chemical/nerve agent antidote stocks
 - Forward placement and position of CHEMPACKS allows for much faster deployment of antidotes for local use - versus the SNS 12-hour time
 - Federal assets available to the locality at little to no cost (other than maintaining storage needs)
 - Assets are maintained and replenished as needed - CHEMPACK participates in the extended shelf-life program

The Commonwealth has agreed to break the container seal and use Chempack assets only under the following conditions:

- When it is determined that a nerve agent release has occurred
- When the release is so large that the medical security of the community is at risk
- When the release has put multiple lives at risk
- When the casualties threaten to overwhelm local medical material.

Configuration of "EMS" Container

- Geared to first responders - 85% auto injectors
- Estimated dose capacity: 454 Doses. (1 Dose for minor exposure; 3 Dose for large exposure)
- Contents (does NOT include ancillary materials such as needles, syringes, tubing):
 - o ATNAA Autoinjectors (Pralidoxime & Atropine): 5 Cases / 8 Boxes per Case / 30 Units per Box
 - o Atropine Sulfate (0.4mg/mL) 20mL Vials: 1 Case / 4 Boxes per Case / 100 Units per Box
 - o Pralidoxime 1g/mL 20mL Vials: 1 Case / 46 Boxes per Case / 100 Units per Box
 - o Atropen (0.5mg) 1 Case / 12 Boxes per Case / 144 Units per Case
 - o Atropen (1mg): 1 Case / 12 Boxes per Case / 144 Units per Case
 - o Diazepam (5mg/mL) Autoinjector: 2 Cases / 10 Boxes per Case / 150 Units per Case
 - o Diazepam (5mg/mL) 20mL Vials: 2 Cases / 5 Boxes per Case / 25 Units per Case

CENTRAL SHENANDOAH HEALTH DISTRICT CHEMPACK DEPLOYMENT WORKSHOP (AUGUSTA HEALTH)

DISCUSSION QUESTIONS

Module 1: Deployment

Trigger Points for Activation

1. What information do you need in determining a potential organophosphate/nerve agent incident?
2. What is the notification process for a nerve agent event?
 - a. Who are initially notified
 - b. How are they notified
3. What information is needed when activating the CHEMPACK asset?
4. What information would guide your decision to activate the CHEMPACK asset?
5. Who can request a CHEMPACK (Per plans - it can be requested or opened at the discretion of a competent authority - who is considered a competent authority)
 - a. Localities
 - b. Hospital
6. When request is being made, who does it need to go to and why? What is their contact information?
 - a. Field
 - b. Hospital

Process for Deployment in-House

1. What information is needed when deploying the asset internally?
2. What departments need to know?
 - a. Who makes contact and when?
 - b. What department maintains the key?
 - i. Day
 - ii. Night
3. What pieces of the asset should remain internally?
4. How will the asset be transferred?
5. Where will the asset go within the hospital?
6. Who will receive the asset within the hospital?

Deployment of Assets to Field

1. What information is needed when deploying the asset?
2. What agencies need to know?
 - a. Who makes contact and when?
3. What pieces of the asset should be deployed?
4. Where will the asset be transferred, and who is picking it up? How are they notified?
5. Who will receive the asset on scene?
6. What documentation is needed for external transfer?

Module 2: Usage and Reporting

Usage in Hospital / Field

1. From request to delivery what is the estimated time this process will take?
 - a. Hospital
 - b. Field
2. What training is needed? How frequently to be done?
 - a. EMS Providers [CSEMS Protocol in Development]
 - b. Training for Hospital Staff (Pharmacy, Security, Providers)
 - c. Just-in-Time Training?

Reporting to Appropriate Entities

1. What entities need to be notified
 - a. VDH
 - b. NVERS
 - c. VEOC / VDEM
2. Who will provide notification to the above entities
3. How will they be notified?
4. When will they be notified?

Ensuring Activation at Other Facilities

1. Where are patients likely to be transported (self and EMS) to?
 - a. What methods of transportation are likely to be utilized
2. Method of notification for other facilities to be on the lookout for additional patients?

LOOKING AHEAD

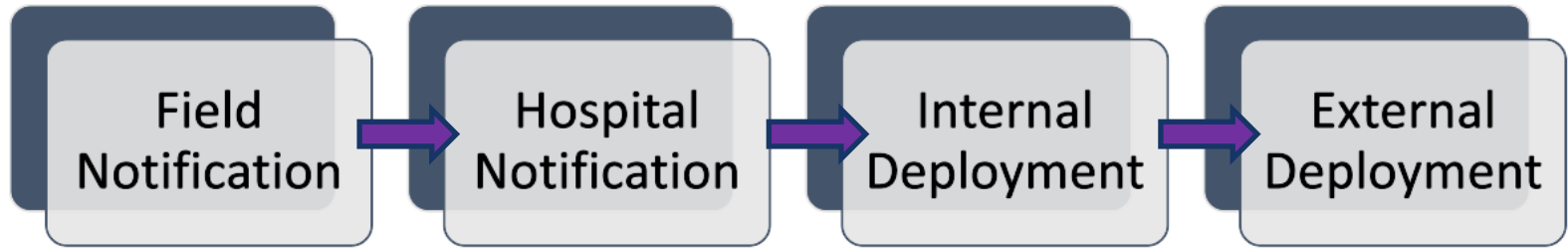
Proposed Timeline of Plan Development

- Kick-Off Workshop (Sept/Oct 2023)
- Initial Draft (Jan 2024)
- Final Draft Plan (Apr 2024)
- Training for Agency Leadership (May 2024)

Proposed Timeline for Functional Exercise

- Functional Exercise Concepts & Objectives Meeting (Mar 2024)
- Initial Planning Meeting (May 2024)
- Midterm Planning Meeting (July 2024)
- Final Planning Meeting (Sept 2024)

Takeaways – Deployment Process



Looking Ahead for CSHD

- **Proposed Timeline of Plan Development**



Workshop for Deployment Plan (October 2023)

- EMS Protocol Approval (December 2023)
- Initial Draft of Deployment Plan (January 2024)
- Final Draft of Deployment Plan (April 2024)
- CSHD Internal Incident Response Guide (April 2024)

- **Proposed Timeline for Training & Exercises**

- Training for Field / Hospital Personnel on Medication Administration (January-March 2024)
- Functional Exercise Concepts & Objectives Meeting (March 2024)
- Train the Trainer on Deployment Plan for Agency Leadership (May 2024)
- Functional Exercise Initial Planning Meeting (May 2024)
- Functional Exercise Midterm Planning Meeting (July 2024)
- Functional Exercise Final Planning Meeting (September 2024)
- ??? Full-Scale Exercise ??? (2025)

Thank you for attending!

- Questions?
- What Did You Learn Today?
- What actions do you plan to take upon arriving back to the office?

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