

CHEMPACK Program

New York State


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What is the CHEMPACK Program?

The placement or "forward deployment" of medical antidotes to provide the healthcare sector and emergency responders a sustainable resource in managing an incident involving nerve agents or the release of organophosphate material

CHEMPACK is a component of the Strategic National Stockpile (SNS) as managed by the Administration for Strategic Preparedness and Response (ASPR)




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Nerve Agents:
Sarin (GB)
Tabun (GA)
Soman (GD)
Cyclosarin (GF)
VX (O-ethyl S)

Organophosphate Pesticides:
Parathion
Malathion
Chlorpyrifos
Diazinon

For the purposes of this presentation, we will be using the term "agents"



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Incident Types

Sarin attacks in Tokyo, 1995




Transportation incidents involving pesticides



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CHEMPACK Program Rationale

- Agents can cause rapid system failure
- Antidotes can reverse symptoms when administered in a timely manner
- Most hospitals & pharmacies do not stockpile these types of antidotes
- DSNS Program has a 12-hour response time after request approval, *too long in the event of an agent release*
 - Forward Deployment is the only method to allow for quick access to significant quantities of antidotes to local healthcare facilities and responders



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CHEMPACK Strategy


- Antidotes are packaged in storage containers supplied by ASPR and situated at healthcare facilities across the State
- Provides coverage to the vast majority of the State's population with the goal of initial treatment within one (1) hour of response
- Higher population density areas receive additional product
- Local control of critical life-saving assets to ensure antidotes are dispensed timely
- Localized leadership over response planning is the best method at ensuring success in managing an incident



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CHEMPACK – Important Considerations

- Locally available resources (medications) have been exhausted
- The primary purpose of CHEMPACK is to manage a large-scale incident, however, use is **not** restricted to a single or several patients
 - The goal is to save lives!
- Use of the CHEMPACK Program does not require pre-approval by the State
- Time is the biggest challenge



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CHEMPACK Management and Oversight

- **ASPR**
- State Department Of Health
- Host Storage Locations

ASPR provides antidotes and manages the CHEMPACK Program

Establishes security and site protocols

Provides 24-hour monitoring

Rotates pharmaceuticals nearing manufacturer's expiration date via "sustainment" visits



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CHEMPACK Management & Oversight

- ASPR
- **State Department of Health**
- Host Storage Locations

Serves as liaison between the ASPR and local partners

Assists in rotation of product and resolving issues

Technical assistance as well as participation in trainings/exercises




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CHEMPACK Management & Oversight

- CDC
- State Department of Health
- **Host Storage Locations**

The host locations ensures the proper storage and security of CHEMPACK assets

Assist in the planning process involving antidote use and deployment (including within the facility)



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Types of CHEMPACK Containers





Wire-Lexan Mesh - Can weigh up to 800 lbs - Approved by DEA for storage of Schedule IV Narcotics – Currently using a Satco C Container measuring 60.5 x 32.5 x 60.5



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CHEMPACK – SLEP Participation


- Shelf Life Extension Program (SLEP) provides for quality assurance techniques used to determine the condition of materiel in storage to ensure a ready-for-issue status
- Originally a US Department of Defense (DOD) program extended to CHEMPACK in cooperation with the US Food and Drug Administration (FDA) and CDC
- Allows for the exchange and rotation of product following efficacy testing by the federal government
- Reduces the sustainment cost of the CHEMPACK Program



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CHEMPACK – SLEP Conditions

- The ASPR owns the product and is responsible for product testing and replacement, with exceptions
- Assets are continuously monitored by a data recording device (Sensaphone/STMS) which will alert the ASPR/Paragon of adverse conditions
 - Temperature (68 – 77 degrees Fahrenheit)
 - Humidity
 - Power or connection loss
 - Security features
- *Contamination from other factors such as mold*
- *If the seal is broken the materials in that container may no longer be eligible to participate in SLEP*



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Types of CHEMPACK Containers


Hospital Container (fixed facility)

- Portions designated mainly for hospitals but may include a limited supply for Emergency Medical Services (EMS)
- Focus on intravenous/injectable (e.g. subcutaneous) delivery (85%); some auto injectors
- Will treat 1,000 victims

EMS Container (field response)

- Primarily intended for EMS for scene triage
- Injectable drugs with focus on auto injectors (85%); some intravenous drugs
- Will treat 454 victims


Treatment numbers may be impacted by severity of victims



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CHEMPACK Container – Host Facility Storage

- The container is stored in a hospital pharmacy, locked room, or DEA approved cage
- Access restricted to authorized personnel
- Monitored 24/7 by intrusion detection device(s) – example: motion sensors
- STMS connectivity – ethernet connection (if needed)
- Backup power such as a generator
- Fire detection and suppression capabilities



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CHEMPACK Planning

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CHEMPACK - NYS Distribution Strategy

SAMPLE HOSPITAL CHEMPACK Breakout

Host Hospital (Hub)
Hub Hospital
Spoke Hospital
Spoke Hospital

NEW YORK STATE Department of Health

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Empire Hospital
123 Main St Anytown, NY 12345

Container Type: Hospital 1 PFI Number: 9999
Container Number: 11111

Item	Cases Per Container	Red Empire	Yellow Empire	Blue County Hospital	Green General Hospital
*Diazepam 10mg Auto-Injector	1	1			
*Diazepam 5mg/ml 10ml vial	3	1	1	1	
*Seizalam (Midazolam) 5mg/ml vial 10ml	10	3	2	2	3
Atropine Sulfate 0.4mg/ml 20ml vial	11	4	3	2	2
Pralidoxime 1gm Inj 20ml Vial	12	4	4	2	2
Sterile Water 20cc vials, for Injection	1	1			
Total full cases to distribute	38	14	10	7	7
[Open and Distribute Items]					
Atropine 0.5mg Auto-Injector (open and distribute [each])	1	[36]	[36]	[36]	[36]
Atropine 1.Dmg Auto-Injector (open and distribute [each])	1	[36]	[36]	[36]	[36]
Total Open and Distribute [Box/Each]		72	72	72	72

*DEA Schedule IV Controlled Substance needs a custody transfer document.
For a current copy of this report send an email to chempack@health.ny.gov please include 9999-01 as the subject line. Last updated: 4/9/2023

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**SAMPLE EMS
CHEMPACK
Breakout**

The diagram shows a large cardboard CHEMPACK container on the left. Two yellow arrows point from the container to a green cube labeled 'EMS' and a yellow cube labeled 'EMS/Hospital' on the right.

EMS

EMS/Hospital

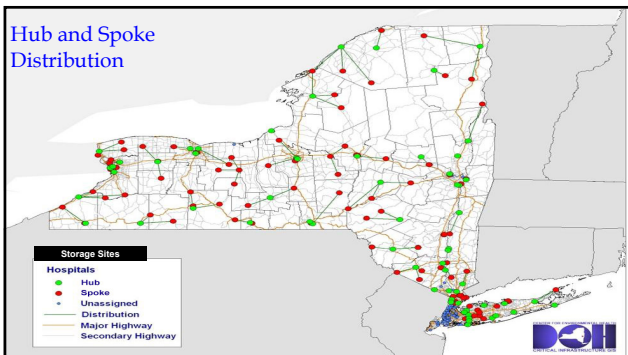
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Empire Hospital
123 Main St Anytown, NY 12345

Container Type: EMS 1 PFI Number: 9999
Container Number: 2222

Item	Cases Per Container	Container Type: EMS 1	
		Green (EMS)	Orange (EMS)
*Diazepam 10mg Auto-Injector	2	1	1
*Seizalam (Midazolam) 5mg/ml vial 10ml	1	1	
Atropine 2.0mg Auto-Injector (M1)	9	5	4
Pralidoxime 300mg Auto-Injector (M1)	5	3	2
Atropine Sulfate 0.4mg/ml 20ml vial	1	1	
Pralidoxime 1gm Inj 20ml Vial	1	1	
Sterile Water 20cc vials, for Injection	1	1	
Total full cases to distribute	20	13	7
[Open and Distribute Items]			
Atropine 0.5mg Auto-Injector [open and distribute [each]]	1	[72]	[72]
Atropine 1.0mg Auto-Injector [open and distribute [each]]	1	[72]	[72]
Total Open and Distribute [Box/Each]		144	144

*FDA Schedule IV Controlled Substance needs a custody transfer document.
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Who Is Involved In The CHEMPACK Project?





- Fire & Emergency Medical Services
- Law Enforcement
- Dispatch
- Emergency Management
- Hospitals
- Public Health








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CHEMPACK Planning

All CHEMPACK plans should include the methodology to transfer CHEMPACK assets from a storage location to the incident scene (triage), hospital emergency room and/or Spoke facilities.

Responsibility for planning and distribution of CHEMPACK assets is placed at the local level. Local Office of Emergency Management and Public Health Departments, as well as host locations/hospitals, law enforcement, Fire/EMS and 911 centers are encouraged to plan as a collaborative effort



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CHEMPACK Planning



CHEMPACK should be deployed if there has been a suspected agent incident that will:

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




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CHEMPACK - Who Authorizes?

- Attending Physician of Emergency Department
- Hub and/or Spoke Hospital Pre-Identified Authority
- County Emergency Management
- County Health Department Commissioner/Director
- State Department of Health
- Centers for Disease Control and Prevention


Note: It is crucial to identify capable and redundant authorities and/or means of communication that can direct the necessary actions in the distribution and use of CHEMPACK Assets.



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CHEMPACK – Healthcare Facilities


- Identification of agent exposure of person(s) or advance notice of incoming patients through normal communication
- Decontamination plans, as applicable
- Locally available resources (medications) not available and/or exhausted
- Approval by pre-identified authority to open container(s)
- Transfer/transport of portions within hospital and spokes
- Hospital activates Hospital Incident Command System (HICS)
- Notify County Emergency Management (EM) & State Department of Health (DOH)
- EM activates county response plan



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CHEMPACK – Incident Site

- Determination at the scene of agent exposure
- Utilize Incident Command System (ICS) and make medical decision
- Request assets through established process
- Notify transportation assets of request
- Distribute as directed
- Return unused portion and complete documentation when possible





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CHEMPACK Planning

Developing the CHEMPACK Plan


- Conditions of Deployment
- Administrative Authority
- Decontamination
- Communication pathways
 - Internally
 - Between partners/facilities
- Maintenance Guidelines
- List of Authorized Personnel
- Transport Plan(s)
- Facility use plans



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The Role of Fire & EMS In CHEMPACK

- Fire & EMS respond to the scene and determine if CHEMPACK assets are needed
- Decontamination
- If made available, administer antidotes to victims in the field
- Transport to appropriate medical facility
- Participate in CHEMPACK Planning and Exercises



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The Role Of Law Enforcement In CHEMPACK


- Local police are often the first responders on scene
- Provide on-scene security
- May transport CHEMPACK assets
- May provide hospital security
- Participate in CHEMPACK Planning and Exercises
- Conduct organizational training to ensure department wide knowledge of CHEMPACK



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The Role of Emergency Management in CHEMPACK


- Authorize the opening of CHEMPACK assets as the situation warrants
- Receive immediate notification of the opening of CHEMPACK assets whenever authorized by another official or medical professional
- Notify and coordinate other agencies supporting the use of CHEMPACK assets
- Overall responsibility for incident management and the CHEMPACK distribution effort to the scene
- Ensure agency personnel with key roles in the implementation of the CHEMPACK plan receive training when available
- Participate in CHEMPACK Planning and Exercises



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The Role Of Dispatch In CHEMPACK



- May receive requests for CHEMPACK assets from Incident Commander
- May notify the Host Storage Location/hospital to mobilize CHEMPACK assets to the field and nearby hospitals
- Coordinate transport of assets, requests from scene/hospital security
- Participate in CHEMPACK Planning and Exercises

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The Role of Hospitals In CHEMPACK


- Host hospitals prepare CHEMPACK assets for transfer to the Emergency Department, the scene and/or other hospitals
- Hospital personnel recognize potential nerve agent exposure in incoming patients
- Health care providers administer antidotes
- Hospital personnel participate in CHEMPACK Planning and Exercises
- Conduct organizational training to ensure hospital wide knowledge of CHEMPACK


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The Role Of Public Health In CHEMPACK

- Limited involvement in the request, receipt, or administration of CHEMPACK assets
- Assist with risk communication, mental health/social services, demobilization activities
- Involved in epidemiologic investigation
- Disaster Mental Health Services
- Participate in CHEMPACK Planning and Exercises




Public Health
Prevent. Promote. Protect.



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CHEMPACK Planning

It is understood that CHEMPACK emergency response plans must be developed, in place, kept current, and practiced if they are to be effective





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NYSDOH Training Containers

NYSDOH offers training containers for use by hospital and local response agencies

- Containers include pre-labeled boxes that match the facility's distribution plan (red, yellow.)
- No charge. NYSDOH will ship to the facility/county with advance notice (> 2 weeks)
- Good method to test the ability to distribute product within a facility or through a county/region (transportation plan)






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CHEMPACK - Review

- Contains antidotes for nerve agents or organophosphate exposure only
- Time is crucial for successful medical management (< 1 hour)
- ASPR maintains ownership until injected
- Managed by NYS in partnership with Hub Hospitals
- Stored at Statewide locations
- Response Plans by County Partners and Hospitals are a collaborative effort
- Communication pathways need to be established
 - Granting authority to use CHEMPACK assets (who, what, when)
- Program familiarity and updated point-of-contacts
- Periodic updates to plan (e.g. annual)
- Training opportunities to test the plan



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