
State Personal Protective Equipment Cache Deployment Plan

Standard Operating Guide

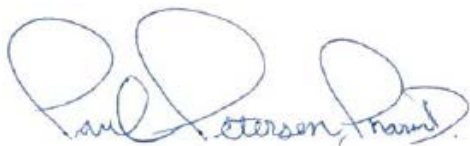
Tennessee Department of Health | July 2019



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Signatory:

A handwritten signature in blue ink that reads "Paul Petersen, M.D." The signature is stylized with large, overlapping loops for the letters "P" and "P" at the beginning.

Dr. Paul Petersen, EP Director

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Executive Summary

The State Personnel Protective Equipment (PPE) Cache was created to provide prophylaxis to hospital personnel (including medical staff and ancillary staff), patients and emergency first responders, and other key personnel, in the wake of terrorist-induced event or naturally occurring event for which such countermeasures are appropriate. Having the ability to protect emergency and healthcare workers in an event of this type is a requirement under our Hospital Preparedness Program and Public Health Preparedness Program grants and this planning and preparation will speed subsequent distribution to responders and reduce morbidity and mortality.

Key Findings

- This is a cooperative agreement requirement from the federal Department of Health and Human Services (HHS), Capability 14: Responder Safety and Health.
- The State SNS Coordinator has the authority to pull the required PPE from the cache to equip the affected population.
- For an activation and deployment, the Regional Health Jurisdictions will be responsible for coordinating with hospitals and other requesting entities for the distribution of the PPE cache in coordination with the State SNS Coordinator.
- The State Health Operations Center (SHOC) will make the decision to drop ship the PPE cache directly to the affected entity(s), incident location or to regional offices.
- Each healthcare coalition or other receiving entity should have a plan to distribute medical countermeasures.
- Each location receiving cache assets shall be responsible for inventory storage, security, accounting and distribution.
- Responders using this equipment must have proper training for the equipment and must follow all OSHA and NIOSH required rules, guidelines, and other professional standards.

State Personnel Protective Equipment Cache Deployment Plan

Introduction

The Hospital Preparedness Program (HPP) and the Public Health Emergency Preparedness (PHEP) cooperative agreement are federal programs funded by the Department of Health and Human Services through the Office of the Assistant Secretary for Preparedness and Response (ASPR) and the Centers for Disease Control and

Prevention (CDC) that both require helping healthcare organizations public health teams and emergency responders prepare for, respond to, and recover from all-hazards disasters. Entities receiving funds or the benefits of said funds are required to meet the Healthcare Preparedness Capabilities – National Guidance for Healthcare System Preparedness (NGHSP) dated January 2012, and the National Standards for State and Local Planning (NSSLP) dated March 2011.

These cooperative agreements are administered by the Tennessee Department of Health and funds Healthcare Coalitions to support the medical/surgical acute care hospitals in the state.

Although several of the NGHSP Capabilities addresses responding issues, Capability 14: Responder Safety and Health specifically requires personal protection equipment (PPE) compliance. The actual requirements in Capability 14 are as follows:

Capability 14: Responder Safety and Health specifically requires PPE compliance

- *NGHSP The responder safety and health capability describes the ability of healthcare organizations to protect the safety and health of healthcare workers from a variety of hazards during emergencies and disasters. This includes processes to equip, train, and provide other resources needed to ensure healthcare workers at the highest risk for adverse exposure, illness, and injury are adequately protected from all hazards during response and recovery operations.*
 - *Function 2: Provide assistance to healthcare organizations with access to additional Personal Protective Equipment (PPE) for healthcare workers during response.*
 - *Task 2 Establish processes to access personal protective equipment by healthcare organizations when requested and available during an exposure incident*

- *NSSLP The responder safety and health capability describes the ability to protect public health agency staff responding to an incident and the ability to support the health and safety needs of hospital and medical facility personnel, if requested.*
 - *Function 2: Identify safety and personal protective needs.*
 - *Task 3: Coordinate with partner agencies to provide medical countermeasures and/or personal protective equipment to public health responders, if indicated by the incident.*

The Tennessee Department of Health (TDH) Emergency Preparedness Program meets a portion of the Responder Safety and Health Capability requirement by securing a cache of PPE, held at a central warehouse location, to respond to any incident where this materiel could be needed. This cache, geographically located in Nashville at a state owned climate controlled and secure site, consists of equipment to provide Level C protection for novel disease (including Ebola) and hospital chemical first receiver patient response.

Inventory

The State PPE Cache is to supplement ninety six (96) hour supply of PPE at receiving facilities. This timeframe was calculated based on the CDC’s Ebola Viral Disease (EVD) PPE Inventory Burn Rate calculator and in state experience with chemical responses. However, depending on the size of the event, the supply may or may not be sufficient to treat the needs of every hospital or individual affected by the event prior to the arrival of additional assets. However, it is assumed that materiel required to treat beyond the capacity of our state’s cache will be obtained through emergency purchasing, asset requests, or delivery of the SNS. Since the State PPE Cache is for a regional or statewide healthcare emergency response, state SNS staff, CEDEP leadership, ESF 8 Emergency Response Coordinators, or the TDH Commissioner or designee have the authority to pull the required PPE from the cache to equip the affected population until the arrival of additional assets.

the State SNS Coordinator has the authority to pull the required PPE from the cache to equip the affected population.

The actual inventory of the State PPE Cache is managed using TDH’s Tennessee Countermeasure Response Network (TNCRN) inventory management system and can be accessed from the Tennessee Emergency Medical, Awareness, Response, and Resources page:

<https://www.tn.gov/health/cedep/cedep-emergency-preparedness/temarr.html>. The PPE cache can also be seen in the inventory tab from HRTS.

The State SNS Coordinator will decide upon the formulation of the cache. Some material required for response will not be stockpiled due to short expiration timeframes, for example, alcohol based hand rub. In the same vein, brands and material types that do not have expirations but still meet all applicable standards will be given precedence over brands and materials that do expire. Equipment sold through vendors already on state contract will also be given priority so quick restocking outside of emergencies can take place. User feedback will also be a factor in specific PPE that is purchased to be placed into the cache. All materiel will be in compliance with federal or professional organization guidance:

Current cache formulation:

- Dupont Tychem 4000 coverall
- International Enviroguard, ViroGuard Coveralls
- International Enviroguard, ViroGuard Boot Covers
- Fisherbrand Disposable Polyethylene Apron
- 3M TR 600 PAPR
- 3M S-Series Hood S-60710 for 3M TR 600
- 3M TR6710N High Efficiency Particulate Filters for 3M TR 600
- 3m TR6530 OV/AG High Efficiency Filter for 3m TR 600
- Moldex 4600 N95 Disposable Respirators
- Moldex 2300N N95 Disposable Respirators
- 3M 1860 Healthcare particulate respirator and surgical mask
- Bullard Isotherm 2 Cooling Vest

All efforts to create local caches should emulate the state cache in capability, or in the case of PAPR, the same or compatible devise.

In the event of an emergency, TDH will procure needed equipment through emergency purchasing or through the Tennessee Emergency Management Agency (TEMA) Logistical Operating Unit (LOU).

Activation Process

In the event of a terrorist induced, naturally occurring disease outbreak, and/or disaster incident that requires distribution of the State PPE Cache for responder protection, the Tennessee Department of Health (TDH) will be in charge of countermeasure distribution and the regions will be responsible for coordinating with

hospitals and other healthcare, or other responder entities for the distribution of the State Pharmaceutical Cache in coordination with the State SNS Coordinator. Subject matter experts, local, regional, state, federal, or other, should be consulted to validate health and safety risks, and to determine what PPE or other protective actions are needed for the situation. Once the TDH identifies the need for medical countermeasures, the State SNS Coordinator, will direct the appropriate amount of PPE to be distributed to the affected entity(s) or appropriate location based on the prevention and treatment recommendations of the Tennessee Department of Health. The contact information for the essential points of contact is contained herein. These individuals are also in the Tennessee Health Alert Network (TNHAN) for emergency notifications and the Healthcare Resource Tracking System (HRTS).

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The region will also serve as a resource guide for hospitals and other entities regarding PPE distribution and will provide the following information as it becomes available:

- Description of the disease to be prevented and nature of the threat to health
- Who is at risk and will need to receive PPE
- Anticipated time of arrival of the PPE
- Storage and security requirements for the materiel
- How to obtain additional information about the progression of the event

Distribution Method

Transport of State PPE Cache items will be determined by the State Health Operations Center (SHOC) depending upon the immediateness of the situation and transportation obstacles. The same holds true for the decision to drop ship the antibiotic cache directly to the affected hospital(s), incident location, or to regional offices. It is intended that the initial supply of PPE reach the affected location(s) so that staff are protected and can perform their duties to respond to the emergency.

The SHOC...(will make) the decision to drop ship the antibiotic cache directly to the affected hospital(s) incident location , or to regional offices

Asset Management

Receiving: Each receiving entity shall be responsible for inventory storage, security, accounting, and distribution. Upon delivery, cache assets must be physically received by personnel authorized to order and receive SNS assets. The receiving entity will be responsible for the storage and security of the assets. Materiel should be secured and kept away in the proper environment.

Each receiving entity receiving cache assets shall be responsible for inventory storage, security, accounting, and distribution.

Handling: Each entity is responsible for dispensing and tracking of the assets to primary and ancillary medical personnel and responders. The entity will keep a running tally of the total number of persons and the number of employees who have and use PPE. This will be reported to the TDH every 24 hours or more often upon request.

Return: At the conclusion of the event, the receiving entity will consolidate any remaining assets for pick up by a Tennessee Department of Health designee. Materiel should be transported appropriately keeping in mind special circumstances such as cold chain. The state has contract with FedEx (SWC 31006) and additional transportation during an emergency can be found through the TEMA LOU. Private entities are welcome to ship by any appropriate means. All materiel used or unused that has the potential to be contaminated with infectious material should be properly disposed or decontaminated. The state has an infectious disposal contract with Stericycle (SWC 000000000000000000056156) for state facilities. Private entities should use an appropriately similar service. The entity shall provide an inventory list of the equipment dispensed and those being returned.

Utilization

All personnel, regardless of first responder, critical infrastructure staff, volunteer responder, or staff responder status, using received equipment must have medical and behavioral health risks identified and communicated to them. PPE or other protective actions do not preclude safety or other briefings by subject matter experts. All responders must be cognizant of the potential dangers to health, safety, and other affects related to entering an area where specialized PPE is needed. Responders must have their health and safety monitored while on scene and actions appropriately modified based on the changing situation. During the incident and following, all responders must have their health and mental health tended to. Depending on the hazard, post event monitoring may be required.

Individuals using this equipment must have proper training for the equipment... and must follow all OSHA and NIOSH required rules

Individuals using this equipment must have proper training for the equipment, whether just in time or previously taught, and must follow all OSHA and NIOSH required rules and standards including but not limited to blood born pathogen, hazardous material, fit testing, and medical clearances as applicable to the situation.

The minimum level of PPE training required by OSHA can be found at:

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9777
TDH, TEMA, and other agencies periodically conduct and sponsor classes that include PPE training.

OSHA fit testing procedures can be found at:

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9780
At the state level, each region conducts its own fit testing, beyond that, fit testing is the responsibility of employers.

The OSHA Medical Evaluation Questionnaire can be found at:

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9783
At the state level, medical evaluation can take place at state or regional clinics by medical staff outside the subject's supervisory chain, beyond that, medical evaluation is the responsibility of employers.

Additional information on fit testing and medical evaluation from OSHA can be found at:

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24993

Ebola: When responding to Ebola, other viral hemorrhagic fevers, or an emerging highly infectious disease, the following guidance for PPE section should be used:

- PPE Selection Matrix for Occupational Exposure to Ebola Virus
<https://www.osha.gov/Publications/OSHA3761.pdf>

All fabric used in PPE construction must meet the ASTM F1671 or ISO 16604 standards. Special attention needs to be made to ensure all seams are taped and meet the same standard as above. TDH has selected International EnviroGuard ViroGuard for its Ebola response fabric. Additional calf high boots/booties need to be worn even if coveralls have foot coverings. Separate shoulder length hoods also need to be worn even if coveralls have a build in hood.

Unknown Chemical: When responding to an unknown chemical first receiver incident the following guidance for PPE section should be used:

- Hospital-Based First Receivers Of Victims from Mass Casualty Incidents Involving the Release of Hazardous substances
https://www.osha.gov/dts/osta/bestpractices/firstreceivers_hospital.pdf

OSHA specifically lists PAPRs as minimum PPE for First Receivers over other respirator types for the decontamination zone. Unless the hazard is known, then a combination 99.97% high-efficiency particulate air (HEPA)/organic vapor/acid gas respirator cartridge should be used with the PAPR. There is not specific US government guidance on penetration or permeation for chemical resistant fabric, just “protection against a wide range of substances”. The chemical involved determines the fabric used. TDH has selected DuPont Tychem 4000 for its chemical response fabric; it provides permeation protection against multiple chemicals for a sufficient time while being more mobile than other heavier fabrics.

Nerve Agent: When responding to a nerve agent related first receiver incident the following guidance for PPE section should be used:

- Fourth Generation Agents: Medical Management Guidelines
https://chemm.nlm.nih.gov/nerveagents/FGA_Medical_Management_Guidelines_508.pdf

This guidance reiterates OSHA First Receiver allowing cached chemical response PPE to be acceptable.

Radioactive Material: When responding to a radioactive material receiver incident the following guidance for PPE section should be used:

- Personal Protective Equipment (PPE) in a Radiation Emergency
https://www.remm.nlm.gov/radiation_ppe.htm

Following REMM guidelines, P 100 or HEPA respirators are needed for radioactive contamination response. Public Health workers on the contamination/monitoring side of a community reception center (CRC) fall under this guidance. At the time of the writing of this plan, the state cache does not contain P100 disposable respirators. HEPA cartridges for PAPRs will meet this requirement. For standard precautions to be considered Level C skin protection for rad response, gowns must be accompanied with foot and calf covering, pants, face protection, and head covering. There is not specific US government guidance on penetration or permeation for radioactive particulate resistant fabric; therefore, any level isolation gown or protective cover all is acceptable.

Fentanyl: When responding to a fentanyl incident the following guidance for PPE section should be used:

- Personal Protective Equipment (PPE) in a fentanyl response
<https://www.cdc.gov/niosh/topics/fentanyl/risk.html>

Following NIOSH guidance, N 100, R 100, P 100, or HEPA respirators need to be used in pre decontamination. At the time of the writing of this plan, the state cache does not contain 100 level disposable respirators. HEPA cartridges for PAPRs will meet this requirement. Standard precautions with double gloves will satisfy the need for arm and hand protection.

Measles: When responding to a measles incident the following guidance for PPE section should be used:

- Infection Prevention and Control Recommendations for Measles in Healthcare Settings
<https://www.cdc.gov/infectioncontrol/pdf/guidelines/Measles-Interim-IC-Recs-H.pdf>

Following CDC guidance, N 95 respirators need to be used regardless of presumptive evidence of immunity, upon entry to the room or care area of a patient with known or suspected measles.

Standard Precautions: When responding to any healthcare incident the following guidance for standard precaution PPE section should be used:

- 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, July 2019
<https://www.cdc.gov/infectioncontrol/pdf/guidelines/isolation-guidelines-H.pdf>

Following CDC guidance, standard precautions should be used in situations involving possible contact with blood or body fluids, mucous membranes, non-intact skin (e.g., exposed skin that is chapped, abraded, or with dermatitis) or other potentially infectious materials. The state cache is not expected to be used for day to day healthcare activities but can be used to supplement a surge response if additional PPE is needed for emergency situations that require standard precautions.

Contact Information

State of Tennessee: The following is a list of relevant State of Tennessee phone numbers to contact in an emergency:

- State Health Operations Center 866-327-9102
- TDH 24/7 Number 615-741-7247
- State Emergency Operations Center 615-741-0001
- Dr. John Benitez EP Medical Director 615-532-6150
- Dr. Paul Petersen EP Director 615-351-8776
- Sean Kice SNS Coordinator 615-840-1211
- Peter Koonz SNS Logistics 615-806-0660
- Matt Hayes TDH ESC 615-854-0483