CAPABILITY 9: Medical Materiel Management and Distribution

Medical materiel management and distribution is the ability to acquire, maintain (e.g., cold chain storage or other storage protocol), transport, distribute, and track medical materiel (e.g., pharmaceuticals, gloves, masks, and ventilators) during an incident and to recover and account for unused medical materiel, as necessary, after an incident.¹³⁷

This capability consists of the ability to perform the following functions:

Function 1: Direct and activate medical materiel management and distribution
Function 2: Acquire medical materiel
Function 3: Maintain updated inventory management and reporting system
Function 4: Establish and maintain security
Function 5: Distribute medical materiel
Function 6: Recover medical materiel and demobilize distribution operations

Function 1: Direct and activate medical materiel management and distribution

Coordinate logistical operations and medical materiel requests when an incident exceeds the capacity of the jurisdiction's normal supply chain, including the support and activation of staging operations to receive and/or transport additional medical materiel. This should be accomplished at the request of the incident commander and in coordination with jurisdictional emergency management.

Tasks

This function consists of the ability to perform the following tasks:

Task 1: Prior to an incident, identify receiving sites for responses of varying sizes and durations.

Task 2: Prior to an incident, identify transportation assets from commercial and/or government sources and create a transportation asset list.

Task 3: Prior to and when applicable during an incident, identify and coordinate with medical materiel suppliers and distributors within the jurisdiction to assess resource availability and potential distribution challenges (e.g., transport of materiel through restricted areas).

Task 4: Prior to and when applicable during an incident, identify staffing needs for receiving sites (e.g., numbers and skills of personnel). *(For additional or supporting detail, see Capability 15: Volunteer Management)*

Task 5: During an incident, monitor medical materiel levels at supporting medical and health-related agencies and organizations by collecting data on materiel availability at least once per week, but potentially more frequently as determined by incident needs. *(For additional or supporting detail, see Capability 10: Medical Surge)*

Task 6: During an incident at the request of the incident commander, activate receiving sites dependent on incident needs.¹³⁸ *(For additional or supporting detail, see Capability 3: Emergency Operations Coordination)*

Task 7: During an incident at the request of the incident commander, select transportation assets from pre-identified asset list, dependent on incident needs.

Performance Measure(s)

This function is associated with the following CDC-defined performance measure:

Measure 1: Composite performance indicator from the Division of Strategic National Stockpile (DSNS) in CDC’s Office of Public Health Preparedness and Response.

This indicator can be found on the DSNS extranet: [http://emergency.cdc.gov/stockpile/extranet](http://emergency.cdc.gov/stockpile/extranet) *(password protected site).*
CAPABILITY 9: Medical Materiel Management and Distribution

Function 1: Direct and activate medical materiel management and distribution

Resource Elements

Note: Jurisdictions must have or have access to the resource elements designated as Priority.

P1: (Priority) Written plans should include documentation of primary and backup receiving sites that take into consideration federal Strategic National Stockpile recommendations. Written plans should include the following elements:
- Type of site (commercial vs. government)
- Physical location of site
- 24-hour contact number
- Hours of operation
- Inventory of material-handling equipment on-site and list of minimum materials that need to be procured and/or delivered at the time of the incident
- Inventory of office equipment on-site and list of minimum materials that need to be procured and/or delivered at the time of the incident
- Inventory of storage equipment (e.g., refrigerators and freezers) on-site and list of minimum materials/supplies that need to be procured and/or delivered at the time of the incident

P2: (Priority) Written plans should include transportation strategy. If public health will be transporting material using their own vehicles, plan should include processes for cold chain management, if necessary to the incident. If public health will be using outside vendors for transportation, there should be a written process for initiating transportation agreements (e.g., contracts, memoranda of understanding, formal written agreements, and/or other letters of agreement). Transportation agreements should include, at a minimum, the following elements:
- Type of vendor (commercial vs. government)
- Number and type of vehicles, including vehicle load capacity and configuration
- Number and type of drivers, including certification of drivers
- Number and type of support personnel
- Vendor’s response time
- Vendor’s ability to maintain cold chain, if necessary to the incident

In addition to this process, public health should have written evidence of a relationship with outside transportation vendors. This relationship may be demonstrated by a signed transportation agreement or documentation of transportation planning meeting with the designated vendor.

P3: (Priority) Written plans should include protocols for medical and health-related agencies and organizations to report medical materiel levels to public health at least weekly, but potentially more frequently. (For additional or supporting detail, see Capability 6: Information Sharing)

P4: Written plans should include a list of, and points of contact for, medical materiel suppliers and distributors within the jurisdiction.

P5: Written plans should include a process to collect and analyze medical and social demographic information of the jurisdiction’s population to plan for the types of medications, durable medical equipment, or consumable medical supplies that may need to be provided during an incident, including supplies needed for the functional needs of at-risk individuals. (For additional or supporting detail, see Capability 1: Community Preparedness)

P6: Written plans should include processes for activating personnel, taking the following into consideration:
- Process for personnel badging
- Process for training personnel, including the provision of job-action sheets for just-in-time training
- Process for requesting additional personnel from outside the jurisdiction, if needed
(For additional or supporting detail, see Capability 15: Volunteer Management)
CAPABILITY 9: Medical Materiel Management and Distribution

Function 1: Direct and activate medical materiel management and distribution

Resource Elements (continued)

P7: Written plans should include a list of key stakeholders (including points of contact at dispensing sites, treatment locations, intermediary distribution sites, and/or closed sites) and protocols for communicating the activation of medical materiel management and distribution to these stakeholders. Written plans should also include protocols for stakeholders to request medical materiel from health departments.154,155,156

S1: Public health staff should understand their role in emergency response.

Suggested resources

S2: Public health staff participating in medical materiel efforts should understand the following roles, and job-action sheets should be available:157
- Logistics161
- Security coordination
- Receiving site leader (if applicable)
- Distribution leader (if applicable)162,163

Suggested resources
- Strategic National Stockpile Conferences and Training: https://www.orau.gov/snsnet/conferences.htm

E1: Have or have access to transportation assets for transporting and distributing medical materiel.

E2: Have or have access to interoperable systems for coordinating medical materiel distribution.

Function 2: Acquire medical materiel

Obtain medical materiel from jurisdictional caches and request materiel from jurisdictional, private, regional, or federal partners, as necessary.
Function 2: Acquire medical materiel

Tasks
This function consists of the ability to perform the following tasks:

Task 1: Request and accept medical materiel from jurisdictional, private, regional, or federal partners in alignment with National Incident Management System standards and incident needs.

Task 2: Maintain integrity of medical materiel in accordance with manufacturer specifications during acquisition and storage.

Performance Measure(s)
This function is associated with the following CDC-defined performance measure:

Measure 1: Composite performance indicator from the Division of Strategic National Stockpile (DSNS) in CDC’s Office of Public Health Preparedness and Response.

This indicator can be found on the DSNS extranet: http://emergency.cdc.gov/stockpile/extranet (password protected site).

Resource Elements
Note: Jurisdictions must have or have access to the resource elements designated as Priority.

P1: (Priority) Written plans should include a process to request medical materiel (initial request and re-supply requests), including memoranda of understanding and mutual aid agreements with state/local partners if applicable. These plans should consider the following elements:

- Assessment of local inventory/medical countermeasure caches
- Identification of local pharmaceutical and medical-supply wholesalers
- Assessment of asset request trigger indicators, thresholds, and validation strategies to guide decision-making
- A process for requesting medical countermeasures through the Emergency Management Assistance Compact
- A process for requesting medical countermeasures from the federal level, which takes into account
  - Stafford Act vs. non-Stafford Act declarations
  - National Emergencies Act
  - Coordination between federal and state resources, including memoranda of understanding between CDC and the state
- Role of U.S. Department of Health and Human Services Regional Emergency Coordinators, if necessary to the incident: http://www.phe.gov/Preparedness/responders/rec/Pages/contacts.aspx
- A process for justifying medical countermeasure requests
- If sites decide to purchase their own medical countermeasures, they are required to meet regulatory standards (i.e., abide by U.S. Food and Drug Administration standards including current good manufacturing practices (cGMP), have appropriate Drug Enforcement Administration registrations, and be responsible to fund and track medical countermeasures rotation)

Suggested resources

(For additional or supporting detail, see Capability 1: Community Preparedness)
**P2:** Written plans should include a protocol for medical materiel storage taking into consideration, if applicable, the following elements:
- Maintenance of cleanliness and packaging
- Storage of controlled substances
- Maintenance of cold chain during storage
- Requirements of the jurisdiction’s vaccine provider agreement

**S1:** Public health staff participating in medical materiel efforts should understand protocols for requesting, receiving, and distributing medical materiel.

Suggested resources
- Extranet for the Division of Strategic National Stockpile in CDC’s Office of Public Health Preparedness and Response: [http://emergency.cdc.gov/stockpile/extranet](http://emergency.cdc.gov/stockpile/extranet) (password protected site)
- Strategic National Stockpile Local Technical Assistance Review User Guide
- Strategic National Stockpile State Technical Assistance Review User Guide
- Strategic National Stockpile Receiving, Staging, and Storing Course
- CDC Emergency Use Authorization Online Course

**S2:** Public health staff participating in medical materiel efforts should be trained on cold chain management techniques, including the use of temperature monitoring equipment.

Suggested resources
- Jurisdictional cold chain management procedures
- Cold chain standards (International Safe Transit Association STD-7E and STD-20 for Thermal Lane Data packaging, International Air Transportation Association manual Chapter 17)

**S3:** Logistics personnel should understand how to apply supply chain tools if applicable to the incident.

Suggested resources

**S4:** Designated personnel with pharmaceutical licenses should be identified if appropriate to the incident and, if necessary, to comply with jurisdictional laws and regulations to assist in medical materiel management throughout the life of the materiel. This includes acquisition, receipt, storage, transport, recovery, disposal of, and return or loss.
**CAPABILITY 9: Medical Materiel Management and Distribution**

### Function 2: Acquire medical materiel

**Resource Elements (continued)**

- **E1:** Have or have access to receiving site materiel-handling equipment for medical materiel acquisition. Examples include pallet jacks, handcarts/dollies, and forklifts.

- **E2:** Have or have access to equipment for maintaining and monitoring temperature, if indicated by the incident [e.g., refrigerator (used solely for storing materiel), Temp-Tell, Vaxi-Cool, or other equipment as suggested by cold chain management guidance].

### Function 3: Maintain updated inventory management and reporting system

Maintain inventory system for the jurisdiction's medical materiel for the life of the materiel, including acquisition, receipt, storage, transport, recovery, disposal, and return or loss.

**Tasks**

This function consists of the ability to perform the following tasks:

- **Task 1:** Conduct initial inventory and update inventory management system with incoming and outgoing medical materiel, and materiel that is recovered, returned, or disposed of.

- **Task 2:** Provide inventory status reports to jurisdictional, state, regional, and federal authorities at least weekly during an incident, but potentially more frequently. *(For additional or supporting detail, see Capability 6: Information Sharing)*

- **Task 3:** Track re-supply requests for medical materiel. *(For additional or supporting detail, see Capability 3: Emergency Operations Coordination)*

**Performance Measure(s)**

This function is associated with the following CDC-defined performance measure:

- **Measure 1:** Composite performance indicator from the Division of Strategic National Stockpile (DSNS) in CDC's Office of Public Health Preparedness and Response.

  This indicator can be found on the DSNS extranet: [http://emergency.cdc.gov/stockpile/extranet](http://emergency.cdc.gov/stockpile/extranet) *(password protected site)*.

**Resource Elements**

*Note: Jurisdictions must have or have access to the resource elements designated as Priority.*

- **P1:** *(Priority)* Written plans should include protocols for reporting to jurisdictional, state, regional, and federal authorities. At a minimum, report should include the following elements:
  - Amount of materiel received (including receipt date/time and name of individual who accepted custody of materiel)
  - Amount of materiel distributed
  - Amount of materiel expired
  - Current available balance of materiel

  *(For additional or supporting detail, see Capability 6: Information Sharing)*
**Function 3: Maintain updated inventory management and reporting system**

**Resource Elements (continued)**

**P2:** Written plans should include protocols for dispensing sites, treatment locations, intermediary distribution sites, and/or closed sites to request additional medical materiel in accordance with National Incident Management System protocol.\(^{176,177}\) At a minimum, request should include the following elements:

- Date of request
- Date materiel is required
- Receiving site location
- Distribution strategy (e.g., distribution through established channels or direct-ship from vendor)

(For additional or supporting detail, see Capability 3: Emergency Operations Coordination)

**S1:** Inventory management personnel should be trained and able to use inventory management system.\(^{178,179}\)

**E1:** Have or have access to a system to manage inventory; system can be manual or automated, electronic, or paper-based.\(^{180,181,182}\)

- At a minimum, system should be able to track the name of drug, quantity, National Drug Code, lot number, dispensing site or treatment location, expiration date, and unit configuration of issue (e.g., case, box, or bottles)
- System must also have a backup which can be inventory management software, electronic spreadsheets, or paper.

Suggested resources

- Receive, Stage and Store Inventory Tracking System: [https://rits.cdc.gov/sitemap/index.htm](https://rits.cdc.gov/sitemap/index.htm)
- Division of Strategic National Stockpile Inventory Management System in CDC’s Office of Public Health Preparedness and Response

**Function 4: Establish and maintain security**

In coordination with emergency management and jurisdictional law enforcement, secure personnel and medical materiel during all phases of transport and ensure security for receiving site and distribution personnel.

**Tasks**

This function consists of the ability to perform the following tasks:

**Task 1:** Identify receiving sites from pre-identified locations and determine which sites may require increased security (such as controlled-substance storage areas).

**Task 2:** At the time of the incident, if necessary, identify additional receiving sites and determine which sites may require increased security (such as controlled-substance storage areas).

**Task 3:** Identify, acquire, and maintain security measures\(^{183}\) at receiving sites and during transportation to points of dispensing, if applicable to the incident. (For additional or supporting detail, see Capability 3: Emergency Operations Coordination)
**CAPABILITY 9: Medical Materiel Management and Distribution**

**Function 4: Establish and maintain security**

**Performance Measure(s)**
This function is associated with the following CDC-defined performance measure:

**Measure 1:** Composite performance indicator from the Division of Strategic National Stockpile (DSNS) in CDC's Office of Public Health Preparedness and Response.

This indicator can be found on the DSNS extranet: [http://emergency.cdc.gov/stockpile/extranet](http://emergency.cdc.gov/stockpile/extranet) (password protected site).

**Resource Elements**
*Note: Jurisdictions must have or have access to the resource elements designated as **Priority**.*

<table>
<thead>
<tr>
<th><strong>P1:</strong> (Priority) Written plans should include processes and protocols that address the maintenance of physical security of medical countermeasures throughout acquisition, storage, and distribution, and include, at a minimum, the following elements:</th>
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<tbody>
<tr>
<td>– Contact information for security coordinator</td>
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<tr>
<td>– Coordination with law enforcement and security agencies to secure personnel and facility</td>
</tr>
<tr>
<td>– Acquisition of physical security measures (e.g., cages, locks, and alarms) for materiel within the receiving site</td>
</tr>
<tr>
<td>– Maintenance of security of medical materiel in transit</td>
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| **P2:** Written plans should include an inventory of security measures at receiving sites and list of minimum security measures that need to be procured and/or delivered at the time of the incident. Lists should be updated at the time of the incident to reflect incident-specific needs. |

| **S1:** Designated personnel with current Drug Enforcement Administration license should be identified to sign for controlled substances throughout chain of custody of medical materiel. |

| **E1:** Have or have access to physical security measures (e.g., cages, locks, and alarms) for maintaining security of materiel within the receiving site. |
**Function 5: Distribute medical materiel**

Distribute medical materiel to modalities (e.g., dispensing sites, treatment locations, intermediary distribution sites, and/or closed sites).

**Tasks**
This function consists of the ability to perform the following tasks:

**Task 1:** Determine allocation and distribution strategy, including delivery locations, routes, and delivery schedule/frequency, based on incident needs.

**Task 2:** Maintain integrity of medical materiel in accordance with established safety and manufacturer specifications during all phases of transport and distribution.

**Performance Measure(s)**
This function is associated with the following CDC-defined performance measure:

**Measure 1:** Composite performance indicator from the Division of Strategic National Stockpile (DSNS) in CDC’s Office of Public Health Preparedness and Response.

This indicator can be found on the DSNS extranet: [http://emergency.cdc.gov/stockpile/extranet](http://emergency.cdc.gov/stockpile/extranet) (password protected site).

**Resource Elements**
*Note: Jurisdictions must have or have access to the resource elements designated as Priority.*

**P1: (Priority)** Written plans should include an allocation and distribution strategy including delivery locations, routes, and delivery schedule/frequency, and should take into consideration the transport of materials through restricted areas. The strategy should also consider whether recipients will be responsible for acquiring materiel from an intermediary distribution site or if the health department is responsible for delivering materiel.\(^{191,192}\)

Suggested resources
- Receiving, Distributing, and Dispensing Strategic National Stockpile Assets: A Guide for Preparedness, version 10.02, Chapter 9: Controlling Strategic National Stockpile Inventory: [https://www.orau.gov/snsnet/resources/Chapter9_ac.pdf](https://www.orau.gov/snsnet/resources/Chapter9_ac.pdf)

**P2:** Written plans should include a list of key stakeholders (including points of contact at dispensing sites, treatment locations, intermediary distribution sites, and/or closed sites) and protocols for communicating the distribution strategy to these stakeholders.

**P3:** Written plans should include agreements with dispensing sites, treatment locations, intermediary distribution sites, and/or closed sites to ensure they record readings of temperature-controlled items in accordance with cold-chain management standards.

**S1:** Public health staff involved in medical materiel distribution should understand protocols for handling materiel and understand the allocation and distribution strategy.


**Function 6: Recover medical materiel and demobilize distribution operations**

Recover remaining medical materiel in accordance with jurisdictional policies and federal regulations and demobilize distribution operations as required by incident needs.

**Tasks**
This function consists of the ability to perform the following tasks:

**Task 1:** Recover materiel and equipment according to jurisdictional policies and federal regulations.

**Task 2:** Determine the disposition of unused (unopened) medical materiel, unused pharmaceuticals, and durable items within the jurisdictional health system according to jurisdictional policies.

**Task 3:** Dispose of biomedical waste materials generated by medical materiel management operations according to jurisdictional policies.

**Task 4:** Scale down distribution operations by deactivating receiving sites and releasing personnel as appropriate to evolving incident needs and in accordance with National Incident Management System protocol. *(For additional or supporting detail, see Capability 10: Medical Surge and Capability 15: Volunteer Management)*

**Task 5:** Document incident findings as part of after action report process.

**Performance Measure(s)**
This function is associated with the following CDC-defined performance measure:

**Measure 1:** Composite performance indicator from the Division of Strategic National Stockpile (DSNS) in CDC’s Office of Public Health Preparedness and Response.

This indicator can be found on the DSNS extranet: [http://emergency.cdc.gov/stockpile/extranet](http://emergency.cdc.gov/stockpile/extranet) *(password protected site)*.

**Resource Elements**
*Note: Jurisdictions must have or have access to the resource elements designated as P1.*

**P1:** *(Priority)* Written plans should include protocols for the storage, distribution, disposal, or return of unused (unopened) medical materiel, unused pharmaceuticals, and durable items, including plans for maintaining integrity of medical materiel during storage and/or distribution within the jurisdictional health system.

**P2:** Written plans should include protocols for demobilizing operations, including release of personnel, closure of receiving sites, and recovery of biomedical waste in coordination with emergency management.

**P3:** Written plans should include protocols for completing an after-action report in compliance with National Incident Management System protocol and Homeland Security Exercise and Evaluation Program guidance. Report should include a timeline with critical time points to validate process operations.*

Suggested resources

Public health staff participating in medical materiel efforts should understand established protocols for disposal of unused (unopened) medical materiel, unused pharmaceuticals, and durable items.

Suggested resources
- Jurisdictional protocols for disposing of biomedical waste materials
- Sharps disposal: http://www.safeneedledisposal.org/resslaws.html
- Transfer of title document
- Medical Waste Management System Training Program: http://www.inquisit.org/mwms

Public health staff participating in medical materiel efforts should understand established protocols for after-action reporting.

Suggested resources
- A Federal Emergency Management Agency Introduction to Exercises (IS 120.a): http://training.fema.gov/EMIWeb/IS/IS120A.asp