**Capability 9: Medical Materiel Management and Distribution**

**Definition:** Medical materiel management and distribution is the ability to acquire, manage, transport, and track medical materiel during a public health incident or event and the ability to recover and account for unused medical materiel, such as pharmaceuticals, vaccines, gloves, masks, ventilators, or medical equipment after an incident.

**Functions:** This capability consists of the ability to perform the functions listed below.
- **Function 1:** Direct and activate medical materiel management and distribution
- **Function 2:** Acquire medical materiel from national stockpiles or other supply sources
- **Function 3:** Distribute medical materiel
- **Function 4:** Monitor medical materiel inventories and medical materiel distribution operations
- **Function 5:** Recover medical materiel and demobilize distribution operations

**Summary of Changes:** The updates align content with new national standards, updated science, and current public health priorities and strategies. Listed below are specific changes made to this capability.
- Broadens the cold chain management guidance to include all aspects of storage and handling
- Expands recovery activities to incorporate proper handling and disposal of infectious, hazardous, or contaminated materiel and waste
- Accounts for security and inventory management tasks that occur throughout the entire distribution process

**For the purposes of Capability 9, partners and stakeholders may include the following:**
- emergency management agencies
- emergency medical services (EMS)
- environmental health agencies
- epidemiology programs
- government agencies
- health care coalitions
- health care organizations
- hospitals and health care facilities
- immunization programs
- jurisdictional office(s) of homeland security
- laboratory programs
- law enforcement agencies
- medical professional organizations
- mental/behavioral health services
- pharmacies
- public health agencies
- surveillance programs
- tribes and native-serving organization
- volunteer groups
Capability 9: Medical Materiel Management and Distribution

Function 1: Direct and activate medical materiel management and distribution

Function Definition: Coordinate with the jurisdictional emergency management agency and health care systems to activate medical materiel distribution operations when an incident exceeds the normal capacity of the jurisdictional supply chain.

Tasks

Task 1: Identify jurisdictional needs for distributing medical materiel. Assess medical materiel response needs based on risk-based scenarios, identify available jurisdictional resources to support medical materiel distribution, and identify potential distribution challenges.

Task 2: Develop procedures to distribute medical materiel. Formulate and update procedures for medical materiel distribution throughout the distribution process, meaning acquisition, management, transport, and tracking during an incident; recovery, disposal, and return or loss after an incident.

Task 3: Establish a network of distribution sites. Identify distribution sites, including receipt, stage, store (RSS), sites regional distribution sites (RDSs), local distribution sites (LDSs), hospitals and health care facilities, or other potential distribution sites, to manage and distribute medical materiel.

Task 4: Develop and establish a transportation strategy. Identify and document transportation assets, based on jurisdictional availability of commercial and governmental transportation resources and establish procedures to mobilize transportation assets based on incident characteristics.

Task 5: Identify and train medical materiel distribution personnel. Identify personnel to manage and distribute medical materiel and ensure identified personnel meet training or certification requirements.

Task 6: Establish an inventory management system. Establish a reliable inventory management system to track medical materiel and exchange inventory-related data with CDC throughout the distribution process.

Task 7: Identify security needs and establish security measures. Identify security needs for personnel, medical materiel, and the network of distribution sites, and establish appropriate security measures based on incident characteristics.

Task 8: Activate medical materiel management and distribution operations. Start procedures to activate identified personnel and the network of distribution sites for medical materiel management and distribution.

Preparedness Resource Elements

P1: (Priority) Assessment of jurisdictional medical materiel needs and distribution response capacity to identify gaps and inform distribution site selection (number of sites and locations), personnel resource requirements, transportation requirements, inventory management strategies, and security measures. The assessment may include

- Inter- and intrajurisdictional roles and responsibilities, such as determining the respective roles of supporting jurisdictional agencies and third party professional warehouse and transportation companies
• RSS sites, warehousing strategies, and logistical support needs for the jurisdiction's network of distribution sites
• Materiel needs for general and targeted populations, including supplies and resources for populations at risk to be disproportionately impacted by an incident
• Additional resources necessary to execute the jurisdictional medical materiel distribution strategy
• Solutions to address potential transportation challenges, including road closures, inclement weather, power outages, and other challenges
• Anticipated needs of sites, such as hospitals and health care facilities, that would serve as both distribution sites and dispensing/administration sites
• Assessment of distribution needs when medical countermeasures would be delivered through direct ship methods

(See Capability 1: Community Preparedness and Capability 3: Emergency Operations Coordination)

P2: (Priority) Jurisdictional plans that reflect the sequential process of medical materiel distribution, meaning acquisition, management, transport, tracking, recovery, disposal, and return or loss. The planning process may include

• Projecting the types and quantities of medical countermeasures, durable medical equipment (DME), or consumable medical supplies to be provided during an incident
• Building working relationships with professional warehouse companies to formalize resources, roles, and responsibilities
• Coordinating direct ship sites at the dispensing/administration site from a national, centralized distributor
• Building working relationships with commercial or public sector delivery operators to develop and formalize transportation plans
• Establishing staffing estimates for all aspects of medical materiel distribution
• Modeling distribution response times, such as response times for transportation
• Establishing operating procedures and confirming specifications for primary and alternate inventory management systems
• Establishing procedures to resupply distribution sites and dispensing/administration sites

P3: (Priority) Identified lead or jurisdictional authority to initiate medical materiel distribution operations based on incident triggers and incident characteristics.

P4: (Priority) Written agreements, such as contracts or memoranda of understanding (MOUs), with partner and stakeholder organizations to support medical materiel distribution operations.

P5: (Priority) Primary and backup distribution sites capable of receiving, staging, storing, and distributing medical materiel, regardless of the originating supply source, such as the Strategic National Stockpile (SNS), the state immunization program receiving vaccine from Biomedical Advanced Research and Development Authority (BARDA), other vaccine distributors, or commercial sources. Distribution sites should be capable of supplying all dispensing/administration sites in the jurisdiction. Distribution site lists describe characteristics, which may include

• Type of site (commercial vs. government)
• Physical location of site
• 24-hour contact number
• Hours of operation
Capability 9: Medical Materiel Management and Distribution

- Inventory of materiel-handling equipment on site and list of minimum equipment that need to be procured or delivered at the time of the incident
- Inventory of office equipment on site and a list of minimum equipment or supplies that need to be procured or delivered at the time of the incident
- Inventory of storage equipment, such as refrigerators and freezers on site and a list of minimum storage equipment that needs to be procured or delivered at the time of the incident
- The network of distribution sites may include
  - Primary and backup RSS Sites
  - RDSs
  - LDSs
  - Pharmacies or their distribution partner locations
  - Hospitals and health care facilities
  - Other locations assessed by the jurisdiction as capable distribution sites

P6: A transportation strategy that may include
- List of transportation assets to support distribution of medical materiel to the network of distribution sites
- Routing systems or modeling software used to assist with developing transportation plans
- Primary transport, backup transport, and number of transportation assets
- Vehicle types and load capacities
- Cold chain management and other environmental control management requirements, such as humidity requirements
- Response time(s) to mobilize transportation resources
- Jurisdictional medical materiel suppliers and distributor points of contact to facilitate jurisdictional access to medical materiel
- Delineation of the respective roles of the public health agency, outside vendors, and other partners
- Written agreements, such as contracts or MOUs, with outside transportation vendors. Transportation agreements should specify, at a minimum
  - 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
  - Response time of vendor(s)
  - Ability of vendor(s) to meet storage and handling requirements, such as cold chain management

P7: Procedures in place to identify and prepare personnel or volunteers to support medical materiel distribution. Procedures may include
- Staffing plans for all categories of distribution sites. Staffing plans may include site leads, alternates, security staff, logistics support staff, and Drug Enforcement Administration (DEA) registrant(s) to sign for controlled medical countermeasures
- Badging and credentialing requirements for personnel at sites
- Training for response personnel and volunteers, including orientation materials, job action sheets, and other training resources or strategies
Capability 9: Medical Materiel Management and Distribution

- Procedures to request additional personnel from outside the jurisdiction, such as from the National Guard or Medical Reserve Corps (MRC) based on state and local mutual aid agreements in coordination with the jurisdictional emergency management agency
- Procedures for immediate contracting of additional trained distribution support personnel based on state and local emergency procurement practices

(See Capability 3: Emergency Operations Coordination and Capability 15: Volunteer Management)

P8: Procedures in place to ensure security throughout the medical materiel distribution process. Procedures may include
- Designation of security leads and contact information
- Evacuation procedures
- Exterior and interior physical security
- Coordination within and across jurisdictional sovereignty lines for law enforcement and security agencies to secure personnel and facilities
- Physical measures, such as cages, locks, and alarms to secure materiel within the distribution site
- Security measures for transporting materiel, such as escorts and securing of designated roadways
- Security measures at alternate distribution sites
- Traffic control staffing
- Worker safety
- Cybersecurity measures, such as protection of personally identifiable information and prevention of unauthorized use of social media


Skills and Training Resource Elements

S/T1: Personnel trained to manage and distribute medical materiel in alignment with jurisdictional procedures. Job action sheets for key distribution positions may include
- Distribution lead
- Logistics lead
- Receiving site lead(s)
- Security lead
- Inventory management
- DEA registrant

S/T2: Personnel trained to use and manage inventory management systems that track medical materiel throughout the distribution process.

S/T3: Personnel trained to conduct tabletop, functional, and full-scale exercises in accordance with the Homeland Security Exercise and Evaluation Program (HSEEP) guidance to test and evaluate jurisdictional medical materiel management and distribution strategies.
Capability 9: Medical Materiel Management and Distribution

Equipment and Technology Resource Elements

**E/T1:** Transportation assets scalable for distributing medical materiel to distribution sites based on incident characteristics and logistical conditions. Incident characteristics and logistical conditions may include

- Vehicle types and load capacity
- Response time(s) for mobilizing initial transportation resources
- Warehouse characteristics, including loading dock type and quantity, staging and storage footprint, and cold chain resources
- Delivery vehicle characteristics, including compatibility of the vehicle(s) with loading dock, presence of lift gate, and capacity for full pallet
- Receiving site characteristics, including compatibility to receive a full pallet, loading dock type, and on-site equipment
- Medical countermeasure characteristics, including the total quantity, weight, and size of the shipments, storage and handling requirements, and packaging
- Distribution plan characteristics, including the number of delivery vehicles that can be allocated simultaneously, routes, and security escorts

**E/T2:** Inventory management system(s) to coordinate and account for medical materiel receipt and distribution, such as CDC’s Inventory Management and Tracking System (IMATS). Interoperable information systems to exchange and store inventory-related data. Inventory management system requirements may include

- Compliance with Inventory Data Exchange (IDE) standards or interoperability with CDC information systems
- Ability to track the name of drug, quantity, National Drug Code number, lot number, dispensing/administration site, expiration date, and unit configuration of issue, such as case, box, or bottles
- Backup systems for redundancy, such as alternate inventory management software, electronic spreadsheets, or paper-based systems

(See **Capability 6, Information Sharing**)

**E/T3:** Equipment needed to maintain security for personnel and facilities, which may include

- Physical security measures, such as cages, locks, and alarms
- Personal protective equipment (PPE)

(See **Capability 14: Responder Safety and Health**, and **Capability 15: Volunteer Management**)

Function 2: Acquire medical materiel from national stockpiles or other supply sources

**Function Definition:** Acquire, receive, stage, and store medical materiel from jurisdictional caches or from private, regional, or federal partners.

**Tasks**

**Task 1:** Acquire medical materiel. Request or obtain medical materiel to meet the needs of the jurisdiction based on incident characteristics.
Task 2: Manage medical materiel. Receive, stage, and store medical materiel in accordance with manufacturer specifications.

**Preparedness Resource Elements**

P1: (Priority) Procedures in place to request medical materiel for both initial requests and resupply requests whether sourced from SNS, the state immunization program, or other source. Procedures may include

- Defined request triggers, indicators, thresholds, and validation strategies to guide decision-making
- Identification of individuals within the jurisdiction empowered with the authority to request federal, state, local, tribal, and territorial assets, such as emergency management representatives, senior health officials, and elected representatives with statutory authority to request mutual aid
- Strategies to use local circulating inventories and existing jurisdictional medical countermeasure caches
- Strategies to use existing infrastructure, such as state immunization programs with experience in vaccine ordering and distribution through the Vaccines for Children Program
- Special provisions that may affect medical materiel request procedures
  - Stafford Act vs. non-Stafford Act declarations
  - Declarations of a public health emergency
  - Procedures to coordinate with U.S. Department of Health and Human Services (HHS), as required
- Procedures to request medical materiel through the Emergency Medical Assistance Compact (EMAC)
- Protocols to ensure compliance with regulatory standards, including
  - U.S. Food and Drug Administration (FDA) standards
  - Current Good Manufacturing Practices (cGMP)
  - Appropriate DEA registrations
- Procedures to obtain medical materiel outside of the SNS, such as pandemic influenza vaccine anticipated to be supplied in coordination with the jurisdiction’s immunization program and CDC’s centralized distributor for publicly funded vaccines
- Identification of local pharmaceutical and medical supply wholesalers
- Processes to justify requests for medical countermeasures and other medical materiel

(See Capability 3: Emergency Operations Coordination and Capability 8: Medical Countermeasure Dispensing and Administration)

P2: (Priority) Procedures in place to receive, stage, and store medical materiel. Procedures may include

- Facility characteristics, such as docks, open floor space, and climate
- Maintenance of cold chain integrity according to storage and handling guidelines
- Storage and access of controlled substances
- Access for authorized persons
- Security measures, including personnel, physical security, and other security measures

**Skills and Training Resource Elements**

S/T1: Personnel trained on procedures to request and manage medical materiel in accordance with manufacturer specifications and jurisdictional procedures.
Equipment and Technology Resource Elements

**E/T1:** Materiel-handling equipment at receiving sites (provision of equipment may be included in contracts or memoranda of understanding with receiving sites). Equipment may include

- Pallets and pallet jacks
- Handcarts or dollies
- Forklifts
- Cold chain storage equipment

Function 3: Distribute medical materiel

**Function Definition:** Transport medical materiel to receiving sites based on incident needs.

**Tasks**

**Task 1:** Transport medical materiel to receiving sites. Activate strategies for apportioning and transporting medical materiel to distribution sites and dispensing/administration sites.

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

Preparedness Resource Elements

**P1:** *(Priority)* Procedures in place to apportion and transport medical materiel, which may include

- Delivery locations and routes
- Delivery schedule/frequency
- Respective roles and responsibilities of public health agencies, transportation partners, and other relevant entities

**P2:** Written agreements with receiving sites and transportation partners to ensure distribution of medical materiel.

*(See Capability 8: Medical Countermeasure Dispensing and Administration)*

Skills and Training Resource Elements

**S/T1:** Personnel trained to apportion and transport medical materiel.

Equipment and Technology Resource Elements

**E/T1:** Equipment and supplies for the distribution of medical materiel at receiving site(s) that are scalable to receiving site operations, incident characteristics, and logistical conditions.
Function 4: Monitor medical materiel inventories and medical materiel distribution operations

Function Definition: Maintain real-time situational awareness of medical materiel management and distribution in order to address emerging needs for resupply, security, transportation, and use of receiving sites.

Tasks

Task 1: Identify and respond to medical materiel resupply needs. Monitor inventory status reports and request resupply based on demand and incident needs.

Task 2: Monitor security of medical materiel operations. Maintain situational awareness of security needs throughout the duration of the incident and adjust security measures, as necessary.

Task 3: Monitor transportation operations. Maintain situational awareness of transportation assets and adjust transportation plans, as necessary.

Task 4: Monitor receiving sites and associated personnel. Assess the effectiveness and efficiency of receiving sites and adjust operations, as applicable.

Preparedness Resource Elements

P1: (Priority) Procedures in place to report inventory status to federal, regional, state, local, tribal, and territorial authorities. Inventory status reports should include

- Amount of medical materiel received
- Additional information about medical materiel received, including receipt date, time, and name of individual who accepted custody of materiel
- Amount of medical materiel distributed
- Current available quantity of medical materiel

(See Capability 6: Information Sharing)

P2: (Priority) Procedures in place to request resupply for distribution sites that specify information, which may include

- Date of request
- Date of medical materiel receipt
- Urgency of medical materiel needs
- Receiving site addresses
- Distribution strategy, such as distribution through established channels or direct-ship from vendor
- Specifics of the requested medical materiel, including item type, size, quantity, intended use, and other relevant information to aid fulfillment choices
- Requestor (or other point of contact) information
- Justifications for resupply

(See Capability 3: Emergency Operations Coordination and Capability 8: Medical Countermeasure Dispensing and Administration)
P3: (Priority) Procedures in place to assess ongoing security measures throughout the distribution process and make adjustments, as necessary. Security measures may be assessed with information from sources, which may include

- Security coordinator
- Law enforcement and security agencies that secure personnel, transportation, and facilities
- Incident management personnel, such as command staff or general staff
- Transportation or warehouse personnel

P4: Procedures in place to resupply, replace, or adapt transportation assets based on incident characteristics and emerging needs.

Skills and Training Resource Elements
S/T1: Supplemental inventory management personnel trained and ready to sustain medical materiel distribution throughout the response.

Equipment and Technology Resource Elements
E/T1: Ongoing access to physical security measures, such as cages, locks, and alarms, for maintaining security of materiel throughout the distribution process.
E/T2: Ongoing access to primary or backup system(s) to manage inventory.

Function 5: Recover medical materiel and demobilize distribution operations

Function Definition: Recover remaining medical materiel and demobilize distribution operations in accordance with jurisdictional policies, federal regulations, and incident characteristics.

Tasks

Task 1: Identify recovery and demobilization needs. Determine the needs of the jurisdiction to recover medical materiel and scale down medical materiel management operations.

Task 2: Recover medical materiel. Recover remaining medical materiel when demobilizing jurisdictional distribution operations.

Task 3: Return or dispose of unused medical materiel. Account for, return, or dispose of unused and unopened medical materiel.

Task 4: Demobilize distribution operations. Deactivate transportation assets, receiving sites, and personnel.

Task 5: Dispose of biomedical waste or other hazardous material. Dispose of biomedical and other potentially infectious, hazardous, or contaminated materials and waste.

Task 6: Prepare after-action reports and improvement plans. Document within an after-action report (AAR) the strengths and challenges encountered during the medical materiel distribution process and develop a corresponding improvement plan (IP).

Task 7: Implement IPs. Implement an IP based on the identified opportunities for improvement.
Preparedness Resource Elements

P1: (Priority) Procedures in place to demobilize operations, including the release of personnel, closure of distribution sites, recovery of unused medical materiel, and disposal of biomedical waste, according to laws and regulations and in coordination with the health care system and the jurisdictional emergency management agency, as required.

(See Capability 3: Emergency Operations Coordination, Capability 10: Medical Surge, and Capability 15: Volunteer Management)

P2: Procedures in place to store, distribute, dispose of, or return unused or unopened materiel, including pharmaceuticals and durable items, in compliance with federal or jurisdiction-specific regulations and product-specific guidance from the manufacturer.

P3: Procedures in place to dispose of biomedical waste or other hazardous materials with appropriate waste management procedures that comply with applicable laws and regulations, such as disposal of chemical or radiological material.

(See Capability 14: Responder Safety and Health)

P4: Procedures in place to complete an AAR and IP consistent with HSEEP guidance, which may include
  • Critical information required to determine the areas of strength and areas for improvement following an incident
  • A timeline to ensure completion of after-action reporting and development of corrective action or IPs

(See Capability 3: Emergency Operations Coordination)

Skills and Training Resource Elements

S/T1: Personnel trained on medical materiel and equipment recovery according to manufacturer and jurisdictional guidelines.

S/T2: Personnel trained on established procedures for disposal of unused or unopened medical materiel, pharmaceuticals, durable items, and hazardous materials and medical waste.

S/T3: Personnel trained on established procedures for after-action reporting, including the National Incident Management System (NIMS) and HSEEP trainings.

(See Capability 3: Emergency Operations Coordination)