



Medical countermeasure dispensing is the ability to provide medical countermeasures (including vaccines, antiviral drugs, antibiotics, antitoxin, etc.) in support of treatment or prophylaxis (oral or vaccination) to the identified population in accordance with public health guidelines and/or recommendations.

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

- Function 1:** Identify and initiate medical countermeasure dispensing strategies
- Function 2:** Receive medical countermeasures
- Function 3:** Activate dispensing modalities
- Function 4:** Dispense medical countermeasures to identified population
- Function 5:** Report adverse events

Function 1: Identify and initiate medical countermeasure dispensing strategies

Notify and coordinate with partners to identify roles and responsibilities consistent with the identified agent or exposure and within a time frame appropriate to the incident.

Tasks

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

Task 1: Prior to an incident, and if applicable during an incident, engage subject matter experts (e.g., epidemiology, laboratory, radiological, chemical, and biological) including federal partners, to determine what medical countermeasures are best suited and available for the incidents most likely to occur based on jurisdictional risk assessment. *(For additional or supporting detail, see Capability 12: Public Health Laboratory Testing and Capability 13: Public Health Surveillance and Epidemiological Investigation)*

Task 2: Prior to an incident, and if applicable during an incident, engage private sector, local, state, regional, and federal partners, as appropriate to the incident, to identify and fill required response roles *(For additional or supporting detail, see Capability 3: Emergency Operations Coordination and Capability 15: Volunteer Management)*

Performance Measure(s)

At present there are no CDC-defined performance measures for this function.

Resource Elements

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

P1: (Priority) Written plans should include standard operating procedures that provide guidance to identify the medical countermeasures required for the incident or potential incident. Consideration should be given to the following elements:

- Number and location of people affected by the incident, including 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.¹⁰⁶
- Agent or cause of the incident
(For additional or supporting detail, see Capability 12: Public Health Laboratory Testing)
- Severity of the incident
- Potential medical countermeasures
(For additional or supporting detail, see Capability 13: Public Health Surveillance and Epidemiological Investigation)
- Time line for establishing medical countermeasure dispensing operations
- Personnel and staffing mix

Suggested resources

- CDC Emergency Preparedness and Response: <http://emergency.cdc.gov>

PLANNING (P)

Function 1: Identify and initiate medical countermeasure dispensing strategies

Resource Elements *(continued)*

- Federal Emergency Management Agency National Response Framework Incident Annexes: <http://www.fema.gov/emergency/nrf/incidentannexes.htm>
- Radiation Emergency Medical Management website: <http://www.remm.nlm.gov>
- CDC Radiation Emergency website (medical countermeasures): <http://emergency.cdc.gov/radiation/countermeasures.asp>
- Management of Persons Contaminated with Radionuclides Handbook: <http://www.ncrponline.org/Publications/161press.html>
- Medical Management of Radiological Casualties Handbook, Second Edition: <http://www.afri.usuhs.mil/www/outreach/pdf/2edmmrhandbook.pdf>
- Conference of Radiation Control Program Directors: www.crcpd.org

P2: Written plans should be developed by jurisdictional level, multidisciplinary planning groups who meet on a regular basis and contain representatives who would respond during a public health or emergency incident.^{107,108} Planning group members could include the following constituencies:

- Public health departments
- Jurisdictional Emergency Management/Office of Homeland Security
- Law enforcement
- Private businesses (including pharmacies)
- Emergency medical services (both public and private)
- Hospitals and clinics
- Medical professional organizations
- Military installations
- Metropolitan Medical Response System participants
- Volunteer groups (e.g., Red Cross and Salvation Army)
- Radiation-specific group, (e.g., Radiation Control Programs, U.S. Environmental Protection Agency, or State Environmental Agency). (The Conference of Radiation Control Program Directors provides a list of state radiation control programs at <http://www.crcpd.org/Map/RCPmap.html>)
- Private organizations such as retailers with supply chains and package delivery services (e.g., U.S. Postal Service, UPS, FedEx, and DHL)
- U.S. Department of Health and Human Services Regional Emergency Coordinators

Group will meet on a regular basis to review the medical countermeasures plans and ensure participants understand their roles and responsibilities. Evidence of the meetings include the following elements:

- Defined roles and responsibilities
- Sign off agreement of the protocols

(For additional or supporting detail, see Capability 1: Community Preparedness and Capability 3: Emergency Operations Coordination)

S1: Staff participating in dispensing operations should understand jurisdictional medical countermeasure dispensing requirements, plans, and procedures.

- CDC Emergency Use Authorization Online Course: <http://emergency.cdc.gov/training/eua/index.html>
- Receiving, Distributing, and Dispensing Strategic National Stockpile Assets, A Guide for Preparedness, version 10.02, Chapter 12: Dispensing Oral Medications: <https://www.orau.gov/snsnet/guidance.htm>

S2: Staff participating in dispensing operations should understand/be knowledgeable of responder groups' roles and procedures during an incident requiring medical countermeasure dispensing. Suggested trainings include the following:

- Division of Strategic National Stockpile (DSNS) in CDC's Office of Public Health Preparedness and Response *(For additional or supporting detail, see Capability 9: Medical Materiel Management and Distribution)*
 - DSNS extranet: <http://emergency.cdc.gov/stockpile/extranet> *(password protected site)*
 - Key Differences for State and Local Planners (DSNS Emergency Use Authorization Guidance): <https://www.orau.gov/snsnet/guidance.htm>

PLANNING (P)

SKILLS AND TRAINING (S)



CAPABILITY 8: Medical Countermeasure Dispensing

Function 1: Identify and initiate medical countermeasure dispensing strategies

Resource Elements *(continued)*

SKILLS AND TRAINING (S)

- Partnering with Federal Agencies: Closed Point Of Dispensing Option (DSNS): <https://www.orau.gov/snsnet/closedpod.htm>
- Taking Care of Business: An Introduction to Becoming a Closed Point of Dispensing (DSNS): https://www.orau.gov/snsnet/resources/videos/TCB_Video.htm
- Hospitals, Treatment Centers, and Public Health: Partners in Emergency Planning and Response (DSNS): https://www.orau.gov/snsnet/av/HTC_PHP.htm
- Military
 - Public Health Emergency Management Within the Department of Defense: <http://www.dtic.mil/whs/directives/corres/pdf/620003p.pdf>

EQUIPMENT AND TECHNOLOGY (E)

E1: Have or have access to a reporting system. Considerations for the system include the following elements:

- Ability to receive orders for delivery of medical materiel from receiving, staging and storing warehouse to points of dispensing (dispensing locations) or treatment sites
 - Ability to provide status reports to the emergency operations center on distribution and dispensing activities, such as shipments received, stock levels, additional assets needed, number of regimens provided, and any irresolvable problems
 - How, where, and by what system (e.g., e-mail, phone call, fax, or radio message) to request additional resources
- (For additional or supporting detail, see Capability 6: Information Sharing)*

Function 2: Receive medical countermeasures

Identify dispensing sites and/or intermediary distribution sites¹⁰⁹ and prepare these modalities to receive medical countermeasures in a time frame applicable to the agent or exposure.

Tasks

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

Task 1: Assess the extent to which current jurisdictional medical countermeasure inventories can meet incident needs. *(Targeted at state and local jurisdictions) (For additional or supporting detail, see Capability 9: Medical Materiel Management and Distribution)*

Task 2: Request additional medical countermeasures from private, jurisdictional, and/or federal partners using established procedures, according to incident needs. *(For additional or supporting detail, see Capability 9: Medical Materiel Management and Distribution)*

Task 3: Identify and notify any intermediary distribution sites based on the needs of the incident, if applicable. *(For additional or supporting detail, see Capability 9: Medical Materiel Management and Distribution)*

Performance Measure(s)

At present there are no CDC-defined performance measures for this function.

Function 2: Receive medical countermeasures

Resource Elements

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

PLANNING (P)

P1: (Priority) Written plans should include protocols to request additional medical countermeasures, including memoranda of understanding or other letters of agreement with state/local partners. Consideration should be given to the following elements:

- Assessment of local inventory/medical countermeasure caches
- Identification of local pharmaceutical and medical-supply wholesalers
- Identification of a decision matrix guiding the process of requesting additional medical countermeasures if local supplies are exhausted. Matrix should take into account the Stafford Act and U.S. Department of Health and Human Services Regional Emergency Coordinators.
- If jurisdictions decide to purchase their own medical countermeasures, they are required to meet regulatory standards (abide by U.S. Food and Drug Administration standards including current good manufacturing practices, have appropriate Drug Enforcement Administration registrations, and be responsible to fund and track medical countermeasures rotation)

Suggested resource

- U.S. Food and Drug Administration Current Good Manufacturing Practices/Compliance: <http://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/ucm064971.htm>

P2: Written plans should include processes and protocols for medical countermeasure storage. Consideration should be given to the following:

- CDC Technical Assistance Review of Strategic National Stockpile Plans recommendations for receiving medical countermeasures
- Storage maintenance of cleanliness and packaging of controlled substances
- Storage considerations for cold chain management and redundancy systems
- Sites receiving vaccines must meet the requirements of the jurisdiction's vaccine provider agreement

EQUIPMENT AND TECHNOLOGY (E)

E1: Have or have access to a system (hardware and software) to receive and manage inventory; system can be manual or automated.¹¹⁰

- System should be able to track, at a minimum, the name of the drug, National Drug Code, lot number, dispensing site or treatment location, and inventory balance.
- System must also have a backup which can be inventory management software, electronic spreadsheets, or paper.

E2: Have or have access to material required to receive medical countermeasures.

- Material-handling equipment (e.g., pallet jacks, handcarts/dollies, and forklifts)
- Primary and backup cold chain management equipment (e.g., refrigerators and thermometers)
- Ancillary medical supplies
- Administrative supplies

Function 3: Activate dispensing modalities

Ensure resources (e.g., human, technical, and space) are activated to initiate dispensing modalities¹¹¹ that support a response requiring the use of medical countermeasures for prophylaxis and/or treatment.

Function 3: Activate dispensing modalities

Tasks

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

- Task 1:** Activate dispensing strategies, dispensing sites, dispensing modalities and other approaches, as necessary, to achieve dispensing goals commensurate with the targeted population.
- Task 2:** Activate staff that will support the dispensing modality in numbers necessary to achieve dispensing goals commensurate with the targeted population. *(For additional or supporting detail, see Capability 15: Volunteer Management)*
- Task 3:** If indicated by the incident, implement mechanisms for providing medical countermeasures for public health responders, critical infrastructure personnel,¹¹² and their families, if applicable. *(For additional or supporting detail, see Capability 14: Responder Safety and Health)*
- Task 4:** Initiate site-specific security measures for dispensing locations, if applicable. *(For additional or supporting detail, see Capability 9: Medical Materiel Management and Distribution)*
- Task 5:** Inform public of dispensing operations including locations, time period of availability, and method of delivery. *(For additional or supporting detail, see Capability 4: Emergency Public Information and Warning)*

Note: State jurisdictions are expected to ensure attainment of Tasks 1 through 5 by their local communities.

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**.*

PLANNING (P)

- P1: (Priority)** Written plans should include written agreements (e.g., memoranda of agreement, memoranda of understanding, mutual aid agreements or other letters of agreement) to share resources, facilities, services, and other potential support required during the medical countermeasure dispensing activities.¹¹³
- P2: (Priority)** Written plans should include processes and protocols to govern the activation of dispensing modalities.^{114,115}
- Identify multiple dispensing modalities that would be activated depending on the incident characteristics (e.g., identified population and type of agent/exposure). Consideration should be given to the following elements:
 - Traditional public health operated (e.g., open points of dispensing)
 - Private organizations (e.g., closed points of dispensing)
 - Pharmacies
 - Provider offices and clinics
 - Military/tribal
 - Incarcerated population
 - Other jurisdictionally approved dispensing modalities
 - Initiate notification protocols with the dispensing locations. The following information should be determined for the sites:
 - Dispensing site name/identifier
 - Demand estimate (number of people planning to visit the site)
 - Required throughput
 - Staff required to operate one shift
 - Number of shifts of distinct staff

Function 3: Activate dispensing modalities

Resource Elements *(continued)*

PLANNING (P)

- Staff availability
 - Total number of staff required to operate the dispensing location through the whole incident
- Plan for functional needs of at-risk individuals (e.g., wheelchair access for handicapped)
- Identify, assess, prioritize, and communicate legal and liability dispensing barriers to those with the authority to address issues. Consideration should be given to the following elements:
 - Clinical standards of care
 - Licensing
 - Civil liability for volunteers
 - Liability for private sector participants
 - Property needed for dispensing medication

Suggested resource

- Receiving, Distributing, and Dispensing Strategic National Stockpile Assets: A Guide for Preparedness, Version 10.02, Chapter 12: Dispensing Oral Medications:
<https://www.orau.gov/snsnet/resources/SNSPlanningGuideV10.02.pdf>

P3: Written plans should include security measures, processes, and protocols for dispensing sites.^{116,117} Consideration should be given to the following elements:

- Activating and badging security personnel^{118,119}
- Safeguarding dispensing site property
- Protecting dispensing site personnel
- Controlling traffic at and around dispensing sites
- Conducting crowd control at and around dispensing sites
- Collaborating with law enforcement and emergency management

Suggested resource

- CDC Strategic National Stockpile Technical Assistance Review, Section 6:
<https://www.orau.gov/snsnet/guidance.htm>

P4: Written plans should include a list of pre-identified private partners for private sector dispensing, if applicable, and written standard operating procedures that provide guidance for when and how public health must communicate with/notify private sector dispensing locations according to the incident scenario and how private sector dispensing locations can request medical countermeasures.^{120,121}

P5: Written plans should include pre-defined communication messages including a set of messages to be used in the case of a novel agent. Messages should be coordinated from federal to state to local according to jurisdictional protocol.^{122,123,124,125,126} *(For additional or supporting detail, see Capability 4: Emergency Public Information and Warning)*

Suggested resources

- Strategic National Stockpile Public Information and Communication Resources:
<https://www.orau.gov/snsnet/functions/PIC.htm>
- Receiving, Distributing, and Dispensing Strategic National Stockpile Assets: A Guide for Preparedness, Version 10.02, Chapter 6: Public Information and Communications:
<https://www.orau.gov/snsnet/resources/SNSPlanningGuideV10.02.pdf>
- CDC Strategic National Stockpile Technical Assistance Review, Section 5:
<https://www.orau.gov/snsnet/guidance.htm>

Function 3: Activate dispensing modalities

Resource Elements *(continued)*

EQUIPMENT AND TECHNOLOGY (E)

E1: Have or have access to material required to dispense medical countermeasures, including the following:

- Dispensing sites materiel-handling equipment (e.g., pallet jacks, handcarts/dollies, and forklifts)
- Cold chain management equipment
- Personal protective equipment
- Ancillary medical supplies
- Administrative supplies
- Specialized items (e.g., scales for weighing children, mixing equipment for pediatric portions, and Broselow tapes), if necessary

E2: Have or have access to systems to support the development of staffing models. The following models are suggested prototypes for consideration:

- RealOpt: <http://www2.isye.gatech.edu/medicalor/research.htm#realopt>
- Bioterrorism and Epidemic Outbreak Response Model: <http://www.ahrq.gov/research/biomodel.htm>

(For additional or supporting detail, see Capability 15: Volunteer Management Capability)

Function 4: Dispense medical countermeasures to identified population

Provide medical countermeasures to individuals in the target population, in accordance with public health guidelines and/or recommendations for the suspected or identified agent or exposure.

Tasks

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

- Task 1:** Maintain dispensing site inventory management system to track quantity and type of medical countermeasures present at the dispensing site.
- Task 2:** Screen and triage individuals to determine which medical countermeasure is appropriate to dispense to individuals if more than one type or subset of medical countermeasure is being provided at the site. *(For additional or supporting detail, see Capability 10: Medical Surge)*
- Task 3:** Distribute pre-printed drug/vaccine information sheets that include instructions on how to report adverse events.
- Task 4:** Monitor dispensing site throughput and adjust staffing and supplies as needed in order to achieve dispensing goals commensurate with the targeted population.
- Task 5:** Document doses of medical countermeasures dispensed, including but not limited to: product name and lot number, date of dispensing, and location of dispensing (e.g., address and zip code).
- Task 6:** Report aggregate inventory and dispensing information to jurisdictional authorities at least weekly during an incident, but potentially more frequently based on incident needs.
- Task 7:** Determine the disposition of unused medical countermeasures within the jurisdictional health system according to jurisdictional policies.

Note: State jurisdictions are expected to ensure attainment of Tasks 1 through 7 by their local communities.

Function 4: Dispense medical countermeasures to identified population

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**.

PLANNING (P)

P1: (Priority) Written plans should include processes and protocols to govern the dispensing of medical countermeasures to the target population.¹²⁷

- Protocol for screening and triaging patients, taking into consideration an assessment of patient characteristics (e.g., age, weight, clinical manifestations, available medical history, and drug or food allergies, assessment of radiation exposure duration and time since exposure, presence of radioactive contamination on the body or clothing, intake of radioactive materials into the body, identification of the radioactive isotope, removal of external or internal contamination) to determine the medical countermeasure to dispense
- Ensure that the permanent medical record (or log/file) of the recipient indicates the following information as deemed necessary:
 - The date the medical countermeasure was dispensed
 - Information on the medical countermeasure including, but not limited to, product name, national drug control number, and lot number
 - The name and address of the person dispensing the medical countermeasure. Federal dispensing law requires: name/address of dispenser, prescription number, date of prescription, name of prescriber, name of patient (if stated on prescription), directions for use, and cautionary statements.
 - The edition date of the information statement (e.g., pre-printed drug information sheets) distributed
- Ensure medical countermeasure recipient receives the information sheet matching the medical countermeasure dispensed
- Data recording protocols to report the data at an aggregate level to state/federal entities. Considerations should be given to population demographics (e.g., sex, age group, and if an at-risk individual) and dispensing information (e.g., medical countermeasure name, location, and date)

P2: Written plans should include protocols for the storage, distribution, disposal, or return of unused medical countermeasures, including plans for maintaining integrity of medical countermeasures during storage and/or distribution within the jurisdictional health system.

P3: Written plans should include protocols to request additional staffing and supplies if necessary to the incident. (For additional or supporting detail, see *Capability 15: Volunteer Management*)

P4: Written plans should include dispensing modality security measures, processes and protocols.^{128,129} Consideration should be given to the following elements:

- Activating and badging security personnel^{130,131}
- Safeguarding dispensing site property
- Protecting dispensing site personnel
- Controlling traffic at and around dispensing sites
- Conducting crowd control at and around dispensing sites
- Collaborating with law enforcement and emergency management

Suggested resource

- CDC Strategic National Stockpile Technical Assistance Review, Section 6:
<https://www.orau.gov/snsnet/guidance.htm>



CAPABILITY 8: Medical Countermeasure Dispensing

Function 4: Dispense medical countermeasures to identified population

Resource Elements *(continued)*

SKILLS AND TRAINING (S)

S1: Public Health staff should be trained on jurisdictional medical countermeasure dispensing systems (e.g., registry or database) and inventory management protocols.^{132,133}

- Medical countermeasures dispensing training offered by the state/local jurisdictions
- Extranet for the Division of Strategic National Stockpile in CDC's Office of Public Health Preparedness and Response: <http://emergency.cdc.gov/stockpile/extranet> (*password protected site*)
- National Association of County and City Health Officials, Advanced Practice Centers Toolkits: <http://www.naccho.org/toolbox/>

EQUIPMENT AND TECHNOLOGY (E)

E1: Information sheets (e.g., drug or vaccine information sheets) for the medical countermeasure dispensed. Consideration should be given to size of the identified population and languages identified within the identified population.

E2: Data forms and information sheets required by an Emergency Use Authorization for the medical countermeasure dispensed to provide to recipients.

E3: Have or have access to system to track dispensing and manage inventory; system can be manual or automated.^{134,135} System must also have a backup which can be inventory management software, electronic spreadsheets, or paper.

Function 5: Report adverse events

Report adverse event notifications (e.g., negative medical countermeasure side effects) received from an individual, healthcare provider, or other source.

Tasks

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

Task 1: Activate mechanism(s) for individuals and healthcare providers to notify health departments about adverse events. *(For additional or supporting detail, see Capability 6: Information Sharing)*

Task 2: Report adverse event data to jurisdictional and federal entities according to jurisdictional protocols. *(For additional or supporting detail, see Capability 6: Information Sharing)*

Note: Tasks 1 and 2 apply to all jurisdictions; states are expected to ensure attainment of Tasks 1 and 2 by their local communities.

Performance Measure(s)

At present there are no CDC-defined performance measures for this function.

Function 5: Report adverse events

Resource Elements

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

PLANNING (P)

P1: (Priority) Written plans should include processes and protocols to govern reporting of adverse events.¹³⁶ The following items should be considered in the plans:

- Guidance and communications messages/campaign that articulates the importance of adverse reporting regardless of suspected cause
- Process to ensure individuals receive the information sheet about potential adverse events of the medical countermeasure dispensed and how to report adverse events
- Triage protocols when receiving notifications of adverse events
- Protocols when receiving notifications of adverse events. Information required to document adverse events includes the following:
 - Patient, provider, and reporter demographics
 - Adverse event
 - Relevant diagnostic tests/laboratory data
 - Recovery status
 - Vaccine(s)/pharmaceutical(s) received, including receipt location, date, vaccine/pharmaceutical type, lot number, and dose number
- Utilize existing federal and jurisdictional adverse event reporting system, processes and protocols

P2: Written plans should include memoranda of agreement, memoranda of understanding, mutual aid agreements, letters of agreement and/or contracts with other entities (e.g., agencies and jurisdictions) to support activities and share resources, facilities, services, and other potential support required for responding to, reporting, and/or investigating adverse events. *(For additional or supporting detail, see Capability 1: Community Preparedness)*

SKILLS AND TRAINING (S)

S1: (Priority) Public Health staff should be trained on federal as well as their jurisdiction's adverse event reporting system, processes and protocols.

Suggested systems for training include the following:

- MedWatch: <https://www.accessdata.fda.gov/scripts/medwatch/medwatch-online.htm>
- Vaccine Adverse Events Reporting System: <https://vaers.hhs.gov>
- Adverse Event Reporting System, U.S. Food and Drug Administration: <http://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/Surveillance/AdverseDrugEffects/default.htm>
- Drug Abuse Warning Network: <https://dawninfo.samhsa.gov/default.asp>

EQUIPMENT AND TECHNOLOGY (E)

E1: Have access to national systems to report adverse events. Current national systems include the following:

- Vaccine Adverse Event Reporting System: <https://vaers.hhs.gov>
- Adverse Event Reporting System, U.S. Food and Drug Administration: <http://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/Surveillance/AdverseDrugEffects/default.htm>
- Drug Abuse Warning Network: <https://dawninfo.samhsa.gov/default.asp>