





Lesson Five – SNS Materiel Management Considerations

SNS Learning Team
April 16, 2019

Purpose

- To identify critical medical materiel management capabilities and processes at delivery sites to enhance product throughput during the distribution of SNS assets.



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Learning Objectives

At the end of this lesson, participants will be able to:

- Describe the steps in the inventory management process
- Describe inventory management considerations to improve medical materiel flow from the receipt, stage and store (RSS) warehouse to the regional distribution site (RDS), points of dispensing (PODs), and other points of care



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Describe the Steps in the Inventory Management Process

The Inventory Management Process

- Mass distribution and dispensing scenario
- PODs, hospitals and other points of care need:
 - Proper resources...
 - Right quantities...
 - Manageable configurations...
 - Delivered in clinically relevant timeframes...
 - And a system to track MCMs from arrival until provided to those who need them





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Inventory Management Process

"The jurisdiction's inventory management system (IMS) should be able to track the chain of custody of medical countermeasures (MCMs) and maintain records on every bottle of pills or vaccine, including items in cold chain management, as it moves throughout the jurisdiction and into the hands of those who need it"

Receiving, Distributing and Dispensing Strategic National Assets: A Guide to Preparedness, Version 11



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Planning for the Event

- Building the inventory management team
- Includes those responsible for:
 - Senior level planning and management
 - Order management
 - RSS staff
 - Other product handling staff throughout the inventory management system



Planning for the Event

- Developing inventory management processes
 - What IMS?
 - Push orders?
 - Whole pallet shipments?
 - Cross docking procedures?
 - Order approval procedures?
 - Data exchange procedures?
- Training and exercising staff



Planning for the Event

- Adopting or developing the IMS
 - Manual?
 - Automated?
 - Self-developed?
 - Commercial off the shelf?
- Coordinating locations where medical materiel will be sent
- Analyzing populations served at each site
- Developing throughput requirements



Planning for the Event

- Inventory Management and Tracking System (IMATS)
 - Need based upon 2009 H1N1 Pandemic
 - Inventory management system
 - Use it free of charge!
 - Creates visibility of inventory levels at:
 - ✓ State
 - ✓ Local
 - ✓ Dispensing sites
 - Access IMATS at: <https://www.cdc.gov/cts/imats/index.html>



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Planning for the Event

- Data Exchange Requirements
 - States report inventory counts during events
 - Use IMATS or Inventory Data Exchange
 - Annual requirements
 - ✓ Receive inventory request file
 - ✓ Generate inventory report file
 - ✓ Send report to DSNS
 - ✓ Receive DSNS message reporting successful processing



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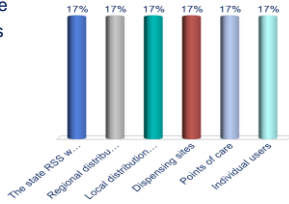
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Knowledge Check 1 & 2

Inventory management begins with receiving product and **SHOULD** end at which level? (Select one)

- a. The state RSS warehouse
- b. Regional distribution sites
- c. Local distribution sites
- d. Dispensing sites
- e. Points of care
- f. Individual users



DSNS requires states to use IMATS for data exchange: (Select one)

- a. True
- b. False



The Inventory Management Process



Figure 4-1: Inventory management process

Step 1 - Mobilizing / Activating Delivery Sites

- Activating at the state and local level is key
- DSNS has enhanced response speed
- Delivery to some sites within four hours
- Delivery sites need become operational very, very quickly



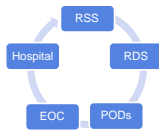
Step 1 - Mobilizing / Activating Delivery Sites

- Activate call down lists
- Rapidly operationalize:
 - RSS Warehouse site
 - RDS
 - PODs
 - Other points of care
- Provide just-in-time-training



Activating Staff and Resources

- Activates IMS
 - Assesses on-hand inventory
 - Advises incident command
 - Monitors local requests
 - Monitors state inventory levels "downstream"



RSS Warehouse Manager

- RSS warehouse manager responsibilities:
 - Facility management
 - Warehouse safety and warehouse personnel administration
 - Provision of resources in support of RSS operations

Team Lead Supervisor

- Team lead supervisor responsibilities:
 - Acts as the leader on the floor
 - Directs the actions of the team leads
 - Assists the RSS warehouse manager

Inventory Management Staff Responsibilities

- Verifying delivery addresses
- Managing resource issues
- Tracking the type, quantity, and location of inventory
- Entering information into the IMS
- Processing apportionment orders

Inventory Management Staff Responsibilities

- Processing orders and reorder requests
- Directing staff to pick items to fill orders
- Monitoring / reconciling inventory levels
- Recording locations where SNS-supplied recoverable items are sent
- Tracking recovery of SNS-supplied items

Step 2 – Ordering / Requesting Resources

- Determining needs throughout the impacted area
 - Directly funded city
 - State
 - Region
 - County
- Use push or pull
- Processing orders
- Validating orders – detailed later






Knowledge Check 3 & 4

Waiting for customer orders is faster than pushing items out based upon demographic data: **(Select one)**


a. True
b. False



Response	Percentage
True	50%
False	50%

Despite the need for speed, be sure to validate incoming orders at the RSS warehouse: **(Select one)**

a. True
b. False



Response	Percentage
True	50%
False	50%

Step 3 – Approving / Validating Requests

- Review externally generated orders
- Approve, modify or disapprove
- Communicate approval / disapproval
- Work with ordering site to solve discrepancies
- **May require** apportioning some products if available quantities are limited



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Step 4 - Receiving Inventory

- Federal government signs over to the state to initiate custody transfer
- IMS tied into process
- Mirrors actions on floor within system
- Manual or automated
- Advanced shipping notice



Receiving Team

- Receiving team responsibilities:
 - Offloading product into receiving staging) area **or crossdocking product directly to outgoing truck or staging area**
 - Inspecting materiel and validating incoming shipping documents
 - Establishing inventory control



Receiving Palletized Products

- Sign for materiel
- Initially place at staging area
- Establishing inventory control:
 - What?
 - ✓ DSNS Managed inventory (MI)
 - ✓ Other sources besides DSNS
 - How much?
 - Condition?



Receiving Containerized Products

- Easy – No handling equipment needed
- Containers numbered and color coded
- Establishing inventory control
 - DSNS provides data file
 - IMATS – Data file moved to state "instance"
- Controlled substances - DEA form 222
- Unload two at a time – MAX
 - Single inventory control point



Step 5 - Storing Inventory



- Called "putaway"
- Mirrors putaway team's actions on the floor
- Storage usually temporary - Cross docking mediates need for storing



Putaway (Storing) Team

- Who designates putaway location?
 - Inventory control?
 - Receiving?
 - Putaway?
 - RSS leadership?
- Putaway completed
- Putaway verified - Inventory control notified
- Controlled items/cold chain management




Knowledge Check 5

The IMS does not need to mirror actions on the warehouse floor: **(Select one)**


a. True
b. False



Response	Percentage
True	50%
False	50%

Step 6 - Picking Orders

- Tied into ordering process
- Can be based upon push orders
- Can be based upon requests
- Manual process – very difficult
- Can be automated



Picking Team

- Picking team responsibilities:
 - Obtaining a pick list / pick slip
 - Locating and selecting material from list
 - Building and marking pallets
- Can integrate QA / QC function here



Picking Team

- This is HARD work!
- Select personnel *based upon physical conditioning*
- 2-3 persons per team
- Stretch wrap pallet?



Picking – Building Pallets

- Review pick list
- Get pallet(s) and material handling equipment
- Go to locations
- Stack items on pallets
 - Heavy items on bottom and middle
 - Do not have overhang
 - How high to build?
 - When to wrap?
 - More than one pallet? Mark "1 of 2" etc



Step 7 - Shipping Orders

- May be part of warehouse team or separate distribution team
- Manual or automated
- Packing list versus bill of lading
 - Packing list detailed
 - Bill of lading contractual document



Shipping Team

- Shipping team responsibilities:
 - Staging area operations
 - ✓ Quality Assurance / Quality Control?
 - ✓ Wrap Pallets?
 - ✓ Marking Pallets?
 - Creating shipping documents and providing them to driver
 - Loading pallets into trucks - LIFO
 - Ensuring driver has route



SNS TourSolver™

- Evaluation, Optimization, and Simulation Routing Decision-Making Tool
 - Number and size of delivery vehicles
 - Quantities delivered to each stop
 - Number of stops
 - Multiple deliveries per stop
 - Throughput of each stop
 - Delivery time windows
 - Loading and unloading times



Step 8 – Dispensing Medical Countermeasures

- Mass dispensing addressed extensively later in course
- Dispensing locations depends on scenario
 - Could be at PODs
 - Could be at hospitals or treatment centers
- State IMS provides visibility of medical materiel from RSS to dispensing sites or other points of care.



Step 9 - Demobilizing

- Reconciling inventory records
- Recovering SNS equipment
 - Containers
 - Ventilators and support equipment
 - Cold-chain systems
 - Anything that plugs into a wall, runs on batteries or has wheels
- Put the site into the condition you found it





Inventory Management Considerations

Product Handling

- Refers to paper trail enforced by federal code
- State pharmacy boards may have additional requirements
- Certain products require special handling:
 - Cold chain products (refrigeration / freezer)
 - ✓ Vaccines and Other medications
 - Drug Enforcement Agency (DEA) Schedule I - V
 - ✓ Controlled substances (DEA Form 222)
 - ✓ <https://www.dea.gov/druginfo/csa.shtml>



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Special Considerations for DEA Scheduled Drugs

- Containerized and palletized Inventory
 - Morphine – Schedule II
 - Diazepam (Valium) and midazolam (Versed) – Schedule IV
- Drug Enforcement Agency (DEA) Form 222 – Schedule II
 - Receiving jurisdictions issues form
 - ✓ One copy to regional DEA Office
 - ✓ One copy to DSNS
 - ✓ One for local record
- DSNS Form 1237A – Schedule II and IV



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Knowledge Checks 6 - 8

Chain of custody only applies to federal regulations:

(Select one)

- a. True
- b. False



Only vaccines and controlled items have special handling needs:

(Select one)

- a. True
- b. False



The supplier of controlled substances always provides the DEA Form 222 to transfer the substance to another DEA registrant:

(Select one)

- a. True
- b. False



Summary

- Inventory management begins when product is received at the state and ends when provided to the end user
- State RSS sites need to be operational as soon as possible
- Pushing product out from the RSS is faster than waiting for orders to arrive
- Incoming orders need to be validated

Summary

- Storage should usually be temporary – cross docking mediates the need for storing
- When appropriate, send full pallets of medical materiel
- Your IMS should be able to track returnable items
- Chain of custody applies to federal and state regulations

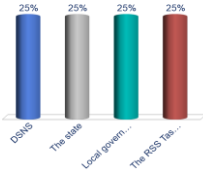


RSS Game



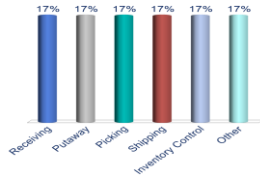
Who is responsible for establishing and running the state RSS?
(Choose one)

- a. DSNS
- b. The state
- c. Local governments
- d. The RSS Task Force



Where might you assign a public health nurse with ten years of emergency room experience (Select One)


- a. Receiving
- b. Putaway
- c. Picking
- d. Shipping
- e. Inventory Control
- f. Other



(True or False) A separate quality assurance / quality control team will increase the speed of your response? (Choose one)

- a. True
- b. False





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QUESTIONS?
