U.S. Strategic National Stockpile: Strategies for Influenza Mitigation

Steven A. Adams, MPH
Deputy Director
Division of Strategic National Stockpile
Centers for Disease Control and Prevention

Influenza A (H1N1) Update Meeting – July 2, 2009
Presentation Overview

• Background on SNS
• SNS Influenza Formulary
• SNS Influenza Materiel Response Planning
• 2009 Influenza A (H1N1) Materiel Response
• SNS Lessobns Learned
Strategic National Stockpile Mission:

Deliver critical medical assets to the site of a national emergency

- Work within a cabinet level (PHEMCE) requirements process to assure we have the most appropriate countermeasures
- Create pathways to move the materiel to the area of need in the timeframe that is clinically relevant
- As initial US medical response is local, assure integration with local planning
- Provide technical assistance to assure that state/local partners who receive SNS assets are ready to effectively use them
- Maintain materiel in a manner that assures long term viability
Background

- Program created in 1999
- >$3.5 Billion portfolio of antibiotics, medical supplies, antidotes, antitoxins, antivirals, vaccines and other pharmaceuticals
- Network of strategically located repositories
- Commercial partnerships for storage, maintenance, and rapid transport
- Federal partnerships for purchasing and security
- Provides extensive training and technical assistance to local officials
- Integrated into broader national Public Health preparedness effort
Formulary Priorities

■ CBRNE*
  ■ Biological - Smallpox, anthrax, botulism, viral hemorrhagic fevers, plague & tularemia
  ■ Chemical – Nerve Agent
  ■ Radiological/Nuclear

■ Non CBRNE
  ■ Pandemic Influenza

*Chemical, Biological, Radiological, Nuclear, Explosive
SNS Pandemic Influenza Formulary
National Antiviral Strategy

Total Antiviral Procurement Goal:

81M - 5 Day Treatment Regimens
- Treatment for 25% of US population (75M regimens)
- Containment reserve (6M regimens)

Joint Federal/State Strategy
- 31M antiviral regimens in state level stockpiles
- 50M antiviral regimens in SNS
Antivirals in SNS

• Prior to Influenza A (H1N1) Response:
  • 50M antiviral regimens in SNS
    • 6M regimens - Strategic Reserve (containment)
      – Up to 2.5M for International Containment
      – Domestic Containment
    • 44M regimens for distribution to 62 project areas*
    • 80:20 ratio - oseltamivir: zanamivir

*50 States, 6 Territories, New York, Los Angeles, Chicago, Washington DC.
Additional Influenza Materiel in SNS

- Respiratory Protective Devices
  - ~100M N95 Respirators
  - ~50M Surgical Masks
- Other PPE
  - Gloves
  - Gowns
  - Face shields
- IV antibiotics: Vancomycin, Levaquin
- Ventilators
- Syringes/Needles
SNS Influenza Response Planning
Organizational Roles

- Public Health Agencies Lead US Government Effort
- Division of Responsibilities
  - Federal (HHS, CDC)
    - Acquisition, Storage, and Deployment of Stockpile
    - Strategic Planning, Guidance, and Direction
  - State
    - Tactical Prioritization
    - Distribution
  - Local
    - Distribution and Dispensing
Planning Assumptions

- Intended for Pandemic Influenza Only, Not Seasonal Use
- Intended for Treatment, Not Prophylaxis
- National Response Will Supplement But Not Replace Commercial Supply and Distribution
- Assets Will Deploy Prior to Need (Symptomatic Patients)
- “Push” to 62 Project Areas vs Need Based Ordering
- Allocation Based on Population
- Commercial Transport (Air and Ground)
- 4 Week Delivery Window
Countermeasure Deployment

• **Primary Strategy - Metered Package Pro Rata Countermeasure Deployment**
  – Part 1: 25% of allocated quantities
  – Part 2: Additional 25% of allocated quantities
  – Part 3: Remaining 50% of allocated quantities

• **Alternative Strategies – Sequential or Partial Deployment**
Countermeasure Deployment Variables

- Antiviral drugs
  - If Indications of Resistance, Have the Flexibility to Hold in SNS

- Ventilators
  - Very Limited Resource with Limited Manufacturing Surge Capacity
  - Maintain Flexibility to Hold From Initial Shipments
SNS Pandemic Planning Challenges

- Federal Challenges
  - Large Physical Quantity of Product (>40,000 pallets)
  - Multiple Strategic Storage Locations
  - Delivery of Assets to 62 Project Areas Simultaneously
  - Coordination of Potentially Scarce Transport Resources
  - Potential Impact of Absenteeism or State Border Closings
SNS Pandemic Planning Challenges

State Challenges

- Intrastate Distribution to Local Facilities
- Push vs Pull strategies
- “Just In Time” Infrastructure
  - States must have RSS (Receive, Stage, and Store) sites available to accept SNS assets
- Adapting All Hazards Framework of Existing SNS Plans and Systems
- Support to Hospitals and Medical Care Facilities Rather Than Ad-Hoc “POD” Based Dispensing
Assistance to State/Local Health Authorities

Guidance provided on:

- State/Local Stockpiling – identify items
- Storage Space Requirements
- Planning for Countermeasure Distribution
  - Formal planning guidance (Version 10)
  - Model commercial contracts for storage and distribution
  - SNS training courses
  - Exercise planning guidance (flu specific) + update
  - State and local technical assistance
  - Surveys/discussions with States regarding distribution plans
2009 Influenza A(H1N1) Materiel Response
Influenza A (H1N1)

SNS Response

• Decision Made to Deploy 25% of SNS Flu Assets
• >10,000 Pallets Shipped to 62 Project Areas Over 7 days
  – ~11M regimens antivirals
  – ~25M N-95 respirators
  – ~12.5M surgical masks
  – gloves, gowns, and face shields
• Support to Mexico
  – Antivirals
  – Logistics Consultation
2009 Influenza A(H1N1) Materiel Response – Lessons Learned
Lessons Learned

• Nature Didn’t Follow the Plan
  – Assumptions around expected lead time optimistic
  – Modest overall use of deployed materiel created unanticipated State/Local storage requirement

• The Plan Worked Anyway
  – Successful 7 day “push” to 62 Project Areas
  – Successful sub-distribution to local hospitals and health authorities
  – Years of Federal/State/Local public health response planning and exercising paid off
Ongoing Preparations

- SNS Continues to Procure Critical Assets
- Continue to Refine and Improve Distribution Strategies to Support Domestic and International Needs
- SNS Continues to Provide Guidance and Technical Assistance to States
- Collaboration with FDA to Address Extended Expiration Dating Where Appropriate
- Expanded CDC Grant Support to Project Areas to Enhance Capabilities
- Enhance Visibility of State/Local Use Rates
Questions?

http://emergency.cdc.gov/bioterrorism/

http://emergency.cdc.gov/stockpile/