2009 H1N1 – Accomplishments and Critical Lessons Learned

Defense Health Board
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Overall Independent Review of DoD Efforts

- DoD engagement predates publishing of the National Strategy for Pandemic Influenza
- DoD partnered in National pandemic influenza planning with other Federal Departments and Agencies
- DoD met mission requirements while operating in a pandemic environment, without mission degradation
- DoD adapted to changes to disease characteristics and resources
The Numbers: 2009 H1N1 Pandemic

- Number of beneficiaries seeking care for flu-related symptoms was 4 times higher than the prior flu season
  - Ambulatory visits for flu up
    - 5.3 times in direct care system and 3.2 times for purchased care
  - ER visits up
    - 5.2 times in direct care system and 8.5 times for purchased care
  - Inpatient admits up
    - 5.1 times in direct care system and 2.8 times for purchased care
- Cost to DoD $156.7M
  - 71% of cost for Active Duty and Family Members
- DoD Deaths due to flu
  - 2 Active Duty
  - 6 Family Member
  - 3 Retiree
Trevor Lin- October 30, 2009
Previously Healthy 7 year old
3rd day of flu like illness developed worsening symptoms
Brought to the regions premier military medical center with shortness of breath, fever 103.7
Diagnosed with “croup”
Next morning he was better
By the afternoon was walking unsteadily and was found to be cyanotic.
Rushed to the nearest ER.
Pronounced dead 2 hours later
Later diagnosed with 2009 H1N1
DoD, CoCOM, Service, and Installation plans were in place before the emergence of a novel influenza strain

- Primarily based on an H5N1 like pandemic threat

Initial confusion between WHO phases, USG stages

- Some Combatant Command plans used USG stages for trigger points.
- Confusion when Federal government elected to use WHO phases exclusively
- Medical community quickly adapted from H5N1 model to 2009 H1N1

Policies largely focused on uniformed personnel

- Limited inclusion of civilian personnel in most DoD policies
- Civilian Personnel Office issued guidance and policy to meet identified gaps

Difficulty delineating who was essential

Plans and policies rapidly modified to meet new requirements
Workplace Policies

• The DoD leveraged Office of Personnel Management and OSHA guidelines to aid in implanting workforce protection policies
• No DoD unified policy relating to civilian employee absentee monitoring or reporting
• Telework limited due to unavailability of compatible laptop computers
Surveillance

- DoD influenza surveillance system was a key component in initial disease recognition and surveillance efforts
  - Many national pandemic surveillance activities were focused outward
  - DoD pandemic surveillance was focused both globally and domestically
- DoD identified the first 4 cases of H1N1
  - Represented 3 different components of the DoD influenza surveillance program
- DoD surveillance/public health community put on “alert” with first identification of a novel influenza strain
- Continued to provide timely information to DoD leadership
  - Frequency of data request from leadership to surveillance community viewed to be excessive
- AFHSC fostered a communication network between laboratory, public health community and HA to identify issues and quickly adapt policy to meet ongoing requirements
Laboratory Assets

- **Limited number of FDA approved diagnostic platforms**
  - Due to CDC choice of diagnostic platform for FDA approval
  - FDA Emergency Use Authorization for ABI 7500 Fast platform enabled DoD central labs to rapidly scale up capacity
    - USAFSAM sampling capacity increased from 5K for a typical flu season to 23K samples
- **Initial sampling targeted confirmation of disease in local populations**
  - Later used to confirm disease in hospitalized and high-risk populations
  - Labs work load increased due to line commanders desire for wide spread testing despite medical guidance for targeted testing
- **Assistance to States was limited**
  - Initial DoD surge requirements
  - Lack of use of Economy and Stafford Acts
Antivirals

• Oseltamivir represented bulk of DoD stockpile
  – 8M treatment courses
    • 1M @ Medical Treatment Facilities
    • 7M @ Depots

• Antiviral policy mirrored CDC with exception of expanded use to maintain operational capability
DoD Antiviral Policy

- Medical discretion for use
- Limited outbreak prophylaxis
- Provide to all those hospitalized with confirmed or suspected disease
- Provide to all those who have high-risk condition and have suspected or confirmed disease or suspected or confirmed exposure
- No high-risk condition and MILD Symptoms – don’t necessarily need to treat
- Operational requirements may mandate treatment based on mission and not medical risk
Antiviral Use

• Limited use of antiviral stockpiles
  – Nearly all antivirals prescribed were from local seasonal stocks, not local (free) pandemic stockpiles
  – Pandemic stockpiles at each military medical treatment facility largely unused
    • Service and Combatant Commander had use and release authority for local stockpiles
Antivirals – the way ahead

• Predominance of oseltamivir in DoD stockpile was based on a H5N1 threat

• Supplemental funding obtained to:
  – Replace expiring oseltamivir
  – Add rimantadine to stockpile for multidrug therapy
  – Increase zanamavir local and strategic stockpiles
  – Funding flexibility would permit addition of new antivirals if necessary
• Consistent focus of concern across DoD sectors
Vaccine Allocation to DoD

• DoD vaccine allocation involved 3 different HHS-controlled programs
  – Operational vaccine – mission-related (2.7M)
  – State Allocation Program – HCW and dependents
  – Federal Employee program – DoD civilians and OCONUS dependents (1M)

• 3 different programs led to local confusion as each program had specific target groups and HHS allocation priorities
May 2009 - National vaccine allocation prioritization plan:
- 700K tier 1
- 650K tier 2
- 1.5M tier 3
- Plan assumed high severity – USG abandoned plan due to low disease severity

June 2009 - DoD agreed to purchase 2.7M doses with delivery of 1M doses early October followed by 1.7M doses late October

September 2009 - DoD was notified that vaccine projections were erroneously high and allocation would be slower than originally projected
- Began to receive vaccine in late October
- Vaccine delivery notification usually 24-48 hrs prior to receipt
- Completed 2.7M dose delivery December 25, 2009
Vaccine Prioritization

- First to receive operational targeted vaccine:
  - Deployed and Deploying (CENTCOM and USFK)
  - Health Care Workers
  - Large training venues
  - Ships-a-float

- USCENTCOM/USFK received first 3 DoD vaccine allocations
  - USCENTCOM immunization rates did not reach 90% until December
    - More staggered vaccine delivery could have accelerated overall DoD immunization rate

- Service definitions of “deploying” and “critical personnel” varied

- Service and CoCOM vaccine requirements exceeded end strength
Vaccine Delivery vs. Administration

Operational Vaccine Availability & AD DoD Vaccination Rates

- 405,000 doses received but not administered
- Goal 90% by 1 April 10

Source: Vaccination Rate (AFHSC Weekly Reports and USAFSAM Weekly Reports)
Cumulative Operational Vaccine Received at Depot and Shipped to MTFs

-300,000.00
200,000.00
700,000.00
1,200,000.00
1,700,000.00
2,200,000.00
2,700,000.00

To MTF
To Depot

23-Oct
30-Oct
6-Nov
13-Nov
20-Nov
27-Nov
4-Dec
11-Dec
18-Dec
25-Dec
Influenza Like Illness Rates and Vaccine Delivery
(Cumulative % Vaccine Received by Depot)

Outpatient and Hospitalized ILI

- (0-14.5%)
- (15-44%)
- (55-100%)
Vaccine Administration Delays

• After receipt at DoD supply depot, amount that could be shipped was limited to approximately 100K doses/week
  – DLA used regular work week to include holiday schedules
• Delay in administration after treatment facilities obtained vaccine
• Vaccine availability lagged behind peak in demand
2009 H1N1 Vaccine – Dependents

- DoD received vaccine via the National Pandemic Vaccine State Allocation Program
  - Each installation received vaccine via HHS allocations to States for dependents, HCW and retirees on a pro-rata basis
    - DoD policy made this vaccine available to AD members with HR medical conditions
    - Vaccine was available for dependents before AD
    - HHS rules of engagement prohibited cross use of vaccines
    - Some States, recognizing that AD members were not being covered provided extra vaccine to meet this gap while other States attempted to deny vaccine for dependents
    - Documentation requirements were daunting for some installations especially if located near state borders
    - Like the civilian community, vaccine demand occurred early while vaccine availability was delayed
  - DoD vaccination rates for dependents unavailable due to Service-specific tracking systems
• Part of HHS-sponsored, CDC-managed vaccine program – 3M total doses
  – DoD has 1/3 of all USG civilian employees
  – Agreed to use DoD logistic assets to receive and distribute our portion of vaccine (1M doses)

• HHS denied DoD request for vaccine targeting OCONUS dependents
  – CDC agreed to increase DoD share of vaccine from this program to cover OCONUS dependents
  – CDC very responsive to meet DoD OCONUS dependent requirement
Vaccine to Department of State and U.S. Coast Guard

- HHS directed DoD to provide vaccine to Department of State and U.S. Coast Guard
- Vaccine came from DoD operational stockpile
- Vaccine to State Department delayed due to regulatory requirements
- USCG: 50K doses
- DOS: 50K doses
Each Service has its own vaccine tracking system
  • Less than optimal integration of the three vaccine tracking systems

Only the Air Force system effectively captures dependent/retiree immunizations

Use of non-electronic immunization administration records resulted in a delay in data entry with an unknown degree of lost data

Reservist and National Guard could receive vaccine from civilian sources
  • Transcription of immunization status to DoD databases had variable compliance
### H1N1 Immunization Compliance
(March 30, 2010)

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Communication

- Use of the H1N1 watch board and the MILVAX web portal were effective communication tools to inform Commanders, Service Members and DoD stakeholders including beneficiaries.
- Hits:
  - DoD Watch Board 8M from April - Jan
  - MILVAX web site 3.5K hits per day
- Use of flash message system targeting pharmacists effective in getting time-sensitive information out to providers
- Installation-based call centers
- Communication variable at local level regarding vaccine availability
Stuff We Can Fix

• Funding
  – Supplemental funding received for purchase of
    • Antiviral medications (zamamivir, rimantadine and X)
    • Personal Protective Equipment (replace and augment existing supplies)
    • Surveillance (increase capacity)
  – Request for POM funding for enhanced surveillance, maintenance of existing stockpiles and ongoing antiviral and vaccine acquisition
    • Overall program in jeopardy if funding not received
• Importance of DoD held/owned vaccine supply recognized – funding gap identified
• Antiviral portfolio being expanded
• Uniform immunization tracking system being developed
• Using the DoD PI plan, DoD planning is being adjusted to encompass all bio-threats to permit a more flexible response to a wide array of threats
Sometimes it all a matter of what you buy!
Response Options – the choice is ours
Questions