



2009 H1N1 – Accomplishments and Critical Lessons Learned

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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



One is Too Many

- 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



Trevor Lin



Planning

- 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



Work-place 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

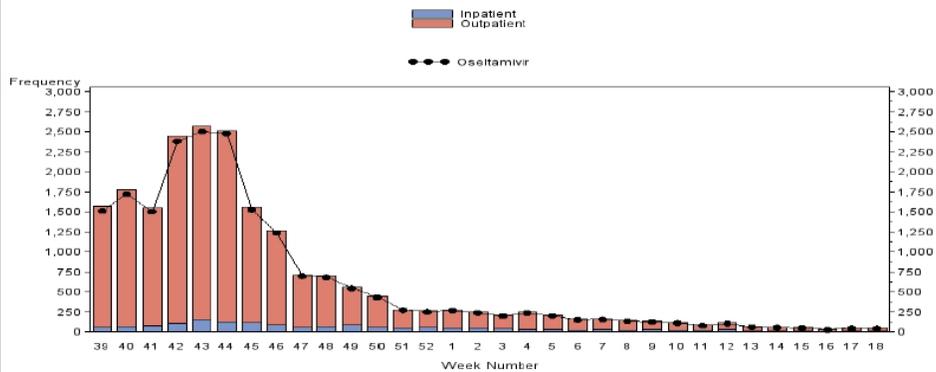
- Medical discretion for use
- Limited outbreak prophylaxis
- Provide to all those hospitalized with confirmed or suspected disease
- Provide to all those who have high-risk condition and have suspected or confirmed disease or suspected or confirmed exposure
- No high-risk condition and MILD Symptoms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



Antiviral Use

DOD Influenza Antiviral Prescriptions

Updated: Week 18 (May 2 - May 8, 2010).
2009-2010 Influenza Season



Courtesy AFHSC



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



Vaccine

- 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



Shifting Vaccine Projections – Operational Targeted Vaccine

- 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

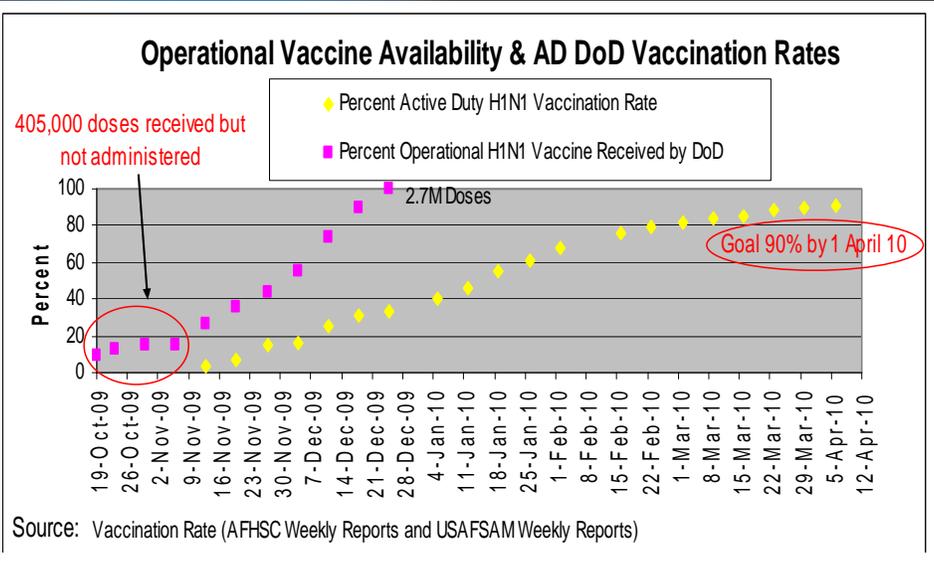


Vaccine Prioritization

- 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

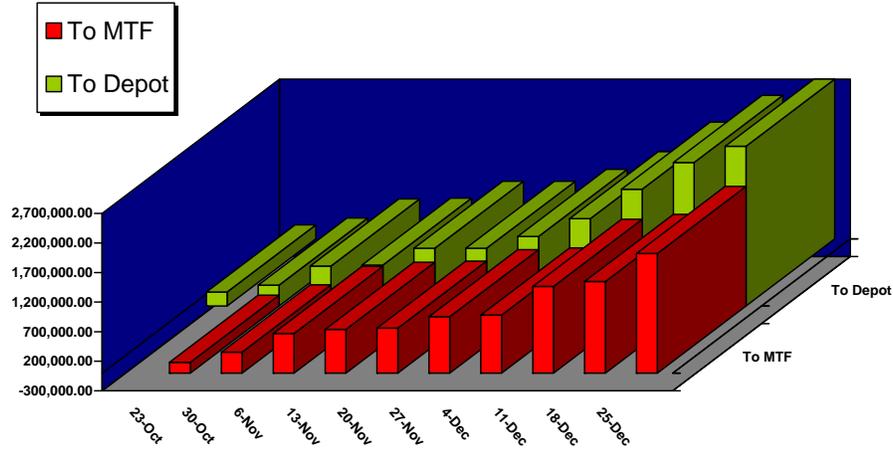


Vaccine Delivery vs. Administration



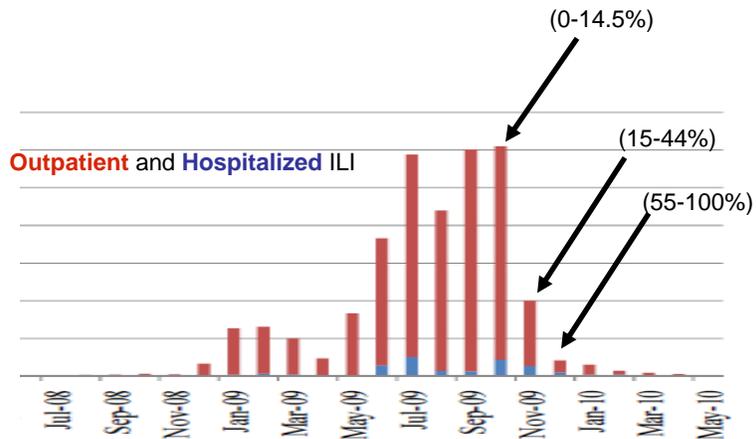


Cumulative Operational Vaccine Received at Depot and Shipped to MTFs



Influenza Like Illness Rates and Vaccine Delivery

(Cumulative % Vaccine Received by Depot)





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



Vaccine – USG Civilian Employee Program

- 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



Vaccine – Tracking

- 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)

Army AD	94%
Army Guard	62%
Army Reserve	58%
Air Force AD	94%
Air Force Guard	81%
Air Force Reserve	75%
Marine AD	81%
Marine Reserve	70%
Navy AD	85%
Navy Reserve	78%



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 (zanamivir, 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



More Stuff

- 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

