2009 H1N1 – Accomplishments and Critical Lessons Learned

Defense Health Board
November 2, 2010

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Overall Independent Review of DoD Efforts

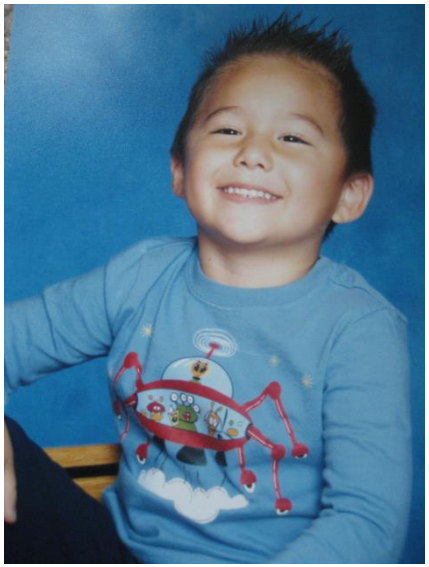
- DoD engagement predates publishing of the National Strategy for Pandemic Influenza
- DoD partnered in National pandemic influenza planning with other Federal Departments and Agencies
- DoD met mission requirements while operating in a pandemic environment, without mission degradation
- DoD adapted 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

- 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



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

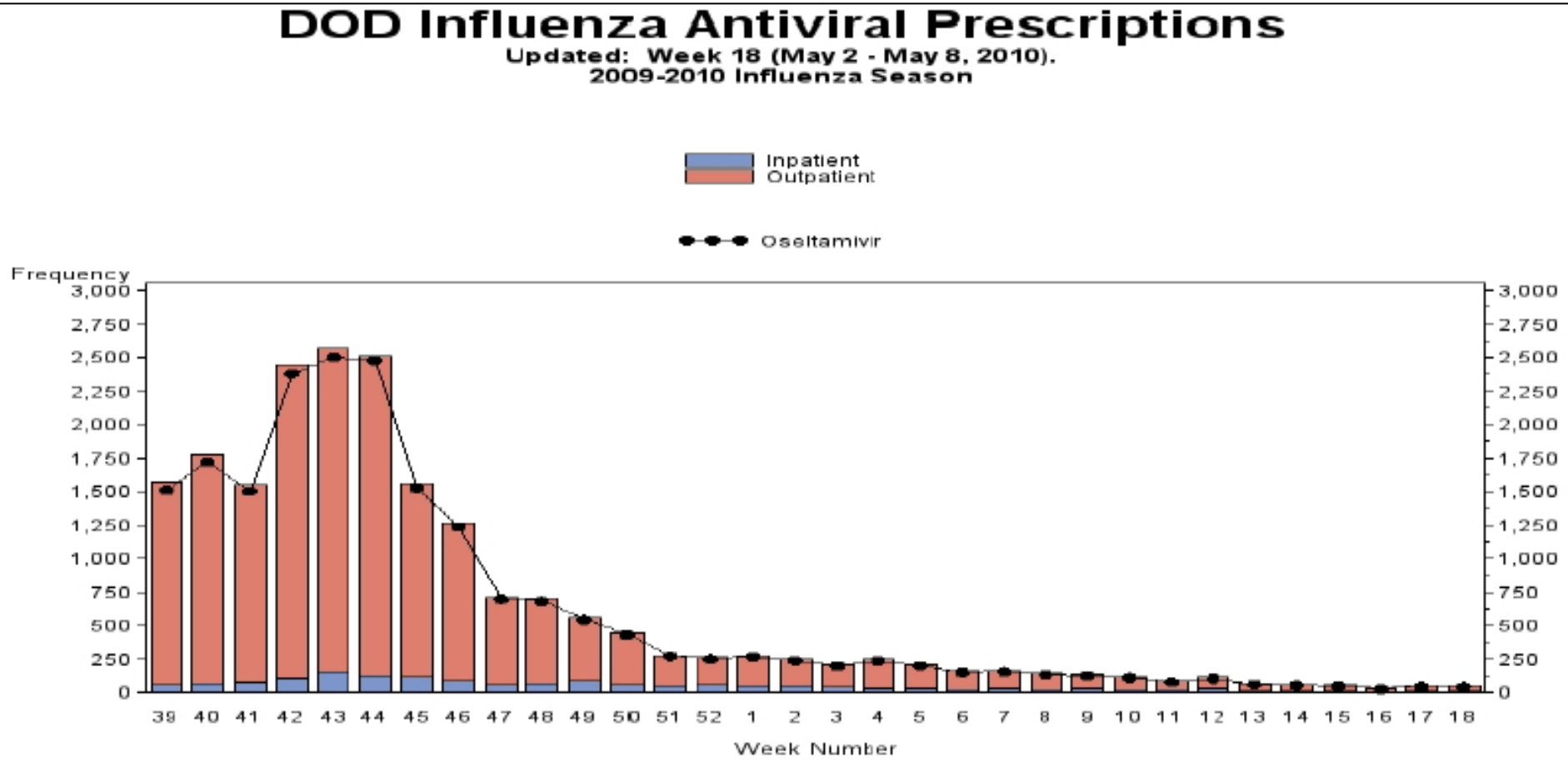
Antivirals

- 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 Symptons – don't necessarily need to treat
- Operational requirements may mandate treatment based on mission and not medical risk

Antiviral Use



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

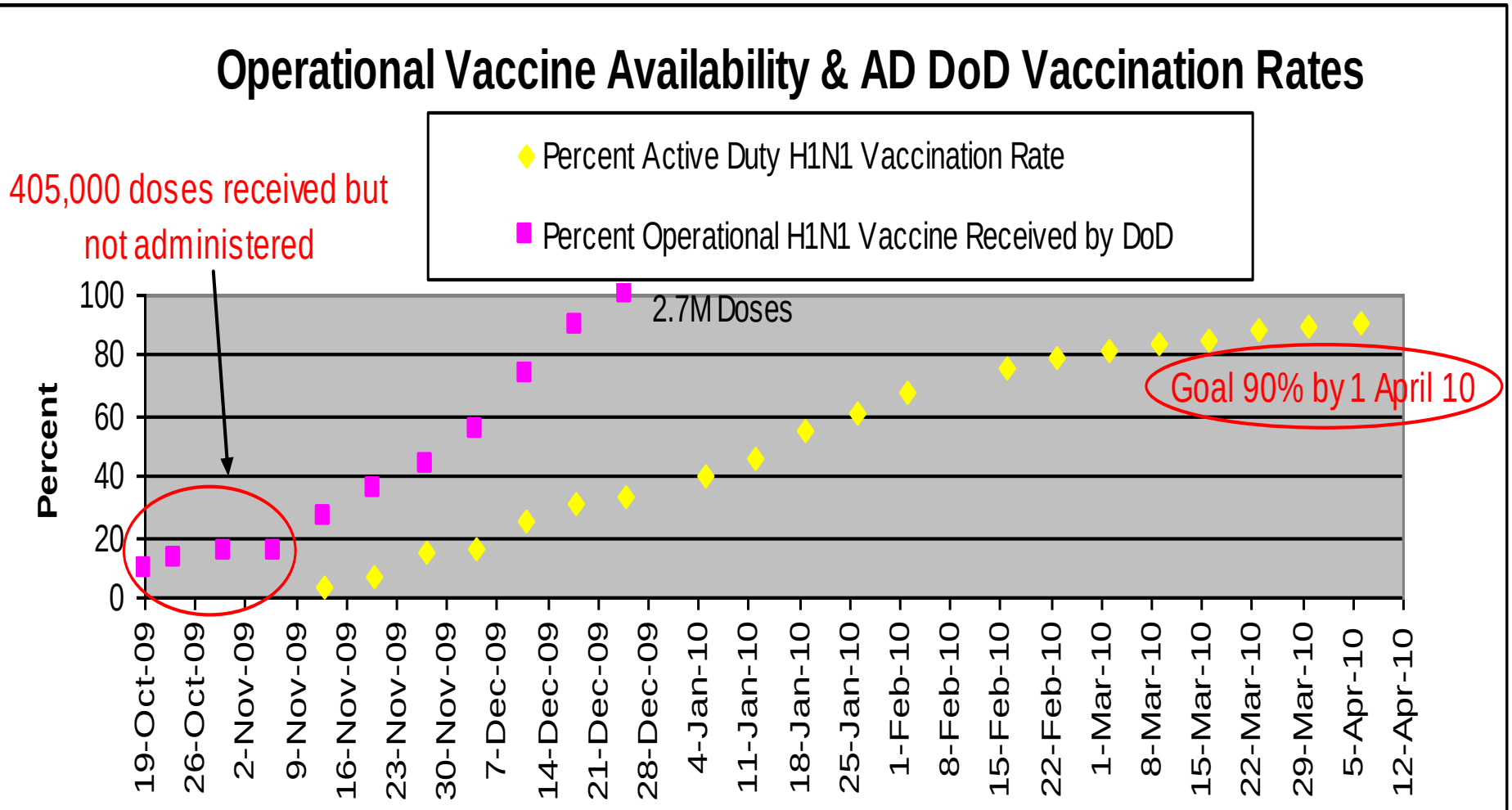
Shifting Vaccine Projections – Operational Targeted Vaccine

- 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

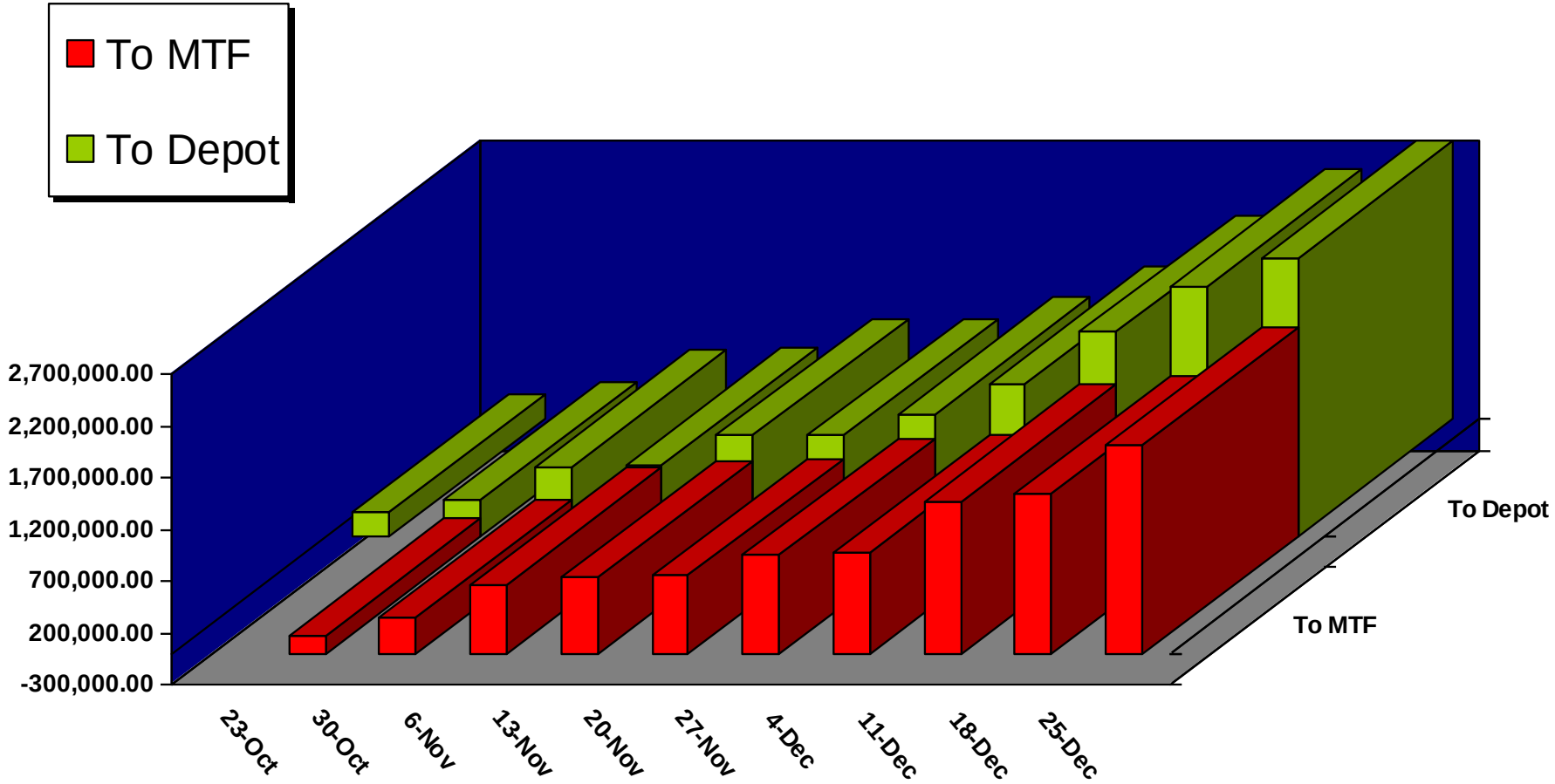
- First to receive operational targeted vaccine:
  - Deployed and Deploying (CENTCOM and USFK)
  - Health Care Workers
  - Large training venues
  - Ships-a-float
- USCENTCOM/USFK received first 3 DoD vaccine allocations
  - USCENTCOM immunization rates did not reach 90% until December
    - More staggered 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



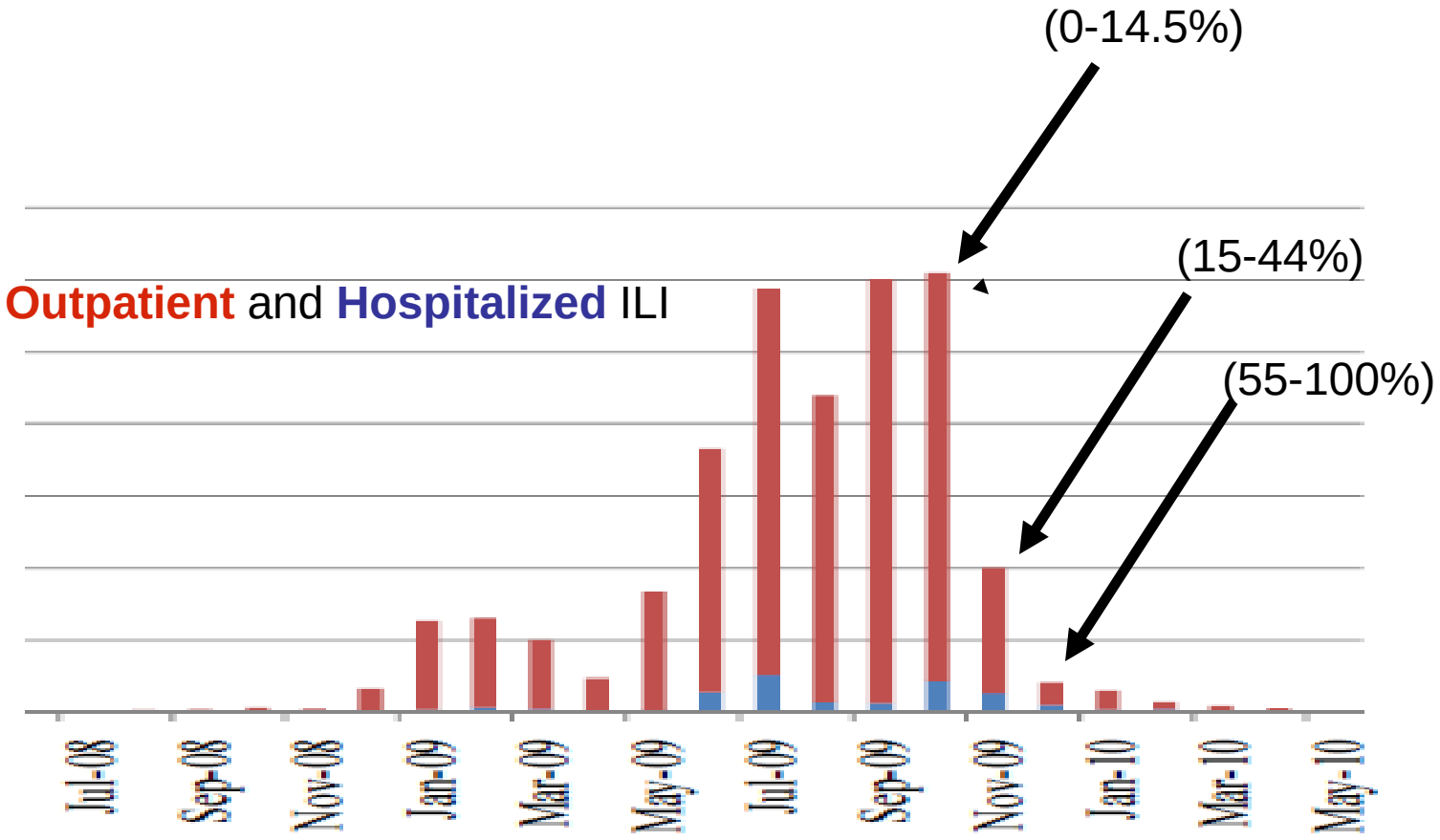
Source: Vaccination Rate (AFHSC Weekly Reports and USAFSAM Weekly Reports)

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 facilites 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

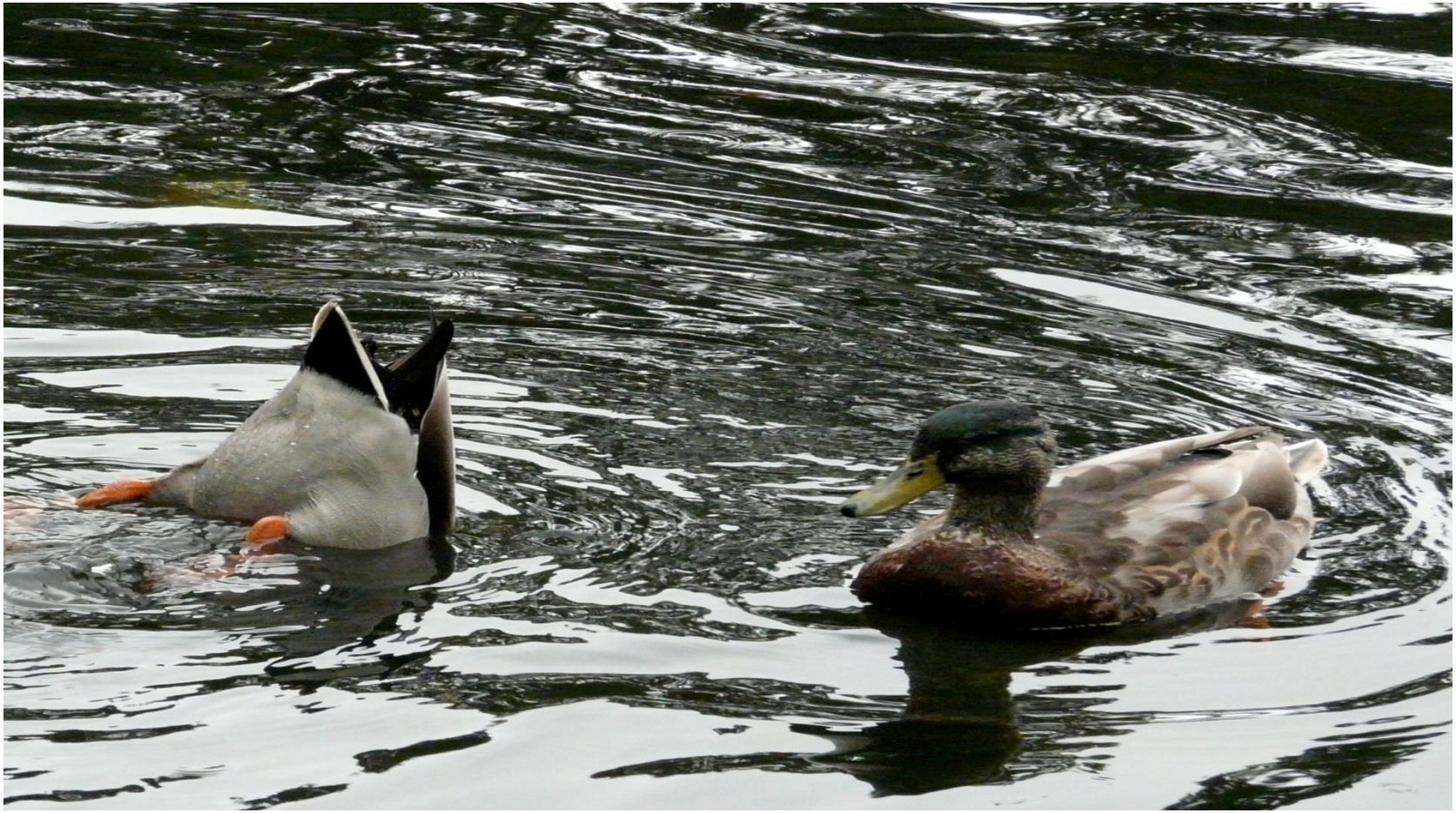
- **Funding**
  - **Supplemental funding received for purchase of**
    - **Antiviral medications (zanamivir, rimantadine and X)**
    - **Personal Protective Equiptment (replace and augment existing supplies)**
    - **Surveillance (increase capacity)**
  - **Request for POM funding for enhanced surveillance, 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




Questions
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