

DoD Global, Laboratory-Based, Influenza Surveillance Program

United States Air Force School of Aerospace Medicine (USAFSAM) / DHA

Wright-Patterson Air Force Base, OH

2015-2016 Influenza Season



Introduction

Mission & Priorities

- Identify circulating viruses / detect new strains
- Evaluate influenza vaccine effectiveness
- Compile weekly comprehensive surveillance report
- Share data and specimens with the Centers for Disease Control and Prevention (CDC) & the World Health Organization (WHO) for vaccine selection

Provide lab-based influenza surveillance

- 2015-16 season: 95 sites worldwide (59 CONUS/36 OCONUS)
- Collect respiratory specimens & questionnaires from individuals with influenza-like illness (**ILI**)
- Process specimens in USAFSAM's Epidemiology Laboratory

Funding: Armed Forces Health Surveillance Center – Division of the Global Emerging Infections Surveillance & Response System Operations (AFHSC/GEIS)

Beginnings

1976-1997: *General Respiratory Surveillance/Research*

- AF Influenza Program “Project Gargle”¹
- Letterman Army Institute of Research²
- DoD overseas medical research labs (Indonesia, Kenya, Peru, Thailand)³

1996: Presidential Decision Directive (NSTC-7)⁴

1997: Global Emerging Infections Surveillance & Response System Operations (GEIS)⁵

1998: Addressing Emerging Infectious Disease Threats: A Strategic Plan for the DoD⁶

- Influenza surveillance named as the #1 priority

1999: Assistant Secretary of Defense, DoD (Health Affairs) Policy Memorandum⁷

- Formal implementation of the DoD influenza surveillance program
- Outlines program functions and surveillance goals
- Appointed the Air Force Surgeon General as Executive Agent and management responsibility was given to what is now USAFSAM

2015: Defense Health Agency (DHA) merger

- DHA combined multiple health surveillance activities across the DoD into the Health Surveillance Branch (HSB)



Service Influenza Policy

DoD

- Assistant Secretary of Defense-Health Affairs (ASD-HA): 2015-2016 DoD Influenza Surveillance Program Sentinel Sites (28 July 2015)

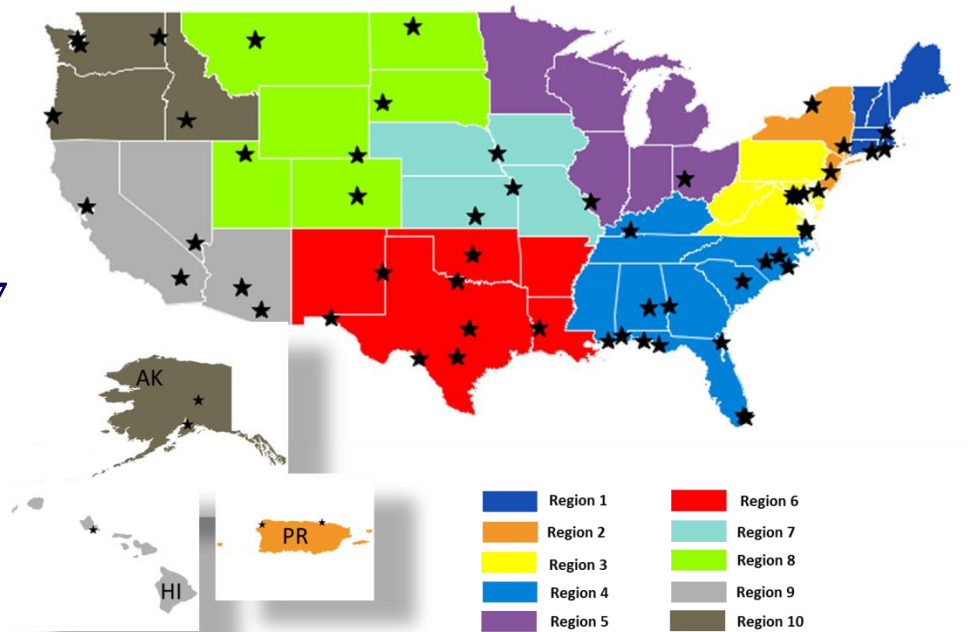
Service Specific Policy

- **Air Force:** Instruction 48-105: Surveillance, Prevention, and Control of Diseases and Conditions of Public Health or Military Significance (15 July 2014)
- **Army:** OP-ORD 15-70: 2015-2016 Influenza Prevention Program: Surveillance and Vaccination (Sep 2015)
- **Navy & Marine Corps:** BUMED POLICY Aug 2015 (Policy for Influenza Vaccine Use for the 2015-2016 Influenza Season)
BUMEDINST 6230.15B Immunization for the Prevention of Infectious Disease
- **Coast Guard:** Guidance dated 21 July 2015 (from USCG HQ/Commandant, Operational Medicine & Medical Readiness Division, CWO Michael Slade)

Program Overview

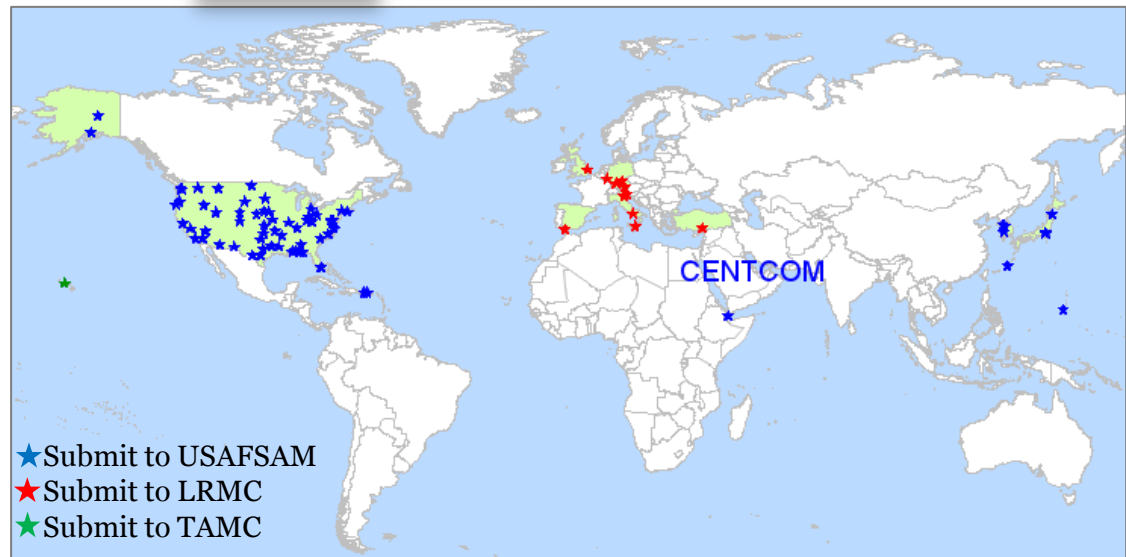
CONUS Sites: 59

- Air Force: 33
- Army: 11
- Navy & Marine Corps: 7
- Coast Guard: 6
- DHA: 2

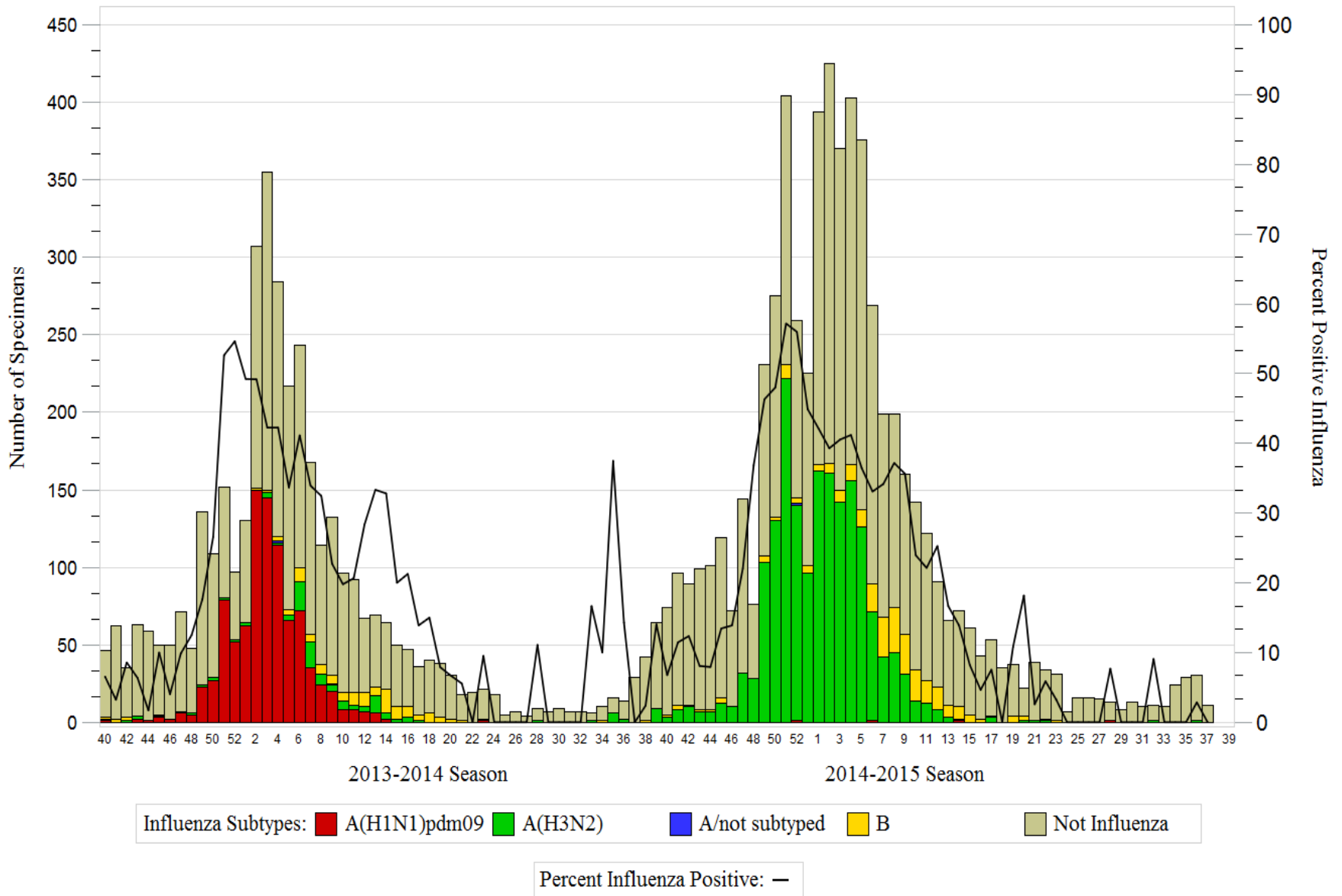


OCONUS Sites: 36

- Air Force: 18
- Army: 9
- Navy & Marine Corps: 7
- Coast Guard: 2



Influenza 2013-2014 and 2014-2015 Subtypes



Refresher

Influenza A

- Evolves rapidly & responsible for most epidemics and pandemics
- Divided into subtypes based on two surface proteins:

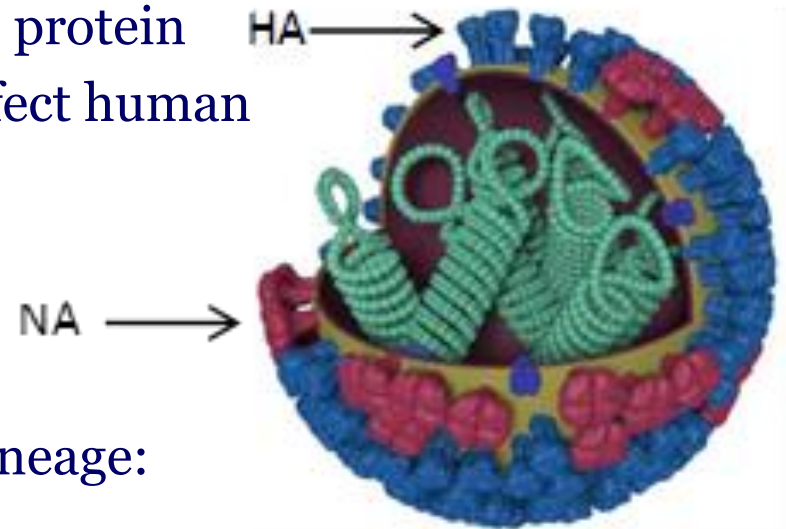
Hemagglutinin (HA) }
Neuraminidase (NA) } (Example: H₅N₁, H₃N₂)

Immunity-related changes to influenza A virus

- Changes to regions of the HA surface protein (called antigenic shift & drift) can affect human antibody responses to the virus

Influenza B

- Gradually changing virus
- Classified by strains based on their lineage:
Currently Yamagata or Victoria



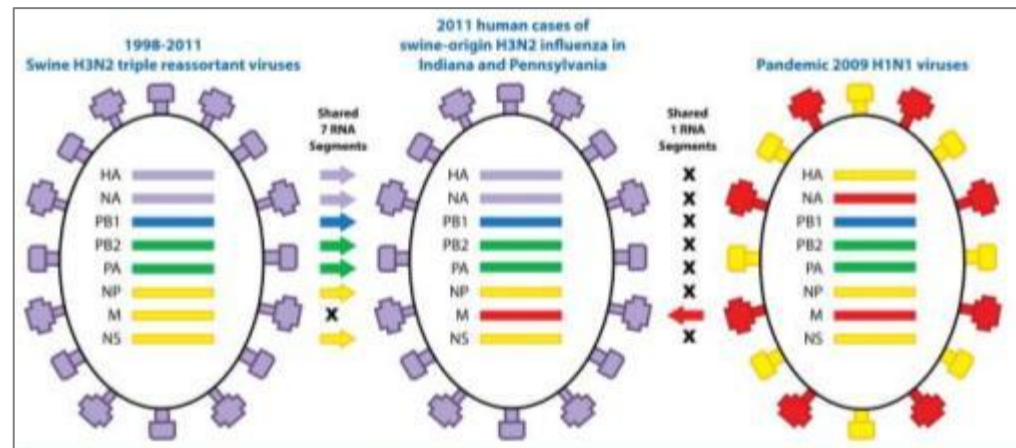
Antigenic Drift & Shift

Antigenic Drift

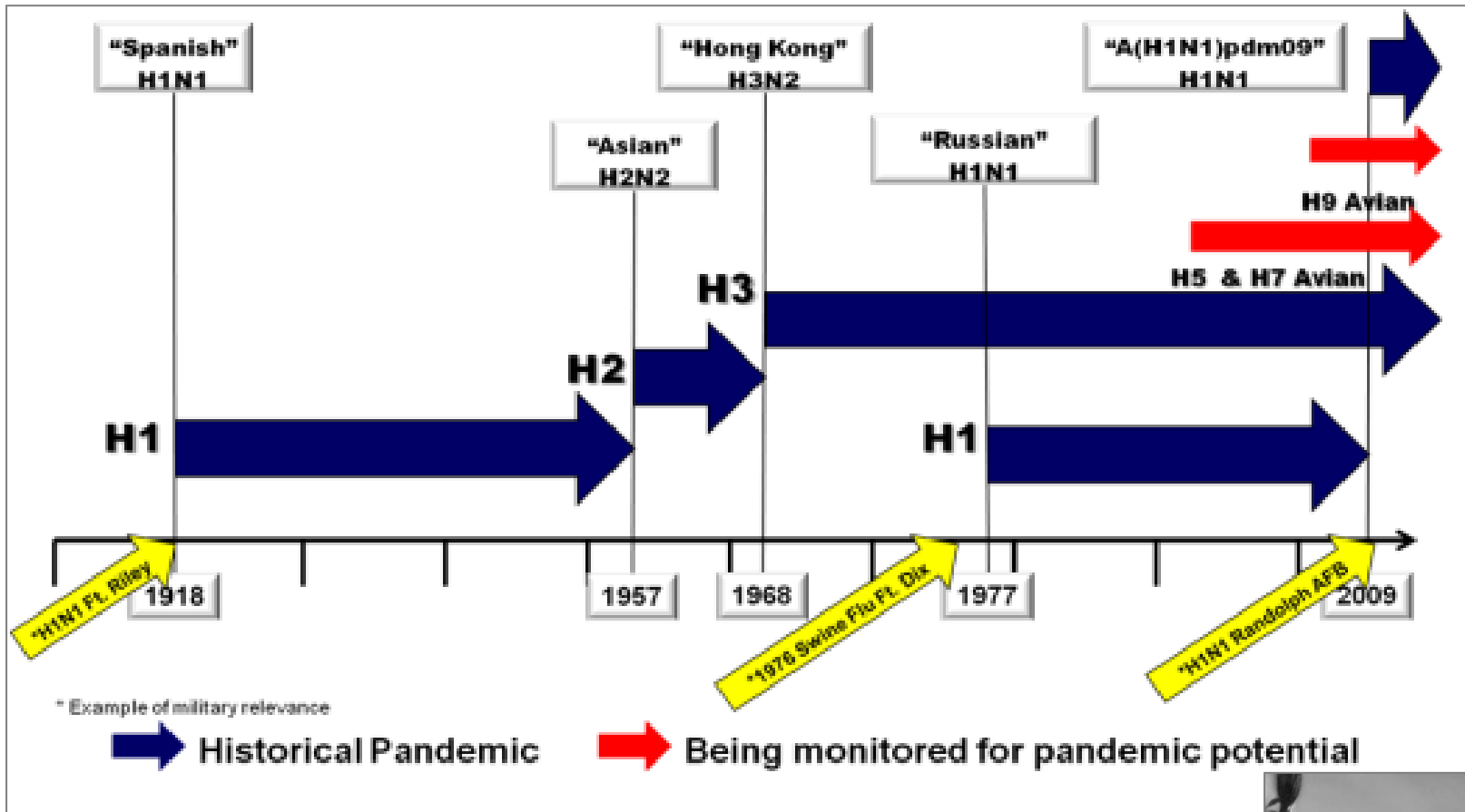
- Small gradual changes that occur over time and create a new strain that may not be recognized by immune system
- Reason that new influenza vaccine is manufactured/distributed each year

Antigenic Shift

- Abrupt major change that produces a novel virus (not previously seen in humans)
 - Result of direct animal-to-human transmission or mixing of human and animal viral genes within the same individual (reassortment)
 - Most people have little or no protection against the new virus
- * USAFSAM monitors these changes using molecular sequence analysis on influenza specimens.



Examples



- 1918 Spanish Flu at Ft. Riley
- 1976 Swine Flu at Ft. Dix
- 2009 H1N1 at Randolph AFB



Vaccine

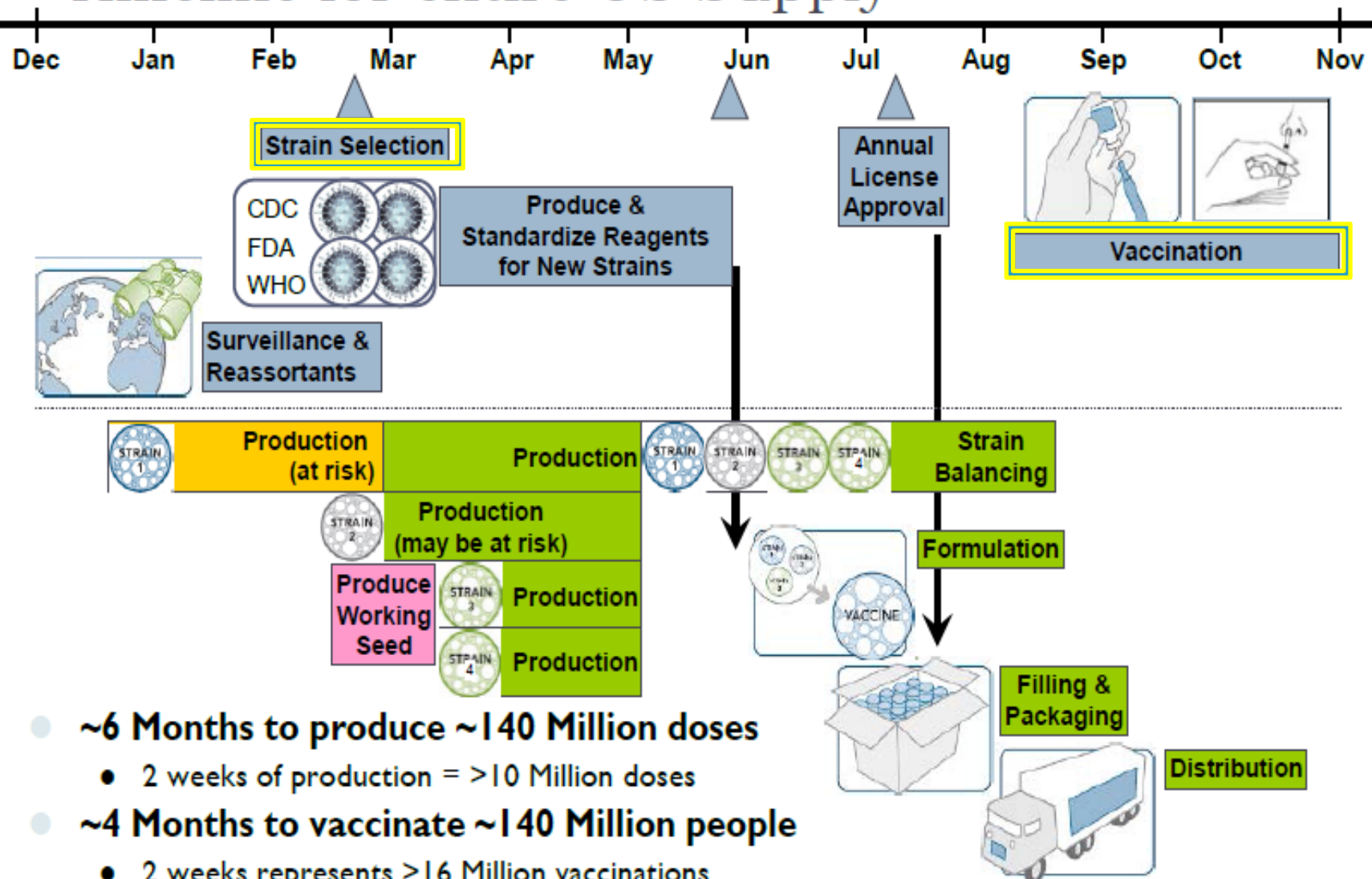
- **Get Vaccinated Early**

- Flu seasons can be unpredictable and begin as early as October
- Takes about 2 weeks for antibody production after vaccination
- Influenza vaccine cannot give you influenza
 - The virus injected is inactivated (killed) or is attenuated (weakened)
 - Designed to only cause mild infection at cooler temperatures (not in the lungs)

- **This year, DoD ordered over 3.5M doses of trivalent (injection) and quadrivalent (injection & mist) vaccines for service members and beneficiaries**

- Trivalent: A(H3N2), A(H1N1)pdm09, B/Phuket
- Quadrivalent: A(H3N2), A(H1N1)pdm09, B/Phuket, B/Brisbane

Annual Influenza Vaccine Manufacturing Timeline for entire US Supply



- **~6 Months to produce ~140 Million doses**
 - 2 weeks of production = >10 Million doses
- **~4 Months to vaccinate ~140 Million people**
 - 2 weeks represents >16 Million vaccinations

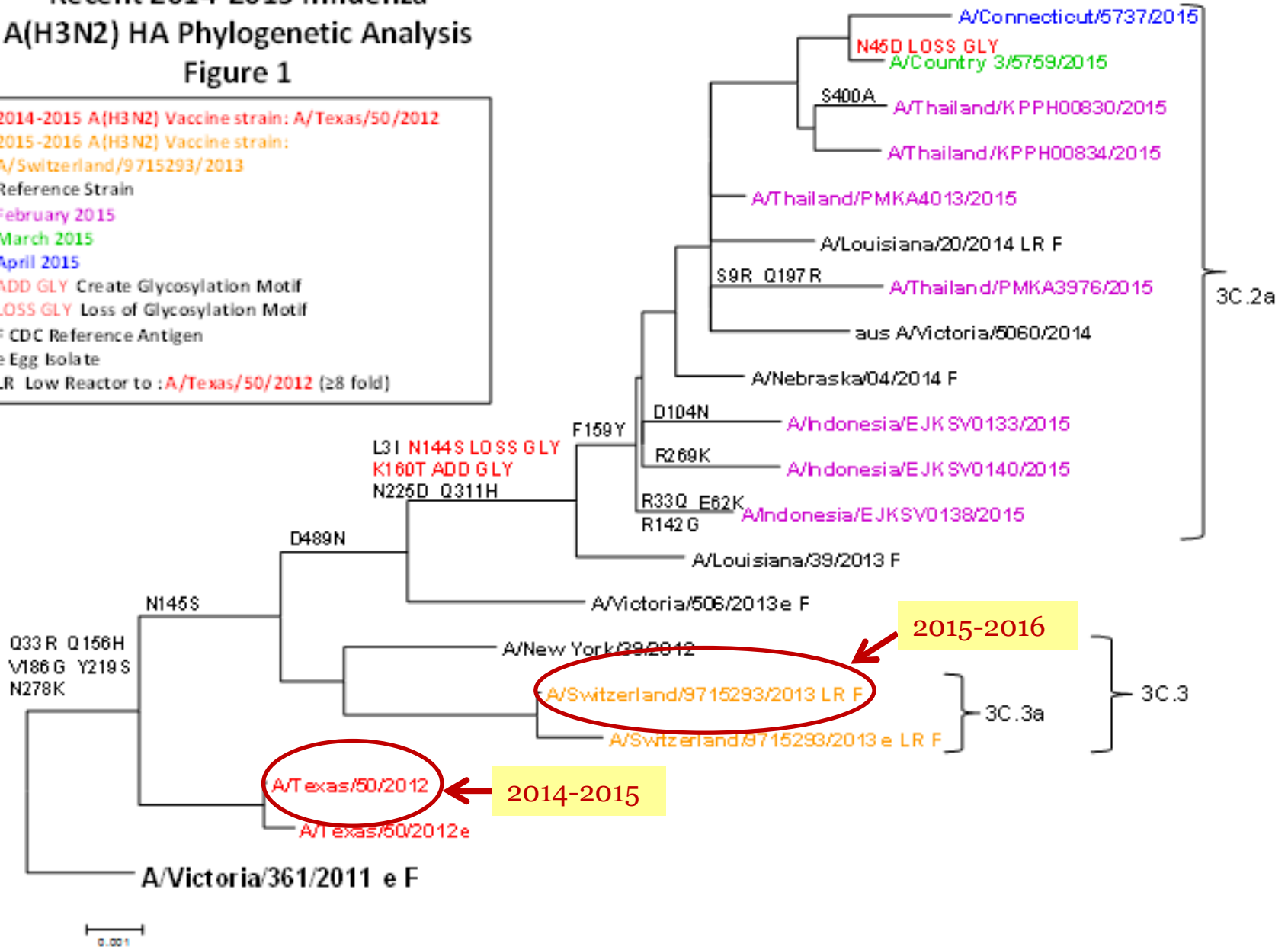
Industry Comments, VRBPAC 04 March 2015

2014-2015 Influenza Season Vaccine Mismatch

- In **mid to late Feb 2014**, WHO & FDA recommended for the 2014-2015 influenza vaccine (Northern Hemisphere) to include:
 - A/California/7/2009 (H1N1)pdm09-like virus
 - A/Texas/50/2012 (H3N2)-like virus
 - B/Massachusetts/2/2/2012-like virus
 - Quadrivalent vaccine also included B virus (B/Brisbane/60/2008-like virus)
- **Late March 2014**: drifted A(H3N2) viruses were detected during routine surveillance testing (4% antigenically distinct from A/Texas)
- **Jun-Aug 2014**: approx. 1/3 of circulating viruses are antigenic drift variants
- **Sept 2014**: nearly 2/3 of circulating viruses are drifted; WHO recommends A/Switzerland/2013-like virus for the southern hemisphere
- 52% of influenza A(H3N2) viruses collected and analyzed in the U.S. from **1 Oct – 22 Nov 2014** were antigenically different from the A(H3N2) vaccine virus.
 - Reason for the reduced vaccine effectiveness against A(H3N2) this season.
 - Most of the drifted A(H3N2) viruses were A/Switzerland/9715293/2013, which was the virus selected for the 2014 Southern Hemisphere vaccine.

Recent 2014-2015 Influenza A(H3N2) HA Phylogenetic Analysis Figure 1

2014-2015 A(H3N2) Vaccine strain: *A/Texas/50/2012*
 2015-2016 A(H3N2) Vaccine strain:
A/Switzerland/9715293/2013
 Reference Strain
 February 2015
 March 2015
 April 2015
 ADD GLY Create Glycosylation Motif
 LOSS GLY Loss of Glycosylation Motif
 F CDC Reference Antigen
 e Egg Isolate
 LR Low Reactor to : *A/Texas/50/2012* (≥8 fold)



Influenza and Military Populations

- Even with modern medical advances, influenza and influenza-like illness can cause high morbidity rates, undermining readiness
- Military members and their families:
 - Are stationed where new strains are likely to appear
 - Are highly mobile across the globe and could quickly spread a pandemic strain
 - May live in areas that represent “gaps” in the CDC influenza surveillance network
- Training environments are well suited for the spread of emerging respiratory pathogens
- Highly immunized military plus our electronic vaccination data registry help facilitate rapid assessment of vaccine protection against this seasons strains (known as Vaccine Effectiveness)

Contribution

Reasons to participate:

- Constant changes to the influenza virus require ongoing collection and characterization of the strains

Seed Viruses and Reference Strains from DoD Surveillance

A/PR8/1945, an A strain isolated from a recruit in May 1943, plus B/Lee (Army)

A/Texas/1/77 (H₃N₂) (USAF)

A/Philippines/2/82 (H₃N₂) (USAF)

A/Panama/2007/99 (H₃N₂) (USAF)

A/California/4/2005 (H₃N₂) (USN)

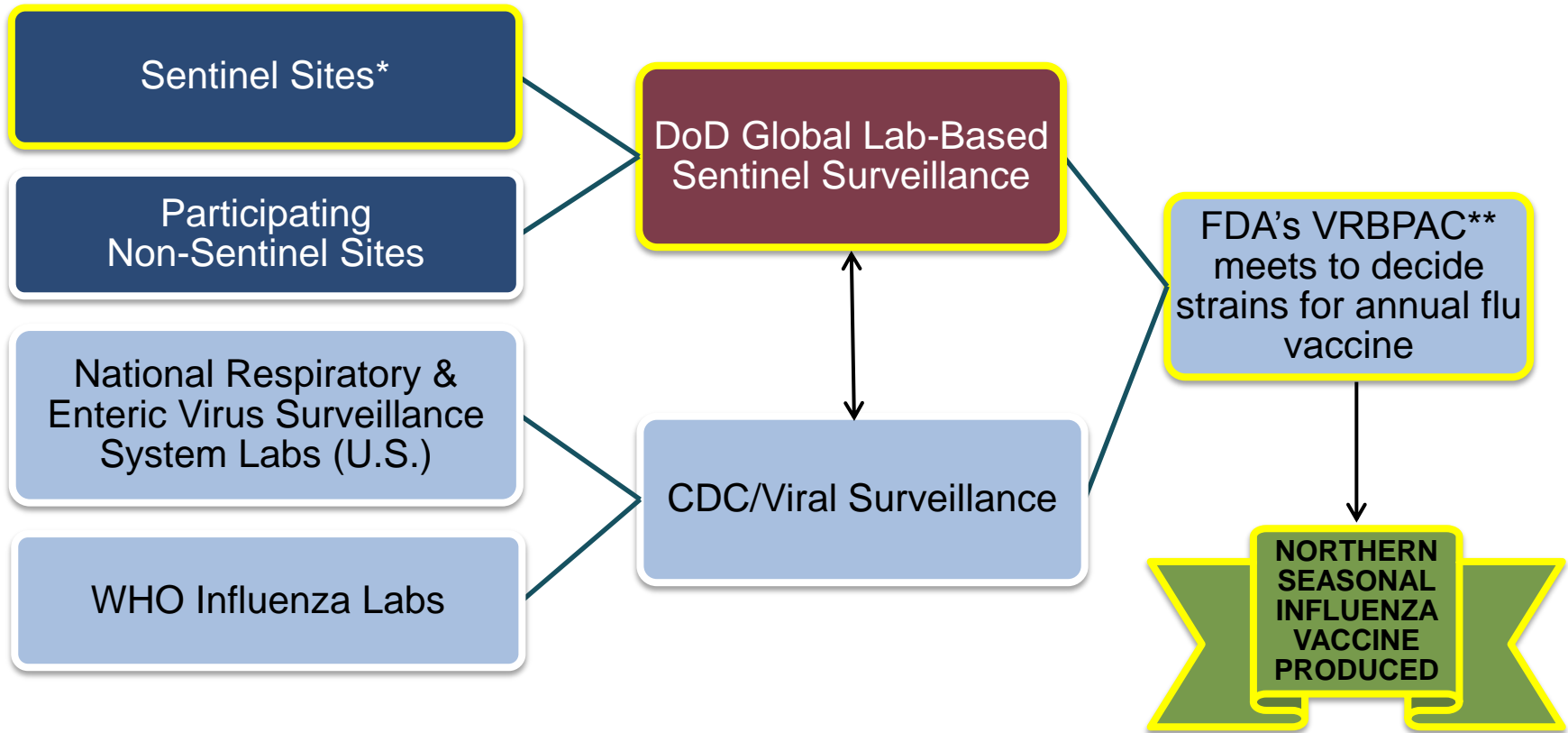
A/South Dakota/06/2007 (H₁N₁), (USAF Base, Army Case)

A/Texas/05/2009 (H₁N₁) (USAF)

A/Iraq/18529/2009 (H₁N₁) (USAF)

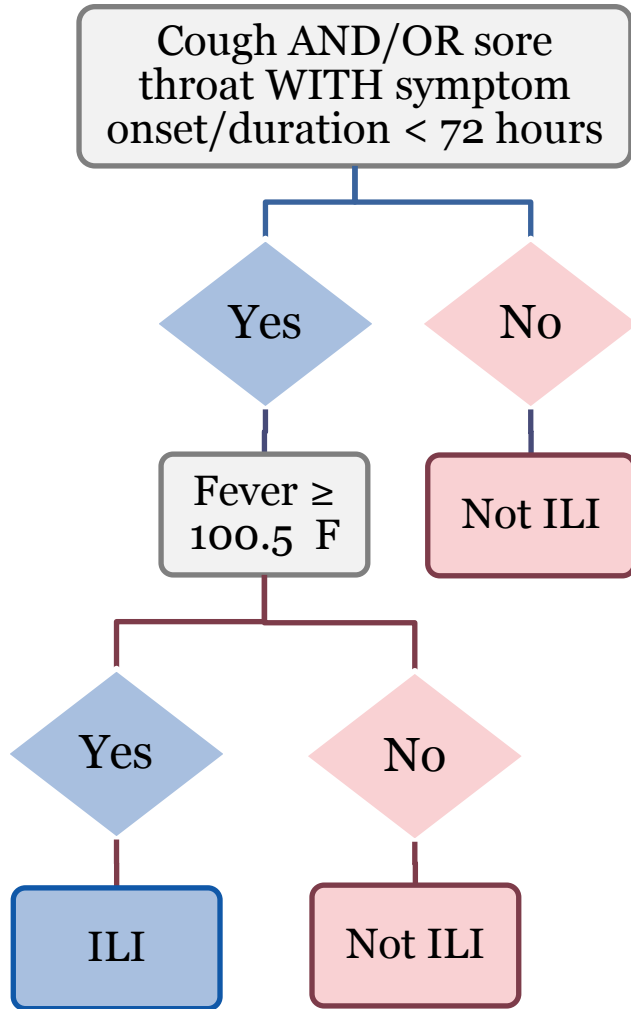
A/California/07/2009 (H₁N₁) (USN)

Surveillance Process and Vaccine Development



**Food and Drug Administration, Vaccines and Related Biological Products Advisory Committee

Decision Tree for Influenza-Like Illness (ILI)



ILI Case Definition: Fever ≥ 100.5°F (38°C) **AND** Cough OR Sore Throat < 72 hours

Not ILI: Not recommended to collect a specimen. However, there is flexibility for clinical judgment. If you suspect influenza or other respiratory viral infection, you can collect a specimen for testing.

ILI: Collect nasal wash specimen (preferred method) or nasopharyngeal swab and submit to USAFSAM in viral transport medium (VTM) for testing.

Nasal Wash (NW) Kits

USAFSAM NW collection kit includes:

- Sterile saline, collection cup, & bib
- VTM
- Biohazard bag
- Influenza Surveillance Questionnaire

USAFSAM also provides:

- Shipping containers
- Shipping costs via FedEx



To request collection kits or other documents:


- Use the current version of the “Supply Order Form” available (under Shipping/Training) at:

<https://gumbo2.wpafb.af.mil/epi-consult/index.cfm>

- Contact the program via email for more kits at usafsam.phrflu@us.af.mil

Nasal Wash

**US AIR FORCE
SCHOOL OF
AEROSPACE
MEDICINE
(USAFSAM)**



****IMPORTANT****

Submit 6-10 specimens/week.
Medical staff - complete the questionnaire in full.

When ordering test in CHCS, order the Epidemiology Lab's viral respiratory panel. Panel is named **RESPIRATORY CULTURE PNL (EP)** or similar name designated by your installation.

ILI CASE DEFINITION
Fever $\geq 100.5^{\circ}\text{F}$ (38°C), oral or equivalent
AND
Cough and/or sore throat (<72 hours duration)

Questionnaire Submission



- Questionnaires can be completed by hand or by computer and printed.
- Submit a hard copy of the questionnaire with each specimen.
- Additional questionnaires can be downloaded from our welcome packet:
<https://gumbo2.wpafb.af.mil/epi-consult/influenza/welcome/> or from this [link](#).

Making a copy of this questionnaire is recommended.

- To resolve discrepant information.
- For cataloging results and potentially entering them into DRS.

Questions?
Please e-mail:
usafsam.phrlu@us.af.mil

To effectively reduce the risk of transmission, use PPE (disposable gloves and surgical mask) while collecting a respiratory specimen. Wash hands before and after specimen collection.

Nasal Wash Procedural Guidelines (Preferred Method of Collection)	Nasopharyngeal Swab Collection
<p>Instructions:</p> <ol style="list-style-type: none"> Have patients blow their nose into a tissue to clear excess mucus. Tuck bib into patients' shirt collar. Uncap pre-filled saline syringe and specimen collection container. Break the seal on the syringe by gently expressing a small amount of saline into the tip of the tube. Have patients tilt their head back so they are able to look directly at the ceiling while they hold the specimen collection container up to their chin area. Encourage patients to not swallow saline by saying "Ka Ka Ka" or making a constant "choking sound" while saline is expressed into their nostrils. Gently express 2-4 mL of sterile saline into right nostril of patient. Saline will drain back into the back of the nasopharynx. After a few seconds, have patients lean their head far enough forward so the saline will drain into the specimen collection container. Repeat for second nostril. Offer patients a facial tissue or have them use the bib to wipe away excess saline from their face. Transfer the contents to the viral transport medium (VTM) vial included in the kit. Bending the rim of the cup will help in pouring the contents into the VTM tube. Place specimen in the biohazard bag included in the kit and forward to USAFSAM. To maintain optimal quality for diagnostics, please be sure to prepare the specimen for immediate shipment. 	<p>Nasopharyngeal swabs can be used to collect an appropriate specimen for influenza testing. Specimens must be immediately placed in 1-3 mL of VTM. Use a flexible fine-shafted aluminum swab with a polyester (Dacron or rayon, not cotton or calcium alginate) tip. *Note - Specimens in Universal Transport Medium (UTM) will not be tested and are unacceptable to our lab.</p> <p>Instruction:</p> <ol style="list-style-type: none"> Have patients blow their nose into a tissue to clear excess mucus. Have patients close their eyes to help them cope with the slight discomfort they are about to experience. With the patients' head at a 70° angle, insert swab into nostril (straight back, not upwards) until resistance is met by contact with the nasopharynx. The distance from the patients' nose to ear gives an estimate of the distance the swab should be inserted. Rotate the swab several times (5-6 times) across the mucosal surface to loosen and collect cellular material. Although a contact time of 30 seconds is suggested, a few seconds of contact often induces coughing or patient resistance, either of which is adequate incentive to remove the swab. Withdraw swab and insert into the tube of VTM, break off the portion of the stem that extends past the opening of the tube, and cap securely. Place specimen in the biohazard bag included in the kit and forward to laboratory for packaging and shipment to USAFSAM. To maintain optimal quality for diagnostics, please be sure to ready the specimen for immediate shipment. 
<p>Please see the video demonstration for nasal wash specimen collection at: https://gumbo2.wpafb.af.mil/epi-consult/influenza/lab (CAC required site)</p> <p>Storing, Packing and Shipping</p> <p>Best: It is best to freeze the specimen at -70°C and ship on dry ice. Please contact USAFSAM if dry ice is not available at your site.</p> <p>Note - Specimens frozen at -20°C are not acceptable due to loss of viability of the viruses.</p> <p>Acceptable: If specimen can arrive at the USAFSAM lab within 48 hours from collection time, a specimen may be shipped on frozen gel packs at refrigerated (2-8°C) temperature.</p> <p>UTM cannot be accepted at our lab and will not be tested.</p> <p>Viral transport supplies may be ordered by emailing our Customer Service department at wafsam.phccusov@us.af.mil or by calling 937-938-4140 (DSN: 798-4140).</p> <p>Ship Priority Overnight to: FedEx number: 425177729 (for respiratory culture panel testing ONLY) USAFSAM/PHE Epidemiology Laboratory Service 2510 Fifth Street, Bldg 20840, Area B, WPAFB, OH 45433-7951</p> <p>For additional packing and shipping details, please refer to the lab guide on the USAFSAM/PHR website: https://gumbo2.wpafb.af.mil/epi-consult/influenza/lab (CAC required site)</p>	

- Nasal wash collection method is **preferred** as it captures adequate volumes of original specimen for:
 - Diagnostic testing
 - Sequence analysis
 - Specimen sharing
- Collection instructions are on the back of each questionnaire
- Nasal wash video can be viewed at:

<https://gumbo2.wpafb.af.mil/epi-consult/index.cfm>

Influenza Surveillance Questionnaire

- Use the current season 2015-2016 questionnaire included in each collection kit or email us at usafsam.phrflu@us.af.mil
- Complete the questionnaire for each patient specimen submitted to our program
- Submit a hard copy of the questionnaire with each specimen
- Make a copy of each questionnaire for your records

DOD GLOBAL INFLUENZA SURVEILLANCE QUESTIONNAIRE, 2015-2016
 USAF SCHOOL OF AEROSPACE MEDICINE (USAFSAM), DEFENSE HEALTH AGENCY (DHA) SATELLITE
 LOCATED AT WRIGHT-PATTERSON AFB, OH
 Influenza-like illness (ILI) Case Definition: Fever \geq 100.5°F (38°C), oral or equivalent AND cough and/or sore throat (>1 hours duration)

• Submit 6-10 specimens/week from different patients who meet the ILI case definition
 • Medical personnel - please complete the questionnaire in full for each specimen submitted
 • Specimens accepted year round for influenza/respiratory surveillance

 *PRIVACY ACT STATEMENT: The social security number is required to facilitate documentation of health care received and patient follow-up. The primary use of this information is to aid in preventive health and communicable disease control programs. The requested information is voluntary.

Does the patient meet the ILI case definition?
 Yes No

PATIENT INFORMATION — PLEASE PRINT LEGIBLY

Patient name: _____ Date of clinic visit (dd/mm/yy): ____/____/____
 *Patient FMP/Sponsor SSN: ____/____-____-____ Date of birth (dd/mm/yy): ____/____/____
 Installation: _____ Permanent duty station (if different): _____
 Please indicate if patient has any of the following conditions by checking the appropriate box:
 Chronic Respiratory Disease Heart Disease Diabetes Pregnant/postpartum Other: _____
 (within 2 weeks)

VACCINE INFORMATION (2015- 2016)

Has patient received the 2015-2016 seasonal influenza vaccine? Yes No
 ↳ If YES, check type: Injection (influenza shot) Nasal spray (FluMist®)
 ↳ If YES, list date (dd/mm/yy): ____/____/____ OR Estimated date: Month: _____ & 1st half or 2nd half

SIGNS AND SYMPTOMS

Date symptoms started (dd/mm/yy): ____/____/____ Temperature recorded at clinic: _____ °F _____ °C
 Highest recorded temperature at home (if known): _____ °F _____ °C Date temperature taken at home (dd/mm/yy): ____/____/____
 Did patient take fever-reducing meds (acetaminophen/ibuprofen) within 6 hours prior to temperature taken at the clinic? Yes No

SYMPTOMS		Yes	No	Yes	No	Yes	No	Yes	No		
Cough	<input type="checkbox"/>	<input type="checkbox"/>	Chills	<input type="checkbox"/>	<input type="checkbox"/>	Runny nose	<input type="checkbox"/>	<input type="checkbox"/>	Nausea	<input type="checkbox"/>	<input type="checkbox"/>
Sore throat	<input type="checkbox"/>	<input type="checkbox"/>	Headache	<input type="checkbox"/>	<input type="checkbox"/>	Stimul congestion	<input type="checkbox"/>	<input type="checkbox"/>	Vomiting	<input type="checkbox"/>	<input type="checkbox"/>
Fatigue	<input type="checkbox"/>	<input type="checkbox"/>	Conjunctivitis	<input type="checkbox"/>	<input type="checkbox"/>	Shortness of breath/difficulty breathing	<input type="checkbox"/>	<input type="checkbox"/>	Diarrhea	<input type="checkbox"/>	<input type="checkbox"/>
Body aches	<input type="checkbox"/>	<input type="checkbox"/>	Earache	<input type="checkbox"/>	<input type="checkbox"/>	Chest pain	<input type="checkbox"/>	<input type="checkbox"/>	Rash	<input type="checkbox"/>	<input type="checkbox"/>

OTHER CLINICAL INFORMATION

At this visit, were antivirals prescribed? Yes No If YES, check antiviral below:
 Tamiflu (oseltamivir) Relenza (zanamivir) Flumadine (rimantadine) Other: _____
 Did patient have pneumonia? Yes No
 Was patient hospitalized (admitted into inpatient ward of hospital) for ILI symptoms? Yes No
 ↳ If NO, complete "Outpatient Visit." If YES, complete "Inpatient Visit" below.

Outpatient Visit	Inpatient Visit
Was patient seen at the emergency room or a clinic? ER <input type="checkbox"/> Clinic <input type="checkbox"/> Was patient placed on quarters? Yes <input type="checkbox"/> No <input type="checkbox"/> ↳ If YES, how many hours? _____ hrs	Was patient hospitalized in a civilian or military facility? CIV <input type="checkbox"/> MIL <input type="checkbox"/> Admission date (dd/mm/yy): ____/____/____ Discharge date (if applicable) (dd/mm/yy): ____/____/____

CONTACT AND TRAVEL HISTORY INFORMATION

Has patient been in close contact with anyone who was recently ill with ILI symptoms? Yes No
 Did patient travel in the past 14 days? Yes No ↳ If YES, did patient travel within or outside the U.S.? Within Outside
 ↳ If YES, where did they travel to/from? _____ Travel return date (dd/mm/yy): ____/____/____

Questionnaire Submission: 1. Questionnaires can be completed by hand or by computer and printed. 2. Submit a hard copy of the questionnaire with each specimen. See shipping details on reverse side. Additional questionnaires can be downloaded from our welcome packet: https://rumb02.areas2.afaoapps.usaf.mil/epi-consult/influenza/welcme/	Questions? Please email: usafsam.phrflu@us.af.mil
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Distribution A: Approved for public release; distribution is unlimited.

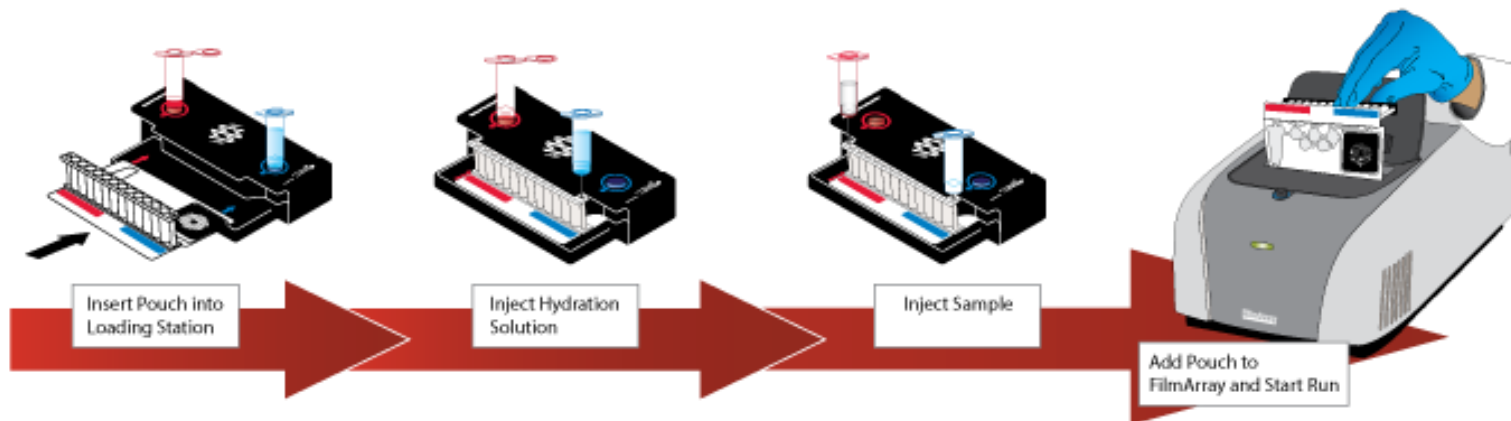
Revised 2015

Distribution A: Approved for public release; distribution is unlimited. Case Number: 88ABW-2014-3876, 19 Aug 2014

20

Influenza Surveillance Questionnaire

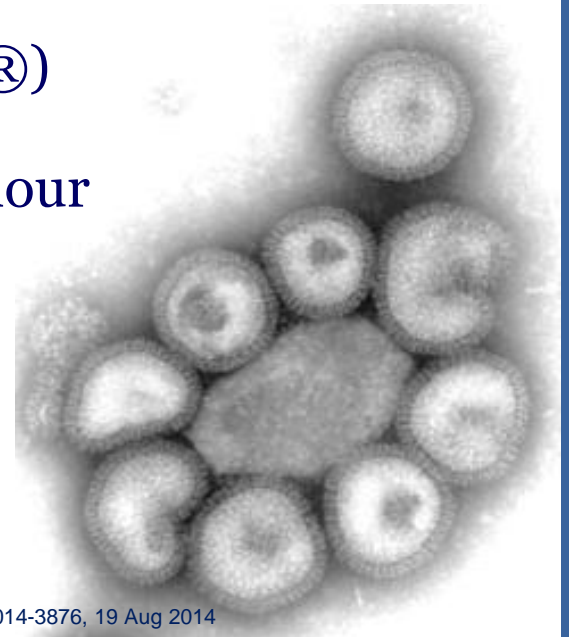
- Provide valuable epidemiological data such as vaccination and travel history
- Identify severe illness and hospitalized cases, which could signal important changes in the virus
- Provide valuable data for vaccine effectiveness, identifying further changes in the virus
- Potential for specimen to be tested on multiplex respiratory panel (20 additional pathogens)



Testing for Influenza at USAFSAM

Two (or **three**) types of tests are performed:

1. Influenza A/B PCR
 - Gold standard – 100% sensitivity, 99.3% specificity
 - 24-48 hours for detection
2. Viral culture (up to 10 days for negative result)
 - Detects flu and non-flu viruses
3. Multiplex Respiratory Panel (FilmArray ®)
 - Detects up to 20 pathogens
 - Low throughput test; runtime = 1 hour
 - *Must test negative on PCR*
 - *Must meet ILI case definition on questionnaire*



Storage & Shipping

Best: Freeze specimen at -70°C and ship on dry ice:

- Specimens frozen at -20°C are **not acceptable** due to loss of viability of the viruses
- Use dry ice blocks or pellets rather than “snow” form
- Each standard shipping box should contain a minimum of:
 - 5 lb of dry ice for CONUS sites
 - 15 lb of dry ice for OCONUS sites

Acceptable: A specimen may be shipped on frozen gel packs at refrigerated temperature ($2-8^{\circ}\text{C}$) *only if received at the USAFSAM lab within 48 hours of collection from patient*:

- Specimens received over 8°C or over 48 hours from collection cannot be accepted

Shipping

- Use the FedEx number *425177729* (for surveillance testing only) and ship FedEx Priority Overnight to:

USAFSAM/PHE

Epidemiology Laboratory Service

2510 Fifth Street, Bldg 20840

WPAFB, OH 45433-7951

- If you have laboratory or shipping questions, request your lab staff to call customer service at:

(937) 938-4140, DSN 798-4140

- For the comprehensive USAFSAM/PHE Laboratory Guide, please visit:

<https://kx2.afms.mil/kj/kx5/EPILab/Pages/home.aspx>

or

<https://gumbo2.wpafb.af.mil/epi-consult/index.cfm>

Shipping Frequently Asked Questions

- Be sure to ship FedEx Priority or Standard Overnight®

Do not ship FedEx First Overnight®

- VTM tube should have at least two identifiers on the label, i.e., SSN/FMP, DOB, or name
- Package each specimen *individually* in biohazard bags with the questionnaire in the front pocket
- Specimens can be received M-F with limited Saturday hours
- If specimens must be shipped for Saturday delivery, please call USAFSAM customer service team at 937-938-4140 or DSN 798-4140 to make arrangements before shipping

Website Resources

- Site-specific surveillance dashboard
 - ✓ Submission data
 - ✓ POC information
 - ✓ Shipping/storage
- Welcome packet
- Weekly reports
- Other sentinel site resources
- Novel virus information
- Historical data
- Program publications

<https://gumbo2.wpafb.af.mil/epi-consult/index.cfm>



USAFSAM/PHR
Epidemiology Consult Service

DoD Influenza Surveillance

→ Welcome Packet - 2014-15 Season

Welcome to the DoD Global, Laboratory-based Influenza Surveillance Program. If you are a sentinel site, we have compiled key resources (links below) to help prepare for the upcoming 2014-2015 influenza surveillance season.

The data gathered from your site will be used to track influenza activity, monitor the trends in new and existing influenza virus strains, and will be used to help shape next season's influenza vaccination.

DoD Policy
Sentinel Sites for the 2014-2015 Influenza Surveillance Program

Training
Visual: Site Training Presentation - EDE | EDE
Audio/Video: Sentinel Site Training Presentation 2013-2014 - Audio.DCD | Video.DCD

Surveillance Questionnaire
EDE | About

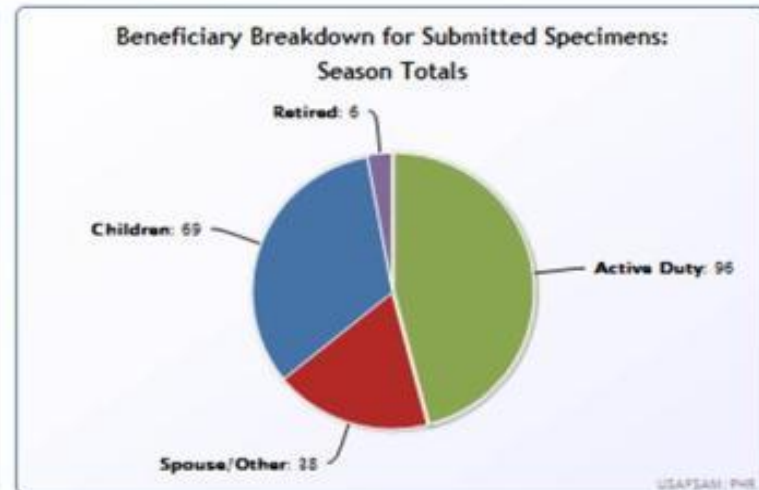
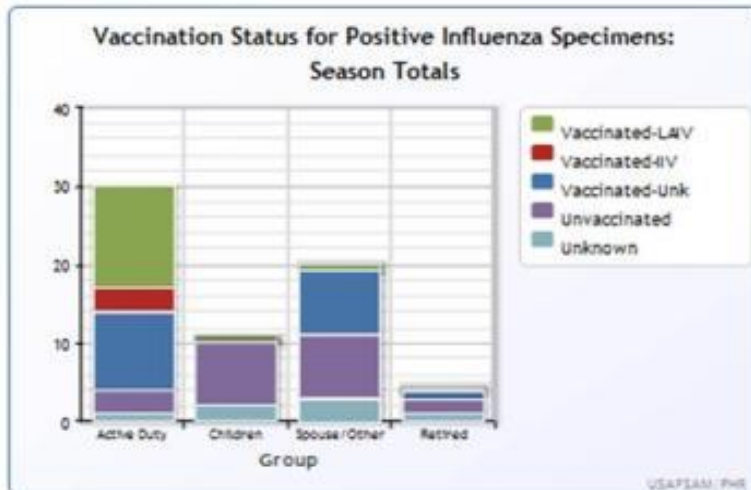
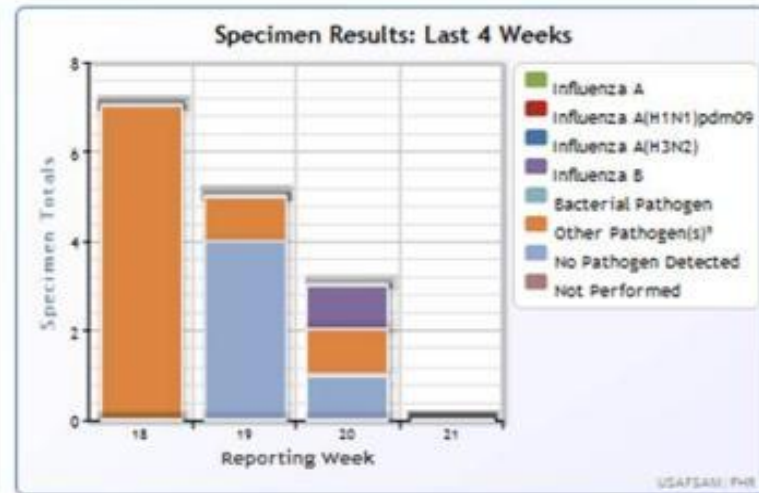
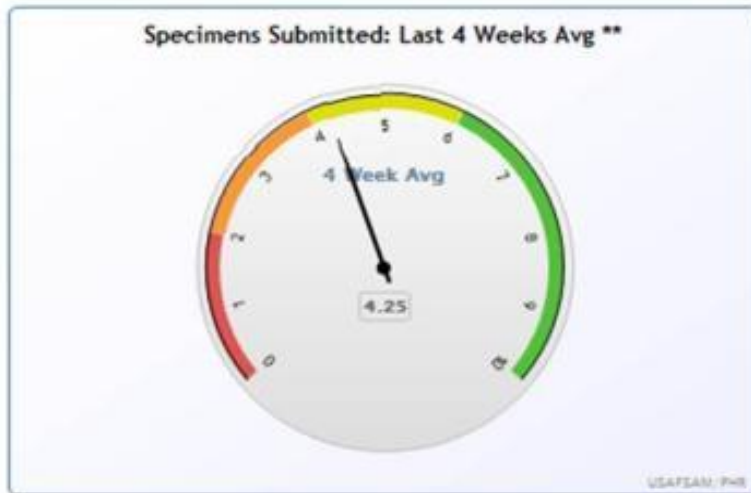
Specimen Collection, Storage, and Shipping

Quick Sheets
+ Laboratory Officer
+ Public Health
+ Primary Care

Contact Us
Influenza Team Contact List

Influenza Dashboard

<https://gumbo2.wpafb.af.mil/epi-consult/index.cfm>



** Request 6-10 specimens per week from patients who meet our ILI case definition.

* Includes all non-influenza co-infections (both viral and bacterial agents) and single non-influenza viral infections

Distribution A: Approved for public release; distribution is unlimited. Case Number: 88ABW-2014-3876, 19 Aug 2014

Weekly Surveillance Report

DoD Global, Laboratory-Based, Influenza Surveillance Program																																																																																																																																																																													
USAF School of Aerospace Medicine																																																																																																																																																																													
2014 - 2015																																																																																																																																																																													
<p>Cumulative Results:</p> <p>Locations 89 Collected 6,051 Tested 5,982</p>																																																																																																																																																																													
<p>Influenza A 1,793</p> <p>A(H1N1)pdm09 4 A(H3N2) 1,784 A & B 1 A & Parainfluenza 1 A(H3N2) & B/Victoria & Adenovirus & Rhino/Enterovirus 1 A(H3N2) & Coronavirus 1 A(H3N2) & Rhino/Enterovirus 1</p> <p>Influenza B 257</p> <p>B/Unknown or pending lineage* 139 B & Rhino/Enterovirus 1 B/Victoria 34 B/Yamagata 83</p> <p>Other Respiratory Pathogens 1,112</p> <p>Adenovirus 123 Bordetella pertussis 0 Chlamydia pneumoniae 2 Coronavirus 90 Human Metapneumovirus 70 Mycoplasma pneumoniae 35 Parainfluenza 172 RSV 208 Rhino/Enterovirus 290 Non-influenza Co-infections 122</p> <p><small>Lab data are current as of 3 August 2015. Results are preliminary and may change as more results are received. *USAFSAM does not sequence all influenza B specimens to determine lineage.</small></p>																																																																																																																																																																													
<p>Respiratory Highlights 5 July - 1 August 2015 (Surveillance Weeks 27-30)</p> <ul style="list-style-type: none"> During 5 July - 1 August 2015, a total of 46 specimens were collected and received from 26 locations. Results were finalized for 34 specimens from 21 locations. One influenza A(H1N1)pdm09 was identified during Week 28. No other influenza viruses were identified. Outbreaks in birds of H5N2, H5N8, and a new H5N1 bird flu virus were first detected in the United States in late 2014. A new CDC study designed to improve understanding of the human health risk posed by H5N2 and H5N8 reaffirms that these viruses pose a low risk to the general public. Additional information can be found here: CDC Flu News (28 July 2015, cited 5 August 2015). 																																																																																																																																																																													
<p>Table 1. Results by region and location for specimens collected and finalized during Weeks 27-30</p> <table border="1"> <thead> <tr> <th>Region*</th> <th>Location</th> <th>A(H1N1)pdm09</th> <th>hMPNV</th> <th>RSV</th> <th>Rhinovirus/Enterovirus/Adeno & Rhino/Entero</th> <th>No Pathogen</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td rowspan="2">PACOM</td> <td>Kadena AB, Japan</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> </tr> <tr> <td>Yokota AB, Japan</td> <td>-</td> <td>-</td> <td>1</td> <td>-</td> <td>-</td> <td>2</td> </tr> <tr> <td rowspan="2">Region 2</td> <td>JB McGuire-Dix-Lakehurst, NJ</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>-</td> <td>2</td> </tr> <tr> <td>USMA - West Point, NY</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>-</td> <td>3</td> </tr> <tr> <td rowspan="6">Region 4</td> <td>Eglin AFB, FL</td> <td>-</td> <td>1</td> <td>-</td> <td>-</td> <td>-</td> <td>2</td> </tr> <tr> <td>Keesler AFB, MS</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>1</td> </tr> <tr> <td>Moody AFB, GA</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>1</td> </tr> <tr> <td>NH Beaufort, SC</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>2</td> <td>2</td> </tr> <tr> <td>Robins AFB, GA</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>1</td> </tr> <tr> <td>Shaw AFB, SC</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>1</td> </tr> <tr> <td rowspan="2">Region 5</td> <td>Tyndall AFB, FL</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>1</td> </tr> <tr> <td>Wright-Patterson AFB, OH</td> <td>1</td> <td>-</td> <td>-</td> <td>1</td> <td>-</td> <td>3</td> </tr> <tr> <td rowspan="2">Region 6</td> <td>Laughlin AFB, TX</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>-</td> <td>1</td> </tr> <tr> <td>Sheppard AFB, TX</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>1</td> </tr> <tr> <td>Region 7</td> <td>Offutt AFB, NE</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>1</td> </tr> <tr> <td rowspan="2">Region 8</td> <td>Ellsworth AFB, SD</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>-</td> <td>3</td> </tr> <tr> <td>Hill AFB, UT</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>1</td> </tr> <tr> <td rowspan="2">Region 9</td> <td>Luke AFB, AZ</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>1</td> </tr> <tr> <td>Travis AFB, CA</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>2</td> <td>2</td> </tr> <tr> <td rowspan="2">Region 10</td> <td>Mt Home AFB, ID</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>1</td> </tr> <tr> <td>NH Bremerton, WA</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>3</td> <td>3</td> </tr> <tr> <td colspan="2">Total</td> <td>1</td> <td>1</td> <td>1</td> <td>5</td> <td>1</td> <td>25</td> </tr> </tbody> </table> <p><small>*US Regions are based on Health & Human Services regions. Other locations are defined by COCOM.</small></p>		Region*	Location	A(H1N1)pdm09	hMPNV	RSV	Rhinovirus/Enterovirus/Adeno & Rhino/Entero	No Pathogen	Total	PACOM	Kadena AB, Japan	-	-	-	-	-	1	Yokota AB, Japan	-	-	1	-	-	2	Region 2	JB McGuire-Dix-Lakehurst, NJ	-	-	-	1	-	2	USMA - West Point, NY	-	-	-	1	-	3	Region 4	Eglin AFB, FL	-	1	-	-	-	2	Keesler AFB, MS	-	-	-	-	1	1	Moody AFB, GA	-	-	-	-	1	1	NH Beaufort, SC	-	-	-	-	2	2	Robins AFB, GA	-	-	-	-	1	1	Shaw AFB, SC	-	-	-	-	1	1	Region 5	Tyndall AFB, FL	-	-	-	-	1	1	Wright-Patterson AFB, OH	1	-	-	1	-	3	Region 6	Laughlin AFB, TX	-	-	-	1	-	1	Sheppard AFB, TX	-	-	-	-	1	1	Region 7	Offutt AFB, NE	-	-	-	-	1	1	Region 8	Ellsworth AFB, SD	-	-	-	1	-	3	Hill AFB, UT	-	-	-	-	1	1	Region 9	Luke AFB, AZ	-	-	-	-	1	1	Travis AFB, CA	-	-	-	-	2	2	Region 10	Mt Home AFB, ID	-	-	-	-	1	1	NH Bremerton, WA	-	-	-	-	3	3	Total		1	1	1	5	1	25
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Distributed via email and website:

<https://kx2.afms.mil/kj/kx7/Influenza/Pages/home.aspx>

- Sentinel sites
- AF bases
- Offices of the Surgeon General (all Services)
- Public Health organizations
- DoD Health Affairs
- AFHSC/GEIS
- CDC collaborators
- CDC Epi-X Distribution (local and state health departments)
- All who are interested

Distribution Statement A: Distribution is unlimited. 88ABW-2015-2196 and PA email guidance dated 1May2015.

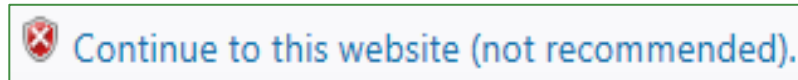
Email: USAFSAM.PHRFlu@us.af.mil, <https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza>

Website Connection Solutions

1. Please be sure to use the following URL:

<https://gumbo2.wpafb.af.mil/epi-consult/index.cfm>

- a. You will receive a security certificate warning;
please select the continue option to proceed to our site.



our certificate is registered to the pre-AFNet address.

- b. Note: You may also need to enter your CAC pin multiple times

2. If you receive an error message:

- a. Close and Open Internet Explorer and try again

- b. If you still cannot reach the site, send an email to

kathy.bush.ctr@us.af.mil with the following information:

- Screen shot or text of the error message
- Number of times you were prompted for your CAC pin
(*also need to know if you were not prompted for a pin*).
- Are other personnel at your site able to access the link?

Successful Solutions to Possible Problems

- Problem: Clinical staff lacks motivation/willingness to work program
 - ✓ Create a subset of these slides to show big-picture and how they fit in the overall U.S. Influenza Vaccination program
 - ✓ Brief program at Pro-Staff or other clinical training times/days
 - ✓ Draft a talking paper explaining program benefits
 - ✓ Find one tech/staff that shows and interest and use as POC for clinic
- Problem: Staff Turnover
 - ✓ Create continuity binder/SOP or other for program
 - ✓ Direct newcomers to Influenza website(s)
 - ✓ Brief at medical staff newcomers orientation or other
- Problem: Completing Questionnaire
 - ✓ Highlight “patient information” section on form for patient to fill-out
 - ✓ Review form to ensure data is gathered accurately/quickly
 - ✓ Centrally locate collection kits for easy access
- Problem: Buy-in from Leadership
 - ✓ Brief weekly flu report:
<https://kx2.afms.mil/kj/kx7/Influenza/Pages/home.aspx>
 - ✓ Invite to Pro-Staff briefing or other clinical training for Influenza
 - ✓ Explain that the Defense Health Agency/Health Surveillance Branch (DoD/DHA/HSB) is now the lead and this is not an optional program

Frequently Asked Questions

- **There is an increase in ILI patients**
 - ✓ Continue submitting up to 10 per week
 - ✓ Priority should be given to the sickest or **hospitalized** patients and those presenting with respiratory distress (shortness of breath)
- **Often difficult submitting 6 specimens in a given week**
 - ✓ Send specimens for those who meet the ILI case definition
- **You want to make sure specimens arrive at USAFSAM on a weekday from Monday - Thursday**
 - ✓ Consider sampling patients early in the week or freeze the specimen at -70 and ship the following week
- **You are in a busy clinic and would like to simplify case selection**
 - ✓ It may be convenient to designate 1 day a week for patient sampling to meet the 6-10 samples per week, for example, “Flu Mondays”
- **A specimen has already been submitted for a patient in the past 14 days**
 - ✓ One specimen per patient is recommended; use clinical judgment in these situations

EUCOM

- **Collection Kits:**

- USAFSAM will provide collection kits with NP swabs to European sentinel sites

- Please contact at DSN 798-3196 or Joshua.Cockerham.ctr@us.af.mil for kits

- **Per Assistant Secretary of Defense, Health Affairs Memo:**

- Submit 6-10 respiratory specimens meeting ILI case definition to Landstuhl RMC (LRMC) laboratory
 - Complete patient questionnaire and submit with specimen
- LRMC coordinates shipment of original influenza positive specimens to USAFSAM every other Monday using USAFSAM's FedEx account

- **Specimen Testing:**

- LRMC conducts PCR testing for common respiratory viruses
 - LRMC results 2-3 days; other sites 4-5 days
- USAFSAM conducts sequencing of influenza positives

European Sentinel Sites	Service
RAF Lakenheath	Air Force
Ramstein AB	Air Force
Spangdahlem AB	Air Force
Aviano AB	Air Force
Incirlik AB	Air Force
Landstuhl RMC	Army
Stuttgart AHC	Army
Vilseck AHC	Army
NSA Naples	Navy
NAS Sigonella	Navy
NAVSTA Rota	Navy

EUCOM Contact Information

PHCR-E

COL Mitchell Meyers
Chief of Epidemiology Department
Email: Mitchell.S.Meyers.mil@us.army.mil
DSN: 314-486-8951

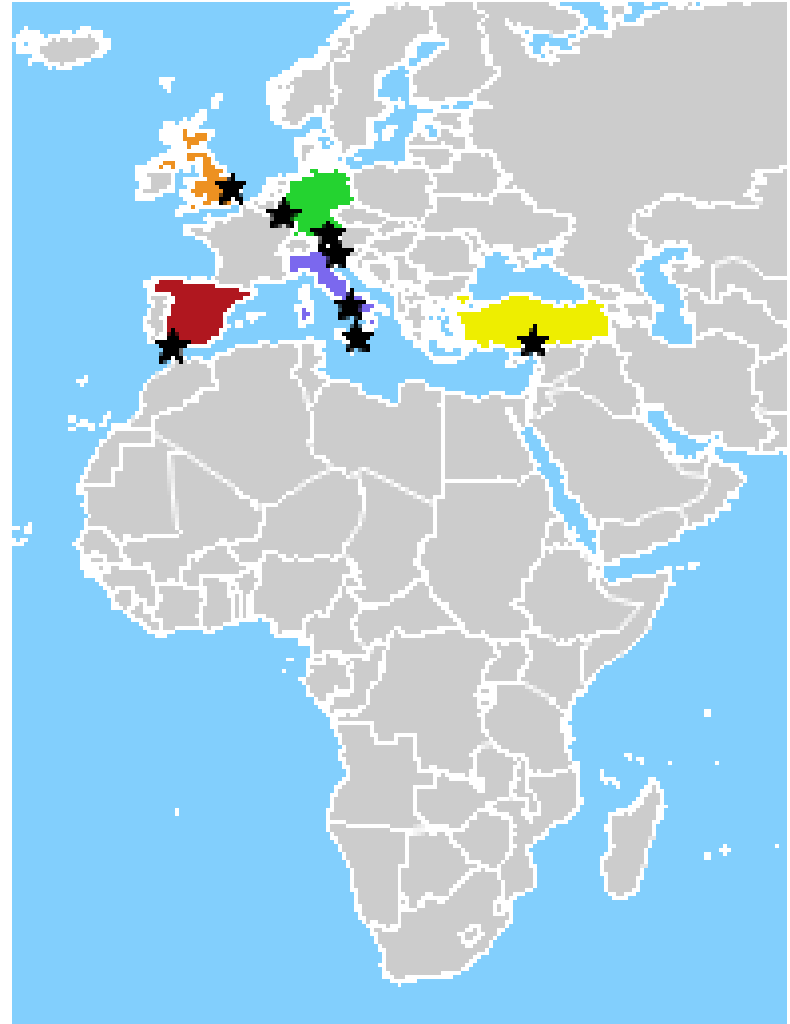
Fritz Castillo, MPH
Epidemiologist
fritz.m.castillo.ctr@mail.mil
DSN: 314-486-8516

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LTC Max Wu
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CPT Ronald Woodbury
Chief, Virology, LRMC
ronald.l.woodbury.mil@mail.mil
DSN: 314-590-5393

Dr. Mike Koenig, Ph.D.
Tech. Supervisor Virology, LRMC
Email: Michael.G.Koenig.ln@mail.mil
DSN: 314-486-7809



CENTCOM

- **Limited influenza coverage by WHO in this region**
- **Potential detection of MERS-CoV specimen; could likely be imported to U.S. from deployed area**
- **CENTCOM sites can ship specimens to USAFSAM or LRMC**
- **Closing of deployed sites: submit as long as clinics remain open**
- **Logistics and Shipping:**
 - Prepare ahead of time
 - Update dashboard with availability of dry ice and -70°C freezer
 - Contact customer service if these are not available
 - Determine available couriers who can re-ice during shipment
 - **DHL & World Courier re-ice**
 - **FedEx **does NOT** re-ice**
 - Recommend keeping a continuity binder, due to high turnover of personnel

CENTCOM Sentinel Sites	Service
Bagram AB	Air Force
Kandahar AB	Air Force
Ali Al Salem AB	Air Force
Al Udeid AB	Air Force
Al Dhafra AB	Air Force
Camp Lemonnier	Navy
Camp Buehring/ Camp Arifjan	Army
BMC Bahrain	Navy

The End

Access USAFSAM flu report:

Website: <https://kx2.afms.mil/kj/kx7/Influenza/Pages/home.aspx>

Website: <https://gumbo2.wpafb.af.mil/epi-consult/ibdex.cfm>

USAFSAM Epidemiology Laboratory Service (PHE)

Email: usafsam.phecussv@us.af.mil

Website: <https://kx2.afms.mil/kj/kx5/EPILab/Pages/home.aspx>

Commercial: (937) 938-4140 or DSN: 798-4140

USAFSAM Epidemiology Consult Service (PHR)

Email: usafsam.phrflu@us.af.mil

Commercial: (937) 938-3196 or DSN: 798-3196

