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

- 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


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

Submit to USAFSAM
Submit to LRMC
Submit to TAMC

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
• **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

- **Strain Selection**
  - CDC
  - FDA
  - WHO

- **Surveillance & Reassortants**

- **Production (at risk)**
  - Produce Working Seed

- **Production (may be at risk)**

- **Strain Balancing**

- **Formulation**

- **Vaccination**

- **Annual License Approval**

- **Filling & Packaging**

- **Distribution**

- **~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


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)

A/Texas/50/2012
A/Victoria/361/2011 e F

2014-2015

A/Switzerland/9715293/2013 LR F
A/Switzerland/9715293/2013 e LR F

2015-2016

A/Indonesia/EJKSV0138/2015
A/Indonesia/EJKSV0139/2015
A/Indonesia/EJKSV0140/2015
A/Indonesia/EJKSV0133/2015
A/Nebraska/04/2014 F
A/Louisiana/39/2013 F
A/Victoria/506/2013 e F
A/New York/33/2012
A/Louisiana/20/2014 LR F
A/Thailand/PMKA4013/2015
A/Thailand/KPPH00830/2015
A/Thailand/KPPH00834/2015

A/Connecticut/5737/2015
S400A
N45Δ LOSS GLY
A/Country 3/5759/2015
S9R Q197R
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

<table>
<thead>
<tr>
<th>Seed Viruses and Reference Strains from DoD Surveillance</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/PR8/1945, an A strain isolated from a recruit in May 1943, plus B/Lee (Army)</td>
</tr>
<tr>
<td>A/Texas/1/77 (H3N2) (USAF)</td>
</tr>
<tr>
<td>A/Philippines/2/82 (H3N2) (USAF)</td>
</tr>
<tr>
<td>A/Panama/2007/99 (H3N2) (USAF)</td>
</tr>
<tr>
<td>A/California/4/2005 (H3N2) (USN)</td>
</tr>
<tr>
<td>A/South Dakota/06/2007 (H1N1), (USAF Base, Army Case)</td>
</tr>
<tr>
<td>A/Texas/05/2009 (H1N1) (USAF)</td>
</tr>
<tr>
<td>A/Iraq/18529/2009 (H1N1) (USAF)</td>
</tr>
<tr>
<td>A/California/07/2009 (H1N1) (USN)</td>
</tr>
</tbody>
</table>
**Surveillance Process and Vaccine Development**

- **Sentinel Sites***
- **Participating Non-Sentinel Sites**
- **National Respiratory & Enteric Virus Surveillance System Labs (U.S.)**
- **WHO Influenza Labs**

**DoD Global Lab-Based Sentinel Surveillance**

**FDA’s VRBPAC**
- Meets to decide strains for annual flu vaccine

**CDC/Viral Surveillance**

**NORTHERN SEASONAL INFLUENZA VACCINE PRODUCED**

---

*40% of 2014-2015 Influenza Season Data used in the Vaccine was from Sentinel Sites

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

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

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

**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.
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:
• Contact the program via email for more kits at usafsam.phrflu@us.af.mil
Nasal Wash

- 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:
**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
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
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°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](https://kx2.afms.mil/kj/kx5/EPILab/Pages/home.aspx)
  or
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

Influenza Dashboard


** Specimens Submitted: Last 4 Weeks Avg **

** Specimen Results: Last 4 Weeks **

** Vaccination Status for Positive Influenza Specimens: Season Totals **

** Beneficiary Breakdown for Submitted Specimens: Season Totals **

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

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

**DoD Global, Laboratory-Based, Influenza Surveillance Program**

*USAf School of Aerospace Medicine*

**Cumulative Results**

<table>
<thead>
<tr>
<th>Influenza A</th>
<th>1,793</th>
</tr>
</thead>
<tbody>
<tr>
<td>A(H1N1)pdm09</td>
<td>4</td>
</tr>
<tr>
<td>A(H3N2)</td>
<td>1,784</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>1</td>
</tr>
<tr>
<td>A &amp; Influenza</td>
<td>1</td>
</tr>
<tr>
<td>A(H1N1) &amp; B/Victoria</td>
<td>1</td>
</tr>
<tr>
<td>A(H3N2) &amp; B/Florida</td>
<td>1</td>
</tr>
<tr>
<td>A(H1N1) &amp; Other</td>
<td>1</td>
</tr>
<tr>
<td>A(H3N2) &amp; Other</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Influenza B</th>
<th>257</th>
</tr>
</thead>
<tbody>
<tr>
<td>B/Victoria</td>
<td>139</td>
</tr>
<tr>
<td>B/Hong Kong</td>
<td>1</td>
</tr>
<tr>
<td>B/Florida</td>
<td>94</td>
</tr>
<tr>
<td>B/Texas</td>
<td>63</td>
</tr>
</tbody>
</table>

**Other Respiratory Pathogens**

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>1,112</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenovirus</td>
<td>133</td>
</tr>
<tr>
<td>Bordetella pertussis</td>
<td>0</td>
</tr>
<tr>
<td>Chlamydophila pneumoniae</td>
<td>2</td>
</tr>
<tr>
<td>Coronavirus</td>
<td>90</td>
</tr>
<tr>
<td>Human Metapneumovirus</td>
<td>70</td>
</tr>
<tr>
<td>Mycoplasma pneumoniae</td>
<td>35</td>
</tr>
<tr>
<td>Parainfluenza</td>
<td>8</td>
</tr>
<tr>
<td>RSV</td>
<td>208</td>
</tr>
<tr>
<td>Rhinovirus</td>
<td>390</td>
</tr>
<tr>
<td>Respiratory Co-infections</td>
<td>122</td>
</tr>
</tbody>
</table>

**Table 1.** Results by region and location for specimens collected and finalized during Weeks 27-30

- **Region**:
  - **Area 1**: Kadena AB, Japan
  - **Area 2**: Yokota AB, Japan
  - **Area 3**: USMA – West Point, NY
  - **Area 4**: Eglin AFB, FL
  - **Area 5**: Keesler AFB, MS
  - **Area 6**: Moody AFB, GA
  - **Area 7**: NH Beaufort, SC
  - **Area 8**: Robins AFB, GA
  - **Area 9**: Shaw AFB, SC
  - **Area 10**: Wright-Patterson AFB, OH
  - **Area 11**: Luke AFB, AZ
  - **Area 12**: Travis AFB, CA
  - **Area 13**: MIF AFB, ID
  - **Area 14**: NH Bremerton, WA

**Respiratory Highlights**

- 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 H7N1 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 suggests 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).

**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
Website Connection Solutions

1. Please be sure to use the following URL:
   a. You will receive a security certificate warning;
      please select the continue option to proceed to our site.
      
      Continue to this website (not recommended).
      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

---

<table>
<thead>
<tr>
<th>European Sentinel Sites</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAF Lakenheath</td>
<td>Air Force</td>
</tr>
<tr>
<td>Ramstein AB</td>
<td>Air Force</td>
</tr>
<tr>
<td>Spangdahlem AB</td>
<td>Air Force</td>
</tr>
<tr>
<td>Aviano AB</td>
<td>Air Force</td>
</tr>
<tr>
<td>Incirlik AB</td>
<td>Air Force</td>
</tr>
<tr>
<td>Landstuhl RMC</td>
<td>Army</td>
</tr>
<tr>
<td>Stuttgart AHC</td>
<td>Army</td>
</tr>
<tr>
<td>Vilseck AHC</td>
<td>Army</td>
</tr>
<tr>
<td>NSA Naples</td>
<td>Navy</td>
</tr>
<tr>
<td>NAS Sigonella</td>
<td>Navy</td>
</tr>
<tr>
<td>NAVSTA Rota</td>
<td>Navy</td>
</tr>
</tbody>
</table>

Distribution A: Approved for public release; distribution is unlimited. Case Number: 88ABW-2014-4213, 8 Sep 2014
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

**LRMC Infectious Disease Lab**
LTC Max Wu  
Chief, Infectious Disease Labs  
Dept. of Pathology and Area Laboratory Services, LRMC  
Email: max.wu.mil@mail.mil  
DSN: 314-590-5653

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

Distribution A: Approved for public release; distribution is unlimited. Case Number: 88ABW-2014-4213, 8 Sep 2014
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
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