U.S. Army Public Health Command (Provisional)
USAPHC

2010-11 Influenza Season, as of
9 February 2011

U.S. Army Influenza Activity Report

Questions or comments:
influenza.surveillance@amedd.army.mil

An integrated summary of findings from epidemiological reporting systems, Army Medical Center laboratory results, and sentinel, population and hospital-based surveillance systems.

Vaccine and Antiviral Resistance

Influenza Vaccine

Circulating strains from DoD and civilian populations are well-matched to the 2010-11 vaccine.
(Reference USAFSAM, CDC)

During well-matched years, clinical trails have shown effectiveness of the vaccine to be between 70-90% among health adults.
(Reference: CDC)

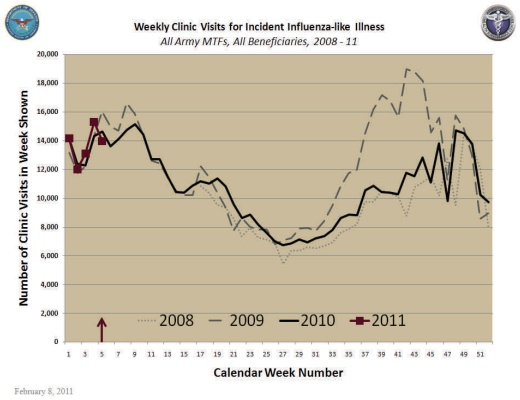
Antiviral Resistance

CDC antiviral testing indicates that all subtypes of influenza continue to be sensitive to neuraminidase inhibitors oseltamivir and zanamivir. DoD antiviral testing, using a genetic marker detection technique, also found that no 2009 H1N1 specimens indicated resistance to oseltamivir .
(Reference CDC, USAFSAM)

Influenza-like Illness (ILI) activity

Clinical visits for ILI are gathered by the Armed Forces Health Surveillance Center from ESSENCE. As of 8 February.

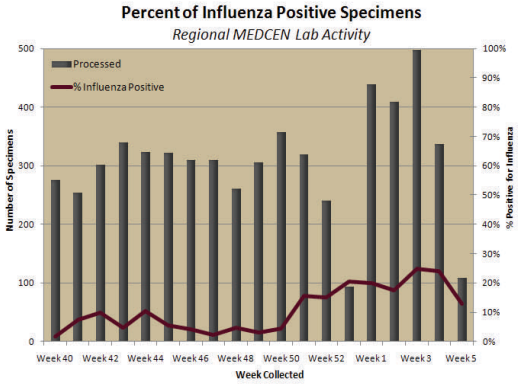
For the week ending 29 January, visits for ILI across Army MTFs decreased (8.6%) from the previous week, remaining in the range of visits for the same time period in previous years. Click graph below for an overview of visits among all Army MTFs and see page 2 for an overview by region.



Army Regional Lab activity

Data reflect all major regional MEDCEN labs (TAMC, LRMC, EAMC, WRAMC, MAMC, and BAMC).

An average of 56 patients per week had a specimen tested for a respiratory virus at one of the major regional Army MEDCEN labs. Of the total 5,799 specimens tested, 48.5% (n=2,811) were positive for a respiratory virus, more specifically, 11.4% (n=661) were positive for influenza. Click graph below and see pages 2-3 for a detailed overview by region.



Resources

To access, double-click titles

Surveillance Programs

- DoD Influenza-like Illness (AFHSC)
- Sentinel-based (USAFSAM)
- Population-based (NHRC)
- Region-based (PHC-EUR/LRMC)
- Acute Respiratory Disease (PHC)
- DoD MHS Lab Surveillance (NMCPHC)

Related Links

- Pandemic Influenza Watchboard
- AFHSC
- CDC Influenza Update
- Historical Army Influenza reports

Surveillance Activity Reports

For detailed information regarding the surveillance programs, see "Resources" section.

MHS Lab Report (DoD beneficiaries)

Week ending 5 Feb: The highest frequency of influenza cases across DoD occurred at Ft Hood (n=95) and Ft Sam Houston (n=27). Overall, Ft Hood has had the most influenza cases (n=333) this season.* As of 9 Feb.

**Data include rapid antigen results.*

Sentinel-based surveillance (DoD beneficiaries)

Influenza viruses account for 21% of total season results (70% A, 30% B). USAFSAM further reported:

Influenza A		Influenza B	
A/H3	(n=65)	B/Victoria	(n=8)
A/pH1	(n=58)	B/Yamagata	(n=1)
A/Pending	(n=3)	B/Pending	n=44)

Of these, 24 were collected from patients affiliated with the Army; 15 further characterized as A/H3 (n=7), A/pH1 (n=5), B/Victoria (n=2), and B/Yamagata (n=1). As of 7 Feb.

Population-based surveillance (Recruits)

Week ending 29 Jan: The febrile respiratory illness (FRI) rate is substantially elevated at Ft Leonard Wood. Specimens collected are pending results.

This season, 10 Army recruits were positive with influenza (7 A/pH1, 2 A/H3, 1 B). Five of the 7 A/pH1 specimens collected from Ft Jackson were vaccinated >14 days.

Recent A/pH1 original specimens and grown virus have been shared with CDC and UAFSAM, respectively. As of 3 Feb.

Acute Respiratory Disease (ARD) surveillance

Strep/ARD surveillance index (SASI)* increased at **1** site: Ft Sill (SASI = 10.71). As of 5 Feb.

**SASI equal to or greater than 25 is a predictor of serious strep-related morbidity.*

Regional Army Respiratory Activity: Syndromic (ILI) and Lab-Confirmed

CONUS Major Regional MEDCEN Lab Activity

Double-click images to the right of the paragraphs to expand.

- **ILI**: For the week ending 5 February, patient visits for ILI decreased (10.8%) from the previous week.

- **Brooke Army Medical Center (BAMC), TX** (BAMC data updated as of 1 Jan. Update available, not transmittable, working issue at this time)

- 2010-11 season: Respiratory Testing

An average of 38 patients a week had a specimen tested.

Of the 492 patients tested, 13.6% (n=67) were positive, more specifically, 1.8% (n=9) were positive for influenza (67% A, 33% B).

- Advanced Trainee Surveillance:

7 specimens have been collected since the 2010-11 season, and 14.2% (n=1) have been positive for influenza.

Robust surveillance is pending receipt of population data for Army, AF, and Navy advanced trainees at Ft Sam Houston.

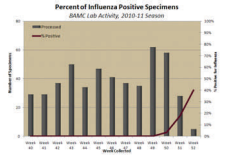
- Patients with Influenza:

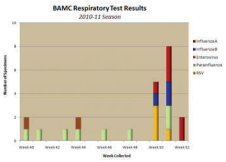
The majority (88.8%, n=8) of patients were dependents.

The majority (7 of the 9) of the patients sought care at MTFs on BAMC, while 2 sought care at Randolph AFB.

- Sites requesting a respiratory test from BAMC lab:

Ft Sam, Camp Bullis, Ft Bliss, Randolph AFB, Lackland AFB, NH Corpus Christi, Ft Sill, Ft Irwin, Ft Leonard Wood, Ft Leavenworth, Ft Hood, Ft Polk, and Ft Wainwright.





- **Eisenhower Army Medical Center (EAMC), GA** (EAMC data updated as of 9 Feb)

- 2010-11 season: Respiratory Testing

An average of 75 patients a week had a specimen tested. Of the 1,355 patients tested, 34.4% (n=466) were positive, more specifically, 16.2% (n=220) were positive for influenza (50% A, 50% B).

- Patients with Influenza:

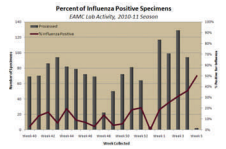
The majority (64.5%, n=142) were dependents (80% children, 20% spouse), followed by 10.9% (n=24) active duty, 4.5% (n=10) AR Nat'l Guard, 0.9% (n=2) AR Reserve, and 3.1% (n=7) retirees. Patients seeking care at Ft. Stewart accounted for 42.7% (n=94) of cases.

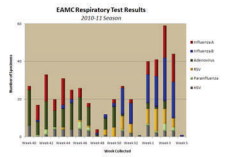
- Active Lab-Based Surveillance:

Blanchfield ACH (Fort Campbell, KY). An average of 3 patients are tested per week at BACH. Due to the more targeted collections, 3 patients have tested positive for influenza (2 A, 1 B) in Weeks 3 & 4.

- Sites of interest:

Ft Jackson: In January, 33.9% (20 of 59) of collections were positive for influenza. Influenza patients were Army AD (n=10), Army NG (n=8), and Army Reserve (n=2).





- **Madigan Army Medical Center (MAMC), WA** (MAMC data updated as of 31 Jan)

- 2010-11 season: Respiratory Testing

An average of 24 patients a week had a specimen tested. Of the 458 patients tested, 26.8% (n=123) were positive, more specifically, 2.4% (n=11) were positive for influenza (82% A, 18% B).

- Patients with Influenza:

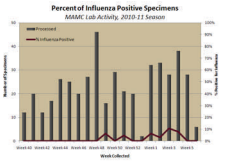
The majority (72.7%, n=8) were dependents (62.5% children, 37.5% spouse), followed by 18.2% (n=2) AF retirees, and 9.1% (n=1) AF active duty. One of the 10 patients sought care at Ft. Wainwright, AK, while the remainder were MTFs on Joint Base Lewis-McChord.

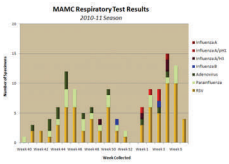
- Influenza identification

Eight influenza A specimens were further characterized as A/pH1 (n=4) and A/H3 (n=4).

- Sites requesting a respiratory test from MAMC lab:

Clinics on Joint Base Lewis-McChord, MAMC, and Ft. Wainwright





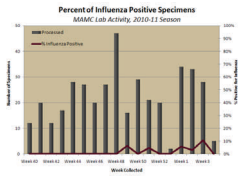
- **Walter Reed Army Medical Center (WRAMC), WA** (MAMC data updated as of 26 Jan)

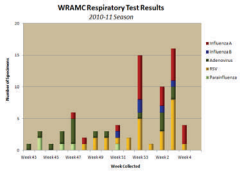
- 2010-11 season: Respiratory Testing

An average of 23 patients a week had a specimen tested. Of the 379 patients tested, 19.5% (n=74) were positive, more specifically, 6.8% (n=26) were positive for influenza (21 A, 5 B). Two isolates were further characterized as A/pH1.

- Patients with Influenza:

All patients with positive influenza results sought care in clinics or the hospital at Walter Reed. Of the 26 influenza-positive patients, the majority (50%, n=13) were children, followed by active duty (34.6%, n=9), and spouse (15.4%, n=4).





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Regional Army Respiratory Activity: Syndromic (ILI) and Lab-Confirmed

OCONUS Activity

Double-click images to the right of the paragraphs to expand.

Pacific

- **ILI:** For the week ending 5 February, patient visits for ILI slightly decreased (2.4%) from the previous week.

- **Tripler Army Medical Center (TAMC), HI** (TAMC data updated as of 4 Feb)

- 2010-11 season: Respiratory Testing

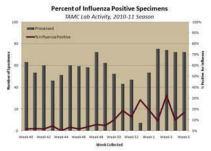
An average of 57 patients a week had a specimen tested. Of the 1,079 patients tested, 32.8% (n=354) were positive, more specifically, 9.1% (n=98) were positive for influenza (62% A, 38% B).

- Patients with Influenza:

The majority (84.6%, n=83) were dependents (67% children, 33% spouse), followed by 7.1% (n=7) active duty, 4.0% (n=4) retirees, 2.0% (n=2) VA beneficiaries, and 2.0% (n=2) civilians. Three of the 98 patients sought care in South Korea (BAACH), while the remainder sought care in HI.

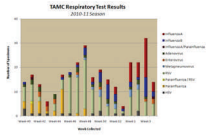
- Influenza identification

TAMC sends influenza specimens to UAFSAM for sequencing and inclusion in the annual vaccine meeting. Of these, 15 (7 A, 8 B) have been sent, with 4 sequenced (3 A/pH1 and 1 B/Victoria).

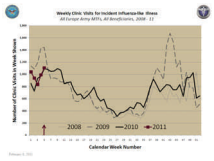


- Sites requesting a respiratory test from TAMC lab:

MTFs on Tripler AMC, Brian Allgood ACH (South Korea), Naval Hospital Guam, USCG Sand Island, Camp Smith, Hickam AFB, Kaneohoe Bay Marine Corps, Pearl Harbor Naval Base, Schofield Barracks.



Europe



- **ILI:** For the week ending 5 February, patient visits for ILI increased (11.4%) from the previous week.

- **Landstuhl Army Medical Center (LRMC), Germany** (LRMC data updated as of 3 Feb)

- 2010-11 season: Respiratory Testing

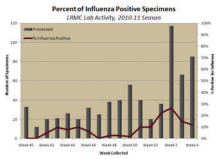
An average of 40 patients a week had a specimen tested. Of the 687 patients tested, 54.3% (n=373) were positive, more specifically, 11.2% (n=77) were positive with influenza (80% A, 20% B).

- Patients with Influenza:

The majority (54.5%) were dependents (57% child, 43% spouse), followed by 33.7% (n=26) active duty, 1.3% (n=1) reserve, and 10.3% (n=8) employees and/or their family members. The majority (46.7%, n=36) sought care in Germany, while 24.6% (n=19) sought care in England, 11.7% (n=9) in Spain, 9.0% (n=7) in Italy, 5.1% (n=4) in Belgium, and 2.5% (n=2) in CENTCOM.

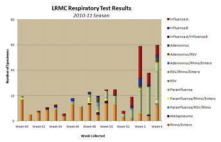
- Influenza identification

The majority (40.2%, n=31) of the positive influenza specimens was collected from patients in Week 2. Fifty-three influenza specimens were further characterized as A/pH1 (n=45) and A/H3 (n=8).



- Sites requesting a respiratory test from LRMC lab:

Sites located in Afghanistan, Bahrain, Iraq, Kosovo, Kuwait, Belguim, England, Germany, Greece, Italy, Portugal, Spain, and Turkey.



- *Note: Respiratory viruses identified by Luminex technology.*

Centers for Disease Control and Prevention

- **Nationwide**, during Week 4 (23-29 January), 4.0% of reported patient visits were due to ILI, which was above the national baseline of 2.5%. Of the specimens tested by collaborating labs and reported to CDC, 32.9% were positive for influenza (82% A, 18% B). The majority of influenza A specimens were A/H3 (43%), followed by pH1 (25%), and subtyping was not performed on the remainder (32%). See CDC's FluView for more information.

- **Global Influenza Activity** (as reported by Global Alert and Response). North America is leveling off or decreasing in influenza activity, though not all regions have experienced a peak yet. Influenza activity in North America has been related primarily to A/H3, with some co-circulation of Influenza B in the U.S. In the United Kingdom, activity predominantly related to A/pH1 is now decreasing. Activity on the European continent is increasing, particularly in the west, and countries are increasingly reporting severe and fatal cases. Severe cases have been reported in association with all three influenza viruses (A/H3, A/pH1, and type B), but A/pH1 appears to be disproportionately over-represented among severe cases when compared to the distribution of viruses in the community. The large majority of the viruses characterized from North America and Europe continue to be of the same lineages as those found in the current seasonal trivalent vaccine. Transmission in Northern Africa and Northern Asia has peaked recently and is declining. In the tropics, several countries of southern Asia have seen increasing trends recently mainly due to A/pH1. Other tropical areas of the world and the temperate countries of the Southern Hemisphere are currently reporting very little influenza circulation. As of 28 Jan.