

2010-11 Influenza Season, as of  
 18 March 2011

# Overview of Army Influenza Surveillance Activities

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

## 2011-12 Vaccine Selection

Trivalent formulation for the 2011-12 influenza season will remain the same as the 2010-11 influenza season.

## 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 show vaccine effectiveness to be between 70-90% among healthy adults. *(Reference: CDC)*

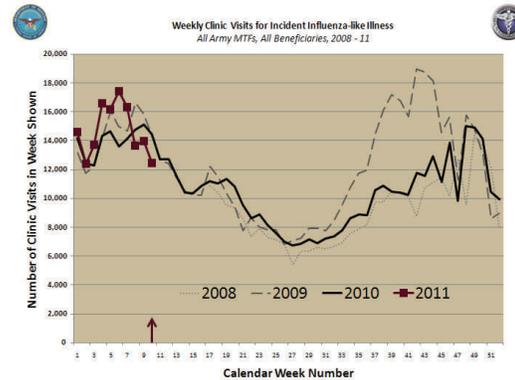
### Antiviral Resistance

CDC findings indicate a high-level of resistance to adamantanes among circulating influenza A isolates, but the A/pH1, A/H3, and B isolates remain susceptible to neuraminidase inhibitors (oseltamivir and zanamivir).

## Influenza-like Illness (ILI) activity

Clinical visits for ILI are gathered by the Armed Forces Health Surveillance Center from ESSENCE. As of 16 March.

For the week ending 12 March, visits for ILI across Army MTFs decreased (10.8%) from the previous week, and remained at or below the range of visits for the major geographic regions. Click graph below and see pages 2-3 for an overview by region.

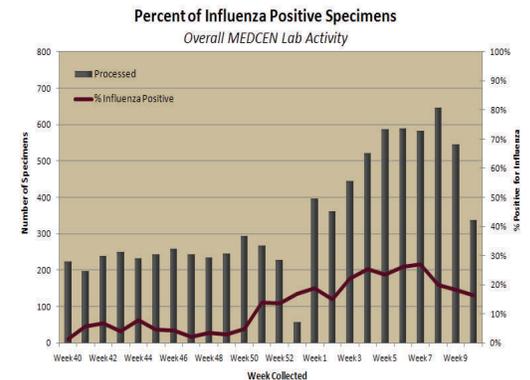


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## Army Regional Lab activity

Data reflect major regional Medical Center lab activity (TAMC, LRMC, EAMC, WRAMC, MAMC, and BAMC).

The frequency of specimen collections decreased (15.5%) from Weeks 8 to 9. The percentage of positive influenza results slightly decreased from 19.8% in Week 8 to 18.3% in Week 9. Click graph below and see pages 2-3 for an overview by region.



## Resources

To access, double-click titles

### Surveillance Programs

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

### Related Links

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

## Surveillance Activity Reports

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

### MHS Lab-based surveillance (DoD beneficiaries)

Week ending 12 Mar: The influenza rate is 2.4 per 100,000 for Army active duty. The highest frequency of cases occurred at Ft Belvoir (n=18), Ft Wainwright (n=17) and Ft Lewis (n=12). There were 11 bacterial coinfections associated with influenza (9 Army), totaling 125 for DoD this season.

### Sentinel-based surveillance (DoD beneficiaries)

Week ending 5 Mar: 43.3% of 97 specimens were influenza-positive (18 B, 13 A/H3, 11 A/pH1). Influenza viruses account for 36% of total season results (70% A, 30% B). USAFSAM further reported:

Influenza A (n=443)			Influenza B (n=187)		
Subtype	No.	(%)	Subtype	No.	(%)
A/H3	239	(54.0)	B/Victoria	9	(4.8)
A/pH1	191	(43.1)	B/Yamagata	1	(0.5)
A/pending	13	(2.9)	B/pending	177	(94.7)

Of influenza patients with vaccine history, 48% (127/266) of influenza A cases and 40% (49/123) of influenza B cases were immunized. As of 16 March.

### Population-based surveillance (Recruits)

Week ending 12 Mar: Febrile respiratory illness rate is at or below expected value at Army recruit sites. This season, 122 Army recruits enrolled in this surveillance program were positive with influenza (107 A/pH1, 7 A/H3, 8 B). Of these, 8 (7 A/pH1, 1 B) were collected from 11-19 Feb. As of 17 Mar.

### Acute Respiratory Disease surveillance (Recruits)

Week ending 12 Mar: Strep/Acute Respiratory Disease (ARD) surveillance index increased from the previous week at 1 site, Ft Sill (ARD=33, Strep=2).

### Pneumonia and Influenza-associated Mortality

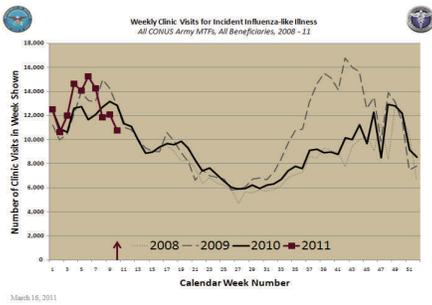
2010-11 season: 1 death on 20 Feb was attributed to influenza A (Ft Jackson). Patient was vaccinated >14 days. A DoD effort is in place to review circulating strains and vaccine efficacy.

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

## Major Geographic Region: CONUS

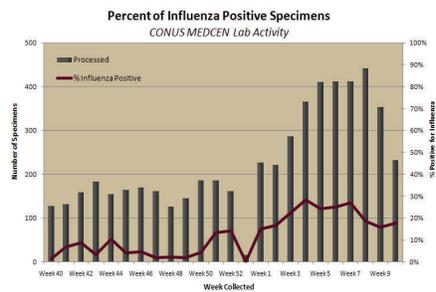
### Influenza-like illness

For the week ending 12 March, patient visits for ILI decreased (10.8%) from the previous week among CONUS-based Army MTFs. Click graph below for an overview.



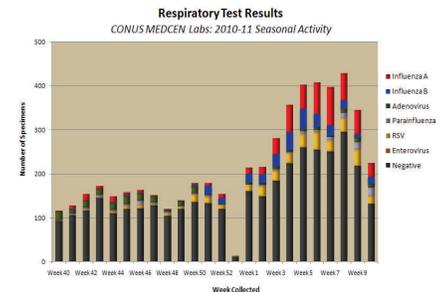
### Respiratory Testing Activity (CONUS)

For week ending 12 March, the frequency of specimen collections decreased (34.3%) from the previous week. The percentage of positive influenza results slightly increased (1.8%) in Week 10. Click graph below for an overview.



### Laboratory Results

For week ending 12 March, 42.7% (n=99) of specimens collected were positive for a respiratory virus. Influenza subtypes identified this season include: A/pH1 (n=27), A/H3 (n=82). Click graph below for an overview.



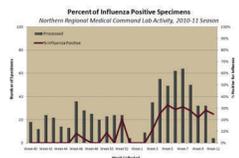
## • Northern Regional Medical Command (NRMC)

### Respiratory Testing Activity

The frequency of specimen collections remained stable from Week 9 to Week 10 (ending 12 March). The percent positive influenza results increased to 28.1% in Week 10. Click graph to right for an overview.

### Patients with Influenza

The majority of influenza-positive patients whose specimen was collected during Week 10 were children (55.6%), followed by 22.2% (n=2) active duty, 11.1% (n=1) retiree, and 11.1% (n=1) spouse.

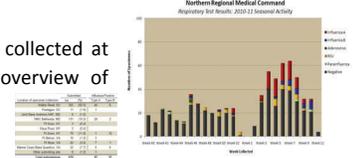


### Laboratory Results

The percentage of positive respiratory results slightly increased from 31.2% in Week 9 to 34.4% in Week 10. Influenza isolates characterized this season include: A/pH1 (n=3), A/H3 (n=2).

### Sites submitting specimens

In Week 10, the majority (46.8%) of specimens were collected at WRAMC. Click table to the right for a seasonal overview of submitting sites and influenza results.



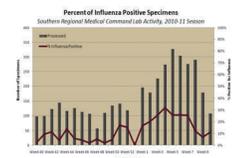
## • Southern Regional Medical Command (SRMC)

### Respiratory Testing Activity

The frequency of specimen collections decreased (40.2%) from Week 9 to 10 (week ending 12 Mar). The percentage of positive influenza results increased from 6.7% in Week 9 to 11.2% in Week 10.

### Patients with Influenza

The majority (68.4%, n=13) of patients whose specimen was collected in Week 9 were dependents (11 children, 2 spouse), followed by 31.6% (n=6) active duty. Most (63.1%, n=12) patients sought care at BAMC, followed by EAMC (n=5) and Ft Stewart (n=2).

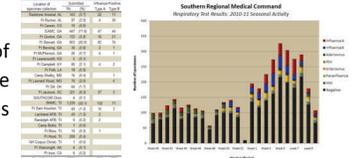


### Laboratory Results

The percentage of positive respiratory results increased from 29.6% in Week 9 to 38.3% in Week 10 (week ending 12 Mar). Influenza subtypes identified this season include: A/H3 (n=48).

### Sites submitting specimens

For the week ending 12 March, the majority (39.3%) of specimens were collected at BAMC, TX. Click the table to the right for a season overview of submitting sites and influenza results.



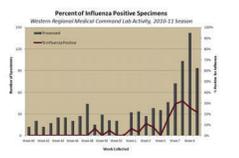
## • Western Regional Medical Command (WRMC)

### Respiratory Testing Activity

The frequency of specimen collections decreased (34.5%) from Week 9 to Week 10. The percentage of positive influenza results decreased from 26.1% to 21.5% in Week 10. Click graph to right for an overview.

### Patients with Influenza

For Week 10, the majority (55%, n=11) of patients with influenza were children, followed by 30% (n=6) spouse, 10% (n=2) active duty, and 5% (n=1) retiree. Twenty percent (n=4) sought care in AK.

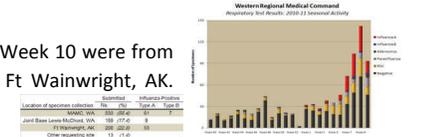


### Laboratory Results

The frequency of positive respiratory results remained at 50% of all specimens processed from Week 9 to Week 10. Influenza isolates characterized this season include: A/H3 (n=32), A/pH1 (n=24).

### Sites submitting specimens

The majority (79.6%) of specimens collected in Week 10 were from MAMC, while 20.4% (n=19) were collected at Ft Wainwright, AK. Click the table to right for a seasonal overview.



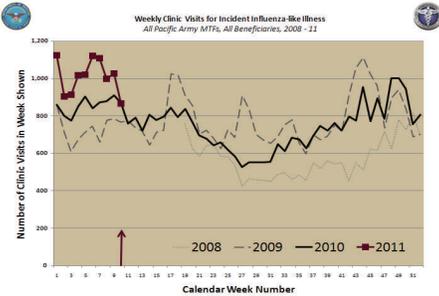
# Regional Army Respiratory Activity: Syndromic (ILI) and Lab-Confirmed

## Major Geographic Region: Pacific

### • Pacific Regional Medical Command (PRMC)

#### Influenza-like illness

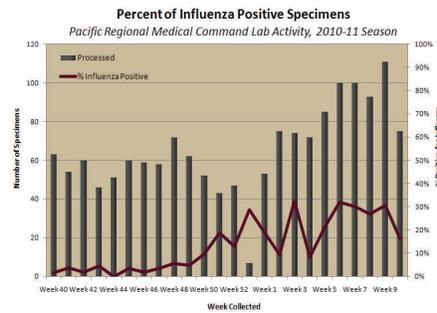
For the week ending 12 March, patient visits for ILI decreased (15.7%) from the previous week among Army MTFs located in the Pacific region. Click graph below for an overview.



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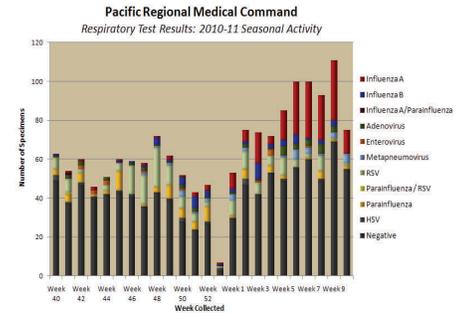
#### Respiratory Testing Activity

For week ending 12 March, the frequency of specimen collections decreased (32.4%) from the previous week. The percent positive influenza results decreased to 16.0% in Week 10.



#### Laboratory Results

For week ending 12 March, 26.7% of specimens collected were positive for a respiratory virus. Influenza subtypes identified this season include: A/pH1 (n=3), B/Victoria (n=1).



#### Patients with Influenza

The majority (66.7%, n=8) of influenza-positive patients whose specimen was collected during Week 10 were dependents (6 children, 2 spouse), followed by 25.0% (n=3) active duty personnel and 8.3% (n=1) retiree. Of these patients, all sought care in HI (91.7% at TAMC and 8.3% at Joint Base Pearl Harbor Hickam).

#### Sites submitting specimens

For week ending 12 March, the majority (90.6%, n=68) of specimens were collected at TAMC, HI, followed by 6.7% (n=5) at Joint Base Pearl Harbor Hickam, and 2.7% (n=2) at Schofield Barracks. Click table below for a season overview of submitting sites and positive influenza results.

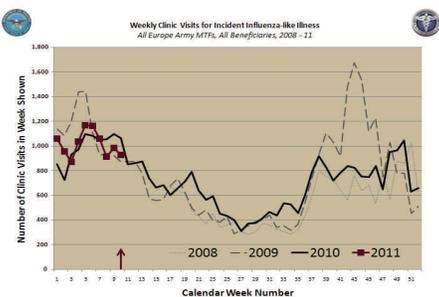
Location of Specimen Collection	Specimens	Influenza Positive
Total	ABC	DEF
2008	112	102
2009	112	102
2010	112	102
2011	112	102
Total	448	408

## Major Geographic Region: Europe

### • Europe Regional Medical Command (ERMC)

#### Influenza-like illness

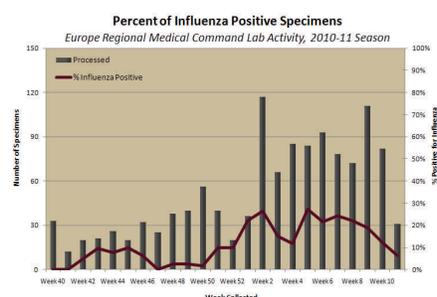
For the week ending 12 March, patient visits for ILI decreased (5.6%) from the previous week among Army MTFs in the European region. Click graph below for an overview.



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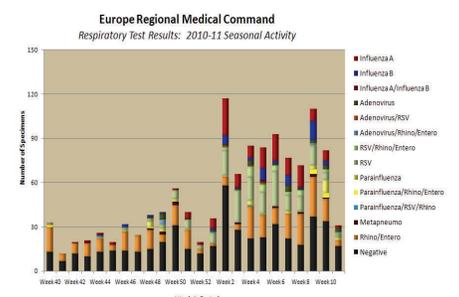
#### Respiratory Testing Activity

The frequency of specimen collections decreased (26.1%) from Week 9 to Week 10 (week ending 12 March). The percent influenza positive results continued to decrease to 12.2% in Week 10.



#### Laboratory Results

The percentage of positive respiratory results continued to decrease from 66.7% to 58.5% in Week 10. Click graph below for an overview of lab results by week collected.

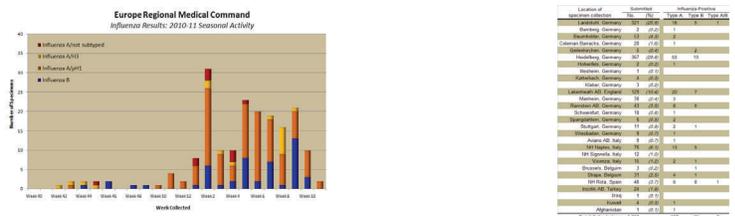


#### Patients with Influenza

The majority (50.0%, n=5) of patients with influenza whose specimen was collected during Week 10 were children, followed by 30.0% (n=3) spouse, and 20.0% (n=2) active duty members. Sixty percent (n=6) of these patients sought care in Heidelberg, Germany.

#### Submitting Sites

For week ending 12 March, the majority (30.4%, n=25) of specimens were collected at MTFs in Heidelberg, Germany. MTFs in Germany collected 70.7% (n=58) of specimens during Week 10 that were submitted to LPMC for a respiratory test. Click table below for a season overview of submitting sites and influenza results.



#### Characterized Influenza

Of the 150 positive influenza specimens identified this season, LPMC further characterized 74.7% (n=112) as A/pH1 (n=96) and A/H3 (n=16). Click graph to the right for an overview of characterized isolates by week collected.