DEPARTMENT OF DEFENSE
Influenza Surveillance Summary

02 May 2013

Summary

- AFHSC is monitoring the current status of the H7N9 influenza outbreak in China. More information will be presented as it becomes available.
- ILI and Pneumonia and Influenza (P&I) incidence rates continued to trend downward for all regions. This season, there have been 306 reportable medical event (RME) influenza cases among service members (82.7% were vaccinated); an additional 328 cases were reported among other beneficiaries.
- Across the overseas DoD laboratory surveillance network, influenza activity was at low levels.
- As of 26 March 2013, vaccine coverage in the active component of the U.S. Armed Forces is 97%. These rates are final.
- This will be the final DoD Influenza Surveillance Summary of the 2012-2013 season.

Electronic Surveillance

Defense Medical Surveillance System (DMSS), medical encounter database and reportable events

- ILI and P&I incidence rates continued to trend downward for all regions (Figure 1).
- The percent of all outpatient visits due to ILI remained relatively stable compared to last week for all regions. Percents were at or below baseline and previous season percents for all populations except US Other Beneficiaries (Figure 2).
- The percent of all outpatient visits due to P&I fluctuated slightly this week compared to last week, but percents were at or below baseline and previous season percents for all regions (Figure 3).
- This season, there have been 306 reportable medical event (RME) influenza cases among service members (82.7% were vaccinated); an additional 328 cases were reported among other beneficiaries (Figure 4).

Laboratory Surveillance

United States Air Force School of Aerospace Medicine (Source: Global, lab-based military sentinel surveillance)

- In Week 16 (through 20 April 2013), a slight increase in specimens tested (26) and influenza positive specimens (5 A/H3 and 5 B) was noted.

Naval Health Research Center (Source: Lab-based surveillance of recruits, ships, dependents, and the US-Mexico border)

- In Week 16, the proportion of samples that were positive for influenza decreased in all populations compared to previous weeks (Weeks 13-15); overall decrease to four cases in Week 16 (2 B, 2 A/H3) from six cases in Week 15.

Army Institute of Public Health (Source: Army MEDCEN Laboratory Results, ESSENCE, DRSi)

- In Week 15, 1.3% of outpatient visits reported through ILInet were due to ILI, which is below the national baseline. ESSENCE data is unavailable. AIPH concluded their seasonal influenza reporting in Week 15.

Global Surveillance Network

DoD Laboratories/Partners (Weeks 14-16; through 20 April 2013):
- Europe: Low influenza activity with co-circulation of influenza A/H1, A/H3, and B (PHCR-Europe).
- Southeast Asia: Low activity with circulation of influenza AH1 and A/H3 only (AFRIMS, NAMRU-2).
- North Africa: Low influenza activity with co-circulation of influenza A/H1, A/H3, and B (NAMRU-3).
- Central Africa: Low influenza activity with co-circulation of influenza B and pH1N1 (USAMRU-K).
- East Africa: Low influenza activity with circulation of influenza A/H3 only (USAMRU-K).
- South America: Low influenza activity with co-circulation of influenza A/H1 and A/H3, and B (NAMRU-6).

Immunization Coverage*

<table>
<thead>
<tr>
<th>(Active Component)</th>
<th>DoD-All</th>
<th>ARMY</th>
<th>MARINES</th>
<th>NAVY</th>
<th>COAST GUARD</th>
<th>AIR FORCE</th>
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<tr>
<td>Seasonal Influenza Vaccine</td>
<td>97%</td>
<td>98%</td>
<td>93%</td>
<td>96%</td>
<td>98%</td>
<td>99%</td>
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Sources: DoD ALL, MILVAX, ARMY-MEDPROS, MARINES-MRRS, NAVY-MRRS, COAST GUARD-MRRS, AIRFORCE-AFCITA

As of 26 March 2013

For inquiries or comments please contact AFHSC.Web@amedd.army.mil
Figure 1. Incidence Rate of P&I and ILI among Active Duty Service Members

US Overall, Influenza Season 2012-2013

EUCOM, Influenza Season 2012-2013

PACOM, Influenza Season 2012-2013

Data Source: Defense Medical Surveillance System
Report Date: Apr 30, 2013
Figure 2. Percent of All Outpatient Visits with an ILI Diagnosis: Service Members and Other Beneficiaries Presented Separately
Figure 3. Percent of All Outpatient Visits with a P&I Diagnosis: Service Members and Other Beneficiaries Presented Separately

US Overall Service Members, 2012-2013 and previous 2 Influenza Seasons

US Overall Other Beneficiaries, 2012-2013 and previous 2 Influenza Seasons

EUCOM Service Members, 2012-2013 and previous 2 Influenza Seasons

Data Source: Defense Medical Surveillance System
Report Date: Apr 30, 2013
Description:

The first 3 figures present the weekly data on ILI and P&I events. These figures give an overview of the influenza season by incidence and all outpatient visits. This data can give a broad view of the pattern and severity of the season and allow the reader to compare seasonal patterns with previous years and between the U.S. and international regions. Figure 4 of this report provides data on influenza reportable medical events.

Incidence of Influenza (Figure 1):

Each week the incidence rates of ILI and P&I are calculated for active duty service members. The numerator comprises the sum of new events occurring during the week of interest. The denominator comprises the total number of persons at risk for that week. Rates are stratified by seasonal influenza vaccination status at the start of the week. Service members vaccinated against influenza at least 14 days prior to the start of the week are included in the vaccinated group. (Figure 1)

Percentage of Outpatient Visits Associated with Influenza (Figures 2 and 3):

The percentage of all outpatient visits that have an ILI (Figure 2) or P&I (Figure 3) diagnosis is calculated each week for (1) all service members, regardless of component and (2) all other DoD beneficiaries. Current proportions are graphed against the baseline** and data for the two prior influenza seasons for comparison.

Reportable Medical Events:

Each week the total number of influenza RME cases is determined for service members (including Active, Reserve, and National Guard components). In addition, the number of cases among all other military health system beneficiaries is calculated. For service members, the total number vaccinated at least 14 days prior to the RME date is also reported. Counts for all regions and services are presented in Figure 4.

(All data are preliminary and subject to change as updated data is received)

Background:

AFHSC maintains the Defense Medical Surveillance System (DMSS) which is a database containing up-to-date and historical data on medical encounters, vaccinations, and personnel and demographic data about service members from all military services. Using ICD-9 codes from hospitalization and outpatient encounters, and influenza vaccination data contained within the DMSS, AFHSC produces weekly summaries of respiratory
illness activity among military health system beneficiaries by geographical regions. Two primary outcomes are used for this surveillance: Influenza-like Illness (ILI) and Pneumonia and Influenza (P&I). ILI is defined as a health care encounter that resulted in a diagnostic (ICD-9) code of 79.99, 382.9, 460, 461.9, 465.8, 465.9, 466.0, 486, 487.0, 487.1, 487.8, 488, 490, 780.6, or 786.2. P&I is defined as an ICD-9 code of 480-488.

AFHSC also receives standardized case reports of RME from all services. The military’s RME system requires reporting of additional infections not included by the Centers for Disease Control and Prevention’s Nationally Notifiable Diseases Surveillance System, including influenza. Respiratory illnesses that meet a clinical case definition (sudden onset of fever >102.2°F, respiratory systems, myalgia and headache) and are laboratory confirmed as influenza are reportable.

**For figures 2 and 3, the overall and region baseline is the percentage of outpatient visits for ILI or P&I during non-influenza weeks (weeks 22-39) over the past 3 years plus two standard deviations.