



DEPARTMENT OF DEFENSE

Influenza Surveillance Summary



14 Feb 2013

Summary

- In Week 6 (through 9 February 2013), Influenza-Like Illness (ILI) in the US and in PACOM decreased; Pneumonia & Influenza (P&I) incidence rates decreased in the US but increased in PACOM among Service Members (SMs). Overall, the incidence of influenza-related RME has decreased since Week 2.
- Influenza activity varied from low to moderate levels across the overseas DoD laboratory surveillance network except in Europe, where high level of influenza activity was detected with co-circulation of influenza A/H1, A/H3, and B.
- The influenza vaccination coverage for the DoD (Active Duty component only) is 96%.

Electronic Surveillance

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

- ILI and P&I incidence rates decreased in the US and fluctuated slightly in EUCOM this week. In PACOM, ILI rates decreased, while P&I rates increased (Figure 1).
- The percent of all outpatient visits due to ILI remained the same in the US, continued to increase in EUCOM and among PACOM Other Beneficiaries, and decrease among PACOM SMs compared to last week. Percents were above previous season percents for US beneficiaries and EUCOM (Figure 2).
- The percent of all outpatient visits due to P&I remained the same or decreased in the US and EUCOM and increased slightly in PACOM compared to last week. EUCOM SMs were the only population with percents above previous season percents (Figure 3).
- This season, there have been 184 reportable medical event (RME) influenza cases among SMs (81.5% were vaccinated); an additional 241 cases were reported among other beneficiaries. Overall, the incidence of influenza-related RME has decreased since Week 2 (Figure 4).

Navy and Marine Corps Public Health Center (Source: HL-7 data)

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- The proportions of both inpatient and outpatient antiviral prescriptions decreased from previous week to present (Week 6) among all DoD beneficiaries. The number of positive influenza tests in inpatient setting remained above the seasonal baseline but decreased slightly from previous week.

Laboratory Surveillance

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

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- In Week 5 (through 2 February 2013), the number of specimens processed increased by about 50% from the previous week; A/H3 remained the predominant strain detected.

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

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- Influenza activity was higher this week compared to previous weeks (Weeks 3-5) among dependents; A/H3 remained the predominant strain.

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

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- The proportion of positive influenza cases identified by Army MTFs this week was similar to the previous week (20% and 23%, respectively), positive samples were predominantly influenza A. This season, Active Duty members accounted for 12% of hospitalized influenza cases.

Global Surveillance Network

DoD Laboratories/Partners (Weeks 4-6; through 9 February 2013):

- *Europe*: High influenza activity with co-circulation of influenza A/H1, A/H3, and B (PHCR-Europe).
- *Southeast Asia*: Moderate influenza activity with co-circulation of influenza A/H3 and B (AFRIMS).
- *North Africa*: Moderate influenza activity with co-circulation of influenza A/H1, A/H3, and B (NAMRU-3).
- *Central Africa*: Low influenza activity with circulation of influenza B only (USAMRU-K).
- *East Africa*: Moderate influenza activity with co-circulation of influenza A/H1 and A/H3 (USAMRU-K).
- *South America*: Moderate influenza activity with co-circulation of influenza A/H1, A/H3 and B (NAMRU-6).

Immunization Coverage*

(Active Component)	DoD-All	ARMY	MARINES	NAVY	COAST GUARD	AIR FORCE
Seasonal Influenza Vaccine	96%	98%	91%	95%	98%	98%

Sources: DoD ALL-MILVAX, ARMY-MEDPROS, MARINES-MRRS, NAVY-MRRS, COAST GUARD-MRRS, AIRFORCE-AFCITA

*As of 12 February 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

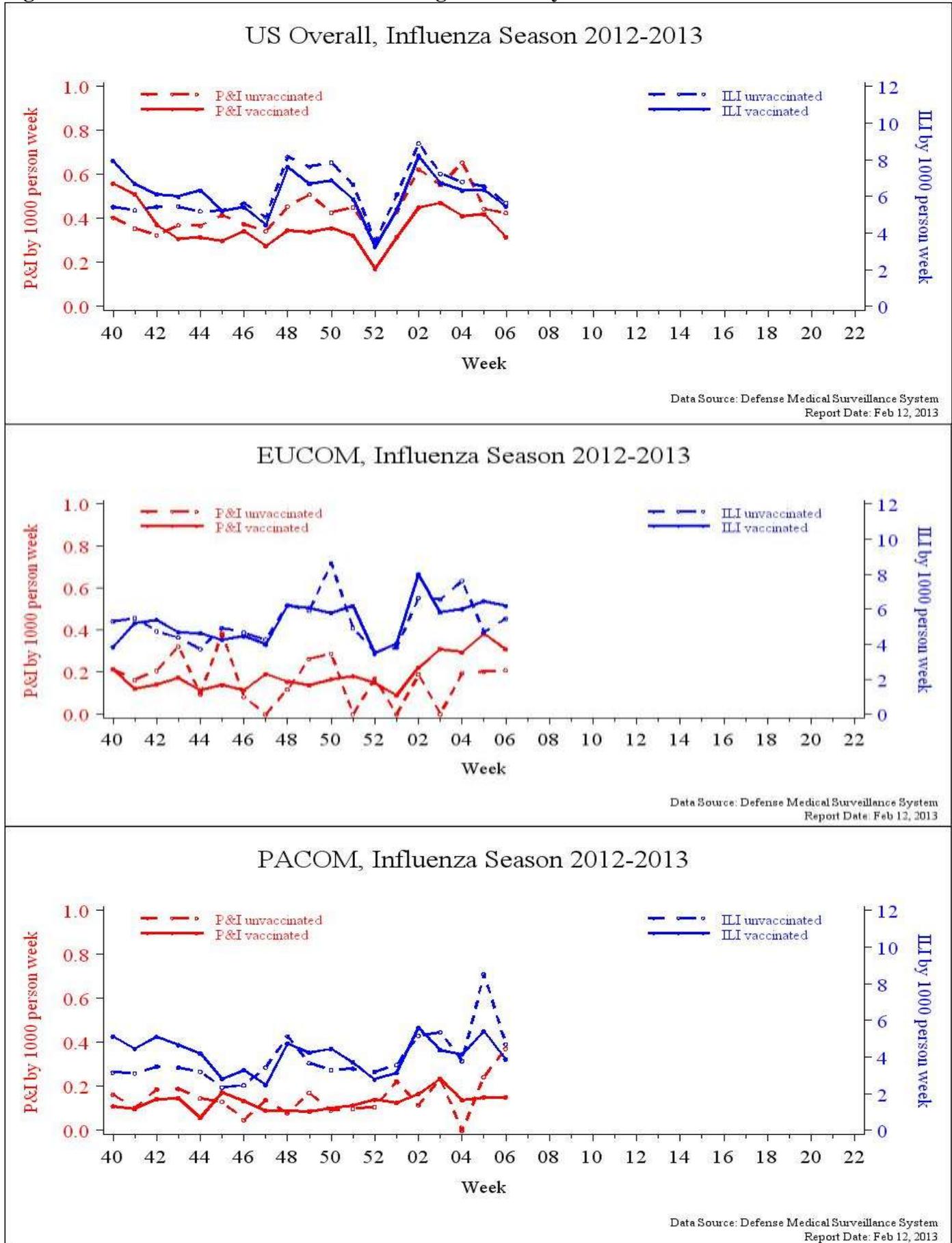
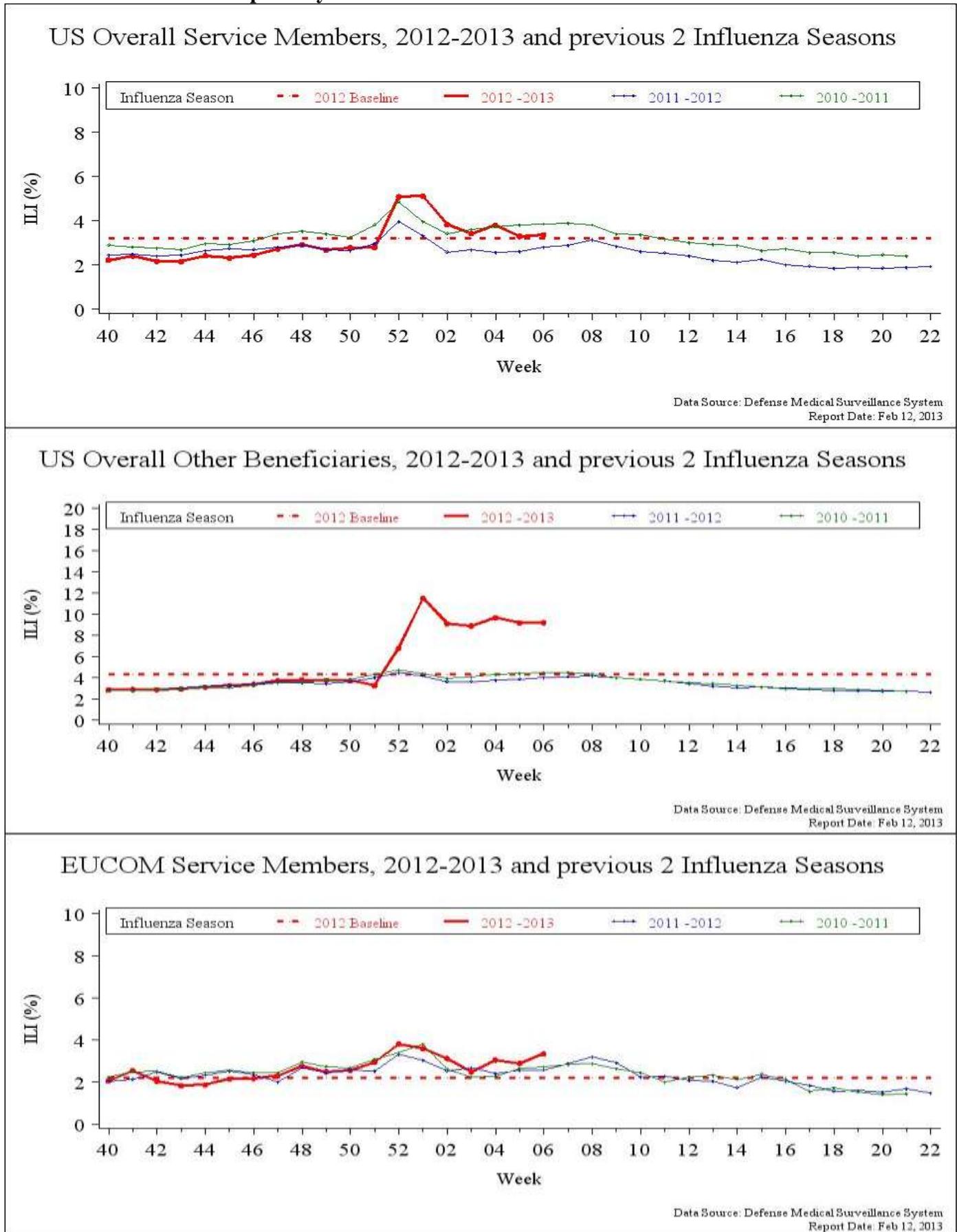
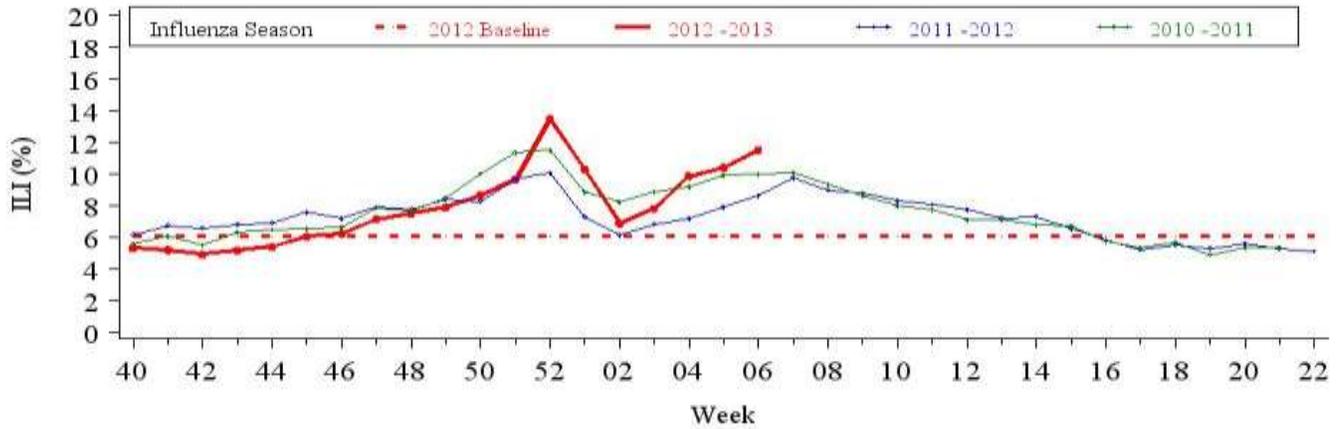


Figure 2. Percent of All Outpatient Visits with an ILI Diagnosis: Service Members and Other Beneficiaries Presented Separately

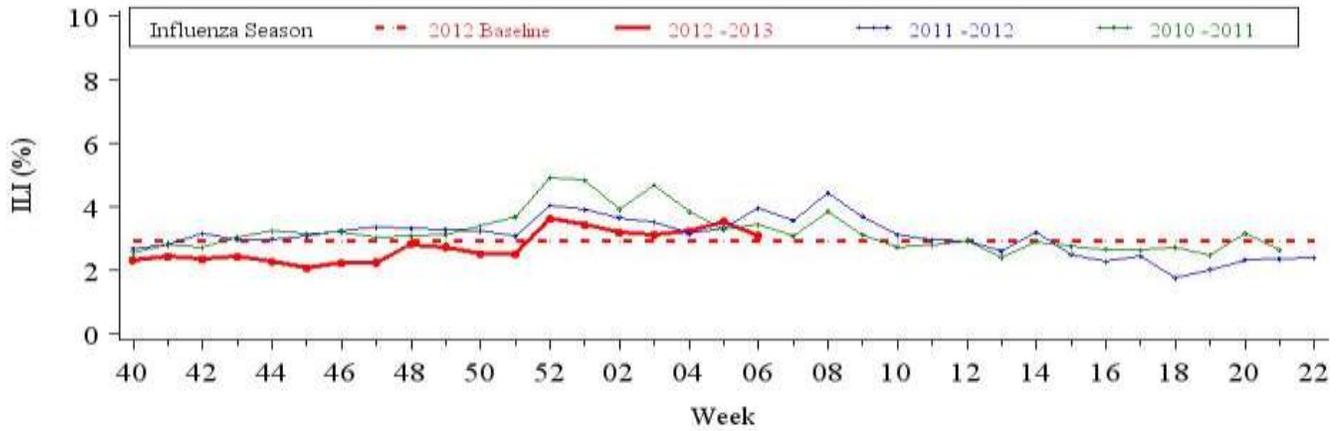


EUCOM Other Beneficiaries, 2012-2013 and previous 2 Influenza Seasons



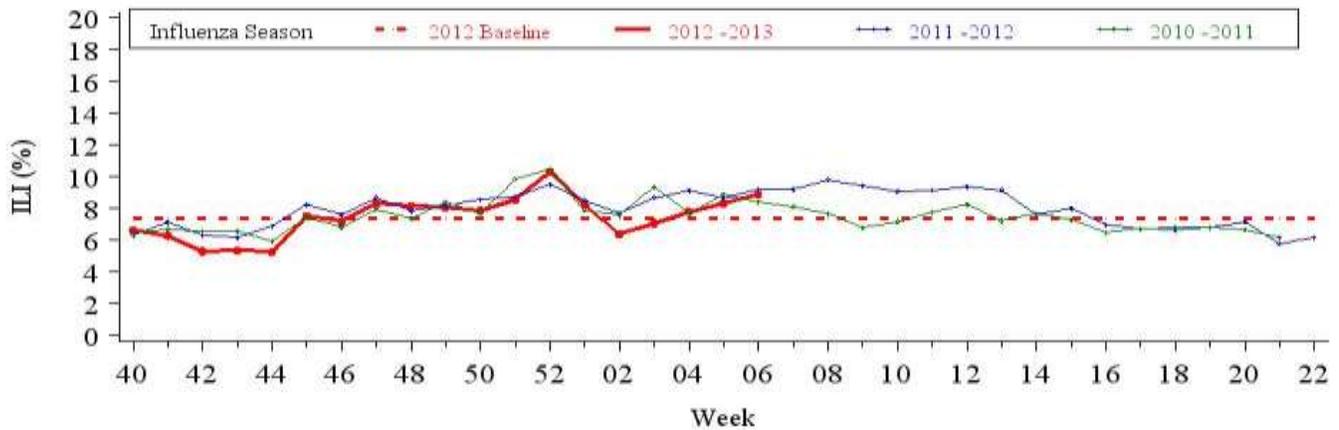
Data Source: Defense Medical Surveillance System
Report Date: Feb 12, 2013

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



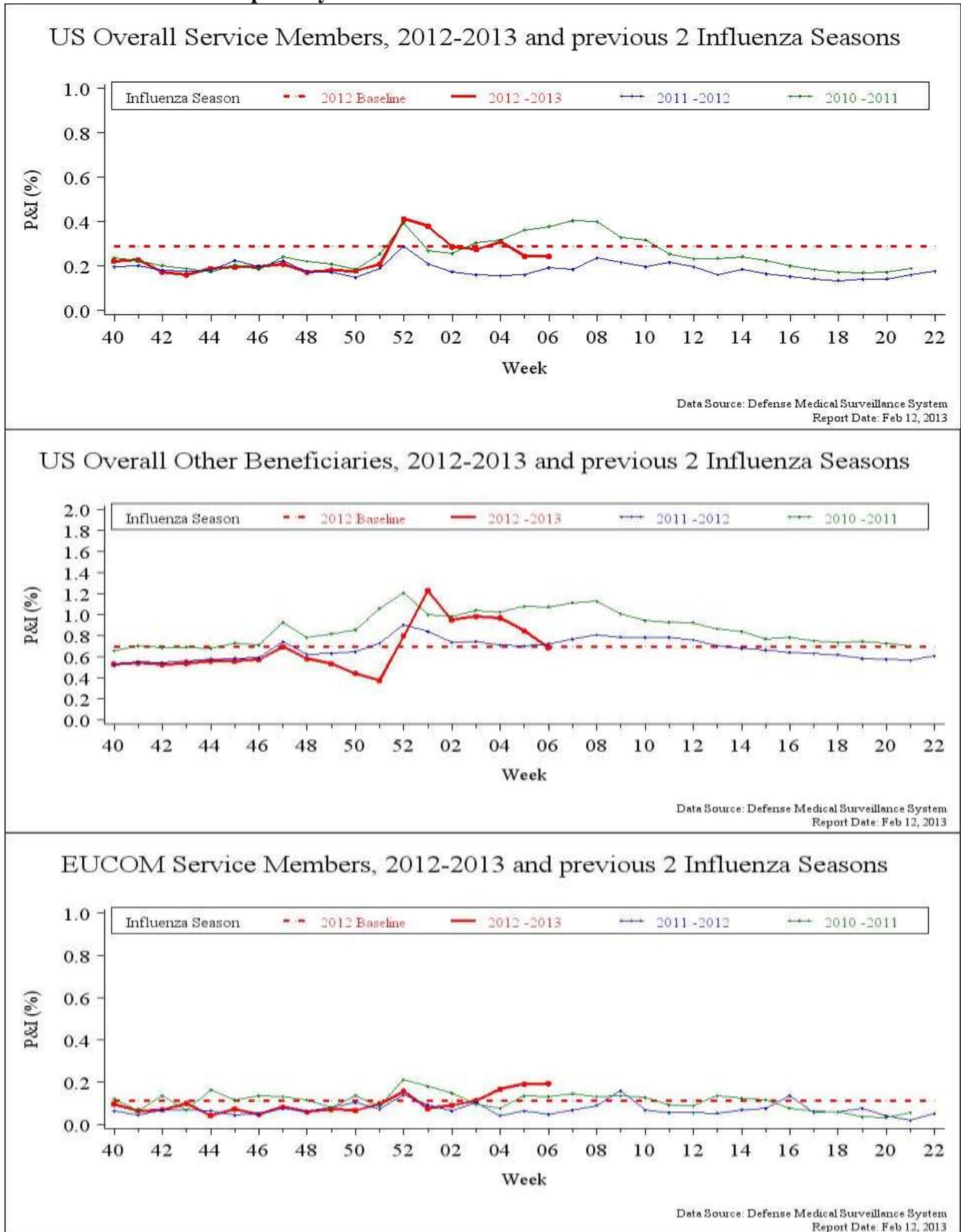
Data Source: Defense Medical Surveillance System
Report Date: Feb 12, 2013

PACOM Other Beneficiaries, 2012-2013 and previous 2 Influenza Seasons

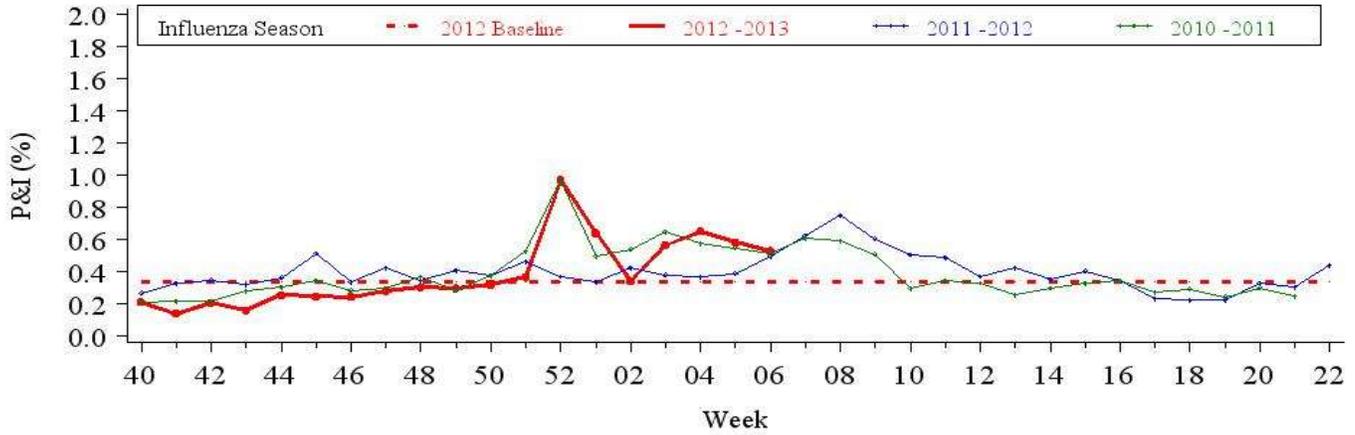


Data Source: Defense Medical Surveillance System
Report Date: Feb 12, 2013

Figure 3. Percent of All Outpatient Visits with a P&I Diagnosis: Service Members and Other Beneficiaries Presented Separately

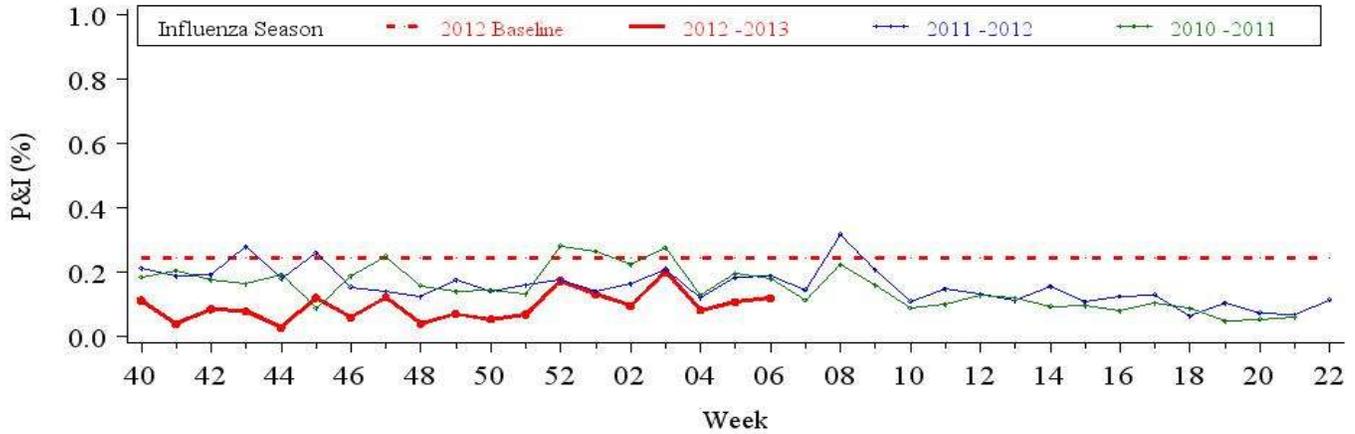


EUCOM Other Beneficiaries, 2012-2013 and previous 2 Influenza Seasons



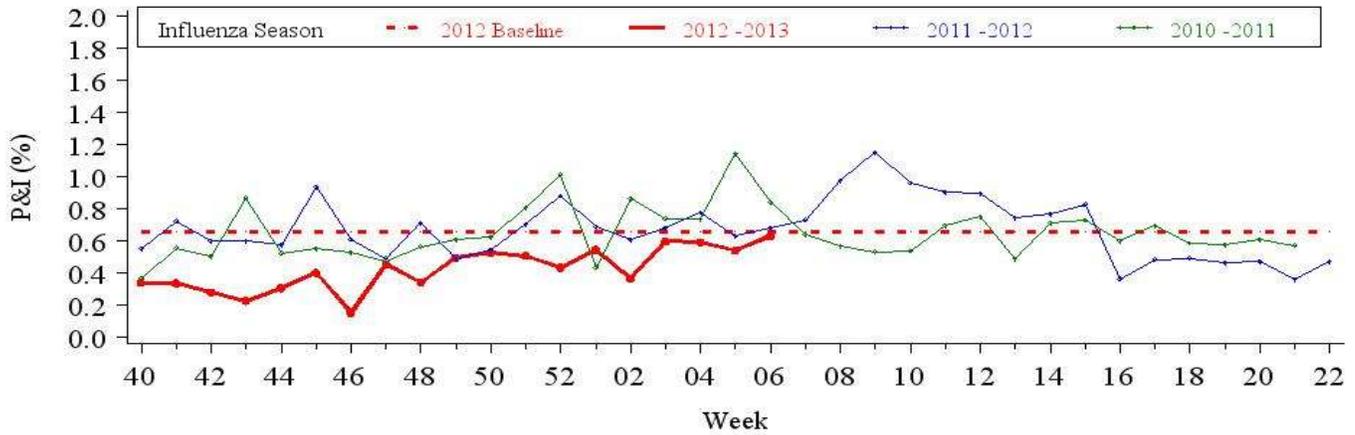
Data Source: Defense Medical Surveillance System
Report Date: Feb 12, 2013

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



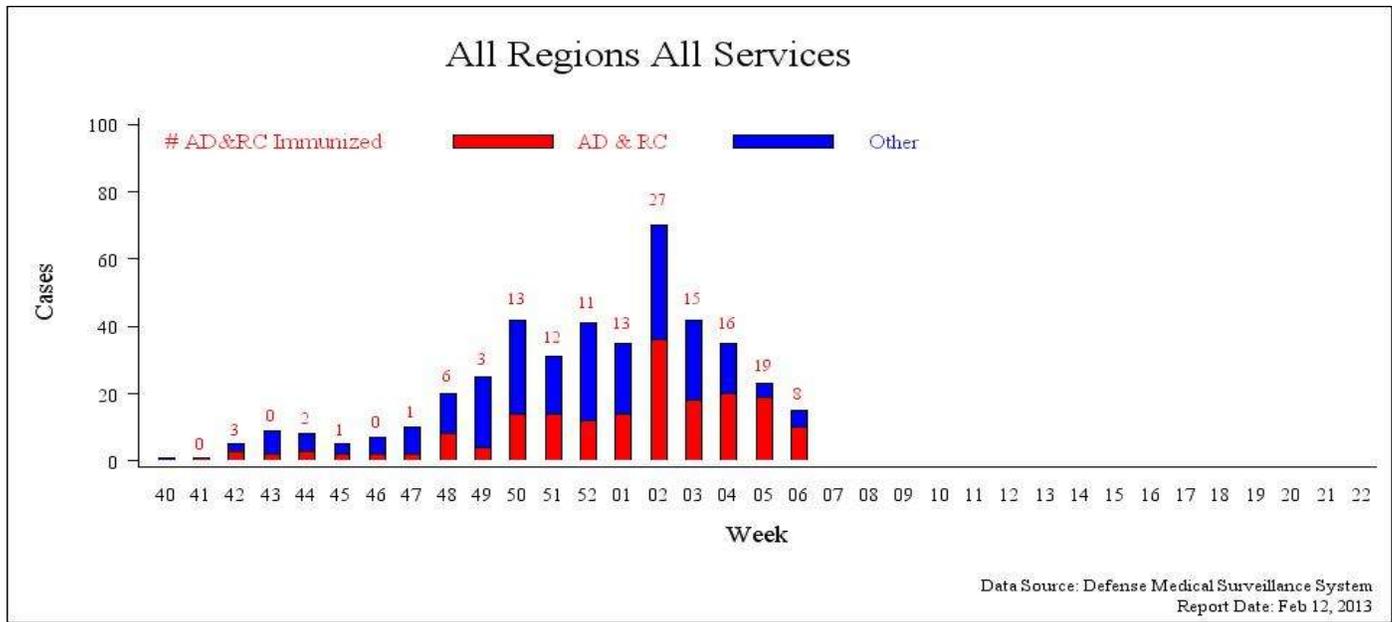
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PACOM Other Beneficiaries, 2012-2013 and previous 2 Influenza Seasons



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Figure 4. RME for Influenza: Confirmed cases (Active Duty (AD) & Reserve Component (RC) vs. Beneficiaries) for All Regions and Services



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 $>102.2^{\circ}\text{F}$, 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.