



Influenza Activity Spotlight

2012–2013 Season

Issue #15 — February 4, 2013

Reminder: Summit calls are scheduled weekly every Thursday at 3 p.m. ET, unless cancelled. The next Summit call is scheduled for February 7, 2013. **Please email [L.J Tan](#) or [LaDora Woods](#) if you have any updates on activities to provide to the Summit.**

SAVE THE DATE! The National Influenza Vaccine Summit (NIVS) will be meeting in conjunction with the National Adult Immunization Summit on May 14–16, 2013 in Atlanta, Georgia. More details and a draft agenda will be provided as soon as available.

1. Summary of the National Influenza Vaccine Summit Call – 1/31/2013

Influenza Surveillance Update – Lenee Blanton (CDC)

Lenee reported that influenza activity remains elevated throughout the U.S. Although levels appear to be decreasing somewhat in the southern states, increases are occurring in western regions. All 2009 H1N1 and almost all A H3N2 samples submitted to CDC for characterization have been similar to the vaccine strains, while about 70% of the B samples are similar to the vaccine. Hospitalization rates continue to be high, particularly among persons >65 years of age. P&I reports remain over the epidemic threshold. During the last week, 8 new pediatric deaths have been reported, bringing the total this season to 45. Although some information is available through hospital surveillance systems, influenza deaths are not nationally notifiable. Therefore, it is not possible to provide exact numbers for specific populations. Updated information on influenza vaccine effectiveness will be released during February.

Influenza-Like Illness on College Campuses – James Turner (University of VA)

Dr. Turner, who serves as the American College Health Association liaison representative to the ACIP, provided an [update](#) on the College Health Surveillance Network (CHSN). This system monitors the incidence of ILI among students seen at student health services, both as an absolute number and as a percent of total primary care visits. The CHSN includes 21 schools representing 671,000 students. Currently 15/21 schools participating in the network submit de-identified ILI data into a central database each week.

Dr. Turner provided a graph indicating that student ILI visits increased prior to Thanksgiving, and then increased dramatically when students returned to campus after the Christmas holidays. From January 12 – 26, ILI visits as a proportion of all primary care visits increased exponentially from 2.71% to 4.5%. Eleven of the 15 participating schools reported being over the 2.4% threshold for an outbreak.

Only 1 hospitalization has been reported from the 13 schools supplying information on hospitalizations and deaths. Participating schools have administered 46,000 doses of influenza vaccine through their clinics, but they have no data on whether students with ILI may have received vaccine at a different location.

Dr. Turner will provide a weekly update of the CHSN data to L.J so that it may be included in future eUpdates.

Adult Immunization Coverage Data – Carolyn Bridges (CDC)

Carolyn provided a brief overview of the 2011 adult immunization coverage data released by CDC earlier this week. This information is now available in the [MMWR](#). This is the second year that the coverage data has been published at the same time as the new recommended immunization schedule for adults. The 2011 data indicates there is much room for improvement in adult immunization rates. It is hoped that significant increases will be evident when the 2012 data is available.

Announcements – L.J Tan (IAC)

L.J announced that registration and hotel information for the 2013 NIVS/NAIS conference, which will be held May 14 –16 should be available online by next week.

The next NIVS call is scheduled for next Thursday, February 7. Any updates from next week's NVAC Meeting will be discussed during that call.

- 2. The CDC/Influenza Division Weekly Influenza Surveillance Report** for week 4, 2013 (ending January 26, 2013) is available [here](#). Of 10,581 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories in week 4, 2,701 (25.5%) were positive for influenza. The proportion of outpatient visits for influenza-like illness (ILI) was 4.2%, above the national baseline of 2.2%. All 10 regions reported ILI above region-specific baseline levels. Twenty-four (24) states and New York City experienced high ILI activity. Other states experienced moderate activity (14 states and the District of Columbia), low activity (4 states), and minimal activity (9 states). This site also includes maps of ILINet State Activity Levels and the [geographic spread](#) of influenza illness as reported by state and territorial epidemiologists. This map indicates geographic spread of influenza viruses but does not measure the intensity of influenza activity. CDC's Seasonal Influenza [Key Points](#) for January 25, 2013 have been released. Archives of previous *FluViews* may be found [here](#).

3. Information from CDC

CDC's recent (January 24) [webinar](#), which included information on 2012–2013 influenza season surveillance, vaccine effectiveness, supply, and antiviral usage, is now available online.

4. Update from the College Health Surveillance Network (CHSN)

The CHSN monitors the incidence of ILI among students seen at student health services, both as an absolute number and as a percent of total primary care visits. The CHSN includes 21 schools representing 671,000 students. Currently 15/21 schools participating in the network submit de-identified ILI data into a central database each week. Weekly data is available [here](#).

5. Multiple New Publications on Influenza Vaccine Effectiveness in *Eurosurveillance*

Abstracts for multiple new publications on influenza vaccine effectiveness from the journal *Eurosurveillance* are summarized below. In addition, CDC has prepared [talking points](#) on vaccine effectiveness and the elderly and has noted that more information will be available when this season's latest vaccine effectiveness data becomes available.

[Effectiveness of Seasonal 2012/13 Vaccine in Preventing Laboratory-Confirmed Influenza Infection in Primary Care in the United Kingdom: Mid-Season Analysis 2012/13](#)

The early experience of the United Kingdom (UK) is that influenza B has dominated the influenza 2012/2013 season. Overall trivalent influenza vaccine (TIV) adjusted vaccine effectiveness (VE) against all laboratory-confirmed influenza in primary care was 51% (95% confidence interval (CI):

27% to 68%); TIV adjusted VE against influenza A alone or influenza B alone was 49% (95% CI: -2% to 75%) and 52% (95% CI: 23% to 70%) respectively. Vaccination remains the best protection against influenza.

[Interim Estimates of Influenza Vaccine Effectiveness in 2012/13 from Canada's Sentinel Surveillance Network, January 2013](#)

The 2012/13 influenza season in Canada has been characterized to date by early and moderately severe activity, dominated (90%) by the A(H3N2) subtype. Vaccine effectiveness (VE) was assessed in January 2013 by Canada's sentinel surveillance network using a test-negative case-control design. Interim adjusted-VE against medically attended laboratory-confirmed influenza A(H3N2) infection was 45% (95% CI: 13–66). Influenza A(H3N2) viruses in Canada are similar to the vaccine, based on haemagglutination inhibition; however, antigenic site mutations are described in the haemagglutinin gene.

[Decline in Influenza Vaccine Effectiveness with Time after Vaccination, Navarre, Spain, Season 2011/12](#)

This study evaluates the influenza vaccine effectiveness (VE) in preventing laboratory-confirmed cases in Navarre, Spain, in the 2011/12 season, in which the peak was delayed until week 7 of 2012. Most characterized viruses did not match the vaccine strains. The adjusted estimate of VE was 31% (95% confidence interval (CI): -21 to 60) for all patients, 44% (95% CI: -11 to 72) for those younger than 65 years and 19% (95% CI: -146 to 73) for those 65 or older. The VE was 61% (95% CI: 5 to 84) in the first 100 days after vaccination, 42% (95% CI: -39 to 75) between 100 and 119 days, and zero thereafter. This decline mainly affected people aged 65 or over. These results suggest a low preventive effect of the 2011/12 seasonal influenza vaccine, and a decline in VE with time since vaccination.

[Vaccine Effectiveness of 2011/12 Trivalent Seasonal Influenza Vaccine in Preventing Laboratory-Confirmed Influenza in Primary Care in the United Kingdom: Evidence of Waning Intra-Seasonal Protection](#)

The 2011/12 season was characterized by unusually late influenza A (H3N2) activity in the United Kingdom (UK). Overall VE against confirmed influenza A (H3N2) infection, adjusted for age, surveillance scheme and month, was 23% (95% confidence interval (CI): -10 to 47). Stratified analysis by time period gave an adjusted VE of 43% (95% CI: -34 to 75) for October 2011 to January 2012 and 17% (95% CI: -24 to 45) for February 2012 to April 2012. Stratified analysis by time since vaccination gave an adjusted VE of 53% (95% CI: 0 to 78) for those vaccinated less than three months, and 12% (95% CI: -31 to 41) for those vaccinated three months or more before onset of symptoms (test for trend: $p=0.02$). For confirmed influenza B infection, adjusted VE was 92% (95% CI: 38 to 99). A proportion (20.6%) of UK influenza A(H3N2) viruses circulating in 2011/12 showed reduced reactivity (fourfold difference in haemagglutination inhibition assays) to the A/Perth/16/2009 2011/12 vaccine component, with no significant change in proportion over the season. Overall TIV protection against influenza A(H3N2) infection was low, with significant intraseasonal waning.

[Low and Decreasing Vaccine Effectiveness against Influenza A\(H3\) in 2011/12 among Vaccination Target Groups in Europe: Results from the I-MOVE Multicentre Case-Control Study](#)

Within the Influenza Monitoring Vaccine Effectiveness in Europe (I-MOVE) project we conducted a multicentre case-control study in eight European Union (EU) Member States to estimate the 2011/12 influenza vaccine effectiveness against medically attended influenza-like illness (ILI) laboratory-confirmed as influenza A(H3) among the vaccination target groups. Adjusted influenza vaccine effectiveness (IVE) was 25% (95% confidence intervals (CI): -6 to 47) among all ages ($n=1,014$), 63% (95% CI: 26 to 82) in adults aged between 15 and 59 years and 15% (95% CI: -33 to 46) among those aged 60 years and above. Adjusted IVE was 38% (95%CI: -8 to 65) in the early influenza season (up to week 6 of 2012) and -1% (95% CI: -60 to 37) in the late phase. The results suggested

a low adjusted IVE in 2011/12. The lower IVE in the late season could be due to virus changes through the season or waning immunity.

6. National Hispanic Council on Aging (NHCOA) Working to Close Gap in Vaccinations; Issues Call for Influenza Immunization

The NHCOA is making efforts to raise awareness about the importance of preventing infectious diseases such as influenza. Through the [Vacunémonos](#) initiative, the organization is working to increase adult vaccination rates among Hispanic older adults. A story on the initiative is available [here](#).

7. Patients Can Emit Small, Influenza-Containing Particles Into the Air During Routine Care

A new [study](#) suggests that patients with influenza can emit small virus-containing particles into the surrounding air during routine patient care, potentially exposing health care providers to influenza. Published in *The Journal of Infectious Diseases*, the findings raise the possibility that current influenza infection control recommendations may not always be adequate to protect providers from influenza during routine patient care in hospitals. Additional information is available [here](#).

8. Flu Vaccine Safe in Children With Severe Egg Allergy

Children with a history of severe egg allergy, even anaphylaxis, can safely receive a single dose of trivalent seasonal influenza vaccine (TIV), according to a [study](#) published in the December issue of the *Annals of Allergy, Asthma & Immunology*. This supports recent ACIP recommendations that egg allergy not be considered a contraindication, but a precaution, to influenza immunization. More information is available [here](#).

9. Scientists Find T-Cell Protein That Helps Ward Off Influenza

This is a reflection of the T-cell immunologist in me (L.J Tan), but this cool [study](#) shows that some T-cells found on exposed body surfaces help to ward off infection better than others due to the selective expression of a certain protein, IFITM3. When the body is exposed to the influenza virus, it results in the production of anti-influenza resident memory T-cells; these memory T-cells become 'experienced' through their initial encounter with the flu virus. Subsequent infections typically result in a much faster and more aggressive response when detecting the same antigen. A story describing this study is available [here](#).

Unfortunately, many of these memory T-cells, like those on exposed mucosal surfaces of the lung, come in contact with other pathogens over the course of time, potentially becoming infected and killed by other infectious agents. In the study, researchers from University of Melbourne and The Walter and Eliza Hall Institute in nearby Parkville, Australia found that T-cells that produce the protein IFITM3 are less susceptible to other infections.

10. Climate Change and Its Impact on Influenza?

Mathematical modeling of climate change and its impact on influenza suggests that influenza seasons will occur earlier and become more severe in the future. A team of scientists led by Sherry Towers, research professor in the Mathematical, Computational and Modeling Sciences Center at Arizona State University, studied waves of influenza and climate patterns in the U.S. from the 1997–1998 season to the present.

The team's [analysis](#), which used Centers for Disease Control data, indicates a pattern for both A and B strains: warm winters are usually followed by heavy influenza seasons. If global warming continues,

warm winters will become more common, and the impact of influenza will likely be more heavily felt, say the study's authors. A story on this issue is available [here](#).

11. Summit Relaunches the Influenza Vaccine Availability Tracking System (IVATS)

In response to Hurricane Sandy and possible losses of seasonal influenza vaccine among vaccine providers, the National Influenza Vaccine Summit has re-opened IVATS (Influenza Vaccine Availability Tracking System) on its [web page](#). The information is available by clicking on under "Looking for Influenza Vaccine for your Clinic" in the lower right corner of the webpage, or click [here](#) for a direct link to the PDF.

IVATS is a resource for physicians looking to purchase influenza vaccine and contains information from approved, enrolled and participating wholesale vaccine distributors or manufacturers of U.S. licensed influenza vaccine. Information on the site will be updated throughout the 2012–2013 influenza vaccination season.

Please share this resource with any providers in your jurisdiction who may have questions about where to purchase influenza vaccine for the current influenza season. For questions about IVATS, please contact [Diane Peterson](#) at the Immunization Action Coalition.

12. 2012–2013 Influenza Vaccine Information Statements Are Now Available

The [influenza vaccine information statements](#) have recently been updated. Both the TIV and LAIV VISs, as well as the TIV Large Print edition, have been updated, and RTF files also are available. All are dated 7/2/2012. These editions have been converted to the updated VIS format, but the text in both VISs is identical to that in last year's influenza VISs. Note that there will be minor updates in the ACIP influenza recommendations, but these do not affect the VIS language.

13. Summit Website Offers Wonderful Resources on Influenza Vaccination!

Remember to visit the [Summit website](#) for the latest on influenza immunization resources and to view archived copies of the weekly updates.