



# ***Influenza Activity Spotlight***

**2013–2014 Season**

**Issue #6 — September 23, 2013**

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**Reminder:** Summit calls are scheduled every Thursday at 3 p.m. ET, unless cancelled. These calls will resume on the regular weekly schedule on September 5, following the Labor Day weekend. Please email [L.J Tan](mailto:LJ.Tan@preventinfluenza.org) or [LaDora Woods](mailto:LaDora.Woods@preventinfluenza.org) if you have any updates on activities to provide to the Summit.

## **1. Summary of the National Adult and Influenza Immunization Summit Call – 9/19/2013**

### **Announcements – Carolyn Bridges (CDC)**

Carolyn facilitated the meeting in the absence of L.J Tan. She announced that today's publication of the [MMWR Recommendations and Reports](#) on "Prevention and Control of Seasonal Influenza with Vaccines" outlines the ACIP's recommendations for vaccine use in the 2013–2014 season. Carolyn also asked Summit partners to watch for an email calling for nominations from the National Quality Forum. The group is looking for a wide range of stakeholders to look at adult immunization quality measures. Finally, Carolyn reminded the group that [pocket guides](#) for influenza and pneumococcal vaccines are available for bulk order (10 or more copies) from the Immunization Action Coalition.

### **Influenza Surveillance Update – Lenee Blanton (CDC)**

Lenee reported that seasonal influenza activity continues to be low. The proportion of visits related to ILI remained below baseline levels in all 10 regions. There has been a slight increase in submissions for testing, with the greatest number of positives coming from the southeastern U.S. Both influenza A and B are circulating at low levels. Two reports of H1N1v were reported from Arkansas. Both cases reported a history of contact with swine at county fairs, and both have now recovered. No new pediatric cases were reported this week, leaving the total for the year at 164.

### **NFID News Conference – Marla Dalton (NFID)**

Marla provided an update on plans for the annual NFID influenza news conference. This year's event will take place on September 26 at 10 a.m. at the National Press Club. Dr. William Schaffner will serve as the event's moderator, and featured speakers include: Howard Koh, Assistant Secretary of Health, Anne Schuchat, Assistant Surgeon General and Director, NCIRD; Paul Biddinger, Massachusetts General Hospital; and Richard Liebowitz, New York-Presbyterian Hospital. Information on how to view the live conference will be distributed shortly, and a video of the event will be available on the NFID [website](#). Following the news conference, Dr. Koh and other panelists will receive their influenza vaccine as part of NFID's *Leading by Example* [campaign](#). Thirty organizations have signed a commitment statement to this campaign, and any other groups who wish to do so are encouraged to contact NFID.

### **Effect of Influenza Vaccination of HCP on Patient Outcomes – Faruque Ahmed (CDC)**

Faruque presented an [overview](#) of "The Effect of Influenza Vaccination of Health Care Personnel on Morbidity and Mortality among Patients: Systematic Review and Grading of Evidence," which was just published in [Clinical Infectious Diseases](#).

The authors conducted a systematic review of randomized trials, cohort studies, and case-control studies to evaluate the effect of healthcare provider (HCP) influenza vaccination on mortality, hospitalization, and influenza cases in patients of healthcare facilities. By way of background, Faruque provided an overview of the GRADE system used by ACIP for grading the quality of evidence and the strength of recommendations. The evidence grades (high, moderate, low, very low) represent a general hierarchy reflecting confidence in the estimated effect of an intervention on health outcomes. Criteria for downgrading (i.e., risk of bias, inconsistency, indirectness, imprecision, and publication bias) are weighed against criteria for upgrading (i.e., strength of association, dose-response, and opposing residual confounding or bias) to determine the final evidence quality. (Additional information on GRADE may be found [here](#).)

The authors identified 4 cluster-randomized trials and 4 observational studies conducted in long-term care or hospital settings. Faruque presented extensive data indicating the pooled risk ratios across trials for all-cause mortality (0.71) and influenza-like illness (0.58). The pooled estimates for all-cause hospitalizations and laboratory-confirmed influenza were not statistically significant. However, the cohort and case-control studies indicated significant protective associations for ILI and laboratory-confirmed influenza. Using GRADE, the quality of the evidence for the effect of HCP vaccination on mortality was moderate, while the effect on influenza cases in patients and patient hospitalization was low. Therefore, the quality of evidence is higher for mortality than other outcomes.

One Summit partner noted the data indicated staff vaccination rates ranging from 48-70%. Given that the Healthy People 2020 goal is to obtain HCP vaccination rates of 90% or more, he asked whether the data provided any hints about an incremental advantage gained by rates >70%. Faruque responded that, although the studies used in this review did not illuminate this issue, modeling shows that higher vaccination rates are advantageous.

- 2. The CDC/Influenza Division Weekly Influenza Surveillance Report** for week 37 (ending September 14, 2013) is available [here](#), and region specific data may be viewed [here](#). During week 37, 5.8% of all deaths reported through the 122-Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 6.1% for week 37. No new influenza-associated pediatric deaths were reported to CDC during week 37. A total of 164 influenza-associated pediatric deaths have been reported during the 2012–2013 season. Additional data can be found [here](#). Nationwide during week 37, 0.9% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI). This percentage is below the national baseline of 2.2%. An [Influenza Summary Update](#) of the influenza activity reported by state and territorial epidemiologists indicates the geographic spread of influenza viruses, but does not measure the intensity of influenza activity. This map has not yet been updated for the upcoming season.) Archives of previous *FluViews* are available [here](#).

### **3. Novel Influenza H3N2v Activity**

Two additional novel influenza A virus infections have been reported to CDC during week 37. Two infections with influenza A (H1N1) variant (H1N1v) viruses were reported to CDC during week 37 by Arkansas, bringing the total number of variant influenza virus infections to 20. A total of 18 H3N2v cases have been reported this summer from Illinois (1), Indiana (14), Michigan (2), and Ohio (1). So far during 2013, one person has been hospitalized as a result of variant influenza illness; no deaths have occurred. At this time no ongoing human-to-human transmission has been identified, and all 20 cases have reported close contact with swine in the week prior to illness onset.

Because of reporting schedules, state totals posted by CDC may not always be consistent with those reported by state health departments. If there is a discrepancy between state and CDC case counts, data from the state health department should be used as the most accurate number.

Early identification and investigation of human infections with novel influenza A viruses is critical in order to evaluate the extent of the outbreak and possible human-to-human transmission. Additional

[information](#) on influenza in swine, variant influenza infection in humans, and strategies to interact safely with livestock is available from CDC.

CDC's [key points](#) regarding recent human infections with influenza H3N2 variant (H3N2v) virus infections in the United States were released on September 6.

#### **4. More information from CDC**

CDC has released a key messages [document](#) highlighting important points for the 2013–14 influenza season, including vaccine recommendations and information on influenza activity.

#### **5. Subscribe to *IAC Express* to Stay Up-to-Date on All Things Immunization!**

Need to stay up with the latest in immunization information and recommendation? Consider *IAC Express*! *IAC Express* is delivered directly to your email box and features important immunization developments such as the latest vaccine recommendations and licensures, important journal articles, practical vaccination resources, conference announcements, and more. Click [here](#) to subscribe to *IAC Express* or any of the other great publications available from the Immunization Action Coalition.

#### **6. Influenza Vaccine Supply Update**

Manufacturers estimate 135-139 million doses of influenza vaccine will be produced for the U.S. market this season. During 2012–2013, 134.9 million doses of flu vaccine were distributed in the United States.

- Of the overall influenza vaccine supply projected for the 2013–2014 season, manufacturers estimate that 30–32 million doses will be available as quadrivalent flu vaccines.
- Of the total quadrivalent influenza vaccine supply, approximately 13–15 million doses of the nasal spray influenza vaccine (LAIV) will be available.

As of September 13, 2013, about 62M doses of influenza vaccine have been distributed. [Information](#) on the number of doses distributed is updated each week. In addition, Summit members can view the FDA lot release [site](#) to obtain information about the lots of influenza vaccine released, which incorporates quadrivalent vaccine lots. However, the number of doses in each vaccine lot is unknown.

#### **7. Study Suggests H1N1 Influenza Shots are Safe during Pregnancy**

New [research](#) examining the safety of the H1N1 influenza vaccine during pregnancy finds no evidence the vaccine raises the risk of miscarriage or birth defects. The national study, which was launched shortly after the pandemic H1N1 influenza outbreak of 2009, will be summarized in two companion papers (available [here](#) and [here](#)) published online this month in the journal *Vaccine*.

#### **8. Small Study says that Flu Vaccine Effectiveness May Drop Within a Few Months**

The effectiveness of the influenza vaccine dropped from 52% at 3.5 months after vaccination to 22% more than 4 months after vaccination during the 2011–12 season, according to a [study](#) out of Spain published today in *BMC Infectious Diseases*. The study's power was limited by a small sample size. The waning immunity appeared to be entirely tied to immune response in elderly patients. Additional information is available [here](#).

## **9. Adults' Immunization Gap Proves Costly**

Many people vaccinated as children are failing to keep it up as adults, costing thousands of lives and billions of dollars annually in the United States. The vaccination rate is particularly low for adults older than 60, with 15.8 percent vaccinating for shingles, and only one-third of women age 19 to 26 opting to receive the HPV vaccine. One of the factors in preventing more immunizations is that adults don't think they are necessary. A recent survey by the National Foundation on Infectious Diseases found that 40 percent of adults questioned said they did not need immunizations because they were vaccinated as children. Additional information on this immunization gap may be found [here](#).

## **10. Scientists Make Breakthrough in Developing Universal Influenza Vaccine**

A group of researchers at London's Imperial College say they have achieved a breakthrough in the search for a universal flu vaccine that can protect people against any form of the flu virus infection.

The team published the [results](#) of its study in the journal Nature Medicine. The latest breakthrough relies on the fact that structures in the core of the virus are stable and shared by many strains. Researchers believe that vaccines that have the ability to target the core of the virus are promising candidates for a universal flu vaccine.

The study found that a type of immune T-Cell, the CD8 T cell, could recognize and target the stable core fragments of the influenza virus as opposed to surface fragments which change regularly making treatments which rely on antibodies targeting the surface fragments effective only in the short-term.

Additional information is available [here](#).

## **11. WHO Raises Concerns about MERS-CoV Patterns and Pace**

The World Health Organization (WHO) today aired [concerns](#) about surging numbers of Middle East respiratory syndrome coronavirus (MERS-CoV) cases and clusters and said that the disease pattern seems to be trending younger and affecting women more often.

## **12. Adult Immunizations Protect At-Risk Newborns from Whooping Cough**

Multiple studies show adult family members are the most common source of spread of whooping cough to infants, who do not receive their first pertussis vaccination in the 5-shot series until 2 months of age. Even for the infant who has started the series but who hasn't completed it, they are especially at risk. Researchers at the University of North Carolina-Chapel Hill's School of Public Health studied [primary sources of infection](#) among children with pertussis from four countries, including the United States. Parents were the source in 55 percent of cases, siblings the source in 16 percent of cases, aunts or uncles in 10 percent, grandparents in 6 percent, and cousins, close family friends and non-family caregivers the source in the remainder.

## **13. It's the Law: New York Health Care Workers Must Get Flu Shot or Wear Mask**

New [rules](#) adopted by the New York Health Department requires all health care workers -- even volunteers -- at hospitals, nursing homes, and other healthcare agencies to either get their flu shots or wear face masks when working with patients.

## **14. Health Leaders Expect Another Early Influenza Season**

Medical officials in North Texas are urging people to get their flu shots early. Last season, flu cases began to peak in November and December instead of the more typical month of February, and this season may mirror last year, Dr. Mark Hebert, chief medical officer at Medical City Hospital in Dallas, stated in an [interview](#).

## 15. Researchers Discover a New Way that Influenza Can Infect Cells

In a [paper](#) published online ahead of the December print issue of the *Journal of Virology*, researchers describe the discovery of an influenza virus that instead uses neuraminidase to attach to cells. A mutation allowed neuraminidase to attach the virus to cells. Hemagglutinin's ability to bind to cells – long considered one of the protein's most crucial and conserved properties – was no longer necessary for infection. An additional story on this discovery is available [here](#).

## 16. CSL Biotherapies Completes 2013–14 Season AFLURIA® Shipments

CSL Biotherapies, Inc. [announced](#) today it has finalized shipment of 11 million doses of AFLURIA®, its seasonal influenza vaccine for the 2013–2014 season.

## 17. Analysis Finds Limited Evidence for HCW Flu Vaccination

Hospitals and public health officials strongly promote healthcare worker (HCW) flu vaccination as a step to protect patients, but a new [analysis](#) found that evidence for a benefit may not be as strong as previously thought. The researchers gave the evidence an overall "moderate" grade. They ranked the quality of evidence for HCW vaccination on mortality as moderate and the quality for both influenza and hospitalization as low. An additional story on these findings is available [here](#).

However, in a [commentary](#) (subscription required), Dr. Marie Griffin said that considering the grave impact flu outbreaks can have in institutional settings, the safety and moderate efficacy of current vaccines, and the potential benefit of herd protection, the new meta-analysis provides reassurance that the measure passes muster. "Vaccination of healthcare workers to protect vulnerable patients and residents of long-term facilities should be viewed as an evidence-based recommendation."

## 18. Sanofi Pasteur is on the Hunt for The FLUgitives(TM) This Flu Season

To help encourage more Americans to get their annual flu shot, Sanofi Pasteur announced today the launch of a national [campaign](#), on [Facebook](#), to round up The FLUgitives(TM) - people who haven't yet been vaccinated against the flu this season. Starting September 19, 2013, #FLUgitives are encouraged ( to come out of hiding, round up other #FLUgitives and turn themselves in to their healthcare provider to learn about the seriousness of influenza and their available vaccine options.

## 19. H7N9 Potentially Highly Transmissible, Virulent

The influenza A(H7N9) virus has the potential to transmit easily among humans and cause a pandemic, new [data](#) suggest. According to a [report](#) in *The American Journal of Pathology*, researchers from Rotterdam, the Netherlands, found that the virus attaches easily to the epithelium of the upper and lower respiratory tracts, which is a trait not previously observed with avian influenza viruses. The researchers also found that there was more concentrated attachment of H7N9 viruses in the ciliated cells of the nasal concha, trachea and bronchi, which suggests potential for increased transmissibility.

## 20. How Influenza Virus Trackers Keep You Healthy

With influenza's yearly arrival imminent, a vast network of epidemiological surveillance [systems](#) is springing back to life. Officials in all 50 states and within the Centers for Disease Control and Prevention (CDC) will be working to discover when, where and with what severity influenza strikes in 2013.

During seasonal outbreaks and when novel viruses appear, a number of systems work together to give public health officials a better handle on the unpredictable virus. The first indications of influenza's arrival usually come from doctors' offices. Thousands of local physicians file weekly reports to the CDC about the number of patients arriving with flu-like symptoms. State officials also gather reports on the number of deaths and hospitalizations from influenza, revealing the season's severity.

Once reports of influenza-like symptoms pass a 2 percent threshold -- meaning that 2 percent of patients coming in to see their doctors are doing so because they have flu symptoms -- officials can say that influenza has likely arrived, said Angie Maxted, an influenza epidemiologist at the New York Department of Health.

#### **21. Don't Forget to Update and Submit to the New Adult Vaccine Locator!**

The new Adult Vaccine Finder is now available! Please forward the following information to immunization providers with whom you work!

**Attention Immunization Providers:** If you are interested in letting the public know about vaccines offered at your practice or clinic, go to <http://vaccine.healthmap.org>. This site already includes more than 54,000 locations that provide flu shots and has provided this information to 500,000 users from the general public. On January 28, 2013, the site expanded to include 10 additional adult vaccines. If you want to register your location on this website, click on the "about" button on the top right hand side and follow the prompts to register, or go to <https://flushot.healthmap.org/admin/signup>.

#### **22. 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.