



# *Influenza Activity Spotlight*

**2013–2014 Season**

**Issue #7 — September 30, 2013**

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**Reminder:** Summit calls are scheduled every Thursday at 3 p.m. ET, unless cancelled. (Please note that, if the federal government is shut down on October 3, the Summit call will be cancelled, as many of our speakers are from the federal government.) Please email [L.J Tan](#) or [LaDora Woods](#) if you have any updates on activities to provide to the Summit.

## **1. Summary of the National Adult and Influenza Immunization Summit Call – 9/26/2013**

This call was cancelled due to the NFID National Influenza/Pneumococcal Press Conference. A summary of this event from NFID and CDC will be provided during a future Summit call.

- 2. The CDC/Influenza Division Weekly Influenza Surveillance Report** for week 38 (ending September 21, 2013) is available [here](#), and region specific data may be viewed [here](#). During week 38, 5.7% 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 38. No new influenza-associated pediatric deaths were reported to CDC during week 38. 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 38, 1.0% 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**

No additional novel influenza A virus infections have been reported to CDC during week 38. A total of 20 variant influenza virus infections (18 H3N2v and 2 H1N1v) have been reported this summer from Arkansas (2), 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 the final data for influenza vaccination coverage points for the [general population](#), [pregnant women](#), and [healthcare personnel](#) during the 2012–2013 season. Vaccine coverage information is accessible through CDC's influenza [website](#). For convenience, CDC will also be integrating these data into the key points document for the 2013–2014 season (shared in the previous newsletter) which will be re-distributed next week (if the federal government is open.)

#### **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 20, 2013, about 73M 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. Government Shutdown Would Halt Seasonal Influenza Program**

If the government shuts down in the absence of a budget agreement, the U.S. Centers for Disease Control and Prevention would be unable to support its seasonal influenza program that monitors the spread of influenza, the Obama administration has announced. CDC also would be unable to provide "technical assistance, analysis, and support to state and local partners for infectious disease and surveillance," according to a Department of Health and Human Services memo about the effects of a possible government shutdown. A full news story is available [here](#). In addition, a story on the impact on those with government grants, including influenza vaccine manufacturers, may be found [here](#).

#### **8. Managing the Human Toll Caused by Seasonal Influenza: New York State's Mandate to Vaccinate or Mask**

Please read this nice JAMA [commentary](#) by our colleague Art Caplan on the New York State mandate for healthcare worker influenza immunization. Art states that the various codes of ethics for all health care professionals and personnel clearly state that patients' interests must be prioritized over those of clinicians. Thus, the mandate requiring health care personnel to wear a surgical mask if they forgo annual flu vaccination honors the professional commitment to patients' best interests. The requirement is in keeping with well-established and existing mandates for annual tuberculosis testing,

measles-mumps-rubella vaccination, and documentation of immunity to measles and other diseases. All health care personnel are obligated to honor the core medical ethics principle of “do no harm,” as a matter of both professional ethics and the common law. The way to do this is to vaccinate or wear a mask.

Health care workers have a distinct duty toward those who are especially susceptible and who cannot protect themselves through vaccination such as elderly individuals, newborns, and those with immune disorders. The predictably poor response to influenza vaccine among the medically fragile and very elderly patients represents an especially important ethical obligation for health care worker vaccination and masking—to reduce transmission to individuals who are unlikely to or cannot benefit from vaccination.

#### **9. The National Quality Forum (NQF) is Seeking Nominations for Five Multistakeholder Committees to Provide Input on Priorities for Performance Measurement**

Under contract with the Department of Health and Human Services (HHS), NQF will provide multistakeholder guidance on priorities for performance measurement to address the three-part aim of the National Quality Strategy (NQS) by focusing on five areas requested by HHS. One of the five areas is Adult Immunization. For more information, see the [Call for Nominations](#) and click [here](#).

#### **10. Vaccine Economics: What Price Human Life?**

In a [commentary](#) published in *Science Translational Medicine*, Professor John Mekalanos discusses the UK Joint Committee on Vaccination and Immunization (JCVI)—which recommends vaccines for inclusion in the UK’s childhood immunization program—failure to recommend a recently approved vaccine against bacterial meningitis primarily on the basis of a fallacious argument of low cost-effectiveness.

In a bold commentary, Dr. Mekalanos criticizes the UK’s decision process, saying, “The committee’s action undermines an unheralded guideline that has served science and society for nearly a century: We must develop and deploy vaccines to prevent death and alleviate human suffering, rather than have the anticipated cost benefits drive the process.”

The new trend, epitomized by the recent JCVI opinion, prioritizes health care outcomes in economic rather than humanistic terms. This represents a type of health care rationing that threatens not only our immediate well-being but also the long-term viability of an essential business sector—vaccine development and manufacturing. Would anyone be surprised if vaccine developers began to seek more fruitful areas of investment?”

#### **11. Researchers Chart Evolution of Deadly H7N9 Bird Flu**

Chinese researchers determined that new H7N9 avian flu viruses evolved from distinct H9N2 viruses as part of a two-step process, according to a [study](#) published in *Cell Host & Microbe*. An additional story is available [here](#).

Researchers from the Chinese Academy of Sciences and Yangzhou University analyzed whole-genome sequences of avian flu viruses from human, poultry and wild birds from China. They found that H7N9 viruses are genetically diverse, which suggested that complex genetic events resulted in their evolution.

#### **12. The American Society for Microbiology has Released a Report, *FAQ: Influenza***

To help answer the many questions people have about influenza, the American Academy of Microbiology has issued a new report, [FAQ: Influenza](#). The Academy convened twelve of the world’s leading experts on influenza in October, 2012 to consider and answer some of the most frequently

asked questions about influenza. The resultant report provides non-technical, science-based answers to questions that people may have about the virus.

### **13. Google Names Its 2013 Science Fair Winners**

In the 17- to 18-year-old age category, Eric Chen of the U.S. won for [his project](#), a *Computer-Aided Discovery of Novel Influenza Endonuclease Inhibitors to Combat Flu Pandemic*, which was also selected as the competition's grand prize winner. "Combining computer modeling and biological studies, Eric's project looks at influenza endonuclease inhibitors as leads for a new type of anti-flu medicine, effective against all influenza viruses, including pandemic strains," wrote Clare Conway of the Google Science Fair team.

### **14. Scientists Closer to Developing Universal Influenza Vaccine**

Following up on the story reported in last week's newsletter, here is additional [press coverage](#).

A new study, published in the journal [Nature Medicine](#), discusses a discovery that could lead to the development of a universal influenza vaccine. The researchers used the 2009 H1N1 pandemic as a natural experiment to determine if existing cellular immunity could limit the symptoms seen in individuals without influenza antibodies. Specifically, the study looked at the role of T cells in natural protection against the flu. The researchers found that a certain type of T cells showed protection across different viruses, serving as a potential blueprint for a universal influenza vaccine.

### **15. HHS Boosts Capacity to Produce Pandemic Flu Vaccine**

To boost the nation's ability to manufacture influenza vaccine quickly in a pandemic, the U.S. Department of Health and Human Services today established a fill and finish manufacturing [network](#), which will cover the final steps in the vaccine manufacturing process. Led by HHS, the network supplements the capacity that influenza vaccine manufacturers currently have, potentially increasing national capacity to produce influenza vaccine by 20 percent.

### **16. First Cases of Influenza Confirmed in SC**

The state Department of Health and Environmental Control reported Monday the agency has [confirmed](#) five cases of influenza in the Midlands.

"Vaccination remains the single best way to prevent the spread of flu," said state epidemiologist Dr. Linda Bell. "We recommend the flu vaccine for everyone six months of age or older. Flu season typically peaks in February in South Carolina. But you should get vaccinated as soon as possible to give your body time to strengthen its natural resistance to the virus before you are exposed. We strongly recommend flu vaccine for anyone who wants to reduce their risk from flu and its complications."

### **17. Virginia Tech Engineer Receives NIH New Innovator Award to Study Influenza Virus**

Linsey Marr, a Virginia Tech civil and environmental engineering faculty member, has studied the influenza virus and late last year led a team that made significant headway in determining how the flu virus survived best – in humidity that was less than 50 percent or above 98 percent. This [result](#) may help explain why the disease spikes in winter months in temperate regions, where wintertime heating leads to indoor air with low humidity. Her team's work was published in an academically peer-reviewed journal *PLoS One*.

Today, Marr is receiving a National Institutes of Health (NIH) New Innovator Award valued at \$2.28 million over five years.

## 18. Health Answers: What Vaccines Do I Need as an Adult?

Although you may have thought you'd outgrown shots, people over 18 need vaccines too, according to public health [officials](#).

Some vaccines — such as the one for whooping cough — are needed to update the protection you got as a child. Other infections, like the flu, evolve rapidly, so a new shot protects against viral strains that developed since your last dose..

## 19. What You Need to Know About Diabetes and Flu

There are certain groups of [people](#) are at risk of serious flu complications each year, including those with diabetes. "Diabetes can weaken your immune system against the flu, and it also puts you at an increased risk of flu-related complications," Ovalle says. "The weakening of the immune system makes it harder for your body to fight the flu virus. Being sick can also raise your blood glucose and prevent you from eating properly. You are also at risk of flu-related complications like pneumonia."

## 20. Flu Shot is Less Effective in Seniors, U.S Health Officials Admit

Health officials from the Centers for Medicare & Medicaid admitted that flu shots are less effective in [seniors](#) but are still encouraging them to go through the vaccination. Flu shots effectiveness varies per season. People who get flu shots will also experience varying effects because the protection depends on their age and current health condition. Getting a flu shot will lessen the impact of flu, antibiotic use, medical appointments, lost productivity, and reduce the chance of being hospitalized.

CDC recently released a study result that the flu shot given between 2011 and 2012 has helped reduce the number of hospitalizations due to flu-related concerns by almost 77 percent.

## 21. MERS-CoV: CDC Guidance for Clinical Surveillance, Management

In preparation for future cases of Middle East respiratory syndrome coronavirus (MERS-CoV) in the United States, the Centers for Disease Control and Prevention (CDC) has released [recommendations](#) for patient evaluation, case definitions, home care, travel, and infection control. The guidance and a summary of worldwide epidemiologic information were published in the September 26 issue of the [Morbidity and Mortality Weekly Report](#).

## 22. Vaccine Refusal Tied to Pertussis Outbreak

Refusal to vaccinate children against whooping cough might have played a role in the 2010 pertussis outbreak in California, researchers [reported](#).

[Analysis](#) of the outbreak -- the largest in the state since 1947 -- showed that pertussis cases fell into two large temporal and spatial clusters, according to Saad Omer, MBBS, PhD, of Emory University in Atlanta, and colleagues.

## 23. AAP Updates Policy on Influenza Prevention, Treatment

The American Academy of Pediatrics has updated its [recommendations](#) for the prevention and treatment of influenza in children, addressing how the influenza vaccine composition has changed, the recent licensure of quadrivalent vaccines, the availability of multiple formulations of vaccine, and the role of antivirals, among other issues. The recommendations for the 2013-'14 influenza season are available in the October issue of [Pediatrics](#).

#### **24. WHO Advises on H7N9 Strain for Vaccine Development**

The World Health Organization (WHO) has recommended a specific strain of avian influenza A(H7N9) to be used in the development of a H7N9 vaccine for pandemic purposes, according to a [statement](#) issued September 26, 2013.

The global health body recommends the use of an A/Anhui/1/2013-like virus as it elicits antibodies that react well with all viruses tested.

#### **25. Study Raises Red Flag for Universal Influenza Vaccine; May Explain 2009 'Canadian problem'**

A new [study](#) sounds a cautionary note for work that is being done to try to develop vaccines to protect against all subtypes of influenza. The research describes a phenomenon in which vaccination against one strain of flu actually seems to raise the risk of severe infection following exposure to a related but different strain, an effect called vaccine-associated enhanced respiratory disease.

The scientists say it's not currently known why the effect happens. Nor is it clear that it would be seen in other species — this research was done in piglets — or with the kinds of flu vaccines used to protect people. But they suggest the findings should be considered during the development and assessment of experimental universal flu vaccines.

The finding is reminiscent of something that was observed in people in Canada during the 2009 H1N1 pandemic. Dr. Danuta Skowronski, a flu expert at the B.C. Centre for Disease Control in Vancouver, spotted a surprising and unsettling trend when she looked at data on people in British Columbia who contracted H1N1 in the spring and summer of 2009. People who had received a seasonal flu shot the previous autumn were more likely to contract the new pandemic strain.

The study was published by the journal [Science Translational Medicine](#).

#### **26. MedImmune Specialty Care And Actress Tia Mowry Team Up To Take On Influenza This Season**

On September 23, MedImmune Specialty Care division of AstraZeneca (MedImmune Specialty Care) [announced](#) it has joined with actress Tia Mowry to raise awareness about the importance of an annual flu vaccination. To kick-off the campaign, MedImmune Specialty Care and Mowry unveiled an online [video](#), "I Insist!", which uses comedy to educate busy families about the importance of living a healthy lifestyle and making flu vaccination a priority.

#### **27. 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>.

#### **28. 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.