CDC conducts vaccine effectiveness (VE) studies with the U.S. Influenza Vaccine Effectiveness (Flu VE) Network each season to estimate flu vaccine effectiveness. End of season data evaluated during the summer by the Flu VE Network also allowed separate estimates for the live attenuated influenza vaccine (LAIV, or the "nasal spray vaccine") and inactivated influenza vaccine (IIV or "the flu shot"). During 2013-2014 there was no measurable effectiveness for LAIV against influenza A (H1N1) among children enrolled in the study.

This finding is unexpected and different from previous studies, which suggested that LAIV may be more effective for younger children. The reasons behind the lack of effectiveness during the 2013-2014 season are not clearly understood, but there may be two reasons for this.

**Biological Cause**
MedImmune reported to the FDA that the H1N1 strain included in LAIV during the 2013-2014 season was susceptible to thermal degradation outside of 2-8 °C.

Degradation was not found in the other vaccine strains. The manufacturer is reportedly going to correct the degradation issue with the 2015-2016 vaccine.

**Circulating Strains**
H3N2 was the predominant strain during the 2011-2012 flu season. H3N2 and B were the predominant strains in 2012-2013. H1N1 was the predominant strain in 2013-2014 so we were able to detect vaccine ineffectiveness.

**Should providers still offer LAIV? Yes.**

The CDC has not changed the current flu recommendations because:
1. There is very little circulating H1N1 so far this season
2. LAIV offers good protection against H3N2 and B viruses
3. LAIV may offer better protection than IIV when antigenic drift occurs
4. Providers have already received and/or administered a majority of their LAIV inventory this season

**Centers For Disease Control, Vaccine Education Center, Dr. Paul Offit**
Talking to parents about the HPV vaccine

Many parents are reluctant to have their children vaccinated with the HPV vaccine. Many providers are hesitant to recommend the vaccine.

Things to consider when talking to parents about this vaccine:
- Nearly 50% of high school seniors have already engaged in sexual intercourse
- 1/3 9th graders and 2/3 12th graders have engaged in sexual intercourse
- 24% of high school seniors have had sexual intercourse with 4 or more partners
- HPV vaccine is CANCER PREVENTION
- HPV vaccine is most effective when given at 11 or 12 years of age
- Parents may be concerned that vaccinating may be perceived by the child as permission to have sex. However, research has shown that the HPV vaccine does not make kids more likely to be sexually active or start having sex at a younger age.
- Parents might believe their child won’t be exposed to HPV because they are not sexually active or may not be for a long time. HPV is so common that an estimated 79 millions Americans are currently infected. Most people will never know they are infected. So even if their son or daughter waits until marriage to have sex or only has 1 partner in the future, he/she could still be exposed if their partner has been exposed.
- Remind parents that all vaccines are given now to prevent infection later. The HPV vaccine is no different.
- A strong recommendation from you is the best predictor of vaccination! Take the time to discuss the vaccine with parents.

Jemal A et al. J Natl Cancer Inst 2013; 105::175-201

Q & A

Q: A study has now been published that found that Fluzone High-Dose protects people 65 years and older better than standard-dose Fluzone. Does ACIP preferentially recommend use of Fluzone High-Dose for all people age 65 years and older?

A: Despite published evidence of better protection from Fluzone High-Dose when compared to standard-dose Fluzone, ACIP has not stated a preference for this vaccine for people age 65 years and older.

Q: If a patient pulls away during administration of a vaccine and the needle comes out, is it okay to reintroduce the same needle and finish the injection?

A: No. The needle should be considered to be contaminated. The needle and syringe

( N Engl J Med 2014; 371:635–45). ACIP has not stated a preference for this vaccine for people age 65 years and older.
2014 Influenza Activity– Antigenic Drift

On December 3, the CDC Health Alert Network (HAN) issued a CDC Health Advisory regarding the potential for circulation of drifted Influenza A (H3N2) viruses.

Influenza activity is currently low in the United States as a whole, but is increasing in some parts of the country. This season, influenza A (H3N2) viruses have been reported most frequently and have been detected in almost all states.

During past seasons when influenza A (H3N2) viruses have predominated, higher overall and age-specific hospitalization rates and more mortality have been observed, especially among older people, very young children, and persons with certain chronic medical conditions compared with seasons during which influenza A (H1N1) or influenza B viruses have predominated.

Data indicates that 48% of the influenza A (H3N2) viruses analyzed through November 22, 2014 were antigenically similar to the 2014–2015 influenza A (H3N2) vaccine component, but that 52% were antigenically different (drifted) from the H3N2 vaccine virus.

What does this mean? Decreased vaccine effectiveness has been observed when a vaccine mismatch occurs. However, vaccination has been found to provide some protection against drifted viruses. This cross-protection might reduce severe outcomes such as hospitalization and death. Vaccination will offer protection against circulating influenza strains that have not undergone significant antigenic drift from the vaccine viruses (such as influenza A (H1N1) and B viruses).

Because of this antigenic drift, the CDC has emphasized the importance of the use of antiviral medications for treatment and prevention of influenza, as an adjunct to vaccination. The two prescription antiviral medications recommended for treatment or prevention of influenza are oseltamivir (Tamiflu) and zanamivir (Relenza).

Data shows that early antiviral treatment can shorten the duration of fever and illness symptoms, reduce the risk of complications from influenza (e.g., otitis media in young children and pneumonia requiring antibiotics in adults), and reduce the risk of death among hospitalized patients.

CDC Health Alert Network, December 3, 2014

Staff resources

- IAC posts Spanish version of the pediatric multi-vaccine VIS
- Checklist for Safe Vaccine Storage and Handling has been updated.

On November 4, the Network for Public Health Law and The Immunization Partnership presented a webinar titled Immunization Laws: Impact of Non-Medical Exemptions

Access the slides and/or the recording of this webinar

Vaccine Education Center posts Dr. Paul Offit’s webinar on meningococcal B vaccines, HPV9, and other topics.

Click on the purple button titled "View Winter 2014 Presentation" and register (at no cost) to listen to the webinar and view the accompanying slide set. The webinar is accredited for one continuing medical education (CME) credit through November 18, 2015.
Immunization News

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