IMMUNIZATIONS NEWSLETTER

PROVIDING GSA MEMBERS WITH UPDATES ON ADULT IMMUNIZATIONS

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FEATURES

News

• Influenza is a very dangerous condition when it develops in pregnant women, and rates of vaccination during the first trimester have been increasing. Now, however, comes an observational study showing increased spontaneous abortion during the 28 days after influenza vaccination with a product containing the A/H1N1pdm2009 (pH1N1) antigen, but only in those women who had received an influenza vaccine in the prior season that also contained that antigen (Vaccine. 2017;35[40]:5314–22). These findings, termed "puzzling" in one news report, do not show causality (since the data are observational), are in conflict with previous reports, and would need to be replicated or otherwise confirmed before changes are made in recommendations. Researchers with the Vaccine Safety Datalink conducted the case–control analysis using figures from 2010–11 and 2011–12. It is sure to be a discussion item when the Advisory Committee on Immunization Practices convenes later this month at the Centers for Disease Control and Prevention (CDC) in Atlanta. This study "is a compelling example of how the public health and medical communities value vaccine safety as a top priority," an author wrote in an opinion piece published by STAT. “Unfortunately, it will take more research to definitively determine if the connection between flu vaccine and miscarriage is real and, if so, what changes are needed for recommendations about getting vaccinated against the flu.”

Resources

• The 2017–18 Influenza Vaccine Identification Guide is now available at EZIZ.org, the California Vaccines for Children program website. It features photographs of products organized by approved age ranges of pediatric and adult recipients.

• Laminated color versions of the 2017 U.S. adult immunization schedule are available from the Immunization Action Coalition.
Patients often report hearing that the influenza vaccine is not effective or it was “only 27% effective.” What do those findings really mean and how can they be concisely explained to patients?

Vaccine efficacy is described as the percent reduction in disease incidence in a vaccinated group, compared with an unvaccinated group, under optimal conditions (e.g., a randomized controlled trial). Efficacy studies often use objective outcomes, such as laboratory-confirmed influenza, and often are so specific as to not be generalizable. Vaccine effectiveness, on the other hand, is the ability of the vaccine to prevent outcomes of interest in the “real world.” Proving vaccine effectiveness is important in communicating with the public and encouraging uptake of the vaccine.

Two factors for influenza can have a significant impact on the vaccine’s effectiveness. The first is drift—if genetic mutations cause the strains in circulation to drift away from the ones in the vaccine, effectiveness can drop, even while some vaccine protection remains. Drift is impossible to predict at the beginning of a season. The second factor affecting effectiveness is bias. Confounding, selection bias, and information bias are all known issues in observational studies that determine vaccine effectiveness. For example, not adjusting for those who have chronic conditions in the study could increase the error in the estimate of vaccine effectiveness.

CDC provides answers to frequently asked questions about influenza vaccine effectiveness. Be ready with accurate, reasoned answers when vaccine issues are raised by patients and those within your sphere of vaccine influence.

The flu is a serious illness, one that is best prevented by the very safe, widely available influenza vaccine. Virtually every American aged 6 months or older should receive the flu shot. Older adults and those with chronic diseases have increased risks of influenza and its complications. Unless they have specific, rare contraindications, all health care workers who present in patient care areas should be vaccinated, not just for their own protection but also to avoid spreading the virus to other patients.

With those target messages in mind, the U.S. public health community is gearing up for influenza season 2017–18. Last season was relatively mild, but the percentage of vaccinated Americans dropped (Figure 1) and the number of older adults hospitalized for pneumonia and influenza increased. For the current season, officials are making sure their influenza vaccine messages are accurate and understandable to those with diverse educational and cultural backgrounds.
“Influenza is a potentially serious respiratory illness that can lead to hospitalizations and sometimes death,” said Thomas E. Price, MD, then-Secretary of Health and Human Services, during the annual influenza vaccination launch news conference on September 28. “This is especially true for older adults, pregnant women, people with certain long-term medical conditions, and young children. But even young, healthy adults can suffer severe complications. The public health consensus is very straightforward—everyone 6 months and older needs to get a flu vaccine every year.”

Whether people get vaccinated against influenza each season provides a case study in human behavior, health promotions, and public health. It’s a bubbly brew of availability and convenience mixed with affordability and personal views about incorrect myths that have sprung up about this common pathogen and the vaccine used in its prevention.

Against this backdrop, one factor is important: the strong recommendation of a trusted health professional. During a September 6 webinar, National Foundation for Infectious Diseases (NFID) Medical Director William Schaffner, MD, provided this alternative to wishy-washy “you should think about getting your flu vaccine” advice: “It’s time for your flu vaccine. You’ll get it on your way out.” Robert H. Hopkins, Jr., MD, representing the American College of Physicians, added that he tells patients they need the flu vaccine so that he “won’t see them in the hospital.” Be forceful, the speakers advised—use tools that really communicate with patients in ways that change their behavior and achieve the desired outcome. Bust the myths by educating patients: you cannot get the flu from the vaccine; if you’ve had the flu, you still need the vaccine with its three or four strains; and the vaccine cannot cause you to give the flu to others.

“The influenza vaccine needs to be presented not as an option but as what patients really need to prevent recurrence,” said Martha Gulati, MD, MS, of the American College of Cardiology. “We need to change the conversation. People read in the lay press or hear things that make them think the flu vaccine isn’t effective. They decide they’re not going to do it. We really need to shut down …, what isn’t based on fact.”
As has been reported previously in this newsletter, research studies have introduced concerns about the timing of influenza vaccine and the possible waning of vaccine effectiveness during the influenza season. Let’s look at the facts and consider the best advice to offer patients.

Influenza is a seasonal condition, occurring more commonly in colder months in temperate climates. But its occurrence is unpredictable. Infections can peak anytime from early fall to late spring. That’s about 8 months.

As described in detail in the May 2017 issue of the NAVP Immunizations Newsletter, vaccine waning occurs in some patients starting after about 4 months for A strains and 6 months for B strains. While those figures are shorter than the above-mentioned 8 months, they match pretty well with general advice for people to get vaccinated by the end of October each year. Most influenza outbreaks occur in the ensuing 4 to 6 months.

The lay media has drawn attention to studies of waning of vaccine effectiveness and has questioned whether pharmacists and other health professionals should be offering influenza vaccine as early as August. The CDC position on this has generally been that patients should be vaccinated whenever they present in a setting where immunizations are offered; this is based on the logic that they might not return before influenza breaks out.

Health professionals have begun wondering whether some of their high-risk patients should receive two doses of influenza vaccine, one early and one late in the season. While there is logic to this idea, both Schaffner and Hopkins said during the webinar there is no evidence to support such an approach as we enter into the 2017–18 influenza season. Younger people wouldn’t generally have any reason at all for two doses, Schaffner said, and there are no data to support more than one dose in older adults or those with chronic diseases.

Two other points for health professionals: You can give other vaccines with influenza vaccine (including the first or second pneumococcal vaccine needed in adults turning 65 or 66 years old—when they first go on Medicare), and if you don’t offer vaccine in your office, you can give a “pseudo-prescription” to patients as a way of reminding them to get the vaccine at a pharmacy, primary care provider, school, or work setting.

For older adults, study after study has shown a greater immune response to the A strains in the high-dose influenza vaccine and products containing stimulatory adjuvants. Should older adults receive these vaccines preferentially?

The available high-dose product (Fluzone High-Dose) and the adjuvanted influenza vaccine (Fluad) are trivalent (containing two A strains and one B strain) while many regular influenza vaccines are quadrivalent (two A and two B strains). Is it more important for older adults to get the vaccines that produce higher responses or to get the vaccines that protect against four strains of the virus?

The answer to that is simple, said Hopkins: “Use the vaccine you have in hand.” If you have the high-dose or adjuvanted product, use it for older adults. But if those aren’t available or are not covered for a particular patient, the other influenza vaccines—trivalent or quadrivalent—are fine. The most important thing is to vaccinate people against influenza when they are ready and in a setting where vaccines are offered.
Gulati, as a cardiologist, emphasized that influenza is a serious disease—it’s not “just a cold,” and people don’t have “the flu” for only a day or two. Influenza is associated with an increased risk of cardiovascular disease and death, even in patients with no pre-existing diseases of the heart and circulatory system. While mortality is difficult to measure because deaths of patients with influenza are grouped with those from pneumonia and are often attributed to complications such as myocardial infarction, tens of thousands of older Americans die of influenza-related illness during each flu season. The vaccine can help protect these people from illness, complications, and death.

Other than a sore arm and minor redness at the injection site, influenza vaccine produces few adverse effects, Gulati said. Vaccine advocates—whether immunizers or those who provide advice and encouragement—need to reinforce key points during this upcoming season in an effort to get immunization rates back up. As promoted by CDC, the central messages are as follows:

**For consumers**
- Flu is a serious illness.
- The flu vaccine is the best protection available against flu. Talk to your doctor about getting the flu vaccine for your family.
- The flu vaccine is very safe (myth busting).

**For health professionals**
- Flu is a serious illness.
- The flu vaccine is the first and most important step to give your patients the best protection this flu season.
- Every visit with your patient is an opportunity to recommend the flu vaccine.

Tools for use in promoting these messages are provided in the CDC toolkit (Figure 2). Remember also that National Influenza Vaccination Week is coming up on December 3–9. This provides a perfect opportunity for one last push for vaccination before the holidays increase spread of the virus among travelers and family members who see each other just once each year.

NFID is promoting its Leading by Example initiative. Organizations can join this effort by using social media channels to circulate photos of leaders getting vaccinated. NFID will also highlight the photos in its Leading by Example image gallery. Spread the word—not the virus! Promote influenza vaccination to your patients, friends, and family members this season, and use every patient encounter to strongly urge people to get their flu shots.

**FIGURE 2.** CDC’s toolkit provides a “one-stop shop” for seasonal influenza vaccination materials, including social media messages, images, GIFs, print-ready materials, badges, widgets, and tools.
SOURCES AND RESOURCES

- 2017–18 Advisory Committee on Immunization Practices recommendations for prevention and control of seasonal influenza
- Centers for Disease Control and Prevention digital toolkit: “Campaign in a Box”
- National Foundation for Infectious Diseases influenza toolkit
- National Foundation for Infectious Diseases “Call to Action” for influenza prevention in older adults
- Archived webinar on “The Role of Healthcare Professionals in Protecting Older Adults Against Influenza,” with Drs. Schaffner, Hopkins, and Gulati

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