IMMUNIZATIONS NEWSLETTER

PROVIDING GSA MEMBERS WITH UPDATES ON ADULT IMMUNIZATIONS

MAY 2017

Developed by The Gerontological Society of America

FEATURES

News

• In conjunction with last month’s March for Science, the National Foundation for Infectious Diseases (NFID) launched a new social media campaign using the hashtag #ShotOfScience. A Thunderclap on the day of the march, April 22, boasted 177 supporters and 780,590 social media users reached. Vaccine advocates can continue to share many of the campaign materials, including animated infograms, infographics, and social media posts. Access the NFID Vaccine Science website to do your part in promoting the vaccines that have averted infectious diseases and death for decades.

Resources

• Immunizing Older Adults and the Chronically Ill is the topic of a May 17 NetConference. The presentation, third in a six-part series on adult vaccines sponsored by the Centers for Disease Control and Prevention (CDC), the Maryland Partnership for Prevention, and state immunization programs, provides clinicians with up-to-date information on immunizing older adults. Later in the month, presentations will cover Immunizing Pregnant Women, Health Care Personnel, and in the Workplace (May 24) and Clinic Logistics: Vaccine Administration, Storage, and Handling (May 31). An internet connection and telephone line are needed to participate in the 1-hour sessions, which begin at noon Eastern time and include live question-and-answer periods.

• The 2017 edition of The Vaccine Handbook: A Practical Guide for Clinicians (aka “the Purple Book”) is now available in print ($34.95) from the Immunization Action Coalition and as a free iOS app in the Apple iTunes Store. The text includes information on every licensed vaccine in the United States and advice for everyday practice, including how to address patient concerns about vaccines.
Poll

- Take 2 or 3 minutes to answer a poll about adult vaccines and the diseases they prevent. Results will be shown the following month. This month, rate your knowledge of influenza vaccines.

- In April, we asked about shingles vaccine. Thanks to those who participated! Our respondents ranged from very knowledgeable to not at all knowledgeable about both the disease and the current vaccine. For a new shingles vaccine being considered by the U.S. Food and Drug Administration, respondents wanted to know about the dosing schedule, adverse effects, relationship to the current vaccine, and communication techniques to make an effective recommendation.

Communications

Shared decision making is often seen as the holy grail of patient-centered care; however, it has skeptics among providers and patients alike. For providers who believe in the power of vaccines to protect older adults, the situation is not one where multiple paths forward exist. A strong recommendation for vaccines must be given. In fact, participatory discussions about vaccines with parents of young children have been shown to lower vaccine acceptance rates in comparison to presumptive recommendations. In older adult patients, shared decision making may be seen as breaking with socially acceptable roles, fearing a label of “difficult” for questioning the provider’s authority.

For individuals who make decisions based on fear, however, shared decision making can be a positive path forward in a vaccination discussion. Shared decision making recognizes that patients’ preferences are shaped by cognitive, emotional, and relationship factors — the same things that affect their fears. To make assumptions that older people would want a vaccine to protect their health minimizes the complexity of older adults and preventive services.

Certainly, the provider must make a strong recommendation. But for patients who are afraid that vaccines are harmful, a discussion to understand the source of that fear may be more effective than a strictly presumptive recommendation. Once the source of fear is understood, the provider can use a consistently positive approach to discuss risks of vaccines compared with everyday risks or reframing the discussion based on the risks of not vaccinating.
WANING OF INFLUENZA VACCINE EFFECTIVENESS:
WHEN IS THE RIGHT TIME FOR VACCINATION?

As the number of sites providing immunizations has grown, Americans have easier and earlier access to their annual influenza vaccination. This convenience aspect has been viewed favorably by public health officials and health professionals—it’s better to give the vaccine at the first opportunity than to take a chance on whether an individual will be back later for vaccination. As a result, influenza vaccinations are being offered as early as late July or August some years, and a substantial portion of the vaccine is administered by October.

A recent study confirming waning of vaccine effectiveness over the course of a season calls into question the wisdom of getting flu shots too early. When is the “right” time to get the vaccine? Let’s look at the evidence.

The study analyzed vaccine effectiveness over four influenza seasons, 2011–12 through 2014–15. The U.S. Influenza Vaccine Effectiveness Network gathers data each season at five locations across the country: Seattle, Washington; Marshfield, Wisconsin; southeastern Michigan; Temple, Texas; and Pittsburgh, Pennsylvania. Cases are categorized using a “test-negative case–control” method in which patients whose samples test positive for influenza are considered cases and those with negative tests become controls.

From this dataset, researchers calculated vaccination effectiveness based on immunization dates and test-positive influenza patterns for adults and children older than 9 years (younger children might have received two vaccinations, complicating the calculation between receipt of vaccine and onset of any flu-like illness). To account for the few days it takes for influenza vaccine to work, infections occurring within 14 days of vaccination were excluded.

Results showed that vaccine effectiveness was greatest at 14 days after vaccination and declined by about 7% per month for influenza A/H3N2 and influenza B, and by about 6% to 11% per month for influenza A/H1N1. After administration, vaccine effectiveness reached zero for A/H3N2 at about 5 months (158 days); the minimum effectiveness figures of 37% for A/H1N1 strains and 23% for B strains were reached at 128 days and 180 days, respectively.

Influenza infections can occur at any time. The start of the influenza season is generally considered as December or early January, but it isn’t unusual for a season to start earlier or later. This complicates the timing of the vaccine, especially in older adults and other patients with chronic diseases that place them at higher risk. Current recommendations call for health professionals to get patients vaccinated by October if possible and to keep administering the vaccine well into the season — as long as vaccine is available and strains are circulating. The current study results indicate that waning of vaccine effectiveness about 4 to 6 months after administration could be a factor for early vaccinees in a late influenza season.

It’s important to note that the high-dose influenza vaccine is being used increasingly in older adults. How that might affect overall vaccine effectiveness is unknown, but theoretically it should be improving the situation.
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BIOLOGICAL SCIENCES

Several biological factors could be affecting these results. After administration of vaccine antigens, the body’s immune system responds by producing antibodies. Without further exposure to those same antigens, the antibodies wane, eventually reaching the point where antibodies are insufficient to fight off an infection. The general timeline identified in this new study for waning of antibodies against influenza is consistent with prior studies conducted in Europe.

Bias or residual confounding could also have contributed to these findings. During the study period, a drifted variant not well-matched to the vaccine antigens would have reduced vaccine effectiveness on its own, even if host antibodies had not declined substantially.

Notably, vaccine protection can appear to decline if unvaccinated people become infected and thus are no longer at risk. A phenomenon known as the leaky vaccine effect can also produce spurious declines in vaccine effectiveness, as people have fewer symptoms but can still be infected and spread the virus.

Furthermore, this study and others have shown that people do not respond as well to influenza shots when they received the prior season’s vaccine. Despite that finding, people are still better off with an annual vaccine, as demonstrated by the waning of effectiveness shown in this study. Some protection each and every year is better than antibody titers declining to an ineffective level.

BEHAVIORAL/SOCIAL SCIENCES

Last season, some Americans purposely delayed getting influenza vaccine because of news reports that questioned early administration. Since this new study confirms that possibility, vaccine advocates will need to be ready to counsel older adults about their risks of serious illness if they become infected with influenza and encourage them to be sure to be vaccinated at least by October. Other individuals who are at increased risk of serious influenza complications should also consider their risk before deciding to delay vaccination.

Advocates need to make sure the small but vocal group of people who are hesitant about getting vaccines do not misinterpret studies such as this one by rationalizing away the need for vaccine or putting it off until it is too late. Even in the current relatively mild season, more than 7% of deaths from pneumonia and influenza in recent weeks occurred in test-positive cases, and 72 pediatric deaths had been reported as of April 8.
The U.S. Advisory Committee on Immunization Practices (ACIP) could revisit its recommendations based on increasing evidence of the waning of influenza vaccine effectiveness during the course of a season. The group meets next during June; at ACIP’s June meetings, recommendations for the upcoming influenza season are sometimes tweaked before being published later in the summer.

In the meantime, the immunizations community will need to prepare for communicating with patients one on one and through health promotions that the most important influenza-related action older adults can take is to get vaccinated. If an individual can delay immunization and there are no reports of increased influenza activity, available data indicate that the optimal time for vaccination is late November or early December. Other key messages for consumers can be accessed on the Flu and You page of the CDC website.

### SOURCES AND RESOURCES

- Appleby J. Yes, it is possible to get your flu shot too soon. National Public Radio. September 15, 2016.
- Centers for Disease Control and Prevention. Flu and you.