IMMUNIZATIONS NEWSLETTER

PROVIDING GSA MEMBERS WITH UPDATES ON ADULT IMMUNIZATIONS

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FEATURES

News

• High levels of demand for GlaxoSmithKline’s recently marketed zoster vaccine, Shingrix, have led to ordering limits and shipping delays, the Centers for Disease Control and Prevention (CDC) reported at the end of April. Health professionals should expect these to continue for the product throughout 2018, according to the CDC report.

Resources

• The CDC’s recommendations for use of the new hepatitis B vaccine, Heplisav-B (manufactured by Dynavax), were published in the April 20 issue of Morbidity and Mortality Weekly Report.

• Adult immunizations are the focus of the May 7 issue of The Medical Letter. In an online-only expanded table, the popular newsletter provides information on selected vaccines recommended for adults, including dose, schedule, general recommendations, common adverse effects, advice regarding special populations, and cost.

TALKING INFLUENZA: USING NUMBERS TO DISPROVE THE MYTHS

People have trouble with numbers. We all have a tendency to trust our “n of 1” experiences more than a lot of confusing data. When it comes to supporting the CDC recommendation for annual influenza vaccination of practically everyone 6 months of age or older, vaccine advocates must understand the numbers but weave them into convincing messages, many of which are more emotive than numeric.
BIOLOGICAL SCIENCES

THE MYTH: I didn’t get a flu shot last year and I didn’t get the flu, so I don’t need to get vaccinated this year.

The numbers: In a study published last month, Tokars et al. took on the task of examining a decades-old estimate that 5% to 20% of people get influenza each season. Data from the CDC’s Influenza Hospitalization Surveillance Network (FluSurv-NET) for six recent influenza seasons were extrapolated to provide an overall incidence of symptomatic influenza of 3% in the low-severity 2011–12 season to 11.3% in the moderate-severity 2012–13 season.

As shown in Figure 1, children were affected in higher numbers than other age groups. Among adults, the group with a surprisingly high incidence was those ages 50 to 64 years; their median incidence of influenza was nearly as high as that of children. Adults aged 65 or older—a group with higher vaccination rates—had a very low incidence in all seasons except the difficult one in 2014–15 when the circulating strains were different from the vaccine antigens, as reflected in the low median incidence shown in the graph.

The message: Nine out of 10 flu seasons, you’re right—you won’t get the flu. When you do, though, influenza can make you miserable for a week or longer and sometimes much worse than that.

BEHAVIORAL/SOCIAL SCIENCES

THE MYTH: I’m pregnant, and I’m not getting the flu shot because I don’t want it to hurt my developing baby.

The numbers: Influenza immunization can not only protect the pregnant woman from a potentially fatal infection before the baby is born, it can also insulate the newborn from infection during the important early months when the vaccine is not indicated.

In a study conducted in Japan, Ohfuji et al. showed that both pregnant and postpartum women should be vaccinated against influenza to protect their infants. In a prospective cohort study of 3,441 infants born in October, November, or December 2013, vaccine effectiveness was 61% for prenatal administration to mothers and 53% for doses they received following birth. This suggests both increased protection from passive immunity transferred before birth and a large herd immunity effect when mothers are vaccinated after giving birth.

The message: Moms, get vaccinated to protect both yourself and your baby.
THE MYTH: The effectiveness of flu vaccine is so low that I might as well just wear a mask.

The numbers: A growing array of studies shows that people benefit from influenza immunization in ways that are not fully explained by immunology and the interactions of antigens and antibodies. When it occurs, influenza is not as severe when people have been immunized for that season. Severity of other diverse clinical conditions seems to be attenuated when patients are vaccinated against influenza.

Three studies demonstrating these data were recently published. Arriola et al. analyzed the effect of influenza vaccination on disease severity among community-dwelling adults hospitalized with laboratory-confirmed influenza during the 2013–14 season. In-hospital deaths were lower among vaccinated individuals in all three age groups studied (18–49, 50–64, and ≥65 years of age), admissions to intensive care units (ICUs) were significantly lower in younger and older adults, and ICU length of stay (LOS) was shorter in those ages 50–64 and ≥65 years of age. For those two older age groups, hospital LOS was shorter for vaccinees.

In Taiwan, older adults undergoing major surgeries had better perioperative outcomes if they were vaccinated against influenza. Liu et al. reported results of a matched cohort study of vaccinated and unvaccinated adults aged 66 years or older that used nationwide data for 2008 through 2013. Risks of postoperative pneumonia, in-hospital mortality, and postoperative ICU admission were significantly lower among those vaccinated against influenza, and their hospital stays were shorter and medical expenditures lower.

Influenza vaccination lowers several clinical risks in patients with asthma, according to a systematic review and meta-analysis conducted by Vasileiou et al. Evidence from 35 studies of 142,519 patients with asthma showed that influenza vaccination prevented 59% to 78% of asthma attacks requiring emergency department and/or hospital admissions. The pooled vaccine effectiveness was 45% for preventing laboratory-confirmed influenza; this figure for live vaccines was 81%.

The message: Influenza immunization helps protect people in ways that go beyond simply preventing influenza. This is especially true for older adults and those with chronic diseases that make them more susceptible to influenza and other respiratory conditions.
HEALTH SCIENCES

THE MYTH: If everyone else gets the flu vaccine, then I don’t need it.

The numbers: Until a better approach to influenza immunization is identified and used widely, there will be seasons when the vaccine does not closely match circulating strains. An analysis of data from the just-completed influenza season shows the importance of vaccination coverage and how that can lower disease burden even when vaccine effectiveness is low. Sah et al. determined that, when vaccine efficacy declines, it is even more important for susceptible groups—such as older adults—to be vaccinated. “Health practitioner encouragement and concerted recruitment efforts are required to achieve optimal coverage among target age groups, thereby minimizing influenza morbidity and mortality for the population overall,” these researchers concluded.

The message: Keeping your immunizations up-to-date is important for all members of the family, and this applies just as much to influenza as to other vaccine-preventable diseases. Do your part—get immunized!

SOURCES AND RESOURCES