

OREGON PUBLIC HEALTH DIVISION • DEPARTMENT OF HUMAN SERVICES

PREPARATION H1N1, ET AL.: INFLUENZA VACCINATION, 2010–2011

Once again the Advisory Committee on Immunization Practices (ACIP) has issued recommendations for the upcoming influenza season.¹ What follows are the highlights from their report, as well as some brief remarks on reporting and surveillance for influenza for the upcoming season. Stay tuned to future issues of *CD Summary* for antiviral recommendations, which CDC will publish separately later this year.

NEW THIS SEASON:

- After decades of incrementally expanding indications, **influenza vaccine is now recommended for all persons ≥6 months of age.***
- There is only one influenza vaccine this season! The 2010–11 trivalent vaccine includes the 2009 H1N1 pandemic vaccine strain A/California/7/2009 (H1N1)-like, along with A/Perth/16/2009 (H3N2)-like (a brand new component) and B/Brisbane/60/2008-like (borrowed from the 2009–10 seasonal vaccine).
- Children 6 months through 8 years of age who are receiving seasonal influenza vaccine for the first time or were preciously vaccinated with only one (valid) dose of seasonal influenza vaccine should get **two** doses this season, separated by at least 4 weeks. (N.b.: this particular recommendation, which differs somewhat from the more complicated ACIP recommendation, has been approved by the Oregon Immunization Program Medical Director.)
- New kids on the block: Sanofi Pasteur's Fluzone® High Dose, an alternative inactivated vaccine for persons ≥65 years of age, was approved earlier this year. Each dose of this vaccine delivers 60 µg of hemagglutinin antigen from each viral strain — 4 times that contained in the standard-dose trivalent inactivated vaccine (TIV). Clinical trials showed higher seroconversion rates and hemagglutination inhibition

titers, but also more local reactions such as pain at the injection site. Also new this year, is Agriflu™ (Novartis), an inactivated vaccine for persons ≥18 years of age. In addition, Fluarix® (GlaxoSmithKline) has expanded its age indications to ≥3 years.

- On August 5, 2010, ACIP published revised guidance for the use of CSL's influenza vaccine, Afluria®. They are recommending that this vaccine not be administered to children <9 years old, as it was associated with fever and febrile seizures among young children during the Southern Hemisphere 2010 influenza season. Other age-appropriate vaccines should be used instead. If you have no other appropriate vaccine on hand, Afluria® can be used for children ages 5–8 years if they have a medical condition that puts them at increased risk for influenza complications.

RECENT EPIDEMIOLOGY

The 2009 H1N1 pandemic was characterized by a substantial increase in influenza hospitalizations and deaths in persons <65 years of age. However, even though H1N1 didn't infect the elderly as often, this group was still at risk for death if they did get sick. In Oregon, those ≥65 years of age accounted for only 10% of influenza hospitalizations — just one-fifth of what we see during a regular influenza season — but 40% of deaths. We're pretty sure that the 2009 influenza A (H1N1) virus will continue to cause illness in the upcoming influenza season. However, we do not know if the pandemic H1N1 virus will have undergone antigenic drift and sicken those who were already were infected with H1N1 during 2009. And only time will tell if the pandemic H1N1 virus will co-circulate with one or more of the "usual" seasonal influenza A subtypes (seasonal H1N1 or H3N2). We will do our best to keep you updated as we find out ourselves. Check out flu.oregon.gov or email Rachel.S.Linz@

state.or.us to subscribe to our weekly influenza newsletter *FluBites*.

LET'S ALL GET VACCINATED!

Annual vaccination against influenza is now recommended for *everyone* ≥6 months of age. This includes all health care workers. We expect more vaccine this year than ever, but if vaccine supply becomes limited, we'll suggest priority groups. Vaccination is the most effective means of preventing influenza infection.

Begin vaccinating as soon as vaccine is available. Take advantage of every opportunity to vaccinate: offer it during routine visits or during hospitalizations. Vaccination efforts should continue throughout the season. Antibody protection against influenza usually develops within 2 weeks of vaccinations, and duration of immunity extends for at least 6–8 months.

Antivirals can also be effective for prophylaxis and have also demonstrated reduction in severity and duration of illness when used as treatment. They should be administered to all patients who are sufficiently ill with influenza to warrant hospitalization. Hand washing and covering your cough are cheap, easy and preventive of a variety of infections: they have our full-throated endorsement.

REVIEW OF VACCINES

Two types of vaccine are available, both of which contain the same three influenza strains. Trivalent inactivated vaccine (TIV) contains killed viral strains and is injected intramuscularly. Live-attenuated influenza vaccine (LAIV) comprises cold-adapted, heat-sensitive viruses and is sprayed into the nares. None of the vaccines licensed for use in the United States contain adjuvants. Both TIV and LAIV have demonstrated effectiveness in children and adults.

Be sure to read the manufacturer's package insert before administering vaccine. In general, TIV can be used for persons ≥6 months of age, includ-

* absent a contraindication, that is



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ing those with high-risk conditions, whereas LAIV's indication is limited to healthy, non-pregnant persons aged 2–49 years. Neither TIV nor LAIV should be administered to persons who have had anaphylactic reactions to eggs or other components of the vaccines. Persons with moderate to severe febrile illness should delay vaccination until their symptoms have resolved. As a precaution, persons with a history of Guillain-Barré syndrome within 6 weeks of a previous influenza vaccination who are not at risk for severe complications from influenza vaccination should not be vaccinated. LAIV should not be administered to children aged <5 years with reactive airways disease or to close contacts of severely immunocompromised persons (e.g., hematopoietic stem cell transplant recipients).

Vaccine Administration. When administering TIV, adults and older children should be vaccinated in the deltoid muscle with a needle ≥ 1 inch in length. Young children with adequate deltoid muscle mass should be vaccinated with a needle $\frac{7}{8}$ – $1\frac{1}{4}$ inches in length. Infants should be vaccinated in the thigh with a $\frac{7}{8}$ –1 inch needle.

LAIV is intended for intranasal administration. Half (0.1 mL) of the sprayer contents should be sprayed in each nostril. LAIV should not be administered within 48 hours of receipt of antiviral medications; and antivirals should not be administered for 2 weeks after receipt of LAIV. Revaccination is not required if your patient sneezes after receiving LAIV; however, defer administration or use TIV if your patient has nasal congestion.

Vaccine Adverse Event Reporting. Significant adverse events following influenza vaccination should be reported to the Vaccine Adverse Event Reporting System (VAERS) at <http://vaers.hhs.gov/esub/index>.

TRACKING IMMUNIZATIONS

To keep track of who's already been vaccinated, we encourage reporting of influenza vaccinations to the ALERT Immunization Information System. If you've already been reporting through ALERT, you can do so via your current means; others can submit online at www.immalert.org. Call the ALERT Helpdesk with questions: 800-980-9431.

SURVEILLANCE: BUSINESS AS USUAL?

Barring any unforeseen circumstances, for the 2010–2011 influenza season we will return to pre-pandemic surveillance status. We are currently recruiting providers for the outpatient Influenza-Like Illness (ILI) Surveillance Network (ILINet). Providers who participate are asked to report the total number of patients seen and the number of patients that meet the ILI case definition on a weekly basis to CDC. Specimens from ILINet patients with ILI may also be tested at Oregon State Public Health Lab free of charge and contribute to our laboratory surveillance. If interested in joining our network of providers, please e-mail Rachel.S.Linz@state.or.us.

Influenza hospitalizations and deaths will no longer be reportable to local authorities after August 31, 2010; however, pediatric influenza-related mortality remains a nationally notifiable condition. Please report laboratory-confirmed influenza-related deaths

in children <18 years of age to the Oregon Public Health Division (971-673-1111). Oregon's Emerging Infections Program will continue surveillance for lab-confirmed influenza hospitalizations in the Portland metro area.

The CDC Maternal Health Team requests reports of ICU admissions and deaths among pregnant and postpartum women with a positive influenza test (any strain) throughout the 2010–2011 influenza season. Case reports can be sent to CDC at ReportSickMom@cdc.gov or via secure fax at 404-248-4094. The Pregnancy Flu Line (404-368-2133) will be staffed 24 hours a day, 7 days a week to answer questions about submitting reports.

RESOURCES

For more information, visit flu.oregon.gov or contact the Public Health Division's Acute and Communicable Disease Prevention Program (971-673-1111) or Immunization Program (971-673-0300).

For flu clinic locations call 1-800-SAFENET (723-3638).

REFERENCES

1. CDC. Prevention and control of influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2010. MMWR Early Release 2010; 59:1–62. Available at www.cdc.gov/mmwr/preview/mmwrhtml/rr59e0729a1.htm?s_cid=rr59e0729a1_w.
2. CDC. Update: Recommendations of the Advisory Committee on Immunization Practices (ACIP) Regarding use of CSL seasonal influenza vaccine (Afluria) in the United States during 2010–11. MMWR 2010; 59:989–92. Available at www.cdc.gov/mmwr/preview/mmwrhtml/rr5931a4.htm?s_cid=mm5931a4_w.