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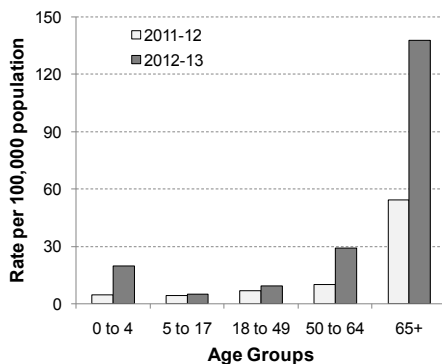
INFLUENZA SEASON'S GREETINGS

As summer fades to fall, remember that influenza season is around the corner. This *CD Summary* highlights last season's flu activity and vaccine developments.

LOOKING BACK

The 2011–12 flu season was the least active in decades, but 2012–13 was moderately severe and early. States in the East and in the South saw flu incidence peak in December, with hospitals and EDs straining to cope with the number of cases. H3N2 predominated, and it tends to affect older adults and young children more severely than other strains. The rate of influenza hospitalization among persons ≥65 years of age in the United States was about 6 times as high during the 2012–13 season (191 per 100,000) as it was during 2011–12 (30 per 100,000).¹ Although the increase didn't seem as great in Oregon, we did see more hospitalizations last season than during the preceding one (Figure). We also logged a lot of outbreaks, especially in long-term-care facilities: 35 of 52 influenza-like respiratory outbreaks were in such facilities, and at least 27 deaths were reported in outbreaks of confirmed influenza.

Figure. Rate of influenza hospitalization in Portland metro counties, 2011–12 and 2012–13



*2012–13 influenza hospitalization data are preliminary

VACCINE STRAINS ON TARGET

Given the severity of the season, concerns began to emerge about vac-

cine effectiveness (VE) against the season's viruses. Early in 2013 a CDC analysis showed that the season's flu vaccine was modestly effective (50%–60%) against medically attended influenza.² A subsequent CDC study showed an overall VE of 56%, though only 27% in those ≥65 years of age. The same CDC study found VE against the specific circulating H3N2 subtype to be 9% among those 65 and older.³

Should older persons still get vaccinated this year? Absolutely. Studies conducted during other flu seasons have shown significant protection among older persons, confirming that VE varies by many factors including season, circulating virus type and subtype, patient age and underlying immune status, and the particular outcome measured.⁴ A study from 2011 showed that flu vaccination prevented 61% of flu hospitalizations in persons ≥50 years of age.⁵ Other studies have shown that vaccination significantly reduces influenza-associated mortality among older adults.⁶ The influenza vaccine is still the best means of preventing influenza. During 2005–2011, influenza vaccination is estimated to have averted 13.6 million illnesses, 5.8 million medical visits, and about 112,900 flu-related hospitalizations in the United States.⁷

VACCINATION

As usual, CDC recommends annual vaccination of all persons ≥6 months of age against influenza. Patients who fall into any of the following categories are at increased risk for complications, so be especially sure to vaccinate:

- children ages 6–59 months;
- anyone ≥50 years old;
- residents of long-term-care facilities, such as nursing homes, group homes or assisted-living facilities;
- persons with disorders that include cardiovascular, chronic pulmonary, renal, hepatic, neurological, hematologic, or metabolic diseases;
- persons with immune compromise;
- pregnant women (or those who may be pregnant during the influenza season);

- persons 6 months–18 years of age receiving long-term aspirin therapy and who might be at risk for Reye's syndrome should they catch the flu;
- American Indians or Alaska Natives; and
- those who are morbidly obese (BMI ≥40).

Be sure also to vaccinate the *contacts* of these folks if they happen to be your patients. The vaccination rate in Oregon among employees at long-term care facilities was 51% during the 2011–12 season—a rate that could stand improvement. If your vaccination clinics are swamped, remember that Oregon pharmacists may also vaccinate adults and children as young as 11 years of age without a prescription* and even younger with your specific prescription.⁸

NEW THIS YEAR

As is usually the case, the vaccine components have changed since last season. For the 2013–14 season, the U.S. trivalent influenza vaccines will contain two influenza A viruses, along with a B virus of the Yamagata lineage; the two A strains are essentially the same as last year's, but the B strain is new. Offer vaccine to your patients as soon as it becomes available, and preferably before October; and continue to round up and vaccinate any flu-shot laggards throughout the season — for as long as influenza is circulating and the vaccine has not expired.

In recent years, two influenza B viruses have circulated each season — one of the Yamagata lineage, and the other of the Victoria. Previous seasonal vaccines would cover just one of these B strains, but now we have **quadrivalent** vaccines — available both in live, attenuated as well as inactivated formulations — that will cover both B lineages as well two A strains. Also new this season are a trivalent **cell-culture-based** inactivated influenza vaccine, labeled for persons ≥18 years of age; and a **recombinant** (not egg-based!) **hemagglutinin** vaccine, for persons 18–49 years of age (see CDC recommendations for details).⁹

* under standing orders from the Oregon Health Authority



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BIRD FLU ON THE MAP

Seasonal influenza was not the only concern during 2012–13. In March 2013, the first human infections by influenza A (H7N9) were confirmed in the laboratory in China. H7N9 is an avian influenza virus, but this one seems particularly adapted to infecting mammalian cells.¹⁰ Unlike H5N1, the virus does not cause severe illness in birds — making it difficult to detect when it infiltrates poultry flocks. The outbreak appears for the most part to have subsided by summer (although two cases occurred in July), but not before leaving in its wake a reported 135 cases and 44 (33%) dead. Most reported cases had been exposed to poultry or poultry markets; limited person-to-person spread may have occurred, however.¹¹ This virus did not cause a pandemic, and no cases have been detected in the U.S.; but concern remains, because it is transmissible to humans, typically causes severe illness, and is often fatal.

CLOSER TO HOME

The emergence of novel influenza strains reminds us of the importance of tracking seasonal influenza. To do this we need outpatient providers to report weekly influenza-like illness (ILI) numbers. If you are a provider interested in tracking seasonal flu, email Matthew.Laidler@state.or.us to find out how to become part of flu surveillance in Oregon. It's easy, and you'll get the privilege of submitting a few suspect flu specimens each week to the Oregon State Public Health Lab for advanced testing at no charge, including PCR for influenza subtyping and testing for novel flu viruses.

What's New?*

- Quadrivalent vaccines: these vaccines have 4 influenza virus components (2 influenza A and 2 influenza B). Available as intramuscular and intranasal vaccines.
- Viruses in the 2012–13 vaccine: A/California/7/2009 (H1N1)-like virus (same as previous years); an H3N2 virus similar to A/Victoria/361/2011;† and B/Massachusetts/2/2012-like. Additional B virus for quadrivalent vaccines: B/Brisbane/60/2008-like.
- Recombinant influenza vaccine: does not use eggs (or influenza virus) in its production, so the options for patients with severe egg allergies have increased.

* The age groups indicated for specific vaccines vary by vaccine type and manufacturer, so check CDC recommendations at www.cdc.gov/flu/protect/vaccine/vaccines.htm

† that's A/Texas/50/2012, for all you virologists.

To get the latest local flu surveillance data, sign up for email delivery of *Flu Bites*, which is published weekly from October through April (<http://healthoregon.org/fludata>).

FLU SUMMIT SEPTEMBER 25

The Immunize Oregon Coalition presents the 2013 Oregon Flu Summit September 25 at the Ambridge Center in Portland. The agenda includes an update for the 2013–14 Flu Season. No charge for admission. For more info and to register, visit www.healthoregon.org/immunizeoregon.

FOR MORE INFORMATION

- For local flu vaccination services, visit <http://211info.org>, or call 211 (formerly SafeNet).
- CDC flu page for health professionals: www.cdc.gov/flu/professionals/index.htm

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