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OREGON PUBLIC HEALTH DIVISION • DEPARTMENT OF HUMAN SERVICES

PANDEMIC H1N1: GETTING READY FOR FLU SEASON

Persisting right through the summer, the once "novel" and now "pandemic" H1N1 influenza strain has made a mockery of the notion of an influenza "season." With the arrival of autumnal breezes—and perhaps more importantly, the reunion of children in schools — we expect increases in casualties in the coming months. Pandemic H1N1, coupled with the likely return of more familiar influenza strains, makes preparation for the upcoming flu season especially important. This issue of the *CD Summary* reviews the emerging epidemiology of pandemic H1N1 and offers guidance about testing, treatment, infection control, and prevention of influenza in the coming fall and winter.

NEW REPORTING LAW

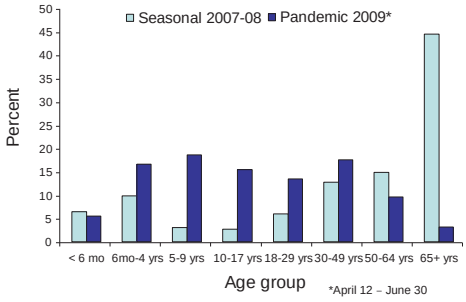
As of September 1, 2009, an emergency Oregon Administrative Rule mandates reporting by physicians, labs, and medical facilities of all patients hospitalized with laboratory-confirmed influenza to the local health department for the county in which the patient resides. Please include patient name, home address, phone number, date of birth, sex, and date of hospital admission; race and ethnicity would be appreciated as well.

EPIDEMIOLOGY OF PANDEMIC H1N1

On April 15, CDC confirmed pandemic H1N1 influenza in a US patient. The apparently promiscuous virus, which has genetic sequences in common with North American avian flu, human seasonal flu, and both Eurasian and North American swine flu, had spread to all 50 states by mid- June.[1] The World Health Organization declared a pandemic on June 11, 2009.

In Oregon, as of August 19, 2009, there have been 92 hospitalizations of people with confirmed pandemic H1N1 and 11 deaths. The severity of illness continues to be similar to that seen with seasonal influenza, with the rate of hospitalization among *confirmed* cases in Oregon measuring in the 10%–15% range.* Compared with seasonal strains, the pandemic virus has been more likely to cause illness among school-age children and less likely to affect persons >65 years of age (Figure).

Hospitalizations with laboratory-confirmed influenza, by age group and strain, US Emerging Infections Program.



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VACCINATE!

Immunization is the most effective means of minimizing illness and death from influenza. This year we'll have two vaccines: one for the usual "seasonal" strains, and one for pandemic H1N1. Persons ≥9 years of age need but a single dose of seasonal vaccine; but for immunity to the pandemic strain — which none of us have hitherto "seen" immunologically — two doses, spaced three weeks apart, will probably be required.†

Healthcare workers attract patients with influenza and are therefore high priorities for receipt of both pandemic and seasonal vaccines; if you want to stay healthy and in business throughout the season, get yourself vaccinated, and offer the same at no cost to your staff, as soon as vaccine is available.[2]

Vaccine against seasonal influenza should arrive in early fall; start using it as soon as it arrives, and keep using it as long as influenza is circulating. The groups advised to receive it are the same as for last year's vaccine.

The vaccine against pandemic H1N1 will lag a bit: at press time, CDC is guessing that, nationally, perhaps 45 million doses of this new vaccine will be available by mid-October, with an additional 20 million doses becoming available *each week* thereafter. Priority groups for this vaccine are listed in the Table.[3]

Priority groups for pandemic H1N1 vaccination

- pregnant women
- household contacts/caregivers for children <6 months of age
- healthcare and emergency medical services personnel
- all persons 6 months–24 years of age, and
- persons aged 25–64 years with health conditions that put them at higher risk of complications*

*long-term aspirin therapy in children and adolescents (aged 6 months–18 years) due to risk of Reye syndrome with influenza; chronic pulmonary (including asthma), cardiovascular, renal, hepatic, hematological, or metabolic disorders (including diabetes); immunosuppression (including that caused by medications or HIV; and conditions (e.g., cognitive dysfunction, spinal cord injuries, seizures, or neuromuscular disorders) that affect respiratory function or handling of respiratory secretions and increase the risk for aspiration.

RESPIRATORY HYGIENE

Stress to both staff and patients the importance of hand hygiene and cough etiquette in stemming the spread of respiratory viruses. Make surgical masks available to patients with influenza-like illness (have pe-

* The true "hospitalization rate" must be much lower, since most patients have an uncomplicated influenza-like illness, recover spontaneously, and may never even see a healthcare provider.

† Similarly, because of immunologic naïveté, children <9 years of age require two doses of seasonal vaccine in their first season.

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diatric sizes available if appropriate), and provide hand hygiene products, facial tissues and receptacles for their disposal in waiting and exam rooms.

SICK LEAVE

Admonish patients with influenza to stay home from work or school until at least 24 hours after fever departs. Modify sick leave policies as needed to ensure that members of your staff can stay home should they fall ill. Staff members who become sick while at work should withdraw from patient care activity and notify their supervisor. Because they work with people who have chronic illnesses, the bar is higher for healthcare workers: if they have confirmed or suspected influenza, they should abstain from work for seven days or until asymptomatic for 24 hours, whichever is longer.

TRIAGE

Help patients with influenza-like illness to decide whether and when to come in for medical evaluation. Consider using your phone system to inform callers about when to seek medical care at your facility, when to seek emergency care and where to get information about how best to care for someone with influenza at home (see *Taking Care of a Sick Person in Your Home, www.cdc.gov/h1n1flu/guidance_homecare.htm*).

INFECTION CONTROL

Healthcare workers who come in close contact with patients who have confirmed or suspected influenza should wear a gown, gloves and a surgical mask. Eye protection is recommended if any potential splash hazard is anticipated. In the setting of aerosol-generating procedures (nebulizer use, intubation, suctioning, or bronchoscopy), an N-95 respirator should be used instead of a surgical mask. These recommendations represent the minimum level of infection control precautions: increased levels of infection control may be employed as indicated by a specific patient or situation.‡

TESTING

The pandemic strain can, unfortunately, elude detection by rapid flu tests; depending on the assay, the sensitivity of such tests can be as low as 10%. Therefore, a negative rapid test does not reliably rule out influenza, and decisions regarding treatment, exclusion from work, school, etc. should be based on clinical judgment.[4]

Pandemic H1N1 has already spread throughout Oregon, and public health surveillance efforts will focus on severe disease — viz., hospitalizations and deaths. The Oregon State Public Health Laboratory (OSPHL) will test, free of charge, specimens from hospitalized patients; we ask that specimens from all patients hospitalized with suspected influenza be collected as soon as possible after admission. OSPHL will no longer perform influenza testing on specimens from outpatients except those from facilities working with us on special projects.

ANTIVIRAL THERAPY

Antiviral therapy is recommended for persons with suspected or confirmed pandemic H1N1 influenza who are at increased risk of complications from influenza (see footnote, Table), or who have symptoms severe enough to require hospitalization. Because of oseltamivir resistance seen among *seasonal* H1N1 strains last year, when seasonal flu returns, it would be reasonable to consider empiric therapy with zanamivir or with the combination of rimantadine and oseltamivir. For the rest of the summer, since only pandemic H1N1 has been circulating, oseltamivir or zanamivir alone will suffice.

Antiviral chemoprophylaxis is recommended for persons at high risk of complications from influenza (see footnote, Table), who have been in close contact with a person with confirmed or suspected H1N1 infection during that person's infectious period.

USEFUL RESOURCES

We will post updated H1N1 data and guidance at *www.flu.oregon.gov*. Also check what the feds are saying at *www.cdc.gov/h1n1flu/*.

REFERENCES

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2. Fiore AE, Shay DK, Broder K, et al. Prevention and control of seasonal influenza with vaccines. MMWR 2009; 58 (early Release):1–52.
3. CDC. Novel H1N1 vaccination recommendations. Available at: *www.cdc.gov/h1n1flu/vaccination/acip.htm*.
4. CDC. Interim guidance for the detection of novel influenza A virus using rapid influenza diagnostic tests, Aug. 10, 2009. Available at: *www.cdc.gov/h1n1flu/guidance/rapid_testing.htm.*

‡ CDC's current guidance is more conservative, with recommendations for N-95 respirators for all healthcare workers who have close contact with patients with suspected or confirmed pandemic H1N1 influenza; this guidance is under review.