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# HCWs Must Get Flu Vaccine

We are facing an unprecedented influenza season with the confluence of seasonal influenza and pandemic influenza A(H1N1).

Health care workers are morally and ethically—if not legally—bound to be immunized against influenza, especially this year.

The scenario is still unfolding, and there are many things we do not know about how it will play out. But we do know one thing: Health care workers (HCWs) are a high-risk group. Not only do they have a greater chance than ordinary citizens of becoming infected, they can also transmit the virus to patients even if they themselves aren't exhibiting symptoms. Yet, despite the wide availability of free and convenient immunization for influenza at many hospitals and other health institutions, health care workers traditionally have been one of the least well immunized of all high-risk groups.

Part of the problem may be that health care workers don't perceive themselves at high risk—after all, we're the healers, not the sick. But in a survey conducted at my hospital—led by my colleagues, Dr. Angela L. Myers and Dr. John Lantos—we found that health care providers, even in a large freestanding children's hospital, harbor some of the same misconceptions about the flu vaccine as does the general public: that you can get the flu from the vaccine, that it doesn't work, or that it isn't important. Many nurses and allied health professionals are young women of childbearing age and are fearful of receiving the flu vaccine while pregnant, even though the risk to them from the pandemic H1N1 influenza appears particularly high and the risk of getting the

flu is much higher than the risk of getting the flu shot. And of course, even health care workers can have a fear of needles.

Some states, including Alabama, Arkansas, California, and Kentucky, have passed laws mandating influenza immunizations. These laws have resulted in increased participation by health care workers, but there still isn't 100% compliance. In many places, the mandate has been extended to include vaccination against the pandemic H1N1 influenza when that vaccine becomes available. However, these state laws all allow exemptions for employees who sign a special written declination, with or without a physician's note providing a medical reason for the refusal.

These requirements may soon become even stricter. Recently, there has been discussion by some health departments that a more stringent regulation be adopted. They recommend that all health care workers in inpatient, outpatient, and home health care settings be required to be vaccinated against both the seasonal and pandemic H1N1 strains of influenza or face dismissal from their jobs. The only exemption would be for a defined medical reason. There would be no religious or philosophical exemptions.

To evaluate health care worker attitudes regarding influenza vaccine, we surveyed about 1,000 employees at our 317-bed children's hospital. We got responses from 62 physicians, 177 nurses, and 346 other employees, a group that included nonclinical staff such as researchers, maintenance, security, and cafeteria workers, as well as care assistants and phlebotomists. The study was initiated in the spring of 2009, and the last surveys were completed 2 weeks after the onset of the pandemic H1N1 flu outbreak.

Physicians and nurses were significantly more likely to receive influenza vaccine than other employees. The physicians were more knowledgeable

than other groups regarding immunization recommendations, communicability, high-risk groups, effectiveness, and vaccine safety. Physicians and nurses were more likely than other employees to understand the risk of severe influenza illness in patients with comorbidities.

No group scored well on questions about disease communicability prior to symptom onset. One-third of physicians and two-thirds of other employees did not know that the disease could be spread before the onset of symptoms. If these people are not immunized, and think that they could protect patients by simply not coming in to work if they are sick, they could spread influenza to patients during the presymptomatic phase of their illness. Fewer than two-thirds of physician and nurse respondents and fewer than half of other employee respondents answered this question correctly.

Physicians were more likely than nurses or other employees to agree that a hospital should mandate influenza vaccine for all employees. Overall, 2% of employee respondents reported that they would rather quit their job than comply with a policy that mandated yearly influenza vaccine. There were no physicians in this group.

Attitudes about influenza vaccine were correlated with attitudes about childhood vaccines. Physicians were more likely than nurses and others to agree with the statement: "Children should be required to get all currently recommended childhood vaccines, unless they have a medical reason not to." When asked to agree or disagree with the statement, "I think parents should be free to decide which vaccines, if any, their children receive," other employees and nurses were much more likely than physicians to agree or strongly agree.

Almost all employees who had children less than 10 years of age reported that their children were up to date on

routine childhood immunizations. However, far fewer had their children immunized against influenza in the prior year.

At our institution, there is an extensive campaign launched every fall to provide education about influenza and vaccine to all employees. We also provide around-the-clock vaccine availability free of charge. Although immunization is not yet mandatory at our hospital, we ask all employees who decline vaccine to fill out and sign a declination form. Typically, a high number of our health care workers are immunized against the seasonal flu; last year, 85% were immunized with 11% signing declinations. We would like to reach 100%.

Our study found that many myths and misconceptions remain regarding influenza immunization. These myths and misconceptions make it likely that many people will refuse influenza immunization even if it is offered free of charge in a program that includes education. Eighty-five percent coverage may be as good as it gets with voluntary programs.

In this unprecedented year of pandemic H1N1 influenza activity, the success of efforts to control the spread of disease and the resulting morbidity and mortality will depend on achieving good immunization coverage. Based on our national numbers, this is unlikely through voluntary programs. Firm mandates may be necessary. ■

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## Interim Antiviral Recommendations Updated for Flu Season

BY HEIDI SPLETE

The Centers for Disease Control and Prevention has updated its guidelines for using antiviral medications to treat the seasonal and pandemic influenza A(H1N1) viruses, according to the CDC Web site.

The updated recommendations include guidance for clinicians about antiviral treatment for very young children and information about correct dosing using the oseltamivir (Tamiflu) dosing dispenser:

► **Treating children younger than age 1 year.** Oseltamivir is not approved by the Food and Drug Administration for use in children younger than 1 year of age. But given this age group's increased risk for complications

from the H1N1 virus, the CDC recommends a 5-day antiviral treatment dose with oseltamivir of 25 mg twice daily for children aged 6-11 months, 20 mg twice daily for children aged 3-5 months, and 12 mg twice daily for children younger than 3 months.

The CDC's recommendations for 10-day prophylaxis with oseltamivir are 25 mg once daily for children aged 6-11 months, and 20 mg once daily for children aged 3-5 months, but oseltamivir is not currently recommended for prophylaxis for children younger than 3 months unless the situation is deemed critical. The FDA issued an Emergency Use Authorization in April 2009 for the emergency use of oseltamivir in children younger than 1 year old.

► **Dispenser measurements.**

The updated CDC antiviral recommendations caution clinicians and pharmacists that an oral dosing dispenser that comes with Tamiflu for oral suspension shows dose measurements in 30-mg, 45-mg, and 60-mg increments. These measurements use "mg" and match those currently recommended by the CDC for treatment of or chemoprophylaxis against H1N1 infection (see table), but the prescription instructions may be listed in "mL" or "tsp," which can lead to dosing errors.

The CDC Web site states that the recommendations should be considered an interim document, which will be updated as needed. For the latest information on the CDC's flu guidance and recommendations, visit [www.cdc.gov](http://www.cdc.gov) or [www.flu.gov](http://www.flu.gov). ■

### Recommended Antiviral Dosages for Pandemic Influenza A(H1N1)

Agent/Group	5-Day Treatment
<b>Oseltamivir</b>	
Children 12 months and older, ≤15 kg	60 mg/day divided into two doses
Children 12 months and older, 16-23 kg	90 mg/day divided into two doses
Children 12 months and older, 24-40 kg	120 mg/day divided into two doses
Children 12 months and older, >40 kg	150 mg/day divided into two doses
Adults	One 75-mg capsule twice daily
<b>Zanamivir</b>	
Children aged ≥7 years	Two 5-mg inhalations (10 mg total) twice daily
Adults	Two 5-mg inhalations (10 mg total) twice daily

Source: Centers for Disease Control and Prevention