



BY STEPHEN I. PELTON, M.D.

ID CONSULT

Physician, Immunize Thyself!

Do the right thing: Immunize yourself and your office staff!

With the recent licensure of a new acellular pertussis vaccine for adults, now is a good time to review the immunization status of health care workers in your setting. We should protect ourselves against vaccine-preventable diseases such as pertussis, influenza, varicella, and hepatitis A so that our patients will be protected as well.

Indeed, the federal government has prioritized immunization of health care workers in its pandemic influenza preparedness plan. Without the personnel to care for affected individuals in the event of a human H5N1 outbreak, we would be risking a greater disaster.

Health care workers who treat children have a particular responsibility to protect themselves. As we know, children less than 6 months of age are vulnerable to a wide variety of infections for which they have not yet been fully immunized. Infants born prematurely—more of whom are surviving today—also remain at high risk for infection during the first year of life.

We also are seeing increasing numbers of older children with chronic diseases such as asthma, as well as more of those left immunosuppressed from formerly fatal diseases such as cancer and HIV. We simply cannot allow ourselves to become the agents for transmission to these vulnerable patients.

I want to touch on four adult vaccines in particular:

Pertussis

Earlier this year, the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (ACIP) recommended that health care workers in hospitals or ambulatory care settings and those who have direct patient contact should receive the recently licensed adult formulation of the tetanus-diphtheria-acellular pertussis vaccine (Adacel, Sanofi Pasteur). Priority should be given to providers who have direct contact with infants who are less than 12 months of age.

Because the efficacy of routine childhood pertussis immunization decays after about 10 years, most adults are currently susceptible to pertussis. Although the disease is rarely fatal in adults (as it can be in infants), it does cause prolonged cough lasting for 3 or more weeks in 80%-100% of adults, and posttussive vomiting in 50%. Missed work for illness or medical care occurs in 78% of adults for a mean of 9.8 days, according to data from the CDC.

Transmission of pertussis is most likely to occur during the early phase of disease (catarrhal stage), when cough and coryza are unlikely to be recognized as anything other than a cold. Now that there's a licensed vaccine that will prevent pertussis transmission—not to mention updating our tetanus and diphtheria immunity—it's in everybody's best interest for health care workers to just get vaccinated.

Influenza

Protection against annual influenza also is essential for health care workers who see

children. Both the ACIP and the American Academy of Pediatrics now recommend that all children aged 6-59 months receive an annual influenza vaccination. However, children under 6 months of age remain susceptible. Moreover, any child who has not previously received an influenza vaccine needs two doses over a 6-week period, and remains susceptible for several weeks after receiving the second dose.

Health care workers who are younger than 50 years of age and don't have high-risk chronic conditions have the option of choosing the live attenuated virus influenza vaccine (FluMist, MedImmune Inc.) as an alternative to the inactivated injectable vaccine.

For the vast majority of health care workers, there is no need to refrain from working after receipt of the live virus vaccine.

The only exception is those who have direct contact with severely immunosuppressed patients, such as bone marrow recipients.

Varicella

Although the routine childhood vaccine has dramatically reduced its incidence and severity, varicella still persists in the community. When it does occur in adults, it tends to be far more serious than it is in children.

The importance of immunity to varicella is even more critical now that varicella zoster immune globulin—previously given following a known exposure to varicella—is no longer being manufactured in the United States. It's available as an experimental product from Canada, but even if you were able to obtain a sup-

ply, it would not likely be in enough time to avert the full-blown clinical picture. You can still take acyclovir prophylactically, but only if you know you've been exposed.

Most pediatricians practicing today have already had chickenpox and are, therefore, immune.

However, that may not be true much longer. Every year my hospital tests incoming medical students for antibodies to varicella, and this past year we found that 10% of these young adults lacked immunity.

Hepatitis A

Last fall, ACIP recommended that all children at least 1 year of age receive the hepatitis A vaccine. Typically, children with hepatitis A infection are either asymptomatic or have nonspecific symptoms such as fever and gastroenteritis. Jaundice is uncommon. If you are treating a child with hepatitis A, you are at high risk for clinically significant illness, including jaundice.

While there is no specific recommendation for hepatitis A vaccination of health care workers, the CDC does state that the vaccine can be given to "any person wishing to obtain immunity." For those of us whose job is to protect our patients and ourselves, I think it's a good idea.

For more on adult immunization, go to www.cdc.gov/nip/recs/adult-schedule.htm.

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Influenza C: A Common Cause of URT Illness

BY JOHN R. BELL
Associate Editor

In children younger than 6 years but older than 6 months, the influenza C virus is a significant cause of upper respiratory tract illness and is probably contracted in many cases from a preschool-aged child in the same home, Japanese researchers reported.

Dr. Yoko Matsuzaki of the department of infectious diseases at Yamagata (Japan) University and colleagues developed a tissue-culture method to test for the virus, and then examined roughly 85,000 respiratory tract specimens collected over a 14-year period from asymptomatic children who were no older than 15 years and had been seen at any of seven Japanese pediatric clinics and hospitals. In total, 187 specimens (0.22%) were positive for influenza C; 17 were excluded because of respiratory coinfection or incomplete medical records. The investigators obtained clinical data on the 170 remaining children and performed nucleotide sequencing to look at intrafamily transmission (*J. Infect. Dis.* 2006;193:1229-35).

There was a strong association between influenza C upper respiratory tract

(URT) infection and the preschool age range. Indeed, 92% of the children found to have influenza C virus were between 6 months and 6 years old—a fact likely explained, they noted, by prior studies' findings that most humans acquire antibodies to influenza C by age 7-10 years and that newborns receive maternal antibodies against the virus that vanish by 6 months—leaving an open window of virus vulnerability in the intervening age group.

In the study, the infection incidence among 1-year-old children was more than three times that of children aged 7-12 months. Although only 17% of the total were hospitalized, this rate was nearly doubled (30%) in children younger than 2 years. The incidence among girls and boys was similar.

As to the transmission vector, "households are important sites for the transmission of the influenza viruses," the researchers said—but for influenza C, they noted that "preschool children might play

a significant role" in bringing the virus into the home.

Influenza C causes symptoms similar to those of other influenza strains. The most common symptoms in the study were fever, cough, and runny nose. This was true for children both younger and older than 6 years, regardless of whether the child was hospitalized. More than three-fourths (79%) of children who were not hospitalized were diagnosed with upper respiratory tract infection or influenza.

The authors found that most influenza C infections occurred in the winter and spring, but especially in the period from April through June. However, they noted that this seasonal association is not evident in regions of the world that—unlike snowy north central Japan—have mild winters. Thus, wintertime influenza C likely often coexists with influenza A and B in temperate areas, making differential diagnosis important.

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Drops Approved for Chronic Eczematous External Otitis

KOLOA, HAWAII — Fluocinolone acetonide oil 0.01% ear drops have recently become the first-ever drug to earn a Food and Drug Administration indication for the treatment of chronic eczematous external otitis, Dr. Lawrence F. Eichenfield said at the annual Hawaii Dermatology Seminar sponsored by the Skin Disease Education Foundation.

"It's an issue that dermatologists don't know much about. I learned about it because an [ear, nose, and throat doctor] I work with sent me lots of affected patients," said Dr. Eichenfield, professor of pediatrics and dermatology at the University of California, San Diego.

FDA approval for use of the medication in adults and children aged 2 years and up was based on a 154-patient clinical trial in which 5 drops per ear twice a day for 7 days of the topical corticosteroid known as DermOtic oil ear drops proved more effective than placebo in clearing the dermatitis.

Dr. Eichenfield has received research funding from Hill Dermaceuticals Inc., which markets DermOtic.

—Bruce Jancin