

Outbreak Highlights Low Flu Vaccination Rates

BY PATRICE WENDLING

CHICAGO — Even if history records the 2009-H1N1 influenza epidemic as mild, its appearance highlights the need to improve seasonal-flu vaccination rates among the elderly and the health care workers who take care of them, said speakers during an influenza symposium.

Vaccination rates among people aged 65 years and older have remained stagnant since the late 1990s, at about two-thirds of that population, despite Medicare coverage of the influenza vaccine, said geriatric nurse practitioner Lynn Chilton, D.N.S.C., during the annual meeting of the American Society of Geriatrics. For 2007-2008, 71.2% of people aged 65 years or older were vaccinated (*Vaccine* 2009;27:815-8). The National Center for Health Statistics Healthy People 2010 has a target of 90% for flu vaccinations.

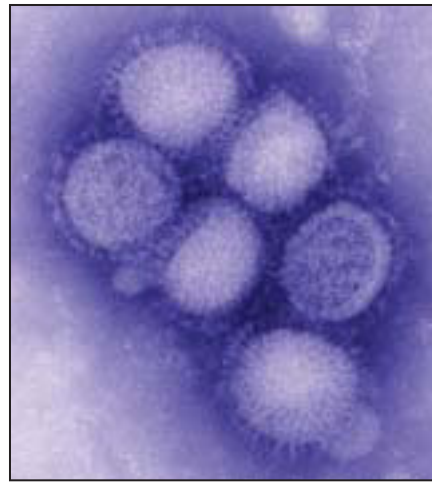
Dr. Chilton said that her own study of 393 ambulatory patients aged 65 years and older at three rural clinics in Mississippi found that 9.5% of the patients had never received an influenza vaccine and 4% had not had one for more than 10 years. Nearly all of the study participants reported their health as fair or good.

The reasons cited most frequently for not receiving a flu shot during the

past year were the belief that there was no need (45%), having had a reaction to a previous injection (22%), or thinking that immunization caused the flu (15%), said Dr. Chilton, a nursing professor at the University of South Alabama in Mobile. None of the patients cited concerns about cost or undisclosed vaccine ingredients, although the latter concern has been recorded among low-income urban residents (*Am. J. Prev. Med.* 2001;20:21-5).

The overall immunization rate in the study was 73.5%, but the number was significantly higher among patients who received postcard reminders and whose nurse practitioner had received and shared a fact sheet on influenza than among patients who were not exposed to either intervention.

Giving reminders and information "is a simple, very cost-effective strategy," Dr. Chilton observed. "I receive reminders from my gynecologist when it's time for me to get a mammogram, postcard reminders from my dentist for my annual check-up, and reminders from my veterinarian for my dog to be immunized, but I've never received a reminder from any primary care provider telling me it's time for me to have an annual immunization, particularly influenza."



Better flu shot coverage would help prevent epidemics (above, 2009-H1N1).

Health care provider recommendations go a long way toward improving vaccination behaviors, Dr. Chilton said. In one study, a provider's recommendation was one of the strongest independent predictors of whether a patient at high risk would be vaccinated (*J. Gen. Intern. Med.* 1996;11:673-7).

Symposium moderator Dr. Stefan Gravenstein took aim at the other side of the equation, stressing the need for all health care workers and volunteers with patient contact to be vaccinated each fall and during a community outbreak. In-

creased vaccination rates reduce lost work days and errors made by workers filling in for absent colleagues.

Currently, fewer than half of all health care workers are vaccinated, said Dr. Gravenstein, medical director of Tockwotton Home, Providence, R.I., and clinical director of Quality Partners of Rhode Island. In 2007-2008, 41.8% of health care workers were vaccinated, well below the Healthy People 2010 goal of 60% for this group, he said.

Health care workers may come to work with influenza because they are asymptomatic, disregard symptoms because of a misdirected work ethic, or be unaware that they pose a danger to their patients.

This last point may be surprising, said Dr. Gravenstein, but he recalled a recent conversation with a nurse whose son was feverish after returning from Mexico. She wasn't sure it was necessary for him to see a doctor.

"We believe that often in nursing homes where we have outbreaks that the original vector is a health care worker," he said.

Dr. Gravenstein reported that he is a consultant for GlaxoSmithKline and for the Sanofi Aventis Group.

Sanofi Pasteur Inc. sponsored the symposium. ■

Test Flu Specimen to Determine Treatment for Elderly

BY PATRICE WENDLING

CHICAGO — The 2009-H1N1 influenza epidemic has mostly affected young people so far, but health professionals should take care to protect the vulnerable elderly from infection, Dr. Stefan Gravenstein said during an influenza symposium at the annual meeting of the American Geriatrics Society.

Dr. Gravenstein and other speakers said that the outbreak highlights the need for new drugs and vaccines to fight influenza in the elderly.

"You should do general infection control: hand hygiene, cough etiquette, and social distancing," he said. "The general party line is 6 feet for social distancing, but the farther the better to avoid transmission."

Transmission between generations within families has been reported in several countries. Two audience members noted that residents of their New Jersey nursing home had influenza A just 1 week before the epidemic came to light, and they speculated that they might have witnessed early cases in the swine-origin 2009-H1N1 outbreak.

Nursing homes and other long-term care facilities with active cases of influenza should halt group dining and instead deliver meals to individuals' rooms, cancel group programs, and restrict staff movement between wards. To protect incoming residents, facilities should delay new admissions to a ward for 7 days after a case of influenza has been confirmed there, suggested Dr. Gravenstein, a professor of medicine at Brown University and clinical director of the company Quality Partners of Rhode Island, both in Providence.

"If you have someone who is sick, keep them in their room," Dr. Gravenstein said. "If a facility has no influenza cases, it can continue to operate as usual, except for the usual seasonal influenza precautions."

The triad of cough, a temperature higher than 38°C, and illness lasting 7 days or less is a reasonably sensi-

tive indicator of contagious influenza, but the gold standard is a viral culture, Dr. Ann Falsey said during the symposium. Viral culture allows for strain typing and resistance testing, both of which are important in the current outbreak. The disadvantage of waiting for an infection to be confirmed by culture is that it can take 3-7 days. That delay can impede infection control and lapse beyond when antiviral treatment should begin, Dr. Falsey said.

Real-time polymerase chain reaction testing is good but expensive and not yet widely available, she said. Immunofluorescence or enzyme immunoassay can give results within 15-30 minutes, but should be followed with viral culture, if possible.

No matter which test for 2009-H1N1 is used, it's only as good as the specimen taken, emphasized Dr. Falsey, a professor of medicine, infectious disease, at the University of Rochester (N.Y.) School of Medicine and Dentistry. Samples should be taken using a nasal swab in both nostrils and a separate throat swab, preferably with plastic rather than wooden swabs.

Viral isolation is important because different influenza viruses are susceptible and resistant to different drugs, she said. "Information on antiviral sensitivities of the recently circulating H1N1 influenza is preliminary, but this virus appears to be sensitive to oseltamivir and zanamivir but resistant to the adamantanes, unlike seasonal H1N1 influenza," Dr. Falsey said in an interview.

Oseltamivir (Tamiflu) resistance has been a growing concern worldwide. The Centers for Disease Control and Prevention reported oseltamivir resistance in 0.7% of 588 influenza A H1N1 isolates during the 2006-2007 flu season. That number jumped to 12% of 1,026 isolates during the 2007-2008 flu season. And as of Jan. 24, 2009, 98% of H1N1 isolates tested in the United States were resistant to oseltamivir, Dr. Falsey said.

Resistance is 16% worldwide. However, oseltamivir resistance does not seem to be associated with previ-

ous use of the drug. The prevalence of resistant isolates is low in Japan, where the agent is widely used, and resistance is present in Denmark, where oseltamivir is not used. The most likely explanations for the resistance occurring are point mutations and drift in the virus, Dr. Falsey said.

Zanamivir would be the preferred medication for any H1N1 virus, but a combination of oseltamivir and rimantadine could be prescribed, Dr. Falsey said. "There has been a little bit of data that combination therapy makes some sense and may reduce resistance."

Clinicians might also want to use antiviral therapy beyond the 48-hour window after symptom onset, as recommended by the Advisory Committee on Immunization Practices. In one study, antiviral therapy was associated with a significant reduction in mortality even though only 29% of patients were treated within 48 hours (*Clin. Infect. Dis.* 2007;45:1568-75).

Influenza vaccines in the elderly are associated with substantial benefits in terms of reduced illness, hospitalization, and death, although there is some controversy about the magnitude of the mortality benefit, said Dr. Kristin Nichol, a professor of medicine at the University of Minnesota and the Minneapolis VA Medical Center. The controversy derives from concerns about the methodology in observational studies, possible bias in studies of healthy vaccines, and the fact that influenza mortality rates have not declined overall, despite increases in vaccination rates.

Sanofi Pasteur Inc. sponsored the conference session. Dr. Gravenstein disclosed that he is a consultant for GlaxoSmithKline and Sanofi Aventis. Dr. Falsey disclosed that she receives research support from GlaxoSmithKline and Sanofi Pasteur Inc. Dr. Nichol has received research funding from Sanofi and GlaxoSmithKline and has served as a consultant and member of the companies' medical advisory boards, as she has for MedImmune, Novartis, and CLS. ■