Pneumonia Vaccine Missing From Pandemic Flu Plan

BY KATE JOHNSON
Montreal Bureau

MONTREAL — U.S. plans for an influenza virus pandemic should include a strong recommendation for bacterial pneumonia vaccination, as this measure has been shown to reduce influenza mortality by up to 50%, said Dr. Keith Klugman.

"Among the 18 fundamental points in the U.S. pandemic plan, there is little mention of bacterial vaccines. I believe their role is significant and has not been considered up until now," he said at an international conference on community-acquired pneumonia.

Although the influenza virus alone can be fatal, the risk of death is greater with secondary pneumococcal infection, said Dr. Klugman, professor of infectious diseases and the William H. Foege Chair of Global Health at Emory University, Atlanta.

"The combination of bacterial superinfection and influenza is highly fatal. It's a huge problem, and it's not a small part of influenza mortality and morbidity," he said in an interview.

Evidence that pneumococcal infection played a major role in the 1918 influenza pandemic "is substantial, but seems to have been forgotten," Dr. Klugman recently wrote in a letter to the editor (Science 2007;316:49-50), citing historical evidence of culturable pneumococci in the blood of at least half of the survivors and victims of influenza in two studies (Br. Med. J. 1919;1:3-5; JAMA 1918;71;1735).

And a randomized, controlled trial by Dr. Klugman and his colleagues has shown that, in children, vaccination against the pneumococcal bacteria results in a 31% decrease in pneumonias associated with respiratory viruses (Nat. Med. 2004;10:811-3).

"Because of the vaccine, they are not getting the superinfection that brings them to the hospital," he said at the meeting, which was sponsored by the International Society of Chemotherapy. "I think that people have known for years that there can be bacterial superinfections with influenza, but they just didn't realize how common they were and how much of a role they play." ■

Should Adults Get the Pediatric Pneumococcal Vaccine?

BY KATE JOHNSON
Montreal Bureau

MONTREAL — Is there a role for giving the children's conjugate vaccine to adults, asked Dr. Keith Klugman at an international conference on community-acquired pneumonia.

A recent study suggested that it may not be as simple as that (Vaccine 2007;25:4029-37). Immunogenicity among elderly patients (aged 70-79 years) who were given the children's dose of conjugate vaccine was "nothing to get overly excited about," said Dr. Klugman, a professor of infectious diseases and the William H. Foege Chair of Global Health at Emory University in Atlanta.

"Perhaps the dose designed for a primary response in kids is not enough for adults," he suggested.

And a study presented at the 2006 International Symposium on Pneumococci and Pneumococcal Diseases by Dr. Andrés de Roux, of the Universitat Autònoma de Barcelona, and colleagues suggested that the administration of the children's conjugate vaccine to elderly patients within 1 year of giving them the polysaccharide vaccine could actually suppress immunity.

"It seems the adult vaccine interferes with the response to the conjugate, which is a concern, because it means we can't simply give the conjugate to people who have previously had the [23-valent pneumococcal polysaccharide vaccine (PPV 23)]. There will have to be a strategy, and it seems that certainly the conjugate needs to be given before the 23-valent," Dr. Klugman said.

Dr. Klugman said that in his opinion, a new conjugate vaccine, with coverage of more strains than the current one, will eventually replace the PPV 23 for adults.

Data from the Centers for Disease Control and Prevention show that adult infections with the seven pneumococcal strains covered in the children's vaccine have decreased, while infections from the other 16 strains covered by the adult vaccine have increased.

"The burden of disease in adults has been impacted more by giving the conjugate vaccine to children than by giving the 23-valent vaccine to adults," said Dr. Klugman.

A new study (Lancet 2007;369:1179-86) offers evidence that vaccinating children protects adults against all pneumococcal pneumonia, not just bacteremic pneumococcal pneumonia, he said at the conference, sponsored by the International Society of Chemotherapy.

Improving pneumococcal vaccine coverage in children could result in dramatic reductions in infection across all ages, he said.

Under a Third of Asthmatic Kids Got Flu Shots in 2004-2005

BY DIANA MAHONEY
New England Bureau

Less than one-third of children with asthma between the ages of 2 and 17 years received the influenza vaccine during the 2004-2005 influenza season, according to the first national estimate of influenza vaccine coverage in children with asthma by the Centers for Disease Control and Prevention.

This rate is about three times higher than that reported for nonasthmatic children, but the "inadequate" numbers indicate "that opportunities for vaccination during healthcare provider visits likely are being missed," said Susan M. Brim of the CDC's National Center for Environmental Health and associates (MMWR, 2007 March 9;56:193-6).

With data from the 2005 National Health Interview Survey (NHIS)—a cross-sectional, household interview survey in the United States—the CDC investigators analyzed influenza vaccine coverage rates for the 5,124 youth aged 2-17 years represented in the database and determined that 29% of children with current asthma had received the influenza vaccine for the September 2004–February 2005 influenza season, compared with 10.3% of their nonasthmatic peers.

Of the children with current asthma, vaccine coverage was highest—at 32.9%—in the 2- to 4-year-old age group, compared with 28% in both the 5- to 12-year-old and 13- to 17-year-old age categories. Children who had experienced an asthma attack or episode within the 12 months before the survey (35.9% of those with asthma) were more likely to have been vaccinated than children with current asthma but no past-year history of an asthmatic episode (20%). Children aged 5-12 years with current asthma and no past year history of an asthmatic episode had the lowest vaccination coverage rate, at 16.4%, in the asthma group, they wrote.

When the data were analyzed based on the number of health care visits per child during the 12 months preceding the survey, influenza vaccine coverage in children with asthma was directly related to the number of visits. "About 10.8% of children with current asthma who had one health-care visit in the preceding year were vaccinated, whereas 42.0% of children with [10 or more] visits were vaccinated," the authors reported.

The results of the analysis could not be compared with previous years because the 2005 NHIS was the first to include questions on influenza vaccination in the child portion of the survey. "Analysis of NHIS data from 2006 and future years will allow determination of trends in national influenza vaccination coverage in children with asthma," said the authors. Such monitoring is essential for the design of public health strategies for increasing influenza vaccination coverage that targets all children with asthma, particularly those with the lowest coverage rates, they stressed. ■

More Focused Management of Flu Could Prevent Pneumonia

BY KATE JOHNSON
Montreal Bureau

MONTREAL — Influenza vaccines and antiviral drugs greatly reduce the incidence of and mortality associated with community-acquired pneumonia, but they are grossly underutilized, according to Dr. Grant Stiver, professor of medicine at the University of British Columbia, Vancouver.

"We are not optimizing the management of influenza by far—largely because of costs and political unwillingness to put out money," he said at an international conference on community-acquired pneumonia (CAP). "We are the ones who influence policy. … We need to do a better job at campaigning for improved resources to reduce the morbidity and mortality due to influenza because it's quite clear that we're just not doing enough."

Until now, influenza prevention has focused on so-called high-risk groups, but there is no reason why the net shouldn't be widened to include everyone, Dr. Stiver said. During the 2003-2004 influenza season, half of the 153 influenza-associated deaths among children in the United States were in those with no high-risk conditions (N. Engl. J. Med. 2005;353:2559-67).

"These were your normal children or grandchildren," he said, adding that 70% of the deaths resulted from respiratory infection, and 47% of these were from confirmed CAP. "Pneumonia is a scary thing for the public, but influenza is not. Influenza is something that the public can trivialize until a member of their family dies from pneumonia. So if we show we can actually prevent pneumonia with the optimization of influenza vaccine and antivirals, we can probably get better public acceptance."

Dr. Stiver said that to increase vaccination rates, it may be time to put more pressure on target groups such as health care workers. "We should make vaccination a condition of employment for health care workers, and if they don't want it, they can't work in a health care institution. We can play hardball and demand this," he said. Essential service workers who are designated as first priority for antiviral prophylaxis in the event of a pandemic should be denied the drugs if they have not been previously vaccinated, he suggested at the meeting, which was sponsored by the International Society of Chemotherapy.