

Call for Revision of National Pandemic Flu Plan

There is considerable disparity among state plans for epidemic surveillance, pandemic containment, etc.

BY KATE JOHNSON
Montreal Bureau

A revision of the national pandemic influenza plan could help to remedy the current patchwork of state plans “that will not adequately detect and control” an influenza pandemic, according to a review by Scott D. Holmberg, Ph.D., and his colleagues at Research Triangle Institute International, Atlanta.

“The control of future pandemic and inter-pandemic influenza will necessarily rely on each individual state’s plan to vaccinate persons and detect and contain this disease,” the investigators wrote (*Emerg. Infect. Dis.* 2006;12:1414-7). “The current national [Health and Human Services] pandemic influenza plan presents only a categorization and listing of steps rather than explicit direction for the states.”

The authors cite a “lack of clear guidance” at the federal level as one of the reasons for considerable disparity among the 49 states that have posted their plans for

vaccination, early epidemic surveillance and detection, and containment of pandemic influenza (available online at www.cdc.gov/ncidod/EID/vol12no09/06-0369_appT1.htm).

According to the review, all states agree on vaccination priority strategies as recommended by the Advisory Committee on Immunization Practices and the U.S. Department of Health and Human Services. “General agreement exists, explicit or implicit, to provide vaccination during a pandemic that is prioritized by those most likely to acquire, become ill, or die from pandemic influenza,” they noted.

In general, this means that the elderly, those with chronic diseases, and health care and infrastructure personnel will be vaccinated first; some states will include young children in this list. “We believe the estimate that such persons make up [about] 15%-20% of the population in any state is reasonable,” the researchers wrote, adding that this vaccination strategy is aimed at preventing deaths, not re-

ducing transmission, since the latter would require much more vaccine than is currently available.

State plans are more variable regarding surveillance and detection, although they all plan to use the National Sentinel Physician Surveillance and the nationwide 122 Cities Mortality Reporting System. Neither system would likely detect a local outbreak of influenza within 2 weeks, the authors noted, but “to our knowledge, no health authority feels confident that earlier detection of influenza by 1-3 weeks would necessarily lead to better control or substantial retardation of an outbreak.”

Syndromic surveillance aimed at detecting influenzalike illness in emergency departments and clinics is being used in several cities, and the Centers for Disease Control plans to expand the use of syndromic surveillance to 300 clinical sites by the end of 2006.

State plans are “markedly heterogeneous” in their recommendation of personal contact avoidance and prophylactic measures, with few states discussing non-pharmaceutical strategies. “Even in this computer-based economy, in which a considerable percentage of persons can work

from home most of the time, this simple stratagem is not addressed in most state plans,” Dr. Holmberg and his associates commented.

Specifically, 35% of states mention voluntary self-isolation; 37% discuss closing schools, institutions, or businesses; 31% talk about quarantining institutions, persons, or households; and 25% mention contact vaccination or chemoprophylaxis. Other simple recommendations that are often neglected in the plans include avoidance of mass gatherings; shopping on off-hours; and home and work strategies such as hand washing, keeping towels separate, and avoidance of handshaking, the investigators wrote.

Although the authors point to weak federal direction as one of the reasons for the patchwork of state plans, they also acknowledge gaps in epidemiologic knowledge. “We also believe it would be prudent to begin studies and, in the interim, create expert panels to determine if masks, school closings, social isolation, and several other nonpharmaceutical strategies would be useful in reducing the illness and death caused by pandemic influenza and its spread in the community.” ■

Low-Dose, Whole-Virion Vaccine For Avian Flu Looks Promising

BY ROBERT FINN
San Francisco Bureau

A whole-virion vaccine for the H5N1 avian influenza virus produces acceptable levels of immunity even at low doses, researchers found in a preliminary study.

Developed at the Sinovac Biotech Co. in Beijing, the vaccine appears to be effective when delivered in two 10-mcg doses 28 days apart. A different whole-virion vaccine required two 90-mcg doses, and a split-virion vaccine required two 30-mcg doses.

Given current manufacturing constraints, supplies of that split-virion vaccine would be limited to about 225 million people, far lower than worldwide demand in the event of an avian flu pandemic. A much greater number of people could be treated if the new dosage-sparing vaccine is found effective in larger clinical trials.

Dr. Jiangtao Lin of the Chinese-Japanese Friendship Hospital, Beijing, and colleagues reported on a placebo-controlled, double-blind, phase I trial of 120 volunteers aged 18-60 years. The participants were given either two injections of placebo or two injections of an

inactivated, whole-virion influenza A (H5N1) vaccine at four doses between 1.25 mcg and 10 mcg.

Aluminum hydroxide was added as an adjuvant, a practice previously shown to reduce the dosage needed to produce immunogenicity.

Although all four doses produced immune responses, the 10-mcg dose produced 78%

Supplies of a higher-dose, split-virion vaccine would be limited to about 225 million people, far lower than worldwide demand in the event of an avian flu pandemic.

seropositivity, significantly higher than that produced by the other doses (*Lancet* 2006 Sept. 7 [Epub DOI:10.1016/S0140-6736(06)69294-5]).

No serious adverse events were reported at any dose level up to 56 days after the first injection. Local and systemic reactions were all rated as mild and transient.

Pain at the injection site in the deltoid muscle was more frequently reported in the vaccine groups than in the placebo group, but there were no significant differences in systemic reactions, the most common of which were fever, headache,

myalgia, and nausea.

In an accompanying editorial, Dr. Iain Stephenson, of the Leicester (England) Royal Infirmary, noted that vaccination will be central to any response to an avian flu pandemic (*Lancet* 2006 Sept. 7 [Epub DOI:10.1016/S0140-6736(06)69340-9]). The 1918 influenza pandemic—also derived from an avian virus—caused up to 50 million deaths. Dr. Stephenson said that the dose-sparing approach described by Dr. Lin could be crucial for obtaining a global supply of the vaccine.

He also noted that earlier whole-virion vaccines were associated with febrile reactions, especially in children.

Although larger clinical trials will certainly be necessary before widespread immunization, Dr. Stephenson suggested that a modest amount of reactogenicity might be acceptable in the face of the threat of a worldwide pandemic.

The authors of the study acknowledged that funding came from the Sinovac Biotech Co., which had a role in both study design and monitoring. They said the company had no role in data collection or in writing the report. ■

Missed Chances for Flu Vaccine Noted in Children With Asthma

BY ROBERT FINN
San Francisco Bureau

The majority of children with asthma fail to get vaccinated for influenza even when they visit health care providers during the flu season.

Addressing these missed opportunities for vaccination could significantly improve vaccination rates among these children, according to results of a recently published study.

In this retrospective study of 4,358 asthmatic children (aged 5-18 years) in the Michigan Medicaid program, only 17% had a flu vaccination during the 2001-2002 flu season, and only 22% had a flu vaccination during the 2002-2003 season. Less than 10% of children received influenza vaccinations in both seasons, and 71% were not vaccinated in either season (*Arch. Pediatr. Adolesc. Med.* 2006; 160:966-71).

During 2001-2002, 73% of the children had at least one missed opportunity for vaccination, defined as visits during the flu season (October-January) when a vaccine-eligible child is seen by a health care professional, yet no vaccine is administered. During the 2002-2003 flu season, 69% of the children had at least one missed opportunity.

In each of the seasons, close to 50% of the missed opportunities occurred in October, and nearly

three-quarters occurred in either October or November.

These figures demonstrate that missed opportunities to vaccinate for influenza are more common than vaccination among these children and frequently occur in successive influenza seasons, said Kevin J. Dombkowski, Dr.P.H., and his colleagues from the University of Michigan, Ann Arbor. They said that their study was the first to look at children with public insurance over successive flu seasons. But the results were similar to earlier studies of privately insured children with asthma, which also found that missed opportunities for flu vaccination abounded.

The investigators calculated that even a modest reduction in missed opportunities could substantially increase influenza vaccination rates. A 25% reduction in missed opportunities would result in an overall 35% vaccination rate among children with asthma, and a 50% reduction in missed opportunities would translate into an overall vaccination rate of 49%.

Dr. Dombkowski and his associates suggested that standing orders and reminder-recall systems could reduce the rate of missed opportunities for vaccination. They urged that emphasis be placed on implementing physician-focused reminder systems, but that reminder systems that prompt parents to request vaccination also may be effective. ■