Pediatric Novel H1N1 Vaccine Trials Underway

BY MIRIAM E. TUCKER

Two trials are underway to test the safety and efficacy of a candidate pediatric vaccine for novel influenza A(H1N1).

An independent safety monitoring committee recommended in mid-August that trials of a candidate vaccine begin in children. The National Institute of Allergy and Infectious Diseases (NIAID) concurred with the recommendation. The two trials are being conducted through the agency's Vaccine and Treatment Evaluation Unit (VTEU) network.

The safety monitoring committee reviewed data from more than 500 healthy adult and elderly volunteers enrolled in three VTEU trials of candidate novel H1N1 vaccines that began Aug. 7 and found no safety concerns in those trials that would preclude the start of pediatric trials, the NIAID said in a statement.

One trial is investigating the immune response to two different strengths of a candidate vaccine manufactured by Sanofi Pasteur. Led by the VTEU at the University of Maryland, Baltimore, the trial is enrolling up to 650 children aged 6 months to 17 years at five locations. Immune responses will be measured following doses of either 15 mcg or 30 mcg of vaccine at the first visit and a second dose 3 weeks later.

The second trial, led by the VTEU at St. Louis University and occurring at five other institutions, is testing administration of seasonal influenza vaccine along with a candidate novel H1N1 vaccine. The study will assess the candidate vaccine's safety and how immune responses vary when the novel H1N1 vaccine is given before, after, or at the same time as the seasonal vaccine. ■

Six Steps for Influenza Control

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from 6 months to 24 years, and people aged 25-64 years with underlying medical conditions such as asthma and diabetes.

Concurrent with the news conference, the agencies released a set of written recommendations and resource materials for schools on the government's flu Web site, Flu.gov. The documents are on a school-planning page in the "Plan and Prepare" section of the site.

The CDC guidance lists six recommended steps for K-12 schools to take for influenza control as the new term starts:

► Have sick students and staff stay home when sick until at least 24 hours after they no longer have a fever or signs of a fever without using fever-reducing medications, advice that applies whether antiviral drugs are used or not.

► When students and staff develop flulike illness at school, have them immediately stay in a separate room until they go home. While waiting to go home, sick people should wear a surgical mask, and individuals who care for those who are sick should also wear protective gear such as a mask.

► Have students and staff wash hands frequently with soap and water and cover coughs and sneezes with a tissue, a shirt sleeve, or an elbow.

► Have school staff routinely clean surfaces that students and staff touch often.

► Encourage people at high risk for flu complications who develop flulike illness to be seen as soon as possible by their health care provider; early treatment with antiviral medication is important.

► Provide communities with the option to close a school in which most or all students are at high risk from flu, although not many schools are in this category.

The CDC also said it might make additional recommendations if novel H1N1 infections this fall turn out to be more severe than they were last spring.

The H1N1 vaccine is expected to be ready for distribution by mid-October, and will likely require two separate doses administered about 3 weeks apart. ■

Treatment Recommendations for Upcoming Flu Season Clarified

BY BRUCE JANCIN

VAIL, COLO. — The recommended antiviral therapy during the coming influenza season will depend on whether a patient has laboratory-confirmed novel influenza A(H1N1).

In patients with confirmed novel influenza A(H1N1), or in patients with laboratory-confirmed influenza A(H3N2) or B, the first-line antiviral is oseltamivir (Tamiflu). However, in patients with a positive laboratory test for influenza A or seasonal A(H1N1), the preferred agent is zanamivir (Relenza), according to Centers for Disease Control and Prevention recommendations based on antiviral resistance patterns.

Zanamivir is also the first-line agent in patients who are suspected of having influenza on clinical grounds but who did not have laboratory tests or had negative results, Dr. Adriana Weinberg explained at a conference on pediatric infectious diseases sponsored by the Children's Hospital in Denver.

Novel H1N1, A(H3N2), and B viruses share the same antiviral susceptibility pattern—all are susceptible to both zanamivir and oseltamivir. However, oseltamivir is preferred because as an oral agent it is easier to administer than the inhalation powder zanamivir, has fewer side effects, and is approved for use across a wider age range, added Dr. Weinberg, professor of pediatrics and medicine and medical director of the clinical virology laboratory at University of Colorado Hospital, Anschutz.

The recommended alternative to zanamivir in patients with laboratory evidence of influenza A, a negative test result, or no testing is the combination of oseltamivir plus rimantadine (Flumadine). For patients who are positive for seasonal influenza A(H1N1), the fallback antiviral regimen is rimantadine alone.

Alternatives to the inhalation-only zanamivir are important because that administration route is problematic in patients who are intubated or have asthma or other airway disease. Plus, zanamivir is not approved for use in children younger than age 7 years, she noted. In contrast, on April 28 the Food and Drug Administration approved a 1-year Emergency Use Authorization for the use of oseltamivir for treatment and prophylaxis in infants.

A big concern among virologists and infectious disease specialists is that the novel H1N1 virus will become resistant to oseltamivir, as did seasonal A(H1N1). An investigational antiviral agent that could prove particularly valuable is an intravenous formulation of zanamivir, a drug still active against all strains of influenza. Another promising drug is peramivir, a neuraminidase inhibitor that appears to be effective and well tolerated. Its big advantage is it can be administered parenterally, Dr. Weinberg noted. ■

TALK BACK

What has your practice done to prepare for the spread of the novel influenza A(H1N1) virus?

Share your thoughts!
Send e-mail to
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5635 Fishers Lane, Suite 6000,
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Novel H1N1 Flu Vaccine Distribution Plans Outlined

BY DOUG BRUNK

When a vaccine for the novel influenza A(H1N1) virus is cleared for use, expect the distribution process to resemble the Vaccines for Children program.

The vaccine will be allocated to states based on their populations, Dr. Jay C. Butler said during a teleconference of the National Vaccine Advisory Committee (NVAC).

"Providers may include physicians' offices, hospitals, occupational health clinics, pharmacies, anyone the state designates as an appropriate recipient of vaccines to administer," said Dr. Butler, director of the H1N1 Vaccine Task Force at the Centers for Disease Control and Prevention.

To date, the federal government has purchased 195 million doses of the vaccine. All orders will be filled in increments of 100 doses.

The overall vaccine distribution process "was developed in collaboration with state and local health officials," he said. "This approach provides state and local direction with flexibility in keeping with local needs. Distribution of vaccine can be achieved without rebuilding infrastructure for in-state distribution, which has mostly been lost within the last couple of years."

The Countermeasure and Response Administration, a Web-based aggregate reporting by age group, will be used to track the number of doses being given. "This system may underestimate the number of doses that are administered," Dr. Butler said. "There will be a certain amount of work involved in the data entry, and it's possible that vaccinators may not enter all the data."

As for coverage assessment, the National Immunization Survey can begin collecting data as early as the week of Oct. 10, and provide weekly national coverage estimates, he said, while the Behavioral Risk Factor Surveillance System "will provide a more complete picture of vaccine coverage by state and in specific risk groups." Updated data will be available as frequently as twice per month.

While some of the clinical trials of novel H1N1 vaccine have been underway since mid-July, Robin Robinson, Ph.D., said that no adverse events have been reported to date. "That is very encouraging," said Dr. Robinson, director of the Biomedical Advanced Research and Development Authority.

During the 2-hour meeting, NVAC members approved two recommendations that will be passed along to the assistant secretary for health for review. One advises that the Department of Health and Human Services "develop, and where possible test in advance, a strong and organized response to scientific and public concerns about vaccine safety that may emerge during the 2009 H1N1 vaccination campaign."

The other recommendation concerned the need for a "clear federal plan" to coordinate communications regarding the novel H1N1 influenza vaccination campaign.

This includes "delineating the difference between seasonal influenza and pandemic H1N1 influenza" and "reaching out to health care providers who do not usually supply vaccination services," such as internists, obstetricians, and gynecologists. ■