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Response to novel influenza A (H1N1) virus ramping up


Dr. Bernstein

by **Henry H. Bernstein, D.O., FAAP**, and **John S. Bradley, M.D., FAAP**

The novel influenza A (H1N1) virus (swine flu) has been spreading rapidly human-to-human, and a significant increase in cases, hospitalizations and deaths are expected as the 2009-'10 influenza season gets under way.

Current focus is on reducing the spread and severity of the illness as well as providing information to health care providers, public health officials and the general population.


Dr. Bradley

Pandemic declared

The World Health Organization (WHO) raised its alert level to Phase 6 on June 11, indicating that a global pandemic is under way. At that time, more than 70 countries had reported cases of novel influenza A (H1N1) infection, and community outbreaks had occurred in many parts around the world. The global spread of the novel influenza A (H1N1) virus, not the severity of illness caused by the virus, prompted the raising of the worldwide alert level.

The Centers for Disease Control and Prevention (CDC) estimates there have been more than 1 million cases of novel influenza A (H1N1) in the United States since the virus was first identified in April. Although overall novel influenza A (H1N1) virus activity in the United States has decreased in the past few months, the virus continues to cause disease, with a large number of outbreaks among children being reported in summer camps. Not surprisingly, with all children susceptible to this new strain of influenza, any situation that results in close contact with an infected child, even during the summer, will lead to ongoing transmission.

The severity of the influenza season will depend in part on the extent of circulation of the novel strain along with the regular seasonal influenza strains. Early data indicate that novel influenza A (H1N1) virus has become the predominant strain in most of Australia and in other parts of the Southern Hemisphere, but other strains of influenza continue to circulate and remain the predominant strains in some areas.

The CDC is monitoring the influenza situation closely. The WHO and CDC have stopped documenting the numbers of confirmed novel influenza A (H1N1) cases, shifting to reporting only hospitalizations and deaths.

The declaration of a pandemic by the WHO supports the ongoing development of a monovalent vaccine to protect against the novel influenza A (H1N1) virus. The U.S. Department of Health and Human Services is preparing for a national novel influenza A (H1N1) campaign if it is needed.

Vaccine production, distribution

In the United States, both inactivated and live attenuated monovalent novel influenza A (H1N1) vaccines are being produced, and safety and immunogenicity trials of these new vaccines are under way. Experts think most people will need two doses to develop appropriate protection. Novel influenza A (H1N1) vaccines will be much like seasonal flu vaccines and should be available in various formulations, including without thimerosal.

Plans are to manufacture 600 million doses of vaccine. About 120 million doses are anticipated to be available by late October, and 40 million doses may arrive as early as September. Distribution methods are still being explored.

The overall pattern of spread for novel influenza A (H1N1) virus during the current influenza season in the Southern Hemisphere and expected activity in the United States this fall and winter will guide recommendations for the use of the monovalent novel influenza A (H1N1) vaccine in the 2009-'10 season.

The Advisory Committee on Immunization Practices (ACIP) of the CDC has recommended a prioritization schedule for Americans, since initially, there will not be enough novel influenza A (H1N1) vaccine for eveeryone.

The ACIP recommends that the first groups to receive this new monovalent vaccine include pregnant women; household contacts and other caregivers of infants under 6 months; health care and emergency service workers; young people ages 6 months through 24 years; and non-elderly adults with long-term (chronic) medical conditions that increase their risk for serious health problems as a result of influenza.

Once supplies at all local levels are adequate to routinely vaccinate these target populations, vaccine also is recommended for healthy adults ages 25 through 64. Fewer novel influenza illnesses have been reported in people 65 or older, indicating that this age group may have some immunity to this virus. Therefore, the elderly should receive this new monovalent vaccine only after all other groups have been vaccinated.

In addition, if vaccine supplies are limited early on, the ACIP identified "special" subgroups as the initial highest priorities, specifically pregnant women; household contacts of infants under 6 months; health care emergency service workers who provide direct patient care or have contact with infectious substances; children 6 months

RESOURCES

Up-to-date information on novel influenza A (H1N1) can be found at www.cdc.gov/flu, www.aapredbook.org/flu and www.who.int/csr/disease/swineflu/en/index.html.

Information for pediatricians and families will be updated frequently on the AAP Web site, www.aap.org.

through 4 years of age; and children 5 through 18 years of age with chronic medical conditions that increase their risk of serious health problems as a result of influenza.

The ACIP faced some uncertainties in creating these guidelines, including vaccine arrival date, how much vaccine will be available early on, how quickly the manufacture of vaccine will increase over time, the number of doses needed for each person, and how easily these recommendations can be implemented locally and throughout the country. ACIP members also considered how severe this influenza infection may be, judging which age groups are more likely to be infected or be at greater risk of serious health problems.

The CDC is working to enhance safety monitoring systems and will be encouraging both providers and recipients to report adverse events following vaccination.

Virtually all novel influenza A (H1N1) virus strains in the United States remain susceptible to oseltamivir (Tamiflu) and zanamivir (Relenza), according to the CDC. While reports of sporadic resistance have been in the news, these strains have not yet caused substantial disease in any country in which they have been reported. Susceptibility of newly isolated strains is being tracked closely by the CDC and the WHO.

Collectively, everyone must remain engaged in health-promoting behaviors and stay well-informed on the state of the circulating strains of influenza virus to protect themselves and those around them. It is critical for all health care providers to be aware of their local and state health department recommendations.

Dr. Bernstein and Dr. Bradley are members of the AAP Committee on Infectious Diseases.