CDC Revises Flu Treatment, Peramivir Guidance

BY JEFF EVANS

The Centers for Disease Control and Prevention updated its recommendations on early and late antiviral treatment during the 2009-2010 influenza season, and provided more guidance on the use of the investigational antiviral drug peramivir.

When to Start Antivirals

► Patients with mild, uncomplicated illness who are not considered to be at increased risk of developing severe or complicated illness are not likely to benefit from antiviral treatment if started more than 48 hours after illness onset. Similarly, patients who are already recovering from influenza do not need antiviral medications. For patients who present within 48 hours of onset, clinical judgment should be used to decide if patients with mild or uncomplicated illness and no risk factors need antiviral drugs.

► Antiviral regimens lasting 5 days are recommended for patients with confirmed or suspected 2009 H1N1 influenza who have severe, complicated, or progressive illness, or who are hospitalized. The 5-day treatment duration might be extended in some patients. Limited data from observational studies of hospitalized patients suggest that the initiation of antiviral treatment more than 48 hours after onset reduces mortality or duration of hospitalization in patients with prolonged or severe illness.

► Promptly begin empiric antiviral therapy for patients with confirmed or suspected influenza who have an increased risk for complications, the CDC advised. These include children and adolescents younger than 19 years of age who are receiving long-term aspirin therapy, adults aged 65 years and older, pregnant women, and individuals with certain medical conditions (asthma; neurological and neurodevelopmental disorders; chronic lung disease; heart disease; blood, endocrine, kidney, liver, or metabolic disorders; and a weakened immune system due to disease or medication).

► Available data suggest pregnant women should receive prompt antiviral therapy, although no clinical studies have assessed the safety and efficacy of oseltamivir (Tamiflu) or zanamivir (Relenza) for pregnant women. The systemic activity of oseltamivir makes it the preferred treatment for pregnant women. The agency also advises prompt antiviral treatment of women up to 2 weeks post partum with suspected or confirmed 2009 H1N1 influenza (regardless of the pregnancy outcome), because anecdotal reports have suggested that they also may be at risk for severe complications and death.

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Giving Antivirals to Vaccinated Patients

A history of vaccination does not rule out influenza, the CDC advised, because vaccination for 2009 H1N1 or seasonal influenza is effective only after 2 weeks. In addition, each vaccine is not expected to provide protection against influenza viruses other than the targeted virus. The agency recommends treating vaccinated patients as if they had not been vaccinated. People who are vaccinated with live attenuated influenza vaccines and who are given antivirals within 48 hours before or up to 2 weeks after vaccination might not develop immunity and should be revaccinated.

Peramivir Availability and Dosing

The Food and Drug Administration (FDA) approved the use of intravenously administered peramivir under an Emergency Use Authorization for hospitalized patients who have not responded to either oral oseltamivir or inhaled zanamivir. Peramivir also is indicated when patients are expected not to have a dependable or feasible route of delivery other than intravenous, or when a clinician judges intravenous therapy to be appropriate because of other circumstances. Pediatric patients may receive the drug if either of the first two criteria applies.

As of October, the FDA has received safety and efficacy data on the use of peramivir for 1,891 patients with acute uncomplicated seasonal influenza A. The drug has not been evaluated in hospitalized patients. It is available from the CDC upon request by a licensed physician.

The FDA now recommends that adult patients with end-stage renal disease and a creatinine clearance of less than 10 mL/minute per 1.73 m^2 who are not receiving intermittent hemodialysis or continuous renal replacement therapy should receive 100 mg of peramivir intravenously on day 1, followed by 15 mg once daily.

The updated dosing regimen for pediatric patients who have that rate of creatinine clearance but are on intermittent hemodialysis varies according to age. Such children aged 6-17 years should receive 1.6 mg/kg peramivir on day 1, followed by 1.6 mg/kg 2 hours after each hemodialysis session on hemodialysis days only.

Peramivir dosing for children who have a creatinine clearance of less than 10 mL/minute per 1.73 m^2 but who are not on intermittent hemodialysis or continuous renal replacement therapy follows the same initial dose on day 1 that is recommended for pediatric patients who are on intermittent hemodialysis. However, subsequent daily doses are lower, at 0.25 mg/kg for those aged 6-17 years. ■

The recommendations are available at www.flu.gov/individualfamily/prevention/medicine/antiviralsrecommend.html.

IOM Report Advises National Vaccine Plan on Priorities

BY MIRIAM E. TUCKER

The National Vaccine Plan should prioritize limited resources to meet unmet health needs and to increase funds for safety research and communication, the Institute of Medicine said in a new report.

The IOM, an independent advisory body, launched its report "Priorities for the National Vaccine Plan" at a press briefing.

The National Vaccine Plan, first released in 1994, was mandated by the National Childhood Vaccine Injury Act of 1986. A draft update was issued in November 2008. Given current budgetary constraints, the National Vaccine Program Office, part of the Department of Health and Human Services, requested guidance from the IOM on prioritization of activities. The plan is expected to be finalized in 2010.

Dr. Claire Broome, who chaired the 18-member multidisciplinary committee that wrote the report, said the new plan will be broader in scope than was the 1994 document. That one was intended to be used primarily by the NVPO, which coordinates all vaccine-related activities of multiple federal agencies. In contrast, the new plan will also be aimed at other public and private vaccine stakeholders, including public health offices, health care providers, pharmaceutical companies, health care organizations, and the general public.

"Changes in society, medicine, science, and communication were important considerations for our committee as we looked at the plan for the future of vaccines and immunization," said Dr. Broome, an adjunct professor at Emory University, Atlanta.

The document identifies 18 "priority actions" distributed among five main goals, as well as two additional recommendations regarding the role of the plan as the primary tool to be used for all agencies with roles in the NVPO, and for allocation of resources to ensure implementation of vaccine-related activities within the plan.

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Under the heading of Vaccine Development, the report advises that the plan incorporate improvements in the vaccine regulatory process that reflect current science and "encourage innovation without compromising safety and efficacy." Evidence-based approaches should be used to prioritize new and improved vaccine candidates and to develop specifications for high-priority vaccines. Acceleration of high-priority vaccine development should involve the National Institutes of Health and the Department of Defense, as well as private sector partners.

With regard to Vaccine Safety, the committee said that the plan should establish a process to identify potential vaccine safety hypotheses for future basic, clinical, or epidemiologic research through review of data from existing surveillance systems. A framework should be developed to prioritize the national vaccine safety research agenda, and the plan should establish a permanent vaccine safety subcommittee within the National Vaccine Advisory Committee. Funding should be increased for vaccine safety research activities within the various federal agencies.

The IOM report includes recommendations for the development of a national communication strategy on vaccines and immunization targeting both the public and health care professionals.

Recommendations regarding Vaccine Use and Supply include the development of strategies to eliminate financial barriers to immunization, the application of research and best practices to improve patient access, the exploration of nontraditional approaches to surveillance of disease, vaccine safety, and vaccine coverage. The plan should ensure that the NVPO is actively involved in the development of national health information initiatives including electronic medical records, strengthening of the public health infrastructure to support vaccine programs, and assessment of the outcome of national health reform for its impact on immunization priorities.

Global Vaccine Issues within the new National Vaccine Plan should include engagement of U.S. federal agencies and partners in building immunization capacity in low- to middle-income countries through the provision of both expertise and financial resources, and also the endorsement of global policy frameworks to further global adherence to differential pricing in order to ensure access to needed vaccines in all countries.

Dr. Broome and the rest of the committee members do not have any conflicts of interest, according to an IOM spokesperson. ■