

# H1N1 Flu Outbreaks Could Come in Waves

BY BETSY BATES

Americans may need to brace for a long winter of “rising and falling” waves of pandemic influenza A(H1N1) outbreaks, Kathleen Sebelius, Secretary of the Department of Health and Human Services, warned during a telebriefing.

The notion that the H1N1 pandemic may have peaked in October, as it became widespread in 46 states, “may be overly optimistic,” she said. “It is totally unpredictable what’s going to happen. How many [bell] curves we will see, our scientists tell me they don’t know.”

During the 1950s, rolling waves of serious influenza outbreaks buffeted various regions of the country, with peaks occurring both in the fall and the winter. The same phenomenon may occur this year and even into the spring.

“We could see months of disease outbreaks rising and falling,” she said.

According to the most recent figures available, nearly 22,000 Americans had been hospitalized for influenza and pneumonia syndromes since Aug. 30, and there had been 2,416 deaths. During that time, 53 children had also died.

Unlike most years, this year’s power-

ful fall influenza season followed a spike last spring of cases and hospitalizations, most from the H1N1 strain.

Both Sec. Sebelius and Janet Napolitano, Secretary of the Department of Homeland Security, offered reassurances at their joint press conference that widespread vaccine shortages will soon ease considerably.

Unforeseen problems with manufacturing of the H1N1 vaccine led to sluggish production in the early weeks of an outbreak that quickly spread throughout the country, outpacing health officials’ ability to provide inoculations to groups considered at high risk of complications, including pregnant women, children and young adults, caregivers of infants, health care workers, and people with underlying medical conditions.

Sec. Sebelius explained that the H1N1 virus strain proved to grow slowly using 50-year-old egg-based technology, which is considered safe but sluggish in com-

parison with experimental cell-based technologies that have yet to be fully evaluated and approved.

The distribution of vaccine also was hampered by early snafus with manufacturers’ stepped-up production line schedule, which she compared to glitches associated with the “roll-out of a new restaurant.”

When scenarios were first conceived about how to ramp up production and distribution in anticipation of the fall outbreak, “It seems that we were getting some pretty rosy scenarios,” she said. “Yield was lower than anticipated.”

Today, however, a “robust” supply of a safe and efficacious vaccine is on its way to 150,000 vaccination sites from five manufacturers, with state and local governments deciding who to vaccinate first, where, and when, she said.

The federal government in this case is providing “actions and assistance ... well grounded in science and well grounded in facts.” But “nobody is sitting here in

[Washington]” deciding, for example, where pregnant women in Arizona should go for a vaccine, said Sec. Sebelius.

Some school-based clinics in Maryland that had already planned to administer seasonal flu shots decided to direct limited H1N1 vaccine supplies there first.

Other localities decided to concentrate on vaccinating health care workers as their highest priority.

Such choices will become less difficult in the coming weeks, as a total of 250 million doses of vaccine are distributed, far more than the 100 million doses of seasonal influenza vaccine typically produced for the nation, she said.

In the meantime, Sec. Sebelius directed consumers to flu.gov, a government Web site where vaccination clinic locations are being updated continually.

A new link on the Web site (flu.gov/evaluation) enables consumers to connect to an H1N1 Flu Self-Evaluation tool, “not to take the place of anyone’s doctor” but to alert high-risk individuals to the need for seeking a vaccination or medical care, and to reassure the “worried well [so they do not] overwhelm our health care providers,” said Sec. Sebelius. ■

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## Oseltamivir-Resistant H1N1 Emerges With Prophylactic Use

BY HEIDI SPLETE

Collection of an oseltamivir-resistant pandemic influenza A(H1N1) isolate in a 59-year-old man taking the drug prophylactically underscores the need to limit antiviral prophylaxis of pandemic flu, according to correspondence published online in the *New England Journal of Medicine* on Nov. 11.

Oseltamivir was prescribed to all household contacts of the man’s 13-year-old son (the index patient), whose infection was confirmed by a reverse-transcriptase polymerase-chain reaction test. The patient’s father, mother, and sisters (aged 15 and 18 years) were prescribed 75 mg oseltamivir once daily for 10 days as prophylaxis.

The patient’s father was taking 5 mg prednisone daily and had chronic obstructive pulmonary disease. The father developed flulike symptoms approximately 24 hours after prophylaxis began.

On prophylaxis day 8, the father was seen by his physician for a persistent cough, and an H1N1-positive nasopharyngeal aspirate was collected. After an uneventful course of illness, a second sample was negative, the investigators wrote. The case was reported by Mari-

ana Baz, M.Sc., of the Centre Hospitalier Universitaire de Québec, and colleagues (*N. Engl. J. Med.* 2009 Nov. 11 [Epub doi: 10.1056/NEJMC0910060]).

The sample from the father showed a neuraminidase mutation (H275Y) that has been associated with oseltamivir resistance in seasonal H1N1<sup>3</sup> and avian H5N1<sup>4</sup> viruses, the investigators wrote, but the isolate from the father was susceptible to zanamivir. None of the other family members developed flulike symptoms.

“We hypothesize that the presence of subtherapeutic levels of oseltamivir at a time when viral replication had already begun was an important factor that led to the emergence of the resistant virus in the father of our index patient,” they wrote.

The case supports the need to limit prophylactic treatment with oseltamivir in persons who have already been exposed to the H1N1 virus, the investigators noted. They also suggested that patients receiving once-daily antiviral prophylaxis convert to a twice-daily regimen as soon as they develop flulike symptoms.

A conflict of interest disclosure statement for the authors was unavailable at press time. ■

**Patients receiving once-daily prophylaxis against the H1N1 virus should be converted to a twice-daily regimen as soon as they develop flulike symptoms.**

## New Online Tools Assess, Monitor Flu Symptoms

BY ELIZABETH MEHCATIE

The American Medical Association has launched an interactive Web site for the public to evaluate the severity of influenza symptoms of individuals or family members and share that information with their health care providers, who in turn can use the site to monitor their patients’ symptoms, the AMA announced during a telephone briefing.

The Web site, AMAfluhelp.org, is described as the country’s first “comprehensive Web-based patient flu-assessment program,” which “walks patients through a series of questions to determine the severity of their flu symptoms,” based on the latest guidelines from the Centers for Disease Control and Prevention, according to an AMA statement announcing the launch.

The free site features physician-designed online tools “to help physicians monitor their patients’ symptoms, facilitate care and treatment decisions, and efficiently manage their practices’ patient flow.”

For example, a physician can use the site to determine whether a patient can return to school or work, and a patient can use the site to generate a note from the physician to that effect. Also, a patient can use the site to determine whether to seek medical care for themselves or a family member. A patient who indicates that he or she has a high

fever will receive a prompt to call his or her physician immediately or seek urgent medical care. The site also can be used to help patients monitor symptoms after vaccination, prompting them on when they should seek medical help.

People can log in to the Web site or can participate anonymously and can “invite” family members and their physicians and other health care providers to connect with the system. The information they enter is private and secured, and personal data cannot be accessed without a user’s consent, according to the AMA statement.

Dr. James Mault, chairman and CEO of HealthyCircles, the company powering the AMA portal, said during the briefing that a physician can enter the program and monitor all the patients he or she is following, and communicate with them through online questions and answers.

During the briefing, Chris Lindley, director of emergency preparedness and response in the Colorado Department of Public Health and Environment, said that a link to the Web site will be added to the department’s Web site, as part of the state’s response to the influenza pandemic.

The AMA is promoting the Web site in collaboration with a coalition that includes Blue Cross NEPA, CVS Caremark, Merck & Co., Microsoft Corp., Minute Clinic, and the state of Colorado. ■