

# Pandemic Influenza? Physicians Calmly Prepare

*For now, doctors can just watch and wait. In fact, the only panic that's occurring is among the media.*

BY SHARON WORCESTER  
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Warnings of a potential avian influenza pandemic have the nation and medical community on alert—but those who would be on the front lines appear to be taking the threat in stride.

"Everyone I know is fatalistic about it. Everyone knows it's coming, but it's difficult to prepare for," Doug Campos-Outcalt, M.D., said in an interview with FAMILY PRACTICE NEWS.

Beyond promoting preventive hygiene measures, such as hand washing and covering one's mouth when coughing or sneezing—important for preventing transmission of any influenza virus—most preparations for a pandemic are "out of the hands of ordinary physicians," said Dr. Campos-Outcalt, chair of the department of family and community medicine at the University of Arizona, Phoenix, and former chair of the American Academy of Family Physicians' commission on clinical policy.

The watch-and-wait mode is an appropriate place for individual physicians to be right now, said Bill Hall, a spokesperson for the Department of Health and Human Services.

The federal government, primarily through the HHS department, is maintaining open lines of communication with public health departments, and through those departments is working to keep physicians informed of world events related to the spread of avian influenza—particularly the H5N1 strain that is rampant in Asia, has spread to numerous other areas, continues to mutate, and has jumped from birds to multiple other species.

While there is a sense of urgency, there is, at this point, no influenza strain that is causing a pandemic, thus there is no alert to physicians with regard to a pandemic, Mr. Hall said in an interview.

In fact, the only panic—as in people running through the streets with arms flailing—is occurring among the media, he said.

Donald M. Poretz, M.D., vice president of the Infectious Diseases Society of America, agreed there doesn't appear to be—and there shouldn't be—major fear or panic in the United States regarding a pandemic at this point.

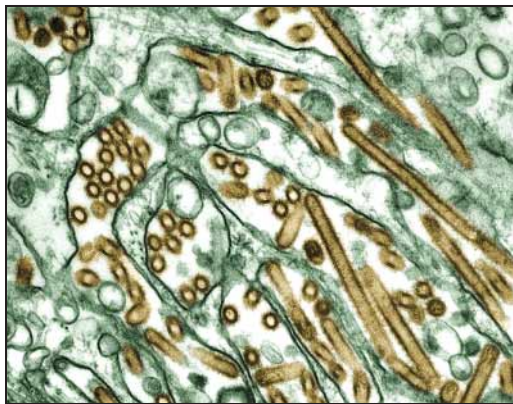
"We need to look at the information objectively, and not emotionally. I don't believe anyone can make a statement as to whether or not there will be a pandemic, but the likelihood is that there will be at some point, so one has to be prepared," said Dr. Poretz, professor of medicine at Georgetown University in Washington.

As for recent press coverage of a leaked draft of the federal government's pandemic preparedness plan, which indicates

the country is alarmingly unprepared for such a pandemic, Mr. Hall said only that the report has undergone and will continue to undergo revisions as the situation evolves.

The final report is anticipated, but its release won't be hastened in response to the flurry of media reports about the draft copy.

"What drives us is not the media, but global health, and being as prepared as possible for a pandemic," he said.



This micrograph shows Avian influenza A H5N1 (gold) grown in MDCK cells (green). Avian influenza A does not usually infect humans.

According to information from the World Health Organization, IDSA, and various research projects, the H5N1 avian influenza strain does appear to have the potential for developing efficient person-to-person transmission capability, which it currently lacks, and which could be the bridge between the current situation and a future pandemic.

Should the virus obtain this capability, H5N1 could circle the globe within weeks or months, and could kill as many as 150 million people, according to a WHO estimate.

This scenario is the source of the sense of urgency that Mr. Hall mentioned.

At press time, WHO had confirmed 117 cases of human infection with H5N1 influenza, with cases in Vietnam, Thailand, Cambodia, and Indonesia. Human-to-human transmission has been documented in only two of those cases—both from a single household in Vietnam. The fatality rate among these cases is over 50%.

Infection in animals has been more widespread. The virus' ability to mutate and infect additional species, including cats, leopards, tigers, and pigs, is another source of that urgency, as are the findings of a recent study of the 1918 influenza pandemic, which killed an estimated 50 million people.

Researchers completed the virus coding sequence for the responsible virus and discovered that like H5N1, the 1918 strain was a bird flu that infected humans (Science 2005;310:77-80).

The findings of the study, coupled with the apparent staying power of the H5N1 strain (it has been circulating since 1997) and the fact that many experts say an influenza pandemic is overdue (historically

such outbreaks occur about every 30 years, and the last one occurred 37 years ago) contribute to the urgency in preparing for a pandemic.

That urgency is apparent in the flurry of government activity in response to the pandemic threat.

The U.S. State Department recently hosted a meeting of senior health officials from nearly 70 countries to address the need for improved communications and efforts to prevent a pandemic. That meeting was not open to members of the press.

And President Bush has met with vaccine makers to urge increases in flu vaccine production.

Further, the Bush administration and Congress are considering spending billions to stockpile the antiviral drug Tamiflu (oseltamivir); legislation has been introduced that would further ramp up vaccine production and pandemic preparedness; and the National Institute of Allergy and Infectious Diseases has teamed with MedImmune Inc. to develop and manufacture new influenza vaccines, including vaccines against high-priority strains such as H5N1.

But some experts have suggested H5N1 does not confer a pandemic threat, saying that if it was going to develop the ability to efficiently transmit between people, it would have done so by now, and that because the current avian influenza strain is distantly related to earlier flu viruses, much of the population already has some level of immunity.

Whether or not H5N1 becomes pandemic, preparing for a potential pandemic is warranted and worthwhile, experts agree.

"Even if it does not materialize, the planning and development of effective interventions will provide the necessary preparations in the event that another avian strain jumps the species barrier or a known human pathogen like H2N2, to which large segments of the population

lack immunity, reemerges," John G. Bartlett, M.D., of Johns Hopkins University, Baltimore, and Frederick G. Hayden, M.D., University of Virginia Health Sciences Center, Charlottesville, Va., wrote in a recent editorial (Ann. Intern. Med. 2005;143:460-2).

Preparations would also enhance the nation's ability to cope with annual epidemics and their substantial toll.

Widespread vaccination and use of antiviral drugs could provide the foundation for responding to the next pandemic, thus warranting the stockpiling of antiviral agents, they wrote.

Physician groups are taking heed.

Emergency medicine in general has been planning for years for events such as an influenza pandemic. Severe acute respiratory syndrome (SARS), bioterrorism threats, and pandemic influenza have been on the radar screen for a while.

Planning at the national and local levels has been focused on how emergency departments should and will respond to such a crisis, Richard Rothman, M.D., Ph.D., of Johns Hopkins University and a member of the public health committee for the American College of Emergency Physicians, said in an interview with FAMILY PRACTICE NEWS.

"It's there, people are aware of it, and they're trying to plan as best as possible," Dr. Rothman, noting that both ACEP and the Society for Academic Emergency Medicine are actively addressing matters such as policy, clinical issues, and risk of hospital overcrowding.

Likewise, the American Academy of Family Physicians is participating in discussions regarding national and state preparedness, and the AAFP is encouraging and facilitating communications among local chapters.

The academy will be conducting educational activities to help physicians understand what their role will be in the event of a pandemic, Dr. Campos-Outcalt said. ■

## What Can YOU Do?

The most effective thing individual physicians can do is in preparation for a potential avian influenza pandemic is to vaccinate patients against the currently circulating influenza strains, Dr. Poretz said.

Such vaccination will address the immediate concern of influenza outbreaks in the United States, and, according to WHO guidelines, could be useful for preventing co-infection with H5N1 and a human influenza strain.

According to the WHO, doing so will decrease the opportunity for genetic reassortment of the avian H5N1 strain with genes from a human (H1 or H3) strain and thereby reduce the likelihood that a novel pandemic strain will emerge from the current situation in Asia.

If an avian influenza pandemic does occur, diagnosis could prove quite difficult, because the symptoms of H5N1

are similar to those of "regular flu," Dr. Campos-Outcalt said.

Communication and surveillance will be the cornerstones of effective management, he added. This is where education for and by physicians becomes important.

Physicians need to stay up to date, because so much is unknown about how patients would present in the event of a pandemic. And physicians need to educate patients about the preventive measures that will become imperative should available vaccines and antivirals prove ineffective for the pandemic strain.

When it comes to potential patient requests for antiviral medications such as oseltamivir, "I would encourage physicians to prescribe as recommended by the CDC and the manufacturer," said Dr. Campos-Outcalt.

The CDC's influenza page is located at [www.cdc.gov/flu/](http://www.cdc.gov/flu/).