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Sacramento Bee

Bird flu battle on horizon: Scientists fear the deadly virus is adapting and will hit the U.S. hard.

Printable version

by *David Whitney -- Bee Washington Bureau*

Relevance: **UC Davis veterinarian Carol Cardona , also a spokeswoman for the Department of Homeland Security's National Center for Foreign Animal and Zoonotic Disease Defense here, is helping oversee in California a national effort to detect the virus's avian arrival.**

WASHINGTON - They know it's coming. Hospitals are monitoring for its arrival with every patient who checks in. Now scientists are swabbing wild bird bottoms in California and elsewhere in a hunt for the first signs of the deadly virus.

What has scientists worried is not the fact that the avian flu virus H5N1 has killed at least 60 people overseas. Or that it has spread from Southeast Asia to China and Russia.

What has them convinced about the diminishing odds of escaping a worldwide health catastrophe - one study estimates that fatalities in California could top 60,000 - is that wild birds overseas no longer seem to be dying.

That means the virus is mutating, and scientists fear it has adapted so that it can survive the annual migration of wild birds from Asia to North America without killing its hosts.

"That's a real danger sign," said **veterinarian Carol Cardona of the University of California, Davis**.

Cardona is part of the growing army of scientists and health care professionals gearing up to fight what could become the first flu pandemic since 1918, when a Spanish flu virus - also believed to have been spread by birds - killed between 20 million and 40 million people around the world.

More Americans died in that outbreak than were killed in World War I. And already the projections are that the next pandemic, perhaps just months away, will kill similar numbers of people.

So far, the virus has not mutated or combined with other influenza viruses so that it can spread from human to human.

"The great fear is that we will see a version of H5N1 that will spread very easily from person to person," said David Daigle of the federal Centers for Disease Control and Prevention in Atlanta.

"Most experts believe it is not a question of if, but when," he said.

According to a recent report by the Trust for America's Health, the U.S. toll could surpass 540,000. In California, the report said, deaths could top 60,000 and hospitalizations could exceed 273,000 - unfathomable given the fact that that's four times the number of hospital beds in the state, according to the California Hospital Association.

Researchers working on an anti-viral drug to fight the virus have been surprised by its accelerating mutation.

Recently there have been reports from the National Institutes of Health that a drug known commercially as Tamiflu has shown promise in studies involving rats that it could suppress the spread of the virus.

"That's very encouraging," said Ken August, a spokesman for the California Department of Health Services. "But to produce enough for all Americans and then to distribute it to all who need it would be an enormous challenge."

That point was highlighted by the Trust for America's Health report. It said that if the 5.3 million doses of Tamiflu in federal possession were distributed on the basis of population, only about 639,000 of California's 30 million people would get the medicine.

The report's conclusions are grim.

"Overall, U.S. pandemic preparedness is inadequate," it said. "Both the federal pandemic plan and various state pandemic plans are insufficient for a national response to a pandemic influenza."

August said that if the nightmare scenario develops, mass quarantine of infected patients and other mandatory steps to stop the virus's spread could be inevitable.

"We could face asking the public to take some extraordinary measures," August warned.

Already, he said, hospitals throughout the state have been asked to begin monitoring for patients reporting unexplained respiratory illness and who have traveled recently to Southeast Asia.

"What we're concerned about is the flu virus mutating into something that no one has experienced and that would cause severe illness and death," he said.

While scientists and health officials stress that there is no evidence of an Asian variety of the H5N1 virus in the United States now, it could arrive almost at any time with passengers unloading from a flight from Thailand, China or Russia.

Or it could arrive on the wings of an infected bird.

UC Davis' Cardona, who is also a spokeswoman for the Department of Homeland Security's National Center for Foreign Animal and Zoonotic Disease Defense at the university, is helping oversee in California a national effort to detect the virus's avian arrival.

This year, she said, some 2,000 non-migratory wild birds will be checked to see if they've have any signs of the Asian H5N1 virus. The non-migratory birds are easier to locate and swab, she said, and they are likely to pick up the disease from waterfowl and other birds migrating down from Alaska on the Pacific Flyway.

The goal is to keep the virus from poultry farms in the Central Valley and Southern California before they become incubators or, worse yet, breeding grounds for the deadly form that can be transmitted from human to human.

"We all believe that wild birds are not likely to cause a pandemic without an intermediate host for the virus," she said. "And poultry are likely to be that host."

Already, she said, poultry growers and backyard farmers are being urged to keep the water and feed for their chickens and ducks protected from wild birds so that the virus can't be passed along.

Farther north in Alaska, UC Davis-educated veterinarian Jonathan Runstadler is overseeing state-funded research doing a similar thing to migratory birds that have flown from Asia to their summer nesting grounds.

Runstadler said researchers hope to swab 5,000 birds before the fall migration begins in a matter of weeks.

The concern is that migratory birds from Asia, already in Alaska, will mix with other birds soon to be headed south to the mainland United States. Because ducks and geese carry other flu viruses that have made the leap to human-to-human transmission, the concern is that the deadly H5N1 strain will combine with one of them to produce the killer bug.

"This may be the place where new viruses are created," said Runstadler, an assistant professor at the

University of Alaska's Institute for Arctic Biology.

The deadly strain of the H5N1 virus was detected in Southeast Asia more than two years ago. Tens of millions of domestic ducks and chickens have been slaughtered and burned to stop its spread, but the virus quickly migrated to China and then Russia and now other countries as well, carried by wild birds.

While there have been no reports of the virus being transmitted between people, British researchers reported finding the H5N1 virus in the spinal fluid of a young Vietnamese boy earlier this year, indicating that the virus is mutating to the point it can infect the human brain.

California is better off than most states.

Two years ago, the trust praised California for the way it had spent $160 million it received for bioterrorism preparedness, citing it as one of the top four best-prepared states.

State officials are not sanguine, however.

"One of the benefits of our preparedness for bioterrorism is that we have an improved network of laboratories, we've improved our system for identifying outbreaks, and we've strengthened our communication between public health, law enforcement and public officials," August said. "But we can never be fully prepared for a pandemic."

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