



Bird Flu News 23-31 August 2006

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Cumulative Number of Confirmed Human Cases of Avian Influenza A/(H5N1) Reported to WHO

23 August 2006

Country	2003		2004		2005		2006		Total	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
Azerbaijan	0	0	0	0	0	0	8	5	8	5
Cambodia	0	0	0	0	4	4	2	2	6	6
China	1	1	0	0	8	5	12	8	21	14
Djibouti	0	0	0	0	0	0	1	0	1	0
Egypt	0	0	0	0	0	0	14	6	14	6
Indonesia	0	0	0	0	17	11	43	35	60	46
Iraq	0	0	0	0	0	0	2	2	2	2
Thailand	0	0	17	12	5	2	2	2	24	16
Turkey	0	0	0	0	0	0	12	4	12	4
Viet Nam	3	3	29	20	61	19	0	0	93	42
Total	4	4	46	32	95	41	96	64	241	141

Total number of cases includes number of deaths.
WHO reports only laboratory-confirmed cases.

Turkey issues bird flu warning as migration begins

August 23, 2006

There is a strong possibility that avian flu will make a reappearance in Turkey in the coming months as wild fowl begin their annual migration from the north ahead of the approaching winter, Turkish experts have warned.

Domestic poultry owners have been warned that they should take precautionary measures similar to those imposed last year and early this year to reduce the risk of further outbreaks of the deadly H5N1 strain of



the virus. These precautions include keeping domestic fowl penned rather than loose and avoiding any contact with wild fowl.

There has also been a call for all domestic fowl to be vaccinated to minimise the chance of avian flu being contracted. The initial outbreak of avian flu in Turkey took place in the town of Manyas in the western province of Balikesir in October 2005. There were further outbreaks in December to February of this year, with more than one third of the country's 81 provinces reporting cases of the virus. At least six people died after contracting the illness after coming into contact with either domestic or wild fowl that had the virus.

Source: NTV MSNBC - Turkey

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800,000 'bird flu busters' set for door-to-door campaigns

August 24, 2006

SUPHAN BURI - Launching a door-to-door campaign against bird flu, Thailand's Ministry of Public Health is set to send over 800,000 health volunteers to educate people at home on how to prevent the deadly virus, according to Caretaker Public Health Minister Pinij Jarusombat on Wednesday.

Mr. Pinij, now inspecting bird flu control in central Suphan Buri province, said the so-called 'bird flu busters' will be sent into action in the ministry's door-to-door anti-bird flu campaign nationwide from August 23 to 31 to educate the public on strict rules they must follow in order to prevent the infection and spread of bird flu.

To be carried with them for distribution to the public are varied kinds of bird flu media materials, such as posters, pamphlets and similar others with the message to be conveyed focusing on hygienic household practices, especially in relation to poultry contact.

In the first stage, the campaign will focus on at-risk areas in 30 provinces which have experienced bird flu outbreaks before, including 12 provinces in the North, 10 in the central region, seven in the Northeast and one in the South, the minister said.

Public Health Ministry permanent secretary Prat Boonyawongwirot said that in the 24 hours from 6 am on August 22, some 79 patients with flu-like symptoms were hospitalised in 22 provinces, quarantined and monitored for possible bird flu, awaiting laboratory tests to indicate whether they carried the deadly virus or not.

Source: Thai News Agency MCOT - Bangkok, Thailand

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Scientists Move Closer to Understanding Flu Virus Evolution

August 28, 2006

Aug. 28 (Bloomberg) -- Scientists tracking bird flu moved closer to understanding the evolution of the viruses and the genes that make them more infectious to people in a new study.

About 52 key genetic changes distinguish avian influenza strains from those that spread easily among people, according to researchers in Taiwan, who analyzed the genes of more than 400 A-type flu viruses. The analysis will help scientists trace the mechanism for infection and how the viruses replicate in different species, according to a report appearing in the September edition of *Emerging Infectious Diseases*.



Interest in influenza viruses has been bolstered by the spread of the H5N1 avian flu strain, which has infected at least 241 people in 10 countries during the past three years, killing 141 of them. The virus may kill millions if it changes into a pandemic form that can be passed from human to human.

“How many mutations would make an avian virus capable of infecting humans efficiently, or how many mutations would render an influenza virus a pandemic strain, is difficult to predict,” wrote Guang-Wu Chen and colleagues at Taiwan’s Chang Gung University.

The researchers analyzed the gene sequences of 306 human and 95 avian influenza viruses to molecularly identify the host species. The data was crosschecked with 15,785 more sequences from the National Center for Biotechnology Information.

Spanish Flu

“It is the type of work that everyone has thought of doing, but no one has had the time to do,” Ron Fouchier, a virologist at the Erasmus University in Rotterdam, said in an e-mail today. “The number of mutations in the viruses that correlate with host species is much larger than I initially suspected.”

There are dozens of influenza subtypes, many of which weren’t analyzed in the study. This may have influenced findings, Fouchier said.

“Using reverse genetics technology, and with the information collected from the systematic analysis of mutations in published genome sequences as described in this paper, it should now become possible to test the effects of each of the described mutations, and start to understand how avian influenza viruses adapt to the human host,” Fouchier said.

Experts believe that a pandemic in 1918, which may have killed as many as 50 million people, began when an avian flu virus jumped to people from birds. The study by the Taiwan scientists indicate that the H1N1 virus responsible for the 1918 pandemic, known as Spanish flu, is more closely related to avian influenza than other human influenza viruses.

“As a signature for the first species jump, the study does not offer much new,” said Ian Jones, a professor of virology at the University of Reading in the U.K. “As something that adds to understanding the long-term evolution of these viruses, it is useful.”

To contact the reporter on this story: Jason Gale in Singapore at j.gale@bloomberg.net

Source: *By Jason Gale*

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New Test Speeds Diagnosis of Lethal Avian Flu Strain

August 29, 2006

In an advance that speeds up diagnosis of the most dangerous avian flu, scientists have developed a detailed influenza test that takes less than 12 hours, federal health officials said yesterday.

The new technology, a microchip covered with bits of genetic material from many different flu strains, cuts the typical time needed for diagnosis of the A(H5N1) flu to less than a day from a week or more. In addition, rather than giving just a yes-or-no result, it usually reveals which flu a human or an animal has.

That means that public health officials investigating, for example, a flu outbreak in poultry or in humans in a remote Asian or African village will be able to decide quickly whether to kill thousands of birds or to treat hundreds of potentially exposed people with expensive antiviral drugs.

Right now, ascertaining whether a flu is of the lethal A(H5N1) strain requires that a sample be frozen and shipped to a highly secure laboratory, usually in a major city like Atlanta or Hong Kong, where the virus



can be grown in eggs, isolated and genetically sequenced. That process takes four to five days plus shipping time and runs the risk of samples defrosting in transit and being ruined.

The new test, called FluChip, can be performed in any laboratory that can amplify bits of genetic material; many countries have such laboratories in their national capitals, if not in provincial hospitals. Samples need not be frozen, and because only bits of genetic material are multiplied rather than whole viruses, the work can be done in laboratories with lower biosecurity levels.

Nancy J. Cox, chief of the influenza branch of the Centers for Disease Control and Prevention in Atlanta, said the chip "really allows us to get a lot of information about a virus in a short time."

Dr. Anthony S. Fauci, director of the National Institute of Allergy and Infectious Diseases, which announced the creation of the test, called it an "encouraging advance" that could be "invaluable to international flu surveillance efforts."

Dr. William B. Karesh, chief field veterinarian for the Wildlife Conservation Society, who led a 2005 expedition to Mongolia to track the lethal avian flu virus as it first moved out of Asia in migrating wild birds, said the new test "sounds fabulous."

"It could be an incredibly powerful tool," Dr. Karesh said.

A more advanced version to be used in the field may be ready within two years, said Kathy L. Rowlen, a University of Colorado chemistry professor who led the team that developed the test.

At present, animal and human health experts trying to fight avian flu in remote areas are forced to make important decisions based largely on guesses because it is too risky to wait a week for a laboratory to confirm that a highly dangerous virus is loose.

A dipstick test done on the spot, which a veterinarian working in Indonesia said was as quick and as simple as a home pregnancy test, can tell only if a flu is type A.

Getting more information requires polymerase chain reaction amplification, which Dr. Rowlen described as "separating the genetic material of the virus itself from all the other things you find in a nasal swab, and then making a million copies of it, like using a photocopier."

That requires a machine costing about \$20,000, which can be found in most countries' national laboratories and in some provincial hospitals, Dr. Karesh said. One he saw in Mongolia was "a kitchen-tabletop-type thing," he said.

Currently, such machines and follow-up tests can tell in about four hours whether a flu is an H5 strain.

The FluChip, sometimes called a microarray, or gene chip, greatly enhances that technology.

It is coated with 55 short stretches of RNA selected from 5,000 samples of human, bird, pig and horse flus provided by the C.D.C., and including H5N1 and routine human flus of the H3N2 and H1N1 strains. The broken-up DNA in the amplified sample is, in effect, poured across the chip, and fragments stick to the matching bits of RNA. By noting the matches, scientists can deduce which flu it is.

In recent tests, the technology correctly identified 72 percent of samples and partly identified an additional 13 percent, according to the disease centers.

Moreover, as the flu mutates, Dr. Cox said, stretches of RNA from newly emerging strains could be added.

Michael T. Osterholm, director of the Center for Infectious Disease Research and Policy at the University of Minnesota, called the chip "good news, because it clearly moved ahead the diagnostic tools we have."



It also has the potential to speed up mass testing because dozens of samples can be tested on dozens of chips at once.

But if a flu pandemic were to erupt, Dr. Osterholm warned, the test could quickly be rendered useless because most of the chemicals needed for the preliminary DNA-amplification steps come from abroad, and the chaos that a pandemic would cause would interrupt supplies.

"You can have all the guns you want," he said, "but if the bullets are offshore, you can't shoot very much."

Source: *The New York Times*: By DONALD G. McNEIL Jr.

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Five in Indonesia's Sulawesi tested for bird flu

Wed 30 Aug 2006

JAKARTA - Five people have been admitted to hospital on Indonesia's Sulawesi island with bird flu-like symptoms and local authorities have sought funds from the government to help cull poultry, officials said on Wednesday.

Samples from the patients in Palu, the capital of Central Sulawesi province, have been sent to a government laboratory in Jakarta to be tested for bird flu, said Runizar Ruesin, head of the ministry's bird flu information centre.

No further details about the five people were available.

Indonesia has so far recorded 60 bird flu cases, 46 of them fatal. The country's death toll is the highest in the world.

Zulkarnain Hassan, a coordinator at the agriculture ministry's Avian Influenza Crisis Centre, said that there had been bird flu cases in poultry in West and South Palu district and the provincial capital of Palu city.

An official of the agriculture ministry in Palu said the local government did not have enough money to compensate farmers for culling their birds and had asked Jakarta for more funds.

"(Culling) is something that must be done," he said, adding that some slaughtering had started in the region on Wednesday.

He did not say how many chickens needed to be killed or how much the work would cost.

Bayu Krisnamurthi, head of the national bird flu control commission, said the central government would reimburse funds spent by local governments or compensate farmers.

Separately, the government will on Friday embark on a new campaign to raise awareness about bird flu through television and radio advertisements, leaflets, posters and billboards, said Tri Satya Naipospos, deputy chief of the National Committee for Avian Influenza Control and Pandemic Preparedness.

"So far our campaign has been spotty. We realise that human cases have occurred in regions where people are ignorant about bird flu and they don't have the means to support our efforts," she said, declining to give the cost of the campaign.

Experts said public ignorance, along with official ineptitude and lack of money, are hampering efforts to stamp out the disease in the country of 220 million.

Farmers often oppose the destruction of their fowl because of low compensation.



A full-grown chicken sells for 35,000 rupiah (\$3.85) in Jakarta, but the government only offers between 10,000-12,500 for each fowl killed.

Although bird flu remains essentially an animal disease, experts fear it could mutate into a form that can pass easily among humans, killing millions.

New fears that the virus had mutated into a form that can easily pass between humans arose this month after a series of confirmed or suspected cases in West Java's remote Cikelet village, where bird flu is rife in poultry.

The World Health Organisation (WHO) said there has been no evidence that human-to-human transmission had occurred in the area.

Source: Reuters

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