

Human-to-Human Infection by Bird Flu Virus Is Confirmed

By ELISABETH ROSENTHAL

ROME, June 23 — An Indonesian who died after catching the A(H5N1) [bird flu virus](#) from his 10-year-old son represents the first confirmed case of human-to-human transmission of the disease, a [World Health Organization](#) investigation of an unusual family cluster has concluded, the agency said Friday.

The W.H.O. investigators also discovered that the virus had mutated slightly when the son had the disease, although not in any way that would allow the virus to pass more readily among people.

"Yes, it is slightly altered, but in a way that viruses commonly mutate," said Dick Thompson, a spokesman for the agency in Geneva. "But that didn't make it more transmissible or cause more severe disease."

The greater importance of the slightly modified virus is that it allowed researchers from the W.H.O. and the [Centers for Disease Control and Prevention](#) in the United States to document that the virus almost certainly was passed from person to person.

In previous cases where human-to-human transmission was suspected, researchers could not test samples from the patients, or the virus in the patients was the same as that in poultry in the area.

The [genetics](#) work vindicates some Internet [flu](#) watchers who had disputed statements by a W.H.O. official and the Indonesian Health Ministry soon after the cluster was reported, saying it was possible the whole family had been infected by a barbecued pig, poultry or chicken manure.

The independent flu watchers, relying on local Indonesian news media, had argued that the pattern of dates on which different family members fell ill suggested that the virus had jumped from human to human to human.

Scientists have long said the A(H5N1) virus, which has killed or led to the culling of hundreds of millions of birds worldwide, does not spread easily to humans or among them. But they have worried that it might mutate to acquire that ability, setting off a devastating [pandemic](#).

More than 200 people have contracted bird flu worldwide, almost all of them after very close contact with infected birds.

International health officials have been in [Indonesia](#) for much of the past month, investigating a family outbreak that affected seven relatives in Kubu Sembilang, a remote village in the mountainous Karo district of Sumatra. Six of the seven died, and one is still hospitalized.

Although Indonesia has been struggling all year to control bird flu outbreaks among poultry, the family on Sumatra had no known direct contact with sick birds, although the first to die was a woman who sold vegetables in a market that also sold birds.

But scientists have long suspected that A(H5N1), though an avian virus, could also spread between people in rare cases, if there was prolonged close contact.

The family members in the cluster had a banquet in late April when the vegetable merchant was already ill and coughing heavily. Some spent the night in the same room with her, and some nursed sick relatives.

The first five family members to fall ill had identical strains of A(H5N1), one found in animals in Indonesia. But that virus had mutated slightly in the sixth victim, a child, and he apparently passed the mutated virus to his father, who cared for him in a hospital without proper protection, said Dr. Tim Uyeki, an American epidemiologist on the W.H.O. team.

Still, Mr. Thompson said there was no evidence that the mutated virus was better adapted to human infection. To the contrary, the agency has been following 54 relatives and neighbors for a month and none have caught it.

"So we know it is not more easily transmitted," he said.

Donald G. McNeil Jr. contributed reporting from New York for this article.