

Pandemic Postings

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Current global avian influenza activity¹
 Newly-confirmed outbreaks of highly-pathogenic avian influenza H5N1 in poultry, 14 Jul - 19 Jul 2006,² by country. The complete list of human cases and poultry outbreaks to date can be found on the [ARPHS website](#).

International

Avian influenza re-emerges in Thailand [WHO, 26/07/06](#). The Ministry of Public Health in Thailand has confirmed a case of human infection with H5N1 avian influenza. The patient, a 17-year-old man from Thap Khlo district of Phichit province in the north, developed symptoms on 15 July, was hospitalized on 20 July and died on 24 July. This is the first human case of H5N1 infection reported from Thailand in 2006. Field investigations have not found any indications of respiratory illness in close contacts of the young man.

According to Thai news reports ([CIDRAP, 24/07/06](#)), this case occurs in the context of the first outbreak of H5N1-avian influenza in poultry in Thailand in the last eight months. Thai agriculture officials said the virus was identified in a fighting cock from the northern province of Phichit. The dead bird was from Bang Mun Nak district, where almost 300 birds were culled after the mysterious deaths of about 30 poultry 2 weeks ago, the story said. Bloomberg News ([CIDRAP, 26/07/06](#)) reported that the case had been in contact with fighting cocks that had not been declared to authorities for fear of culling; the fighting roosters are reported to be worth as much as US\$13,000. Thailand's disease-control director said the young man also tested positive for dengue fever, making his case unique.

Avian influenza re-emergence in Laos [CIDRAP, 28/07/06](#). Laos has reported its first major outbreak of H5N1 avian influenza in more than 2 years, on a poultry farm in an area bordering part of Thailand that has recently been hit by the disease. An FAO official said the disease surfaced on a farm just south of the capital city of Vientiane and killed 2,500 chickens. The last poultry outbreak in Laos occurred in January 2004, according to the World Organization for Animal Health (OIE). Reuters reported that the same farm was the site of the latest outbreak and the one in 2004. Laos has not reported any human cases or deaths. The Laotian government culled all chickens on the farm, disinfected the area, and restricted movement of livestock within a 5-kilometer surveillance zone.

Economic impacts of avian influenza [World Bank, 29/06/07](#). In a speech to the 1st International Conference on Avian Influenza in Humans, World Bank economist Milan Brahmbhatt estimated that a severe avian flu pandemic among humans could cost the global economy about 3.1 per cent of gross domestic product - around US\$1.25 trillion on a world gross domestic product of \$40 trillion. This worst case scenario is based on an average attack rate of 35%. Brahmbhatt also suggests that the most immediate and largest economic impact of a pandemic might arise not from actual death or sickness but from the uncoordinated efforts of people to avoid becoming infected, as occurred during SARS. The speech, and accompanying PowerPoint presentation, also examines the impact of poultry-culling strategies on household income, by comparing the industrialised poultry industry of Thailand with the household backyard-based poultry sector in Vietnam.

	Human ¹ cases	deaths	Poultry ² outbreaks
Sudan	-	-	9
Total	-	-	9

Notes:

- The [World Health Organization](#) cumulative number of human cases of avian influenza (H5N1) has not been updated since 14 July 2006, prior to the last issue of Pandemic Postings.
- As reported to [World Organisation for Animal Health](#) (OIE)

International (contd)

Update on avian influenza in animals [FAO, 19/06/06](#). The Food and Agriculture Organisation of the UN (FAO) has published an update on the global distribution and control of avian influenza in animals. The report presents a country-by-country summary of recent avian H5N1 outbreaks, investigation and control measures in each country that has reported H5N1 in bird populations. The following general points have been abstracted from the report. From the end of 2005 to the first quarter of 2006, the disease spread to European and African regions, possibly as a result of severe winter conditions in Russia and the Caucasus pushing migratory birds south and westward. More than 30 countries or areas reported cases in poultry during the first half of 2006; of these, 23 reported H5N1 infection for the first time. More than 209 million poultry worldwide have died or been culled since January 2004.

The animal species playing a role in transmission, spread and introduction of the highly pathogenic avian influenza (HPAI) H5N1 virus are essentially domestic and wild birds. Although some fifty non-domestic bird species have proved susceptible to infection from the virus, epidemiological data currently available suggests that, among the wild birds implicated in the transboundary introduction of the virus, aquatic birds play a major role.

The nature of transboundary spread of H5N1 has varied between continents. In most European countries where the H5N1 virus has appeared, introduction has occurred with wild birds. In East and Southeast Asia, the disease has been arguably spread by a combination of domestic and wild birds, while in Africa it appears that poultry trade and traffic, both legal and informal, were responsible.

GSK reports high immune response with low level of antigen in new H5N1 vaccine [GSK, 26/07/06](#) and [CIDRAP, 26/07/06](#). Pharmaceutical company GlaxoSmithKline (GSK) has announced data showing that its H5N1 vaccine achieved a high immune response at a low dose of antigen. The vaccine, which uses a "novel, proprietary adjuvant", enabled over 80% of subjects who received two vaccine doses containing 3.8µg of antigen to demonstrate a strong seroprotective immune response. A typical dose of seasonal influenza vaccine is 15µg: development of a safe and immunogenic vaccine that uses a low antigen dose would increase production capacity. GSK estimates that the vaccine price would be roughly US\$7.35 per dose.

Background

Avian influenza among waterfowl hunters and wildlife professionals [Gil et al, Emerg Infect Dis \[serial on the internet\], 2006 Aug \[cited 31/07/06\]](#). A cross-sectional seroprevalence study in Iowa showed that persons who were routinely heavily

exposed to wild ducks and geese through recreational activities (duck hunting) or through their employment (bird banding) showed evidence of past influenza A/H11 infection. This is the first study to show direct transmission of influenza A viruses (albeit not H5N1) from wild birds to humans.