The threat of bird flu reaching Australia

Frank Gaglioti 12 September 2024

Scientists have issued warnings that the H5N1 avian influenza panzootic raging around the planet is likely to arrive in Australia in spring and summer via migratory birds. A panzootic is the equivalent of a pandemic in animal species. Currently Oceania, including Australia, is the only part of the world free from H5N1. The superspeed spread of the virus across the planet and its infection of mammal species, including humans, poses the danger of a new pandemic.

The most likely route the virus will be transferred to Australia is through the migration of infected birds from Antarctica across to the sub-Antarctic islands such as Macquarie Island, south of Tasmania. H5N1 reached Antarctica in February where it has devastated bird life.

At a meeting held at the headquarters of the Australian Antarctic Division (AAD) in Tasmania last month scientists mapped out the likely scenarios of bird flu arriving at Macquarie Island.

AAD operations manager Robb Clifton told the Australian Broadcasting Corporation (ABC) that "[the virus builds] up to where we think we're at real risk of transmission into the human population because of the proximity of the wildlife on Macquarie Island." He warned that it was virtually inevitable the virus would reach the Australian territory, saying: "It's not a matter of if, it's a matter of when."

AAD Sea bird ecologist Louise Emmerson explained that the virus had already infected mammal species: "It has also spread to other animals such as, most recently cows, cats, seals and sea lions, it's been very devastating." However, she underplayed the potentially devastating health impact on humans, stating that "animal-to-human transmission is low."

The bird flu virus, however, evolves very rapidly and with every spillover event into humans the virus could mutate to allow humanto-human transmission and potentially produce a pandemic. The virus is known to be highly lethal for humans.

According to the World Health Organisation (WHO), 903 people have become infected with H5N1 since 2003, and of these 463 died, indicating a lethality of 51 percent. The current COVID pandemic with a lethality of approximately 2 percent has killed over 27 million people due to its very high transmissibility.

The dangers were highlighted recently by the death in Prey Veng province in Cambodia on August 20 of a 15-year-old girl who became infected with H5N1 after coming in contact with an infected chicken. She was probably infected with the 2.3.2.1c clade that is known to be circulating in Asia. Since 2023, 16 cases have been found, including 10 this year. A clade is a genetic grouping that has a common ancestor.

On 22 May, the first human case of the virus in Australia was

reported in Victoria when a two-year-old girl returned home from India where she had acquired the infection. She had contracted the virus in Kolkata, India in February. She spent over two weeks in intensive care before finally overcoming the infection.

The child had been infected by the H5N1 2.3.2.1a clade, common in South Asian birds, especially in Bangladesh and India.

Over May and June, there were three outbreaks of another bird flu virus—the highly pathogenic H7 virus—in poultry farms in Victoria, New South Wales and Canberra. The outbreak was very unusual as three different clades were involved, including H7N3, H7N9 and H7N8.

The almost simultaneous outbreak of three separate strains of the H7 influenza virus was extremely unusual. Fortunately, the outbreaks were contained by quarantining the affected properties and the culling of infected birds. In total 11 farms were affected, and 1.8 million birds were euthanized.

The H7 form of avian influenza is highly contagious and can result in up to 100 percent lethality in domestic poultry. Humans who become infected can have severe respiratory illness with a lethality of 40 percent. An outbreak of H7N9 in Shanghai, China in 2013 infected 125 people and resulted in 25 deaths.

The existence of numerous clades of avian influenza reflects the evolutionary history of the virus and its capacity to mutate very rapidly.

The immediate response from Australian authorities to the likely arrival of the H5N1 strain has been to minimize its significance.

Victorian Chief Health Officer Dr Clare Looker told ABC radio: "Fortunately, this virus, the avian influenza H5N1, is actually much, much less transmissible than seasonal flu. There are very few cases internationally of this being passed from human to human."

Yet scientists are particularly concerned with the H5N1 2.3.4.4b clade. Currently there is a H5N1 panzootic killing huge numbers of birds internationally, significantly raising the probability of cross over infections in mammals and humans.

"For some reason, in the last five years [avian flu] has become supercharged. It's exponentially increased in terms of these spillover events and the dynamics of it have certainly shifted up a gear," chair of Veterinary Public Health at the University of Sydney, Professor Michael Ward, told the *Sydney Morning Herald*.

A spillover event is where the virus, that predominantly infects birds infects other animals such as mammals, including humans. So far, it is estimated that 485 species of birds and 48 species of mammals have been impacted.

The H5N1 2.3.4.4b clade was first detected in a goose in China

in 1996. The virus was extremely infectious and lethal, spreading to every continent including Antarctica, with the only exception being Oceania.

In July 2005, a communication in *Nature* described the first mass mortality event in wild birds in China. In total 1,500 birds were found dead.

Importantly the authors warned of the threat of a future pandemic: "The highly pathogenic H5N1 influenza virus has become endemic in poultry in southeast Asia since 2003 and constitutes a major pandemic threat to humans."

An article published in May by Dr Michelle Willie, a researcher at the Doherty Institute, entitled "Chickens, ducks, seals and cows: a dangerous bird flu strain is knocking on Australia's door" traces the rapid spread of the virus internationally.

Willie described the rapid spread of the virus, writing: "But the real change came in 2020. The number of outbreaks in poultry and wild birds dramatically increased. In 2021, reports streamed in of mass mortality events in Europe and the virus rapidly travelled the world. The world was in the grip of a "panzootic"—a global pandemic in animals."

As well as devastating the wild bird populations, H5N1 has hit mammals. It is estimated that more than 50 species of predatory and scavenger animals have been recorded as dying from avian influenza, mostly after having eaten infected birds.

Of major concern is the spread of avian influenza through dairy herds in the US. The first detected infection was in March 2024 in Michigan, but it has now spread across the US to 13 states, with 191 herds affected. Four humans working in the affected dairy farms have been infected. Humans become infected when in close contact with the infected cows or by consuming milk that has not been pasteurised.

The infection of humans has major implications. With each spillover event into a human the chances of the virus developing the capacity for human-to-human infection is multiplied.

The threat has been heightened through the inaction of government authorities. Unpasteurised milk is still being sold that is consumed by 4.4 percent of Americans. Contact tracing of cattle and workers in proximity with the infected animals is not being done, leaving health authorities blind to a developing crisis. Only limited genomic analysis has been released, making it impossible to determine how the virus is evolving.

This likely means that more herds and humans than have been identified have been infected.

A perspective published in the *World Socialist Web Site* on June, entitled "The destruction of public health and the growing threat of an H5N1 bird flu pandemic," explained: "The deepening threat of a bird flu pandemic is now concentrated in the United States, where the response of the dairy industry, in collusion with the Biden administration and all responsible federal agencies, has been nothing short of criminal. Sitting on an epidemiological time bomb, they are proceeding with reckless disregard for the health and lives of the US and world population."

Flying in the face of scientists warning of the growing threat of a bird flu pandemic, the authorities continue to downplay the possible threat. This parallels the stance taken internationally in adopting a "forever COVID" program that has resulted in 27 million deaths. If a strain of bird flu develops into a pandemic, the results would be catastrophic.

"This virus in its current state does not look like it has the characteristics of causing a pandemic. But with influenza viruses, that equation could entirely change with a single mutation," an immunologist at the University of Pennsylvania in Philadelphia Scott Hensley told *Nature*.

As in the US, the federal Labor government in Australia has eliminated all mitigation measures aimed at containing the COVID pandemic. It has acted in a similar manner regarding this latest bird flu threat, ignoring scientists' warnings and failing to alert the population to the possibility of bird flu arriving in the country.

In a press conference in June, Health Minister Mark Butler stated: "There has not been a case of infection here in Australia, although there has been a young person who returned to Australia from another country earlier this year with an infection. From human health portfolios, we're monitoring the avian flu spread around the world as well as instances here in Australia very, very closely."

In July, the Australian government set aside the pitiful sum of \$7 million to deal with the imminent arrival of the virus. On August 6 in a speech to a Zoo and Aquarium Association conference, Environment Minister Tanya Plibersek declared said the H5N1 virus "is coming for us," remarking on deadly consequences for wildlife but saying nothing about the potential danger to humans.

As in the case of the deadly COVID pandemic, the government is taking the same profits-before-lives approach to the dangers of bird flu to the population.



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