

Bird flu in perspective

We asked four experts on bird viruses for their views on avian influenza.



Tim Graham/Alamy

News reports over recent months would have us believe we are on the brink of Armageddon because of a new strain of avian influenza virus. This virus has swept through domestic chicken populations in the Far East and has reached mainland Europe. It now threatens the UK.

The avian virus has, infrequently, crossed into humans, with deadly consequences. Unfortunately, the intimate association between humans and domestic poultry in the Far East provides an ideal opportunity for the virus to spread between species. At the time of writing, the essential genetic changes that make it capable of being transmitted from person to person have not taken place. Almost every human infection with avian flu can be clearly traced to direct contact with an infected bird, either living or recently dead.

Avian influenza can affect all types of birds. They carry the viruses in their intestinal tracts. Infected birds can also release virus in saliva and nasal secretions. Waterfowl are particularly prone to influenza because when the viruses are shed into water they can survive until a new host ingests them.

Whilst we are cautious about the potential threat, the virus in its present form probably doesn't present a serious risk to people in the UK. This is helped by the fact that, here, farmed chickens are fairly isolated from human populations, apart from the farmworkers and poultry processors. However, if the virus reorganises its genes with other strains of influenza virus, or if it mutates, it could become more dangerous to people.

Two of us (Ernie and Alistair) have studied another controversial bird disease that can infect humans—West Nile

virus. Our work shows that this virus can exist in a population of birds without causing disease. The situation is almost certainly similar for avian flu. Forms that don't cause a virulent disease are probably already circulating in UK bird species. Studies in nearby Holland have isolated such viruses from both wildfowl and poultry.

To assess the risks, we need to know much more about influenza in the natural environment. Monitoring UK bird populations for viruses would be a major task, but an intelligent and directed approach would yield data that would warn us of future problems and help us design appropriate prevention strategies.

Want to know more?

You can follow the progress of avian flu and many other infectious diseases by going to www.promedmail.org/pls/promed. Robert Possee comments, 'It is a bit dry, but contains pure data, without spin. Mostly, it is accurate as scientists are reporting confirmed findings.'

Ernie Gould, Miles Nunn and Robert Possee are at the Centre for Ecology & Hydrology (CEH), Oxford, where they research virus evolution and emerging wildlife diseases in mammals, birds and invertebrates. Their emails are eag@ceh.ac.uk, amn@ceh.ac.uk and rdpo@ceh.ac.uk respectively. All three have experience of working with influenza viruses. Alistair Dawson is the senior scientist at CEH Monks Wood, email: asda@ceh.ac.uk.