

UK poultry can roam free outside again, but bird flu risk hasn't gone away

April 21 2023, by Paul Wigley



Credit: AI-generated image ([disclaimer](#))

The [UK government](#) recently announced that as of April 18, poultry and captive birds [can be kept outside](#) again as the threat from bird flu eases. These mandatory housing measures were introduced across England and Wales [in the autumn of 2022](#) following the unprecedented spread of bird flu in the UK and Europe.

Indeed, the past two winters in the UK have seen our largest and most prolonged outbreak of [bird flu](#) in modern times, leading to substantial controls in poultry production, the mass death of seabirds, cases in wild mammals and a single human case.

So how did we get here, and has the threat in the UK really receded? Let's take a look.

Avian influenza, commonly known as [bird flu](#), is caused by the influenza A virus which can lead to disease in many hosts including humans. However, its ability to infect and transmit to different hosts depends on which subtype or serotype of influenza A is involved.

Influenza A serotypes are designated based on [two proteins](#) found on the virus's surface called neuraminidase (N) and haemagglutinin (H), each of which come in several different types. The combination of H and N types (for example, H5N1, H1N1 or H3N2) defines the serotype. Within the serotype there can also be a number of variants called clades.

The [current outbreak](#) in the UK and elsewhere is caused by a [2.3.4.4b clade](#) of the H5N1 serotype. Typically, horse strains of influenza A are H3N8 and H7N7, pigs and humans are susceptible to H1N1 and H3N2, and [avian influenza](#) encompasses H5 and H7 serotypes.

In general, human influenza viruses have little capacity to infect animal species and vice versa, but sporadic infections can sometimes occur between species.

How did the current outbreak spread?

The origins of all influenza A serotypes are thought to be in aquatic birds such as ducks, geese, gulls and wading birds. The [2.3.4.4b clade](#) of the H5N1 serotype, for example, is descended from the goose/Guangdong

lineage, first isolated in a goose in Guangdong, China.

This clade emerged around 2021 and has caused several outbreaks globally, including in Europe, Asia, and the Americas, most likely spread by [migratory birds](#). As many geese and duck species can carry the virus and shed it in their droppings without becoming ill they can easily transmit virus to other bird species.

Normally in the UK we see a number of localized bird flu outbreaks each winter, but the levels of the current virus—identified in more than 300 UK [poultry farms](#) in the past two years—is unprecedented in modern times.

And while avian flu has traditionally been a problem primarily for chickens and other domestic birds, this outbreak has been unusual in its capacity to cause disease and death in wild birds too. This strain has been found to cause disease in [over 60 wild bird species](#) in the UK, including many not previously known to be affected.

The reasons for this are not clear but could include changes to migratory flyways (the routes birds use for migration) and increased susceptibility due to climate change or pollution affecting the general health and immune systems of seabirds.

This outbreak has unquestionably been deadly. Across 37 countries affected, more than [50 million birds](#) have been culled.

Beyond birds

Mammals can become infected with [bird flu](#) as a result eating infected birds—through predation or scavenging—or from coming into contact with bird feces. In the UK most [mammalian cases](#) are in species likely to have consumed infected birds including foxes, otters and weasels.

The UK Health Security Agency has a zero to six level of threat for pandemic avian influenza. The alert level has remained at [level 3](#) (limited transmission in mammals other than humans) for some time, with the only evidence of transmission between mammals from a [mink farm in Spain](#).

Since December 2021 there have been [seven reports](#) of human infection with 2.3.4.4b H5N1 around the world. Generally, the risk of transmission of avian influenza to humans is low. Most cases are through direct contact with live chickens or ducks.

In the current outbreak cases in Spain and the US were found in [poultry workers](#) and the [single UK case](#) in a man keeping infected ducks in the household. A [nine-year-old girl](#) from Ecuador who contracted the virus was reported to be in contact with backyard poultry.

Balancing risk with animal welfare

Over the past two winters mandatory orders to house birds, including [free-range](#) and backyard flocks, have helped reduce the potential for transmission into, within and from poultry. The greatest risk of influenza to poultry is through the autumn and winter months with the migration of birds, such as barnacle geese.

As we move out of peak influenza season, the risk should be lower in the short term. The removal of housing restrictions is a decision that balances infection risk with animal welfare.

Almost two-thirds of [UK egg production](#) is free range and it's thought there could be as many as [one million UK households](#) that keep backyard chickens. Allowing these birds back outside will benefit their health.

That said, it's increasingly likely that H5N1 is here to stay and will remain a problem for [poultry production](#) and wild birds, and a threat to other species. For now, advice to avoid contact with infected birds and report any [suspected cases](#) is sensible. We will need ongoing surveillance of poultry, [wild birds](#) and mammals to assess risk and potential emergence of more transmissible strains in the future.

This article is republished from [The Conversation](#) under a Creative Commons license. Read the [original article](#).

Provided by The Conversation

Citation: UK poultry can roam free outside again, but bird flu risk hasn't gone away (2023, April 21) retrieved 11 July 2024 from <https://phys.org/news/2023-04-uk-poultry-roam-free-bird.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.