

By Dr Toh Han Chong, Editor

Bird Flu Fears

– Are We a Little Chicken or *Chicken Little*?



“More people have probably died from eating dodgy Chinese food than contracting some form of avian flu.”

– Lord Stratford (eminent animal welfare campaigner), in British Parliament on 26 October 2005

Watching Disney’s latest animated movie *Chicken Little* taught me two things. Firstly, when a cute chick tells you that the sky is falling and aliens have invaded planet Earth, pay attention. Secondly, every dog, I mean chicken, has its day.

The late Sir Fred Hoyle, described by Emeritus Editor of the journal *Nature*, Sir John Maddox, as a man ahead of his time, and his colleague Professor Chandra Wickramasinghe believed that the influenza virus came from outer space. According to Hoyle and Wickramasinghe, these virulent biological particles arrived on Earth through passing comets and cosmic dust. Needless to say, they received the same belittling reception from the larger scientific and lay community as *Chicken Little* did in the town of Oakey Oaks. Ironically, the latter had believers only amongst a big pig named Runt-of-the-Litter and an ugly duckling called Abby Mallard – all three creatures

being known natural hosts of the H₅N₁ avian influenza A virus.

In 2005, the Year of the Rooster, one of the biggest global medical concerns must surely be an imminent H₅N₁ avian influenza A pandemic. In this issue of the *SMA News*, senior infectious disease specialist Dr Wong Sin Yew expertly presents the key issues surrounding H₅N₁ avian influenza A viral infection. The influenza virus represents one of the cleverest of all pathogens, and a master of disguise and reinvention, changing appearances through antigenic drift and shift more often than actor Jim Carrey’s character from *The Mask*. The H₅N₁ avian influenza A virus took only a three-amino-acid mutation in the haemagglutinin viral protein spike to hop into a human host, a three-year-old Hong Kong boy, who died from the infection. But historically, the H₅ strain has not easily crossed the species barrier into mammals, including humans. Thankfully, the highly

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pathogenic H5N1 avian virus remains endemic and uneradicable mainly in birds, as long as antigenic mutations do not trigger easier human-to-human transmissions.

But some international health experts are still worried, and wondering why the pandemic has not arrived yet. Since 2003, over 70 deaths from bird flu have been reported in Asia, while this year, for the first time, four bird flu deaths occurred outside Asia in Turkey. With over 100 million birds destroyed, mainly in Asia, farming communities throughout South-east Asia dealing with birds and poultry have been crippled. The city of Guangzhou in China, felt to be an epicenter of emerging epizootic infections, has over 40 million human inhabitants, and over 700 million chickens living in sometimes cramped and unnatural conditions and from which over 500 strains of influenza viruses have been identified. Some countries have been uneasy with the reporting of cases of human infections and mortalities from bird flu. Other countries have been plain acting blur on the matter.

Big Pharma has allowed generic Tamiflu (oseltamivir) to be manufactured and also dropped its purchase price to poorer countries. Tamiflu resistance has begun. It will be the poorer, sicker folks living in substandard and overcrowded conditions who will be hardest hit by any bird flu pandemic, not unlike the battle weary soldiers in overcrowded trenches in the European front during the First World

War who faced the 1918 influenza pandemic. An accessible bird flu vaccine with adjuvant boost that activates broad immunity may better protect the global community if it can be produced.

Fortunately for me, a lover of Cantonese roast duck, Kentucky Fried Chicken, London Chinatown fried yam duck and chicken vindaloo, eating well prepared poultry products is not so likely to cause a risk of catching bird flu. One is more likely to catch bird flu if one goes to the Ministry of Sound or Zouk packed with birds like the falcated teal – by inhaling their infectious droplets during really close body-to-bird, cheek-to-beak contact gyrating and pecking on a congested dance floor. Worse still, if some foul fowls peddle knock-off Tamiflu to other pill-popping birdbrains in dark corners, a potential Tamiflu-resistant H₅N₁ strain will explode. Serving raw duck blood pudding (its ingestion resulting in two bird flu deaths in Vietnam) with Bloody Mary's at the bar would really be pushing the pandemic risk.

So, is civilisation as we know it going to face an apocalyptic bird flu pandemic of Hitchcockian proportions? We can only be thankful for small mercies, a more compassionate *Big Pharma*, and national and international efforts to provide aid, expertise, monitoring, transparency and preparedness measures to make this a safer world for us all. I believe there is no need to fly into a panic like headless chickens.

Happy New Year! ■