

Surf Report...

February 2004

Dear fellow surfers,

Hello to ANZSRS surfers for 2004, and I hope you are all going well. I was musing over the last couple of months, what on earth was I going to put into this next column? No great inspiring thoughts were happening and the discussion groups both here and elsewhere were quiet. And then it came by way of the news broadcasters... **H5N1** Influenza often called Avian Influenza or Bird Flu. Sensational headlines have started appearing with words like “killer” and “pandemic”: Reason enough for concern.

The Centre for Disease Control and Prevention in the US ([CDC](#)) write “Influenza A (H5N1) is a subtype of the Type A influenza virus. Wild birds are the natural hosts of the virus, hence the name avian influenza or bird flu. The virus was first isolated from birds (terns) in South Africa in 1961. (The first Avian Influenza other than H5N1 was seen in Italy a hundred years ago. See [WHO](#).) The virus circulates among birds worldwide. It is very contagious among birds and can be deadly, particularly for domesticated birds such as chickens.”

In the current epidemic that began in December / January, nine Asian Nations have been affected, Cambodia, China, [Hong Kong](#) (in a single peregrine falcon), Indonesia, Japan, Korea, Laos, Thailand, and Vietnam, and other nations are taking precautions. Singapore is about to cull 250 chickens. So far thirty-three million chickens have been slaughtered across Asia since the current epidemic broke out. At least 10 people have died. The number is increasing daily.

So what is the **H5N1** Influenza and should we be worried? Even though infection rates for humans are low, we do have good reason to worry. In 1997, the first direct bird-to-human transmission of H5N1 was documented during an outbreak of avian influenza among poultry in Hong Kong; the virus caused severe respiratory illness in [18 people, of whom 6 died](#). Approximately 100 had been infected. Since that time, there have been other instances of H5N1 infection among humans. So far H5N1 viruses have not appeared to be capable of efficient human-to-human transmission. This is something that is being watched carefully and is being investigated during the current outbreak. Because these viruses commonly do not infect humans, there is little or no immune protection against them in the human population.

Alarmingly the WHO now believe that the first human to human transmission of H5N1 has occurred in Viet Nam. [Two sisters](#) most probably have been infected by their brother. All have died. More of this and how it may have happened can be read at various [discussion boards](#).

The fear is that if enough people are infected with H5N1, the chance are high that there will be enough survivors, in which H5N1 will undergo small changes in it's antigenic composition, known as [antigenic shift](#). The virus genes may be

expressed in other virus strains (usually benign) but easily transferable between humans. In other words the surviving victims become a mixing vessel for the bad H5N1 with the insignificant benign but easily transmissible influenzas. This could create a “super-virus” causing a pandemic. Hence the worry.

The pandemic viruses of [1957 and 1968](#) were reassortants of human and avian subtypes of influenza A. The [Spanish Flu](#) pandemic of 1918 is believed to have killed between 20 and 40 million people worldwide, more than the Plague of the 1300's. We will probably never know exactly how many died, because the Spanish Flu pandemic occurred during WW1. The World Health Organisation has attempted to devise a [plan](#) for pandemic control, but they do not have all the answers themselves.

What is happening locally? The Victorian Brack's Govt is planning to screen [migratory birds](#) flying into Victoria, bringing the H5N1 strain. Five outbreaks of Avian Influenza strains infecting chickens have quickly been contained in Victoria in the last 30 years. Presumably any human to human strain identification will rely solely on human screening. A “Bird Flu Committee” has also just been convened in the NT.

There is currently no vaccination available against H5N1, but the [World Health Organisation](#) does recommend that those who are at risk of exposure, including health workers, have the recommended seasonal influenza vaccination. This will at least help to prevent super-viruses being formed.

Now.... Along the same vein is some more disturbing news about SARS. So far this year, four people in China have been identified as infected with SARS. Alarmingly there is a recent report published in the [Science journal](#) titled, “Molecular Evolution of the SARS Coronavirus During the Course of the SARS Epidemic in China”. The researchers followed a group of SARS victims, and found that there was a traceable mutation rate in the viral genome during the epidemic. This must mean that SARS is now different from when it started.

.....Enough of doom and gloom.

A link of interest is the news portal [PulmonolyLinx](#). The page shows recent journal articles of interest in Pulmonary Medicine. They want you to register, and then they can send ads your way. I'm sure it is one of many such portals.

The [ARTP](#) have published their most recent issue of Inspire. Unfortunately it is now for members only, but it may be possible to click on a copy. Try it and see. I managed to download one from the page. There is a great article on running a lung function lab in 1960.

Thanks to Dr Graham Hall, who has kindly offered to help with this column. We will be taking turn about with the monthly issues. If you would also like to help then please be in touch. And if you have any suggestions or criticisms then please let us know.

Happy surfing...

Andrew Coates, CRFS

ancoates@mater.org.au