

Avian flu & profit margins

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Article

New Sunday Times - 11/20/2005

IT looks like the world will be no longer be safe in the years ahead. The threat of war and violence will continue to be a feature of the new millennium with Palestine, and now Iraq, as the crucibles of insurgency.

This has been acknowledged recently by London's former ambassador to Washington when he said the Iraq war fuelled terrorism.

It is bound to spread to other frontiers in the region depending on how the cards are stacked.

What is certain, however, is the threat from the avian flu that is now extending its geographical reach beyond the Asian borders into Europe and possibly the Americas.

So far, more than 100 known cases have occurred in Southeast Asia and at least 60 have died in Cambodia, Indonesia, Thailand and Vietnam.

In almost all these deaths there was direct contact with infected birds. The global reservoir of flu viruses in avian species is said to be astonishingly large.

At any given time, according to one expert opinion, as many as 10 to 20 per cent of otherwise healthy waterfowl may be infected with one or more of the major avian influenza types.

In fact, millions of billions of virus particles are silently replicating, exchanging genes, mutating and evolving in waterfowl, wrote Dr Burke, a professor of International Health and Epidemiology at the Johns Hopkins Bloomberg School of Public Health (WSJ Asia, Nov 4-6).

Occasionally, an otherwise mild avian influenza virus changes to become a highly pathogenic virus that can infect, kill and start an epidemic in domestic poultry.

The situation becomes even more life-threatening once the flu viruses or bird-derived influenza virus genes enter into humans and adapt to become transmissible from human to human.

This probably signals the beginning of a global pandemic such as in 1918, 1957 and 1968.

A pandemic is a global outbreak that occurs when a new virus appears and then spreads from person to person worldwide. It is different from a seasonal outbreak or an "epidemic".

The pandemics during the last century were related to the emergence of several new influenza virus subtypes, all of which spread around the world within a year of being detected.

For example, according to the US Centers for Disease Control and Prevention, the Spanish flu pandemic of 1918-1919 caused the highest number of known influenza deaths.

Although, the actual influenza virus subtype was not detected in the 1918-19 pandemic, more than 500,000 lives were lost in the US alone.

Worldwide, the toll was 50 million, some deaths due to secondary complications. Nearly half of those who died were young, healthy adults.

The virus H1N1 is said to still circulate today after being re-introduced into the human population in 1977.

In the same year, there was a benign pandemic, called the "Russian flu" which primarily affected persons born after the 1950s. Reportedly, H1N1 too has co-circulated with H3N2 virus in humans since then.

In the 1957-58 pandemic called the Asian flu, about 70,000 deaths occurred in the US. It was first identified in China in late February 1957 when the H2N2 virus spread to the US in less than four months.

A decade later, a new pandemic appeared between 1968 and 1969. Known as the Hong Kong flu, it caused 34,000 deaths in the US. The H3N2 virus was first detected in Hong Kong in early 1968 and is still circulating today.

Unlike the 1918-19 pandemic where the virus appeared to have an avian origin, the later two pandemics were caused by viruses containing a combination of genes from a human influenza virus and an avian influenza virus.

The Asian Development Bank recently estimated that a flu pandemic this time could result in economic losses of about US\$300 billion (RM1.14 trillion) in the region and push the world into a recession.

About three million people in Asia will die with China, Hong Kong, Malaysia, Singapore and Thailand being the hardest hit, the bank predicted.

It is worth recalling that in 1997, the influenza virus H5N1 which emerged in Hong Kong by gene-swapping between bird viruses, had for the first time infected and caused illness in humans.

Not surprisingly, as mentioned by Dr Burke, if and when a human pandemic does break out, it will begin in a chain of transmission: firstly bird to human, then human to human.

Scientists have expressed fear that as the virus mutates, this can happen more readily. The location of the initial human chain transmission will be determined by where the viruses were transmitted to humans.

This in turn is a function of the intensity of infection in the local avian populations and the intimacy of contact between humans and birds.

Models developed by Dr Burke show it may be possible to identify a human outbreak at the earliest stage.

However, the next problem is whether international resources could be deployed to rapidly tackle the initial human pandemic burst.

This is related to the intensity of human surveillance for the flu, especially in areas where it is prevalent in birds. Otherwise, given the rapid global transportation, the pandemic will be global in a matter of months after the initial outbreak.

With respect to deploying resources, the availability of anti-viral drugs that could be supplied globally to quickly contain the situation is of major concern.

More so when there is only one drug which is said be effective, called oseltamivir or Tamiflu.

Not only is it expensive, it is also purportedly difficult to make, according to the company, Roche Holding AG (WSJ Asia, Nov 4-6).

Further, making the drug is described as a dangerous process involving a potentially "explosive" chemical step in the production process.

While this makes a good scare tactic to keep other companies from duplicating the drug, two generic-drug makers in Taiwan and India were not intimidated and produced the drugs in their laboratories within two weeks. Thanks to their bold efforts, the world now is in a better position to combat an avian flu epidemic if and when it occurs.

Therein is an important lesson to be learnt: Profits seem to be more important than saving lives of people in dire need, especially when they are from the Third World.

Remember Africa and the HIV/AIDS situation? There is medication available but it is very expensive and out of reach of the vast number of HIV/AIDS sufferers.

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