



Article about bird flu written in November 2005.

The Director-General of the World Health Organization (WHO) Lee Jong-Wook said on November 6th 2005 that the H5N1 avian influenza virus was spreading fast. "We have been experiencing the relentless spread of avian flu. Migratory birds, as they move around the world to seasonal breeding and feeding grounds, are infecting domestic poultry flocks around the world." He said it was only a matter of time before an avian flu virus, most likely H5N1, acquired the ability to be transmitted from human to human.

David Nabarro Bird Flu chief at the UN / WHO, declared in October 2005 that a human pandemic of [bird flu](#) can no longer be prevented, even though the first human to human case

has yet to be verified.

However the REAL issue is not whether bird flu will jump successfully into humans in an infectious form, but how long it will be before we see a global pandemic of a mutant flu - from whatever origin - birds, pigs or whatever, combined with human flu genes. Since such mutations occur at least once a year, WHO believes it can only be a matter of a decade or two before this happens.

This WHO prediction on bird flu in 2005 is based on the fact that the world has lost control of [bird flu](#) . Every time a human catches the infection from close contact with such a bird there is a small risk that the virus will mutate - if the person is already infected with ordinary human flu.

The US has committed \$7bn to help prepare the country for what is being increasingly seen by the government as an inevitable major flu pandemic with high mortality - whether from a [bird flu](#) mutation or a totally new new viral type. "The only question is when."

US worst-case estimate is anywhere between 200,000 and 1.9 million deaths with 92 million others becoming ill. The government announced in early December 2005 that they had modelled a theoretical outbreak of human to human [bird flu](#) in Thailand, which produced an estimate of up to 722,000 cases just 6 weeks later across America, rising to 92 million cases just 10 weeks after that. Clearly spread at such speed would overwhelm [health care](#) systems, and would happen too fast for vaccines to be prepared and given.

A moderately severe pandemic on the scale of the 1968 pandemic, adjusted for the growth in

US population, would cost the US economy \$180bn not including business disruption.

The UK government has declared [bird flu](#) as public health enemy number 1. It has given a commitment to try and vaccinate the entire population of the country against the new human variant once one emerges, even though spread of such a virus could occur months before vaccinations are manufactured and given.

The World Health Organisation has warned repeatedly of significant [risks](#) to global health from new [mutant viruses](#) - of which HIV, SARS virus and Bird Flu virus are three of many examples we have seen. I have also warned about these [risks](#) since 1987, in most presentations to corporations and also in the books Futurewise (1998/2003) and The Truth about [AIDS](#) (1987/2004).

Just one of these is the form of Bird Flu caused by virus H5N1. In mid April 2005 the Viet Nam Ministry of Health reported to WHO that 41 cases from 18 cities and provinces had been detected in since mid-December 2004. Of these cases, 16 had died and six remained under treatment. By October 17th 2005 there had been 117 human cases of which 60 had died. By mid December 2005 the numbers reported had risen to around 150 of which half had died, with growing concerns about the possibility of many other missed cases.

Human [bird flu](#) is usually only suspected when someone has a severe, unexplained flu-like illness, in an area where birds are dying rapidly. Mild cases are inevitably going to be missed, unless we start testing groups of other people for antibodies to [bird flu](#). And outbreaks among birds can also be missed or go unreported, as was the case for more than 8 weeks in parts of Ukraine through the Autumn.

Possible Economic Impact of Bird Flu Mutation

A human influenza pandemic could cost the world's richest nations \$550 billion, according to the World Bank (Report November 6th 2005).

Previous studies on flu pandemics have suggested any new outbreak could kill between 100,000 and 200,000 people in the United States alone, which could translate into economic losses for the country of between \$100 billion and \$200 billion. This estimate includes 700,000 or more hospital admissions, up to 40 million outpatient visits and 50 million additional illnesses. However, as we have seen above, the worst-case US government estimate is of up to 1.9 million deaths..

The World Bank has extrapolated from the US figure based on only 100,000 to 200,000 deaths, to all high-income countries, with a present-value total loss of \$550 billion. The loss for the world would be significantly larger, because of the impact in the developing world.

The Asian Development Bank warned that the economic damage in the East Asia region from a pandemic could be as high as \$282bn (£158bn), assuming 20% of the region's population falls ill.

A two percent loss of global gross domestic product during a pandemic -- like that caused by SARS in East Asia during the second quarter of 2003 -- would represent about \$200 billion in losses in one quarter or \$800 billion in a year.

The US. government has published its own report on the possible impact of [bird flu](#) mutations on the US economy. The health costs alone of a moderately bad pandemic, not including disruption to the economy, are estimated to be \$181 billion. This figure describes a pandemic similar to that of 1968, which killed about 34,000 Americans, a figure close to the annual average of flu deaths now in a larger U.S. population. Yet the 1918 pandemic killed 500,000 Americans. Economic disruption, through travel limitations and a sharp rise in sick days, would be enormous. The US report predicts that a worst-case avian flu pandemic could kill from 209,000 to 1.9 million Americans. Outside estimates of a global toll have ranged as high as 50 million or 60 million.

Our world is very open to disruption by lethal [mutant viruses](#) because we still have no antiviral drugs that are as effective as penicillin and other antibiotics against bacteria.

The economic impact of an uncontrolled pandemic could be devastating to the [global economy](#) as a whole, if death rates are high, and the effects could last more than a year. Some kinds of business such as conferencing and tourism could be severely affected in some parts of the world at an early stage.

Impact is likely to be greatest on all activities which cause people to gather together, on travel and tourism, but also on parts of the food and manufacturing industries as well as other business sectors. It all depends on how many cases there are of a human form of the infection, where they are, what the death rate is and how infectious it seems to be, and what the public reaction is.

Some countries such as America have already indicated that they may close borders if a dangerous super-flu pandemic seems to be starting.

As we saw with SARS, there would only need to be a few thousand cases with a 10% mortality ([bird flu](#) at present kills 50% who get it) to cause major business and leisure disruption in different parts of the world. The cost to the regional economy of Sars was been estimated to be many billions of dollars. Despite this, in early November 2005 markets had yet to price Bird Flu risk into their forecasts and risk assessments.

The greatest factor is likely to be emotional: worries, uncertainty, fear, loss of confidence, with postponement of expenditure until the situation is more certain.

The British government by October 2005 was working on the basis of a million infections in the UK with 50,000 deaths - four times the normal annual death toll from flu - but with a contingency plan in case the death toll was more than ten times as high.

So long as business and consumers believe that a pandemic is just a worse version of the usual

flu epidemic, it is likely that impact will be relatively small in the short term. However, playing down the risk could contribute to loss of control by making it difficult to justify radical control measures.

Government leaders may be faced with difficult choices: give clear, strong warnings and get effective control, at the risk of worrying millions of people and wrecking some industries - or play down the threat and just hope for the best.

If death rates are high in the first few thousands infected, it is likely that members of the public will start to change behaviour regardless of what [governments](#) say, and leaders may come under huge pressure to implement emergency measures such as closure of schools in some areas, and restriction of all unnecessary travel. Some scenarios could include closure of some airports. Indeed, Reuters has reported that the Chinese government will close all borders if there are proven cases of person to person spread in China.

We could see some control measures introduced because of the need to reassure public opinion even where experts believe such measures will have little or zero effect. Air travel is a good example. In 1918 some 300-400 million became infected in a few months without a single aircraft being involved. A country could try to seal all borders and still find it has a major epidemic - perhaps from unrecognised infection that has already arrived, or from unpreventable movements of people. We can expect vigorous debate about what is appropriate to do.

With every week that passes, our world becomes slightly better defended, as [governments](#) refine their infection control plans, stockpiles grow of antivirals, more aggressive efforts are made to slaughter infected birds, and more bird handlers are vaccinated against ordinary flu (to reduce risk of getting both infections and triggering mutations).

If (or when) the human mutation occurs, it will be vital so slow down spread for as long as possible in the early stages, so that the virus can be analysed, treatments tested, and vaccine production started on a massive scale.

Viral epidemics not taken seriously enough

As I pointed out in 1988 in The Truth about [AIDS](#) , and in 1998 in Futurewise, we continue to take [risks](#) by not taking viral epidemics seriously enough in terms of [medical research](#) [medi](#)

. As a physician who has been involved in the fight against [AIDS](#) for more than 17 years, it is shocking to look back and realise that we are hardly any further forward in treating viral illness like flu than we were back in 1943 when penicillin first began to be available, and 1944 when effective treatment began for TB, syphilis, pneumonia and a host of other conditions. It is true that new antivirals are prolonging life in those with HIV, but these drugs are toxic, have to be taken until the person dies, and don't cure anyone. They just suppress the infection - and then usually only for a while.

AIDS has killed 45 million people in 20 years - and could kill 200 million more over the next 30. But flu epidemics can also be very dangerous - and far harder hitting.

1918 Spanish Flu killed 30-40 million people

In 1918 - 1919 a virus swept around the world that caused what became known as "Spanish flu". Over 18 months it is estimated that 400 million people became infected of which 30 million died - which is 600 times the number of Americans who died in the entire 10 year Vietnam War. 675,000 Americans died of Spanish flu, of which 200,000 died in October of 1918 alone. People often died very rapidly, and many of the victims were young - in contrast to normal flu which is most dangerous to the old.

"As their lungs filled . the patients became short of breath and increasingly cyanotic. After gasping for several hours they became delirious and incontinent, and many died struggling to clear their airways of a blood-tinged froth that sometimes gushed from their nose and mouth. It was a dreadful business." Isaac Starr, 3rd year medical student, University of Pennsylvania, 1919 commenting on flu deaths he saw

The 1918 global flu pandemic spread in the age of horse, boat and train - and at a time when the world population was only a third of what it is today. If such a virus was to re-emerge, perhaps as a mutation of Bird Flu, it could spread far faster, and kill up to 100 million people.

Reports in October 2005 suggest that the [genetic](#) profile of [bird flu](#) is almost identical to that of the 1918 virus - which has been obtained from the sample of a victim preserved in permafrost.

The work involved researchers from the Armed Forces Institute of Pathology (AFIP), the CDC, Mount Sinai School of Medicine, and the U.S. Department of Agriculture. Jeffery K. Taubenberger, MD, PhD, chief of molecular pathology at the AFIP, one of the study leaders, commented:

"These H5N1 viruses are being exposed to human adaptive pressures, and may be going down a similar path to the one that led to the 1918 virus," Taubenberger said in a news conference. "But the H5N1 strains have only a few of these mutations, whereas the 1918 virus has a larger number."

Our only real defence against viral illness like flu is the immune reaction we develop in response to infection. But if a flu virus changes shape as a result of a new mutation, our immune system fails to recognise it and has to develop a new response, which takes time. That means we go on catching flu over and over again, with little or no immunity from previous attacks unless they are recent.

If the virus is dangerous enough, you can be seriously ill or dead before your own white cells have had a chance to mobilise. And some viruses are immune to your own immune defences - like HIV - so that they kill slowly, even though the body is producing a strong reaction.

Vaccines against Bird Flu - do they work?



<http://www.who.org>