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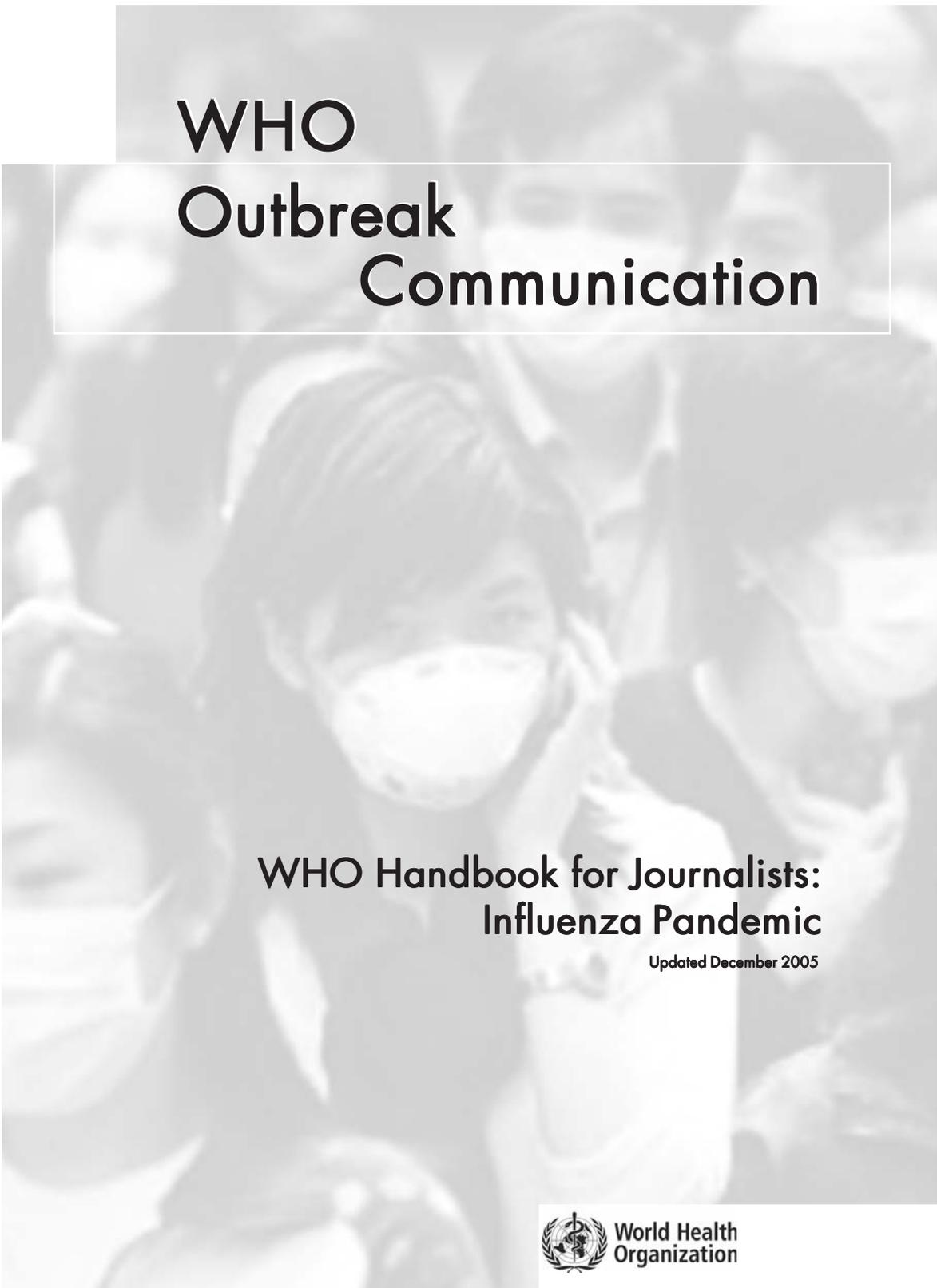
Outbreak  
Communication

WHO Handbook for Journalists:  
Influenza Pandemic

Updated December 2005







# WHO Outbreak Communication

## WHO Handbook for Journalists: Influenza Pandemic

Updated December 2005



World Health  
Organization

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Written by Maria Cheng WHO/CDS  
Designed by Patrick Tissot WHO/CDS



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*Sometimes you really don't know what you don't know. Dealing with a new and emerging infection is a very humbling experience. We should not pretend to know what will happen. Will it be severe or mild? Which age groups will be most affected? We just don't know.*

**Dr Margaret Chan**  
**Representative of the Director-General for Pandemic Influenza**

TRACKING THE NEXT  
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# WHO

## Influenza Pandemic Handbook for Journalists

### Reporting on the pandemic: Why it will be newsworthy

A pandemic is an outbreak that affects the entire world. The avian influenza outbreaks in Southeast Asia remain largely geographically limited in scope and confined primarily to animals. But if the avian influenza virus changes into a fully transmissible human pandemic virus, it will most likely spread worldwide, affecting all populations, regardless of national boundaries or socio-economic status.



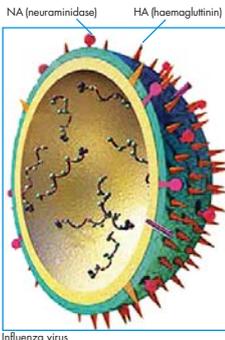
Influenza pandemics are rare but recurring events. They have typically occurred every 10-50 years throughout recorded history. In the 20th century, there were three pandemics: 1918 (caused approximately 40 million deaths), 1957 (caused more than two million deaths) and 1968 (caused approximately one million deaths). Because they bring an abrupt surge in illness and deaths, pandemics frequently overwhelm health services, and can cause severe social disruption and economic losses.

Once a fully transmissible human pandemic virus emerges, it is expected to encircle the globe within three months. Because a pandemic strain would be of a new subtype that had not previously circulated in humans, it is thought that it would be dangerous since the vast majority of the population would have no immunity to it. While health care sectors will be the first affected, pandemics tend to cause major social and economic disruption, as large numbers of the work force are affected, creating significant strain on essential services. In turn, this interrupts normal trade and travel patterns.

### Influenza: the basics

Influenza is caused by a virus that primarily attacks the upper respiratory tract—the nose, throat and sometimes the lungs. Infection usually lasts for about one week. It is characterized by high fever, headache, malaise,

## WHO Influenza Pandemic Handbook for Journalists



cough and sore throat. Annual influenza epidemics attack from 5% to 15% of the population, causing approximately three to five million cases worldwide, including 250 000 to 500 000 deaths (mostly in the elderly).

Currently circulating influenza viruses that affect humans are divided into two groups: A and B. Of these groups, only influenza A viruses have pandemic potential. Influenza viruses evolve easily and unpredictably. As these viruses lack a "proofreading" mechanism, small errors that occur when the virus replicates are not corrected. As a result, their genetic composition constantly changes in small ways.

These ongoing changes in the make-up of influenza A viruses are known as antigenic "drift." They necessitate the production of an updated influenza vaccine each year.

Influenza A viruses affect birds and a few other mammals in addition to humans. An influenza virus from one species can trade genetic material with influenza viruses from another species in a process known as "re-assortment." This is why influenza viruses are referred to by experts as "promiscuous." When viruses re-assort, a new hybrid virus is produced. This is known as antigenic "shift." As human populations have no immunity to the resultant new virus, and as no existing vaccines can provide adequate protection, antigenic shift has historically resulted in pandemics that cause unusually severe disease in unusually large numbers of people. For this to occur, the new subtype must have genes from human influenza viruses that make it readily transmissible from human to human.

A pandemic virus can emerge via another mechanism, known as "adaptive mutation," in which the viruses gradually adapt, during human infections, into a form progressively easier to spread among humans. It is believed that the 1918 Spanish flu strain underwent such a process, undergoing mutation for an unknown period before becoming highly contagious among humans.

Like normal influenza, pandemic influenza will probably spread readily via coughing or sneezing, and will most likely be transmitted prior to the onset of symptoms.

### Avian Influenza and human infections: a very short timeline

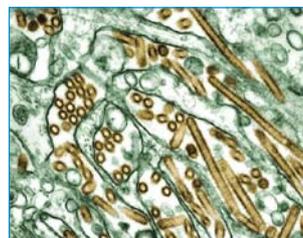


Influenza viruses are usually host-specific. Avian influenza viruses, of which there are more than 100 identified subtypes, normally only infect birds and in rare instances, pigs (pigs have receptors for avian viruses). The first documented human infections with H5N1 avian influenza occurred in 1997 in Hong Kong, when the virus caused severe respiratory disease in 18 humans, of whom six died. Rapid destruction—within three days—of Hong Kong's entire poultry population, estimated at around 1.5 million birds, reduced opportunities for further transmission to humans, and may have averted a pandemic.



In February 2003, an outbreak of H5N1 in Hong Kong may have caused three cases and two deaths in members of a family who had recently travelled to southern China.

Three other avian influenza viruses have caused illness in humans. An outbreak of highly pathogenic H7N7 in the Netherlands in February 2003 caused mild illness in 89 people and one death. Mild cases of avian influenza H9N2 in children occurred in Hong Kong in 1999 (two cases) and December 2003 (one case). H7N3 caused mild conjunctivitis in two persons in Canada in 2004.



H5N1 virus

The latest outbreaks of avian influenza in birds began in late 2003. Between December 2003 and October 2005, more than 100 human cases of avian influenza and more than 60 deaths, caused by the H5N1 strain, have been detected in Cambodia, China, Indonesia, Thailand and Viet Nam.

### ■ The transformation of Avian Influenza into pandemic Influenza and what human to human transmission really means

H5N1 avian influenza is a public health concern because of its potential to spark a pandemic. As long as the virus continues to circulate in animals, there will be opportunities for this virus to infect and adapt to humans.

Based on the present evidence, the H5N1 virus does not easily jump the species barrier to infect humans. The small number of human cases, despite the tens of millions of poultry infected, over vast geographical areas, for more than two years, supports this conclusion.

Three conditions must be met before a pandemic begins: a new influenza subtype that has not previously circulated in humans must emerge (itself a rare event), this new subtype must be capable of causing disease in humans, and the virus must be capable of being passed easily among humans. Only this last condition has yet to be fulfilled by H5N1.

Because sustained human to human transmission of a new influenza strain will be the "trigger" for the start of a pandemic, all suspected instances of human to human transmission of H5N1 must be rapidly investigated. It is known that H5N1 has the capacity to be transmitted occasionally from human to human. Such transmission, however, has only occurred in exceptional instances, usually involving very close contact with a patient during the acute phase of illness. To date, H5N1 has not spread beyond one generation of close contacts.

## When Avian Influenza arrives in a country near you: what does it mean?



Since 1997, the H5N1 strain has gradually extended its reach, and has now become established within Asia. In September 2005, H5N1 was detected in domestic and wild birds in Russia and Kazakhstan and in wild birds in Mongolia. Isolated outbreaks of H5N1 in birds have also been reported in Romania, Russia and Turkey. It is unknown what percentage of wild birds are infected with H5N1. Wild birds can be asymptotically infected, meaning that they can pass on the H5N1 virus without becoming sick themselves. The danger posed by wild birds is that they may transmit H5N1 to domestic poultry flocks, which in turn, are a direct threat to human health.

The more countries in which H5N1 is detected, the greater the risk that the virus will mutate or re-assort with another influenza virus to produce a strain capable of igniting a pandemic. The infection of birds with H5N1 should be the first indication to public health authorities that human avian influenza cases might then be possible.

*Every time the H5N1 virus spreads to new regions, you increase the probability and also the opportunity for the virus to mutate. With every case of human infection, the probability for the virus to mutate increases. This virus is very treacherous.*

Dr Margaret Chan  
Representative of the Director-General for Pandemic Influenza

## The great unknowns: Why there are no certain answers for the big questions

### Why does WHO keep talking about a pandemic?

Unfortunately, no one is able to accurately predict whether H5N1 will actually trigger a pandemic—and if it does, we have no idea how long it might last or how deadly the virus will be. As a global public health organization, WHO has a responsibility to alert the international community when it appears that the world is moving closer to a pandemic. It may be years before a pandemic hits the world, and it may ultimately be sparked by a virus other than H5N1. While WHO recognizes that openly talking about a pandemic threat may raise concerns worldwide, we would not be fulfilling our public health mandate if we were not to warn the world of this evolving threat.



It is essential that countries take this current window of opportunity to prepare for a pandemic. Even if a pandemic is years away, governments will be more adequately prepared to address this public health emergency if they have pre-existing, detailed plans.

A major component of pandemic preparedness is to strengthen the capacity to respond to yearly epidemics of influenza. A surveillance network for human and animal influenza and a targeted influenza vaccination programme are the cornerstones of a national influenza policy.

### ■ Will the pandemic be caused by H5N1?

We don't know. H5N1 is the most likely strain to cause a pandemic, but another subtype could ultimately be responsible. Because H5N1 has become established within the poultry populations in Southeast Asia, as well as proven its continued ability to cross the species barrier and infect humans, it is clear that H5N1 is a strain with pandemic potential.

### ■ How many people could die in a pandemic?

We don't know. It is impossible to predict how lethal the pandemic strain might be, so we can only guess how many people might die in the next pandemic. During past pandemics, the numbers of deaths varied greatly: in 1918, approximately 40 million people died, in 1957, more than two million people died, and in 1968, approximately one million people died.

Modelling research using today's global population has projected that at a minimum, between 2 and 7.4 million people might die in the next pandemic. More deaths are certainly possible, but until the pandemic strain emerges and we are able to determine its lethality and attack rate, it will be difficult to predict its impact worldwide. Higher projections of deaths are in general based on extrapolations from the 1918 Spanish flu pandemic. More people died in 1918 from influenza than in a similar period from any other infectious disease ever, including smallpox and the plague. Thus, because the 1918 pandemic was the single most devastating infectious disease outbreak ever recorded, WHO does not feel it is appropriate to project future pandemic numbers based on such an exceptional event.

Still, however many people die in the next pandemic, there will be many more who become ill and require hospitalization. An influenza pandemic will certainly be an enormous burden on the public health care system regardless of the virus' pathogenicity.

## Questions that can be answered

### Will it be a pandemic of avian influenza?

No. Avian influenza is not easily transmissible among humans, so it would not be capable of provoking a global outbreak. For a pandemic to occur, a novel influenza strain (such as H5N1) needs to adapt in some way to become transmissible from human to human. Thus, H5N1 is a strain with pandemic potential, since it might ultimately adapt into a strain that is transmissible among humans. Influenza pandemics are caused by novel influenza viruses that have adapted to human transmission.

### What will be the first signs of a pandemic?

In one possible scenario, we will see clusters of respiratory illness from one region. Clusters of illness could indicate transmission between people, including casual contacts and health-care workers. Once cases begin to be identified as a new influenza strain, the disease may spread very rapidly, beyond family members and health care personnel, into the general population. This will be the start of a pandemic. Next, we will likely see dozens of cases being reported in a single day, followed by hundreds. Once the pandemic starts, it will be nearly impossible for any surveillance system to miss it.

### Can anything be done to stop a pandemic?

Perhaps. Two modelling studies (*Strategies for containing an emerging influenza pandemic*, **Nature**, 14 July 2005 and *Containing Pandemic Influenza at the Source*, **Science**, 3 August 2005) have been done to suggest that if effective antivirals are rushed to the region in which a pandemic strain first emerges, coupled with certain public health measures, that it may be possible to contain it before it spreads worldwide. This will depend on several factors: identification of the first cases as soon as possible, the ability of the global community to rush antivirals to the region—and to treat everyone who may have been exposed to the virus. It will also be essential to effectively control the movement of people in and out of the affected area. For the pandemic to realistically be contained, all of this needs to happen in a matter of weeks. WHO does not know if this can practically be done, but given the potential health, economic and social damage a pandemic can produce, it must be tried.

### What happens if the pandemic cannot be stopped at its source? Will travel restrictions help to contain it?

It will probably spread worldwide quickly. Unlike Severe Acute Respiratory Syndrome (SARS), which required close contact to be spread, classical influenza is airborne and spreads very easily. Because people with influenza are often contagious before they are symptomatic, travel recommendations and border closures may not have a significant impact in delaying the arrival of the virus. Past influenza pandemics have spread worldwide within six to nine months. Given the heavy volume of international travel in the 21st century, it is likely that a pandemic would spread globally within approximately three months.

*Throughout history, no human interventions have managed to stop a pandemic once it starts ...There's a chance that we could smother the spark of a fire before it catches on. It will depend then on spotting an outbreak of human transmission quickly, and acting quickly.*

**Dr Margaret Chan**  
Representative of the Director-General for Pandemic Influenza



### ■ Will normal flu vaccines protect against the pandemic virus?

No. The seasonal influenza vaccines, which are updated each year according to the dominant circulating influenza strains, will most likely offer little or no protection against a pandemic virus, which will be of a different subtype. However, some high-risk groups, i.e. poultry workers and first-line responders, in countries experiencing H5N1 outbreaks, are given seasonal influenza vaccine. This is not to protect them from the H5N1 virus, but rather, to minimize the chances of re-assortment of seasonal influenza with avian influenza, an event that could produce a pandemic strain. This might happen if a person became infected with seasonal influenza and avian influenza at the same time, thus giving the two viruses an opportunity to exchange genes and produce a new virus transmissible among humans.

## Public health tools: vaccines, antivirals and other interventions

Contingency planning for an event sometime in the future is often difficult to justify, particularly in the face of limited resources and more urgent problems and priorities. However, there are two main reasons to invest in pandemic preparedness:

1. Preparation will mitigate the direct medical and economic effects of a pandemic, by ensuring that adequate measures will be taken and implemented before the pandemic occurs.
2. Preparing for the next influenza pandemic will provide benefits now, as improvement in public health infrastructures can have immediate and lasting benefits, and can also mitigate the effect of other infectious disease epidemics.



### ■ Pandemic vaccine: a calculated bet on H5N1

Because the pandemic strain has not yet emerged, there is no such vaccine currently available. As a pandemic vaccine needs to be a close match to the actual pandemic virus, commercial production cannot begin prior to the emergence and characterization of the pandemic virus. WHO, through its network of specialized influenza laboratories, has constantly monitored the evolution of the H5N1 virus since its initial infection of humans in Hong Kong in 1997. These laboratories prepare the prototype vaccine strain that is provided to industry as the "seed" for vaccine development.

Several companies have begun work on a potential pandemic vaccine, using the WHO "seed" stock, that is based on the H5N1 strain circulating in Viet Nam. In August 2005, US researchers announced preliminary results from an experimental

pandemic influenza vaccine, that provoked a strong immune response in humans in a clinical trial. This development should cut the lead-time needed to produce a vaccine from four to six months to two to three months. This vaccine, however, would only be effective if it is ultimately the H5N1 strain that provokes the pandemic, and if the strain has not significantly changed from that used to develop the vaccine. If the pandemic is caused by another avian influenza subtype (e.g.H7 or H9), it is not likely that this current vaccine would offer much protection.

Working on a pandemic vaccine ahead of time also allows countries and vaccine manufacturers to develop a fast-track licensing and regulation process that can be used once a pandemic strain emerges. Regardless of which avian influenza strain causes the next pandemic, countries will still need to determine processes for licensing an eventual vaccine, as well as negotiating with companies to determine legal issues such as liability. All of these issues should be considered in advance in order to expedite the eventual production and distribution of a pandemic vaccine.

It is highly unlikely that there will be any large quantities of pandemic vaccine available at the start of a pandemic. Once the pandemic strain is identified, it would likely take at least six months to produce any significant quantities of the vaccine. WHO is also urging the international community to find ways to increase manufacturing capacity and ensure that developing countries have access to an effective vaccine at an affordable price. Based on current trends, however, most developing countries will have no access to a vaccine during the first wave of a pandemic, and perhaps throughout its duration.

### **Antivirals: Buying time before the vaccine is available**

There is currently only one class of antiviral that has been shown to be effective against all of the H5N1 human isolates from Asia: oseltamivir, also known as Tamiflu, and zanamivir, known as Relenza. Oseltamivir is currently only being produced by Roche. In the event that a pandemic is caused by an adapted version of H5N1, oseltamivir could potentially help slow its spread. Relenza is produced by GlaxoSmithKline, and unlike oseltamivir, it must be inhaled orally.

WHO recommends that countries with the resources to do so, consider stockpiling antivirals. Since supplies are severely constrained, countries now stockpiling antiviral drugs should decide in advance on priority groups to be targeted, i.e. front-line health care workers. The mass administration of antiviral drugs to the general population is not recommended, as this could accelerate the development of drug-resistant strains. WHO has not set a target for national antiviral stockpiles.

Roche has offered to provide WHO with an international stockpile of oseltamivir (three million treatment courses, which equals 30 million capsules). This stockpile would be used to treat the people in the greatest need at the site of an emerging influenza pandemic in an attempt to contain it. The success of this strategy, which has never been tested, depends on several assumptions about the early behaviour of the pandemic virus. Success would also depend on sensitive surveillance and logistics capacity in the initially affected areas, combined with an ability to regulate the movement of people in and out of the area.



## ■ ↘ **Non-medical health interventions: Other potential ways to stop the pandemic**

At the start of a pandemic, all countries will face inadequate supplies of vaccines and antiviral drugs. Whether or not classic public health measures (i.e. quarantine, isolation, travel recommendations) will be useful depends largely on the characteristics of the pandemic virus, i.e. attack rate, virulence, age groups affected, modes of transmission between countries, none of which will be known in advance. After a pandemic is declared, WHO will monitor its evolution in real time. Recommendations about the most effective measures will therefore become more precise as information about the virus becomes available.

Because influenza is highly infectious, travel recommendations (including entry and exit screening) and other measures restricting the movement of people in and out of affected areas, may only be of limited use. If implemented immediately after the identification of the first clusters of cases, such interventions may succeed in delaying spread. But once the pandemic strain is detected in the general community, it may be too late to be contained. At this point, any such measures will be intended primarily to slow the pandemic, allowing authorities time to strengthen their response.

## ■ ↘ **Social distancing: Reducing opportunities for exposure**

Social distancing involves measures such as school and workplace closures, as well as avoiding mass gatherings, i.e. large conferences, public events and congregations. These measures may be recommended if evidence indicates an association of certain settings or events with increased transmission opportunities into the wider population.

Such measures will have limited effectiveness in stopping human infections once the pandemic begins, but they may be of use in helping to slow the pandemic's spread. By limiting the gatherings of large numbers of people, public health experts will be aiming to diminish the opportunities for exposure to the pandemic virus.

During the pandemic, there is likely to be much discussion and debate over the usefulness of travel recommendations, quarantine/isolation policies and social distancing. Depending on the extent of the virus' circulation, such measures may help to delay the pandemic's spread to countries not immediately affected by the strain's emergence.

## ■ ↘ **Personal hygiene intervention measures: Hand-washing, cold etiquette, use of face masks**

Because the influenza virus is highly infectious, the role of personal hygiene may be important in reducing disease spread during a pandemic. While WHO has existing technical guidance for issues such as personal hygiene, primarily for health-care workers, such guidance is based on general transmission patterns of seasonal human influenza. It is not known how effective this guidance would be in slowing the spread of a pandemic. Thus, any recommendations that WHO provides in the pre-pandemic period, and even once the pandemic starts, may be modified once more information about the pandemic strain is obtained, such as its infection rate and its lethality.

Populations should nonetheless be repeatedly informed about the need for frequent hand-washing with soap and water, as well as of the need for "respiratory hygiene," i.e. covering your mouth when coughing or sneezing, and the careful disposal of used tissues. Mask wearing by the general population may not have an appreciable impact on slowing transmission, but should be permitted, as this is likely to occur spontaneously.

### ▣ ▾ Delaying the pandemic's arrival



If the pandemic cannot be stopped at its source, then WHO's response strategy will be changed to slow its spread worldwide. Slowing the pandemic's arrival into countries worldwide will be vital, as this should buy time to produce an effective vaccine and to introduce other emergency measures. Antivirals, used intensively in an area where a pandemic is emerging, combined with other measures such as quarantine and isolation, could help to delay its spread.

Countries will undoubtedly implement many different measures in an attempt to delay the pandemic's arrival, while vaccine is being produced. Modelling studies projecting the patterns of spread of a future pandemic tell us that many of these measures will eventually fail. They may still have some public health impact, however, in allowing countries time to reinforce their response capacities, and to vaccinate certain target groups.

## WHO global pandemic phases

WHO has currently identified six specific phases that would cover the generation of a pandemic:

### ▣ ▾ Inter-pandemic period

Phase 1: No new influenza subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. The risk of human infection is considered to be low.

Phase 2: No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.

### ▣ ▾ Pandemic alert period

Phase 3: Human infection(s) with a new subtype are reported. There are no instances of human to human spread, or at most, rare instances of spread to a close contact.

*We feel that the opportunity for the virus to make adaptive changes is real. The pandemic risk is great, the timing is unpredictable and the severity is uncertain.*

**Dr Margaret Chan**  
Representative of the Director-General for Pandemic Influenza



\* Phase 4: Small cluster(s), meaning less than 25 people, lasting less than two weeks, with limited human to human transmission occur, but spread is still highly localized, suggesting that the virus is not well adapted to humans.

\* Phase 5: Larger cluster(s), meaning between 25-50 people, lasting from two to four weeks, appear. While human to human transmission is still localized, the virus appears to be increasingly better adapted to humans. Though it is not yet fully transmissible, there is a substantial pandemic risk.

### ■ ↘ Pandemic period

Phase 6: Virus transmission increases significantly, and there is sustained transmissibility in the general population.

Revising the pandemic level (up or down) requires that WHO consult a board of external experts to review all available data. The board will then make recommendations to the WHO Director-General, who will then decide whether the pandemic level should be changed.

## Pandemic preparedness: What is being done now?

### ■ ↘ WHO's role

One of WHO's networks is the 115 National Influenza Centres in 84 countries that continuously monitor influenza activity and isolates influenza viruses worldwide. National Influenza Centres report the emergency of any "unusual" influenza viruses immediately to WHO or to one of four WHO Collaborating Centres. The rapid detection of unusual influenza outbreaks, the isolation of possible pandemic viruses and an immediate alert to the WHO system by national authorities will be essential for an effective response to the pandemic. WHO is also convening meetings with international partners to plan and coordinate preparedness activities, as well as engaging in fund-raising.

WHO has developed an Influenza Pandemic Preparedness Plan to define the responsibilities of WHO and national authorities in the event of a pandemic. WHO also offers guidance tools and training to assist countries in the development of their pandemic preparedness plans.

WHO has also sent a detailed list of actions to help member states prepare for a pandemic (<http://www.who.int/csr/disease/influenza/en/>). These actions are aimed at: reducing the opportunities for human infection, strengthening the early warning system, containing or delaying the spread of the pandemic virus at the source, reducing morbidity, mortality and social disruption from the pandemic, and conducting research to guide response measures.

*\* These numbers are only intended to provide an example of what criteria might be considered in these phases. They are not definitive and will most likely be revised depending on the actual situation.*

During a pandemic, WHO's role will largely be one of international coordination to ensure a rapid and effective response. WHO will work together with international partners and member states to monitor the pandemic and to assist regions wherever possible.

Questions about measures taken by specific countries should be directed to national authorities rather than to WHO. Questions about animal-related issues should be directed either to the World Organization for Animal Health (OIE) or the Food and Agriculture Organization (FAO).

### WHO's global influenza pandemic preparedness plan

([http://www.who.int/csr/resources/publications/influenza/WHO\\_CDS\\_CSR\\_GIP\\_2005\\_5/en/index.html](http://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_5/en/index.html)) defines the role WHO will assume during an influenza pandemic in addition to assisting member states prepare for such an event. This plan addresses the possibility of a prolonged circulation of an influenza virus with pandemic potential, such as the H5N1 virus, as well as the possibility of simultaneous occurrences of events with pandemic potential in several countries.

Several countries have submitted their national pandemic preparedness plans to WHO. These are available at: <http://www.who.int/csr/disease/influenza/nationalpandemic/en/index.html>

## WHO web resources and links

During a pandemic, WHO will post regular updates as necessary on the website, [www.who.int](http://www.who.int). Journalists may sign up to receive automatic email alerts whenever a new update appears. These updates will provide the latest available information from WHO such as numbers of cases, suggested courses of action and an ongoing risk assessment.

In efforts to slow the pandemic, many international, costly, and un-tested methods may be attempted, such as border closures, travel recommendations, and social distancing policies. WHO will be monitoring such measures to determine their effectiveness, and will make recommendations about altering their use as necessary. These web updates will also track the epidemiology of the outbreak as well as providing risk assessments, particularly for vulnerable populations.

The following links may be of interest:

- Avian Influenza Frequently Asked Questions  
[http://www.who.int/csr/disease/avian\\_influenza/avian\\_faqs/en/index.html](http://www.who.int/csr/disease/avian_influenza/avian_faqs/en/index.html)
- Avian Influenza Fact Sheet  
[http://www.who.int/mediacentre/factsheets/avian\\_influenza/en/index.html](http://www.who.int/mediacentre/factsheets/avian_influenza/en/index.html)
- Avian influenza: assessing the pandemic threat  
[http://www.who.int/csr/disease/influenza/WHO\\_CDS\\_2005\\_29/en/](http://www.who.int/csr/disease/influenza/WHO_CDS_2005_29/en/)



- Pandemic preparedness  
<http://www.who.int/csr/disease/influenza/pandemic/en/index.html>
- Ten things you need to know about pandemic influenza  
<http://www.who.int/csr/disease/influenza/pandemic10things/en/index.html>
- WHO checklist for influenza pandemic preparedness planning  
[http://www.who.int/csr/resources/publications/influenza/WHO\\_CDS\\_CSR\\_GIP\\_2005\\_4/en/index.html](http://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_4/en/index.html)
- WHO Outbreak Communication Guidelines  
[www.who.int/infectious-disease-news/IDdocs/whocds200528/whocds200528en.pdf](http://www.who.int/infectious-disease-news/IDdocs/whocds200528/whocds200528en.pdf)
- WHO Global Influenza Programme  
<http://www.who.int/csr/disease/influenza/en/index.html>
- Influenza pandemic threat: current situation  
[http://www.who.int/csr/disease/avian\\_influenza/pandemic/en/index.html](http://www.who.int/csr/disease/avian_influenza/pandemic/en/index.html)
- Avian influenza and the pandemic threat in Africa: risk assessment for Africa  
[http://www.who.int/csr/disease/avian\\_influenza/riskassessmentAfrica/en/index.html](http://www.who.int/csr/disease/avian_influenza/riskassessmentAfrica/en/index.html)
- Avian influenza: food safety issues  
<http://www.who.int/foodsafety/micro/avian/en/index.html>
- WHO guidance on public health measures in countries experiencing their first outbreaks of H5N1 avian influenza  
[www.who.int/csr/disease/avian\\_influenza/guidelines/firstoutbreak/en/index.html](http://www.who.int/csr/disease/avian_influenza/guidelines/firstoutbreak/en/index.html)

## WHO HQ and Regional contacts

WHO Headquarters, Geneva, Switzerland

Dick Thompson, Communications Officer, 4122 791 2684, [thompsond@who.int](mailto:thompsond@who.int)

Maria Cheng, Communications Officer, 4122 791 3982, [chengm@who.int](mailto:chengm@who.int)

WHO Regional Office for Africa, Brazzaville, Republic of Congo

Sam Ajibola, Information Officer, +242 6 656 500, [ajibolas@afro.who.int](mailto:ajibolas@afro.who.int)

WHO Office for the Americas, Washington DC, USA

Bryna Brennan, Information Officer, +1 202 974 3458, [brennanb@paho.org](mailto:brennanb@paho.org)

WHO Regional Office for the Eastern Mediterranean, Cairo, Egypt

Ibrahim Kerdany, Information Officer, +202 27 65037, [kerdanyi@emro.who.int](mailto:kerdanyi@emro.who.int)

WHO Regional Office for Europe, Copenhagen, Denmark

Liuba Negru, Information Officer, +45 3917 13 448, [lne@who.dk](mailto:lne@who.dk)

WHO Regional Office for South-East Asia, New Delhi, India

Harsaran Pandey, Information Officer, +91 11 233 70918, [pandeyh@whosea.org](mailto:pandeyh@whosea.org)

WHO Office for the Western Pacific, Manila, Philippines

Peter Cordingley, Information Officer, +63 2528 9992, [cordingleyp@wpro.who.int](mailto:cordingleyp@wpro.who.int)

## Bird flu: the role of science journalists

David Dickson

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As prospects grow of a global flu pandemic, it is important for governments to recognise that responsible science journalism can play a significant role in limiting its impact.

It would be difficult to imagine a better example of the need for responsible science journalism than avian influenza, or 'bird flu'. Health officials across the world warn that the H5N1 virus could spark a global pandemic of human flu that, many are already predicting, could cost million of lives. It is already becoming clear that effectively communicating accurate information about the disease will be essential to efforts to contain it.

Of course, health and veterinary officials need sound information with which to plan their responses, while governments need an accurate picture of both the nature of the disease and the way it spreads if they are to make sensible decisions about the size and allocation of the resources, both financial and human, needed to combat it.

But it is just as important that the public is equally well informed. There are a number of practical reasons for this. It is important, for instance, to know that cooking food properly appears to destroy the virus and that washing hands before preparing food also helps avoid infection.

There are also strong political reasons for communicating reliable information effectively, particularly if politicians are not to feel pressurised into over-reacting.

Panic measures seldom make good public policy. They are frequently taken when a threat is poorly understood, either by those taking the decision, or by those on whose behalf it is made. They can have disastrous effects, ranging from the excessive and inappropriate use of scarce resources, to ineffectiveness if aimed at the wrong targets.

### Political responsibility

The need for clear and sound information about bird flu is obvious if such reactions are to be avoided. Government officials clearly have a responsibility to ensure that this takes place. But in an era of widespread distrust of public institutions, this is no longer sufficient. Equally, if not more, important, is the role of journalists and the media.

The task is made both more important and more difficult when official organisations seek, for reasons of their own, to place a 'spin' on the information they present. Last year, for example, we criticised the behaviour of governments in Asia that were restricting the information they divulged about bird flu outbreaks — sometimes even denying that outbreaks had occurred (see Bird flu: the communication challenge).

More recently a new culprit has emerged, namely the temptation by international agencies, perhaps keen to squeeze extra funding from reluctant donors, to overstate the size of potential problems they are likely to face.

Last month, for example, the World Health Organization issued a hurried correction after its top official responsible for handling the bird flu crisis, David Nabarro, told the media that the diseases could cause "between five and 150 million deaths", comparing the challenge to that of a combination of climate change and HIV/AIDS. The following day, the agency clarified the statement to say that its estimate of the number of people who could die was "between two million and 7.4 million".



It is not the only recent occasion on which this has happened. Earlier this year, the same WHO official was widely quoted as predicting that the number of people who might die from disease — particularly from cholera — after the tsunami in the Indian Ocean could be twice the number killed by the tsunami itself.

This prediction proved to be widely off the mark. In the event, those displaced by the tsunami soon left the temporary refugee camps in which they had been living — and whose conditions had given rise to this prediction — and the spread of disease was kept well under control.

### **Public assessment of risk**

Both instances, as well as many other recent less controversial examples, illustrate the challenges that science and health journalists face in meeting their responsibilities. Central to their task is conveying accurate information, not only about the nature of the disease itself, but also about the way in which it is spreading.

Individual communities are, legitimately, concerned to know whether they are at risk, and if so, what the nature of that risk is, and what they can do about it. In such situations, undue alarm caused by faulty information can do much damage.

The key responsibility of journalists is — or at least should be — to ensure that the information it disseminates is as accurate as it can be in the circumstances. This does not mean that it has to be scientifically proven. But it does mean that what is being described must be consistent with what is either known and proven, or considered by those most familiar with the field to be likely.

This does not always mean trusting the scientists. Britain's experience with BSE — commonly known as mad cow disease — provides a morality tale in the hazards involved when scientists are reluctant to acknowledge the limits of their knowledge, particularly when they are government scientists employed by a department keen to protect the interests of British farmers.

What it does mean, however, is that in order to cover stories such as bird flu effectively, science and health journalists must be able to probe beneath the surface of what they are being told to judge the robustness of the information they are being given.

### **Critical need for informed journalism**

Being sceptical about official statements, although often justified, is not enough. Equally necessary is the ability to discriminate between statements that are based on sound information and those that are not. Even the WHO's 'official' figure of "up to 7.4 million deaths world-wide" smacks of spurious accuracy, given the many uncertainties that continue to exist about the exact size of the bird flu threat to humans.

Such issues have been receiving increasing attention in the developed world over the past two decades, as governments realise that public perceptions of risk are as important as the 'scientific' measure of the same risk in getting their policies accepted.

As a result, factors that affect public perceptions, such as trust (or lack thereof) in political institutions, need to be taken into account when forming effective policies.

One of the messages of the bird flu crisis is that these issues are no less important in the developing world. Indeed the argument can be made that a lack of both medical and scientific infrastructure, lowers the ability of governments to meet the challenge of a rapidly spreading epidemic and makes effective public communication even more important.

Remember the lessons of HIV/AIDS in Africa. Countries which have been most effective in combating the disease are not the ones with the most sophisticated medical infrastructures, but those, such as Uganda, that have been most open in communicating about the disease. In others, such as South Africa, where political leaders have been in partial denial about the threat of HIV, official policies have been skewed.

History must not be allowed to repeat itself. To avoid this, transparency needs to be the first order of the day. Governments have no excuse to hide information either from their own populations, or from other governments and international agencies that are seeking to combat the disease. But a commitment to transparency on its own is insufficient. Equally important is the need to ensure that those in the front-line of public communication — namely science and health journalists — have adequate tools and skills to perform their task, for example to detect when a commitment to transparency is not being observed. As the threat of bird flu rises up the agenda of governments around the world, this need must be given the priority that it requires.

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### Bird flu: Millions could die

Millions of people around the world could die if the H5N1 strain of bird flu in Asia combines with another strain of bird flu virus that is moving towards the region, the World Health Organization said.

Dr Shigeru Omi, health agency's office, said there are two viruses could triggering a global pandemic. "In my judgement, so that's why we

### Ingredients in place for pandemic influenza outbreak: WHO

TORONTO - An outbreak of deadly avian flu in Vietnam which may have killed as many as 12 people could be the precursor to an influenza pandemic, experts admit-

global influenza program, said in an interview from Geneva.

Recent outbreaks of avian influenza of the H5N1 subtype in South Korea, Japan and now Vietnam, and

### Bird flu could mutate soon

1/21/2004

As health officials around the world kept a watchful eye on reports in China, a potentially more ominous threat could be emerging in Vietnam.

"Everyone is looking at this avian influenza and worrying it's the P word," said Stephen Ostroff of the National Center for Infectious Diseases at the

### Bird flu epidemic is worst in history

Indonesia has become the latest country to admit that a massive outbreak of bird flu has been ravaging its chicken farms for months. The disease has now led to the death of many

### Bird flu crisis unprecedented

BANGKOK, Thailand

A MASS slaughter of infected chickens and ducks is the only way of controlling the deadly birdflu sweeping across Asia, the World Health Organization has warned, as the human toll from the outbreak rises.

At least 10 people have now died from the virus, with fears growing the disease could become a pan-

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For further information, please contact:  
Communicable Diseases  
World Health Organization  
20, Avenue Appia  
1211 Geneva 27  
Switzerland  
E-mail: [thompsond@who.int](mailto:thompsond@who.int)  
Tel: +41 (0)22 791 2684

