

NATIONAL PANDEMIC INFLUENZA PLAN



Fidhmeannacht na Seirbhíse Sláinte
Health Service Executive



DEPARTMENT
OF HEALTH & CHILDREN
AN ROINN SLÁNTE
AGUS LEANAÍ

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Executive Summary

The purpose of this document is to tell you about pandemic influenza (flu), to explain what the Government and the health services are doing to prepare for a possible pandemic and most importantly, to advise you what you need to do if there is a pandemic.

■ What is a Pandemic Influenza?

Influenza (or flu) is an acute respiratory illness caused by infection with an influenza virus. It can be a serious illness and should not be confused with a cold. Pandemic influenza is a worldwide flu epidemic.

If there is an influenza pandemic, it will cause major disruption to health and social services and to businesses around the world. Many people will be infected with the influenza virus and a significant number may die. This is why it is essential to have a plan in place before an influenza pandemic occurs.

One of the main challenges in planning for an influenza pandemic is that we cannot forecast the nature and impact of the pandemic virus until it emerges. Experts believe that the most imminent threat comes from the current avian flu situation but this is by no means inevitable.

At present, the avian flu H5N1 strain is causing disease in birds in countries in Asia and Africa. In a few cases, this virus has passed from birds to humans, causing severe illness and often death. So far, there has been no mutation of the virus, allowing it to pass from human to human however if the virus develops the capability of being passed between humans (that is, if it mutates), it could lead to a pandemic.

At first, the virus would affect only small groups of people but then it would spread to wider although still localised areas. The outbreak at this point would be considered an epidemic. With international travel, however, the virus could then be easily carried to other parts of the world causing new outbreaks of the disease, it will then have become an influenza pandemic.

■ What is being done to prepare for a Pandemic Influenza?

Many organisations, including the World Health Organization, the European Centre for Disease Prevention and Control, and the Health Protection Surveillance Centre in Ireland are monitoring the progress of the H5N1 virus, so that they can take action as soon as there is any sign of the virus mutating and passing from human to human.

In Ireland, the Department of Health and Children and the Health Service Executive are preparing to deal with a potential pandemic. Plans have been developed from the work of expert groups on vaccines and antiviral medicines, surveillance, communications, case management, laboratory operation, personnel and supplies.

This *National Pandemic Influenza Plan* is based on eight core elements:

- communications strategy
- telephone hotline
- outlining the responsibilities of the public
- surveillance
- antiviral drugs
- pandemic vaccine
- reorganisation of health services and redeployment of health service staff
- essential supplies.

This plan is based on the assumption that 96% of those who fall ill can be cared for in their own homes. Much of the planning effort revolves around making this possible. It includes:

- a communications plan to keep healthcare professionals and the public informed and advised at all times
- provision of antiviral medicines to those who fall ill to reduce the duration and severity of their symptoms
- a dedicated telephone hotline to provide advice and support.

■ **What should I do to prepare for a Pandemic Influenza?**

You have a huge role to play in preparing for a pandemic. It is important that you read this document carefully so that you know what to do. If and when a pandemic becomes imminent, you will need to stock up on essential medicines, food and other supplies. You will also need to plan how you will care at home for household/family members who fall ill, particularly members of your family who live alone.

Limiting the spread of the infection is very important. You should avoid unnecessary gatherings and, if you have symptoms, you should keep contact with others to a minimum.

■ **What should businesses do to prepare for a Pandemic Influenza?**

Businesses and other organisations need to consider the implications of a pandemic for their operations. This includes identifying essential functions and posts and putting in place measures to maintain core business activities for several weeks during which there are likely to be high levels of staff absenteeism.

■ **Will this plan still be up to date if a Pandemic Influenza occurs?**

As international understanding of the pandemic increases, we will adapt and change our plan as appropriate.

Your co-operation with the health services before and during the pandemic will be crucial in slowing or preventing the spread of the disease and in supporting your family and community during the pandemic.



Glossary of Terms

Antiviral medicine	A drug that is active against a virus
Case fatality rate	Percentage of people who die from the disease
Clinical attack rate	Percentage of infected people who become ill
DoH&C	Department of Health and Children
ECDC	European Centre for Disease Prevention and Control
Epidemic	The occurrence of more cases of disease than expected in a given area or among a specific group of people over a particular period of time
EU	European Union
HPSC	Health Protection Surveillance Centre. This unit within the HSE is Ireland's specialist agency for the monitoring of communicable diseases (diseases that have the ability of passing from one person to another)
HSE	Health Service Executive
Index case	The first person to be infected with the disease in an epidemic
Irish Pandemic Influenza Expert Group	A group set up to provide expert advice to the Minister for Health and Children and the HSE on pandemic influenza
Morbidity	Sickness
Mortality	Deaths
Pandemic	A global epidemic
Prophylaxis	Treatment given in advance to prevent potential disease
Surveillance	Systematic collection and analysis of health data in order to be able to detect changes in disease patterns
WHO	World Health Organization. The United Nations specialised agency for health.



Section One

Introduction

The *National Pandemic Influenza Plan* outlines the steps to be taken to prepare for, and deal with, a worldwide influenza pandemic. This plan will be reviewed and updated as necessary.

The Department of Health and Children and the Health Service Executive (HSE) have developed this plan based on recommendations by the World Health Organization for national pandemic plans. The plan reflects the advice of the Irish Pandemic Influenza Expert Group. It concentrates on the health response but also provides some advice on the planning which must take place across all sectors of society.

The purpose of this document is to tell you about pandemic influenza (flu), to explain what the Government and the health services are doing to prepare for a possible pandemic and most importantly, to advise you what you need to do if there is a pandemic.

Contingency planning for an event which may occur in the future can be difficult to justify, particularly in the face of more immediate problems and priorities. However, the World Health Organization (WHO) has identified two vital reasons to invest in pandemic preparedness:

1. Preparation will lessen the direct medical and economic effects of a pandemic by making sure that adequate measures are put in place before the pandemic occurs.
2. Improvements in infrastructure to prepare for the next influenza pandemic which will provide benefits now and will also mitigate the effect of other epidemics or infectious disease threats.

Improving our preparedness to manage an influenza pandemic is, therefore, a high priority for the Government and the HSE.

The overall aims of pandemic planning in Ireland are to reduce mortality (deaths) and morbidity (sickness) and to minimise the resulting disruption to society.

This plan has been developed taking account of pandemic plans developed by other countries, the original influenza pandemic preparedness plan, *A Model Plan for Influenza Pandemic Preparedness (2002)* and the *Public Health Emergency Plan (2004)*.

In conjunction with this plan, we have published *Pandemic Influenza Preparedness for Ireland: Advice of the Pandemic Influenza Expert Group*. This provides authoritative information on pandemic influenza, clinical guidance and public health advice to health professionals and others involved in pandemic influenza preparedness and response.

The 2005 WHO Global Influenza Preparedness Plan contains recommendations and actions for national authorities. These are divided into five categories: planning and coordination, situation monitoring and assessment, prevention and containment, health system response, communications and all have been addressed in this plan.

■ Overview of this document

- Section 1** Introduction.
- Section 2** Outlines what pandemic influenza is and describes the phases of an influenza pandemic.
- Section 3** Explains the difficulty in predicting the potential impact of a pandemic and outlines the current planning assumptions.
- Section 4** Describes health service plans for the next pandemic. The key elements of the plan are described under eight headings:
- Communications strategy
 - Telephone hotline
 - Responsibilities as an individual
 - Surveillance
 - Antiviral drugs
 - Pandemic vaccine
 - Reorganisation of health services and redeployment of health service staff
 - Essential supplies.
- Section 5** Outlines the roles and responsibilities of those involved in responding to a pandemic.
- Section 6** Covers legal issues relating to pandemic influenza.
- Section 7** Identifies the key elements of business continuity planning.
- Section 8** Provides additional information.

This document is available on the websites of the Department of Health and Children (www.dohc.ie) and the HSE (www.hse.ie).

Section Two

Pandemic Influenza

■ What is Influenza?

Influenza (or flu) is an acute respiratory illness caused by infection with an influenza virus. There are three types. Influenza A and Influenza B cause the majority of infections, Influenza C rarely causes human illness.

Influenza is characterised by the sudden onset of symptoms which include a temperature of 38°C or more with a dry cough, headache, sore muscles and sore throat. Recovery usually occurs within two to seven days.

■ What is Avian Influenza?

Avian influenza (bird flu) is an infectious disease of birds caused by type A strains of the influenza virus. The disease, which was first identified in Italy 100 years ago, occurs worldwide.

Infection causes a wide range of symptoms in birds, ranging from mild illness to a highly contagious and rapidly fatal disease. It can cause severe epidemics. In a rare number of cases, bird flu passes from birds to humans, causing severe illness and often death. The avian flu strain which is causing most concern at the moment is H5N1.

■ What is an Influenza Pandemic?

An influenza pandemic is a worldwide flu epidemic. It can start when three conditions have been met:

1. A new influenza virus subtype appears
2. It infects humans, causing serious illness
3. It spreads easily between humans.

A new virus may be a re-emerging human virus subtype which has not been in circulation for some time, or a virus originating in birds which has changed into a form that is highly infectious for humans.

A pandemic can cause serious illness and death and can give rise to enormous social and economic disruption worldwide.

■ History of Pandemics

Influenza A viruses periodically cause pandemics with high rates of illness and mortality. In the 20th century, there were three influenza pandemics: 'Spanish flu' (1918-1919), 'Asian flu' (1957-1958) and 'Hong Kong flu' (1968-1969).

Of these pandemics, the Spanish flu had the most devastating impact and resulted in about 40 million deaths worldwide. The Asian flu caused more than two million deaths worldwide, while the Hong Kong flu resulted in about one million deaths.

Most new flu strains appear in South East Asia where large numbers of people are in close contact with domestic fowl and animals. Increased international travel means that the next pandemic virus may appear in Ireland soon after its emergence in another part of the world.

■ The Pandemic Threat

The risk of pandemic influenza is serious. Experts believe that future pandemics are inevitable but agree that it is difficult to predict the timing, source and impact of the next pandemic.

The avian flu virus (H5N1) meets the first two pandemic conditions: it is a new virus for humans and more than half of those infected have died. However, it has not, to date, met the third condition: the establishment of efficient and sustained human-to-human transmission of the virus.

■ Outline of Pandemic Phases

The World Health Organization (WHO) uses six phases of pandemic alert as a system for informing the world of the seriousness of the threat. These phases reflect the progression of an influenza pandemic from the first appearance of a new flu virus to wide international spread.

Phase 1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.
Phase 2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza subtype poses a substantial risk of human disease.
Phase 3	Human infection(s) with a new subtype, but no human to human spread (or, at most, rare instances of spread to a close contact). We are now in Phase 3 (January 2007).
Phase 4	Small cluster(s) with limited human to human transmission, suggesting that the virus is not well adapted to humans.
Phase 5	Large cluster(s) but human to human spread still localised, suggesting that the virus is becoming better adapted to humans, but may not yet be fully transmissible. At this stage, there is a substantial risk of a pandemic.
Phase 6	Pandemic phase: increased and sustained transmission in human population.

The designation of alert phases, including decisions on when to move from one phase to another, is made by the Director-General of the World Health Organization. The transition between phases may be rapid and some phases may be skipped.

Each alert phase coincides with a series of recommended activities to be undertaken by WHO, the international community, Governments and industry. Changes from one phase to another are triggered by several factors, which include the behaviour of the disease and the characteristics of circulating viruses.

The WHO Plan allows for additional national sub-divisions for Phase 2 onwards depending on whether a country is affected itself, has extensive travel/trade links with an affected country, or is not affected.

The European Commission has published four levels of alert to be used in the European context during WHO Pandemic Phase 6:

Level 1	Applies when there are no confirmed human cases infected with the pandemic virus in any EU Member State.
Level 2	Applies when there is one or more confirmed human case in any EU Member State.
Level 3	Applies when there is a confirmed outbreak in any EU Member State.
Level 4	Applies when there is widespread transmission in the EU.

Specific Irish alert levels have also been developed for WHO Pandemic Phase 6:

Irish Alert Level 1	Cases only outside Ireland (in a country or countries with or without extensive Irish travel/trade links).
Irish Alert Level 2	New virus isolated in Ireland.
Irish Alert Level 3	Outbreaks in Ireland.
Irish Alert Level 4	Widespread activity in Ireland.

As of January 2007, the world is in WHO Phase 3: a new influenza virus subtype is causing disease in humans, but is not yet spreading efficiently and sustainably among humans. See www.who.int

Section Three

Potential Impact of a Pandemic Influenza

■ Unpredictability of a Potential Pandemic

One of the main challenges in planning for a pandemic influenza is that we cannot know the nature and impact of the pandemic virus until it emerges. Much will depend on the characteristics of the virus. These include its clinical attack rate (percentage of people that become ill), the severity of the illness and the resulting case fatality rate (how many people die).

To help us plan, we have made a number of assumptions based on the best available information on the potential impact of a pandemic virus and on the feasibility and merits of specific responses.

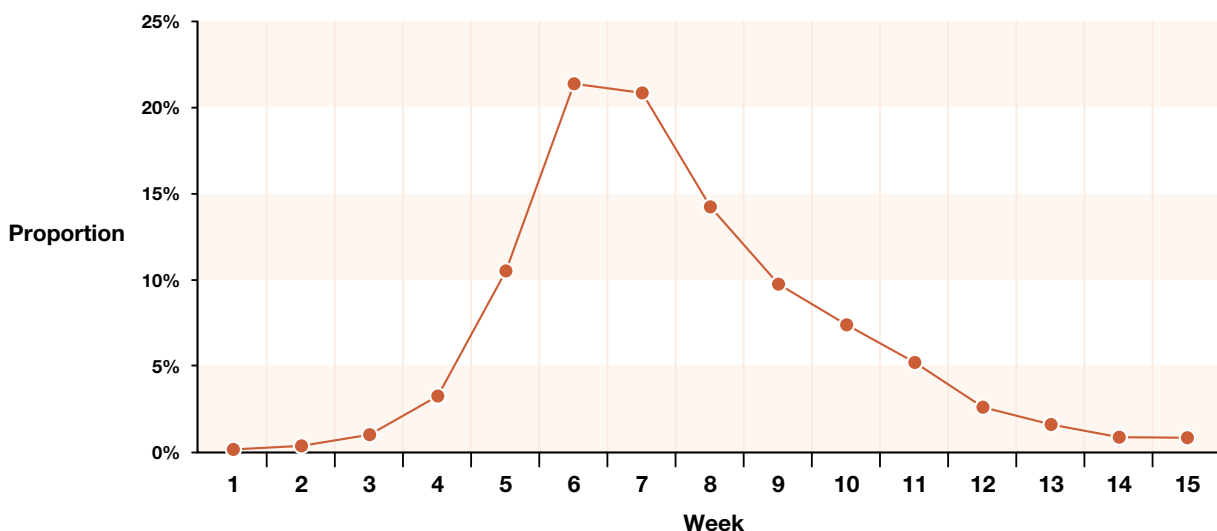
■ Risk Assessment

Experts predict another pandemic but cannot say exactly when it will happen. However, the World Health Organization (WHO) believes the risk has increased over the past two to three years. If and when a pandemic does happen, it may come in two or more waves several months apart and each wave may last two to three months.

A number of scientific models of the impact of an influenza pandemic have been developed internationally to help countries prepare for a potential pandemic. One of these was developed by the Health Protection Agency (HPA) in the United Kingdom. In Ireland, we have based our planning on estimates made by the Health Protection Surveillance Centre (HPSC) using the HPA model.

The HPA model outlines a single wave pandemic over 15 weeks with a peak of clinical cases and deaths occurring in weeks six and seven (see Figure 1). According to this model, just over 20% of cases and deaths occur in each of these weeks.

Figure 1 : Pandemic profile as predicted by the HPA model: % of total cases that will occur each week during a single wave pandemic



■ Current Planning Assumptions

The model can be used to estimate the number of clinical cases, hospitalisations and deaths that will occur in Ireland during each week of a 15-week single wave pandemic, in the absence of any interventions.

The following scenario has been adopted for planning purposes:

- a cumulative clinical attack rate of between 25% and 50% of the population
- a hospitalisation rate of between 0.55% and 3.70%
- a case fatality rate of between 0.37% and 2.50% (equivalent to the 1957 and 1918 pandemics respectively).

Table 1 : Estimated numbers of people falling ill, hospitalisations and fatalities (based on planning scenario)

	<i>Lower range</i>	<i>Upper range</i>
Numbers falling ill	1, 058, 731	2, 117, 463
Hospitalisations	5, 823	78, 346
Fatalities (deaths)	3, 917	52, 937

These assumptions are explored further in the document *Pandemic Influenza Preparedness for Ireland: Advice of the Pandemic Influenza Expert Group* which is available on www.hpsc.ie. The calculations are based on the Census 2006 Preliminary Report, which puts the Irish population at 4,234,925.

It must be stressed that these are only estimates, not predictions, of the numbers of people who may be infected and who may die in the next pandemic. If a pandemic occurs, we will be able to use models based on emerging surveillance information to provide more accurate predictions on the severity and duration of the pandemic.

The measures identified in Section 4 of this plan are designed to reduce the numbers affected.



Section Four

Health Service Plans for a Pandemic Influenza

■ Context

The plans currently in place for a pandemic influenza are based on the modelling assumptions detailed in Section 3. These assumptions will change over time as international understanding of the threat develops. This means the health service plans will be regularly revised and updated.

■ Introduction

The ideal way to deal with an influenza pandemic would be to vaccinate everyone. However, there is as yet no vaccine to prevent pandemic influenza. In order for a vaccine to be produced, we must wait for the specific pandemic virus to appear. It will then take at least six months for a vaccine to be developed. This means it is unlikely that there will be a vaccine available until the first wave of the pandemic is over.

As such, the health services plan for the first wave must consider other measures such as containment and treatment with antiviral medicines. Once the pandemic vaccine becomes available, the Government intends to buy enough vaccine to vaccinate the whole population.

The total amount of vaccine needed is unlikely to arrive in one delivery, but will be received in stages. For this reason, the vaccine will be given first to those identified as priority groups. These include healthcare workers and others who keep essential services running (e.g. energy, health, security, etc.). It will then be given to those considered to be at high risk of serious illness from the infection.

Ireland currently has a small stockpile of vaccine for the H5N1 virus (the 'bird flu'), but this vaccine may not match the pandemic virus. It will only give some protection if the emerging virus in the pandemic is closely related to the H5N1 virus.

■ Planning Budget

A lot of work has been done to prepare for a pandemic and its potential effects on Ireland. The Government has allocated significant funding to develop contingency plans – €9.3 million in 2005 and €19.3 million in 2006 and 2007. Most of this investment has been put towards the national stockpile of medicines and supplies.

■ Framework of the Health Services Plan for a Pandemic

If the next pandemic is severe (towards the upper range of our planning scenario) the worldwide impact will be huge. All aspects of people's lives will be affected. In addition to large numbers of people falling ill, schools may close, business in all sectors will be curtailed, transport may be disrupted, energy production and food distribution may suffer and normal social life will be restricted.

It is anticipated that the vast majority of people who fall ill will be able to be cared for at home and it is important that they stay at home until they are fully recovered so that they do not spread the disease to others.

The health services will come under particular strain. Demand for services will surge but so too will absenteeism and disruption as some healthcare workers and/or members of their families fall ill. These are problems that all services and businesses will have to cope with. However, preparing for the next pandemic will lessen these effects and will allow us to better manage the consequences.

■ Key Elements of The Health Service Plans

① COMMUNICATIONS STRATEGY

A comprehensive communications strategy has been developed to advise you on how to plan for an influenza pandemic, what to do if you suspect you or a family member has the flu virus, and where and how to access services if you need them.

The main elements of this communications strategy include:

- This plan, which will be continually updated
- Leaflet drop to every household before the pandemic reaches Ireland advising of measures you should take
- Regularly updated website
- Press briefings
- Advertising campaign
- Telephone hotline
- Television and radio updates

An internal communication strategy will educate all health service staff about pandemic influenza and will keep staff up to date as the pandemic unfolds.

② TELEPHONE HOTLINE

At Phase 5 this dedicated telephone hotline will provide you with medical advice and support. The aim is to prevent unnecessary attendance at GP surgeries and hospital Emergency departments. This is to prevent the spread of infection and ensure that these services are available for those who require direct clinical care.

Please remember that the health services will be trying to manage urgent and essential activities as well as dealing with cases of pandemic influenza. If you are ill with flu-like symptoms, contact the hotline for advice and direction.

If you suspect that you or a family member has contracted influenza, you should call this hotline before trying to access any GP, pharmacy or hospital services. You will be asked detailed questions to find out if you or your family members are infected with pandemic influenza.

If it is found that you or a family member has the pandemic virus, you will be told what to do, depending on your condition. In most cases, the advice will be to remain at home and rest, take antiviral drugs and put in place some basic measures to limit spread to other household members. You will be told where to go to get these antiviral drugs.

In a small number of cases, where the sick person is very young or old or has other complicating medical conditions, they will be directed to a GP or other healthcare professional for assessment. In a small number of cases, the patient will be directed to a specific hospital for treatment.

3 YOUR RESPONSIBILITIES

The HSE will issue clear advice and instructions throughout the different stages of the pandemic. It is essential that you listen to this advice and act on it without delay. Your health and that of your family may depend on you paying close attention to events as they unfold.

Your behaviour before and during an influenza pandemic will be vitally important. The modelling data described in Section 3 shows that the first wave of the pandemic will last 15 weeks. You should assume that many normal services will be disrupted during this first wave, particularly during the peak weeks (weeks 6 and 7).

It is your responsibility to keep yourself informed and to prepare your household and family for a pandemic. You may need to provide care in your home for family members who become ill. If so, you can get advice from the telephone hotline and website updates.

If you or your household members have flu symptoms during a pandemic, it is essential that you stay away from others as much as possible. This means staying at home while the symptoms are present unless you receive other advice from the telephone hotline.

Your preparations for your family and household should include:

- Buying enough food and other supplies in advance of the pandemic to last you and your household for at least one week
- Being aware of hygiene measures to prevent infection
- Listening to news updates.

Make sure your planning takes into account vulnerable family members, especially those who are isolated or living alone. It is your responsibility to put measures in place to support your household and family before the pandemic arises so that if it does, you will be well prepared to deal with the effects.

4 SURVEILLANCE

An effective surveillance system gathers information about what patterns an outbreak of disease is following so that measures can be put in place to prevent spread of the disease.

Surveillance system co-ordinators include the World Health Organization (WHO), the European Centre for Disease Prevention and Control (ECDC) and the Health Protection Surveillance Centre (HPSC) in Ireland.

In a pandemic, it is likely that the first case (the index case) will occur outside Europe so the first alert will come from WHO which will continue to monitor the disease at a global level and to issue further alerts. Once the pandemic reaches Europe, the ECDC will begin surveillance operations and will issue its own alerts.

The HPSC is Ireland's specialist agency for the surveillance of communicable diseases. It works in close partnership with its international counterparts to provide current information about effective control of infectious diseases.

Surveillance systems are in place in Irish hospitals, GP surgeries and other healthcare facilities and are designed to detect unusual or unexplained acute respiratory illnesses in patients or staff, in order to trigger appropriate public health and laboratory investigations.

Containment describes the actions that follow the identification of the initial (index) case. These actions include contact tracing, treatment of the index case and isolation of the index case and his/her contacts.

Contact tracing is the identification and diagnosis of people who may have come in contact with an infected person. Once the index case has been identified, a team will be mobilised to identify the contacts of that case. Treatment will be given to the index case and antiviral prophylaxis (treatment to prevent potential disease) will be given to people whom the index case has been in close contact with. The index case and his/her contacts will be asked to remain in voluntary isolation to try and stop the spread of the disease.

In Ireland contact tracing and the treatment of contacts will only occur in the early stages of the pandemic.

5 ANTIVIRAL MEDICINES

Antiviral medicines (drugs used to treat influenza) will be given to people who are infected with the flu virus. Antivirals are just one part of plans to manage the pandemic influenza in Ireland. These drugs are intended to reduce the severity and duration of symptoms and, in the first wave of the pandemic in Ireland, will almost certainly be the only influenza-specific treatment available. Antivirals should enable most people to stay at home and care for themselves, or be cared for by their family, while they are ill.

6 PANDEMIC VACCINE

If and when a pandemic virus emerges, pharmaceutical companies will start to develop a vaccine for that particular strain of influenza.

The Government will negotiate contracts with pharmaceutical companies to provide a pandemic vaccine for the entire population as soon as is possible. However, it is likely to be at least six months after the pandemic is declared before any significant quantities of a pandemic vaccine become available. This means that it is unlikely that a vaccine will be available during the first wave of the pandemic in Ireland.

The vaccine currently in the national stockpile is specific to the H5N1 virus that is already in circulation, not to any virus that may mutate to cause an influenza pandemic. The H5N1 vaccine may provide partial protection from a pandemic strain, but this is as yet unconfirmed

7 REORGANISATION OF HEALTH SERVICES AND REDEPLOYMENT OF HEALTH SERVICE STAFF

All non-essential health services will be cancelled or postponed during a pandemic. In some cases, healthcare centres may be temporarily converted to deal exclusively with influenza patients.

The HSE will have to manage a huge surge in demand for its services while suffering significant levels of absenteeism due to illness and carer responsibilities. It can only do this by redirecting staff and resources to meet this surge in demand. This means postponing or cancelling all but essential services to allow bed capacity to be created for influenza patients and redeploying staff freed up from these service postponements and cancellations to manage influenza patients.

This redeployment of staff will be the most challenging element of our plan and will require a co-ordinated approach between the HSE and private/ contract providers such as GPs, private and voluntary hospitals, community pharmacies and others.

8 ESSENTIAL SUPPLIES

The HSE is building a national stockpile of medicines and supplies to deal with an outbreak of pandemic influenza, as these items may be difficult to acquire if a pandemic occurs.

The stockpile currently contains:

- One million packs of Tamiflu (an antiviral medicine for adults)
- Tamiflu in a paediatric preparation form to treat 63,000 children
- 70,000 packs of Relenza (antiviral medicine for adults)
- 184,200 doses of H5N1 vaccine which will be given to essential workers only
- 500,000 surgical masks, five million pairs of disposable gloves and 150,000 surgical gowns for health care providers.

Contracts have been agreed to buy more Relenza and H5N1 vaccine, A further 636,000 packs of Relenza will be delivered in batches during 2007 and 215,800 doses of H5N1 vaccine will be delivered in early 2007.

Building a national stockpile is an ongoing process. The amount of supplies that will be needed will depend on when the pandemic occurs and how severe it is. The contents of the stockpile will be reviewed and supplemented if circumstances demand.

■ Implementation of the Health Services Plan

Some parts of the plan have already been put into effect. These include the purchase of items for the national stockpile, drafting of information leaflets for households and detailed planning of what non-essential activity will be postponed during the pandemic. Other parts such as how to distribute antiviral medicines, the role of private healthcare providers and the content of TV and radio advertisements are at various stages of completion.

Plans will evolve as the international understanding of pandemic influenza improves and as drug treatments become available. Regular exercises will be carried out within the health services to test these plans.

The eight key elements of our plan will be put into effect at various points during the WHO alert and during the pandemic itself.

■ Increasing Alert Levels

The following sections outline the steps that will be taken as WHO increases the pandemic alert level and as the virus reaches Ireland.

Currently (January 2007), we are in WHO Phase 3. (human infection(s) with a new subtype has emerged but there has been no human to human spread or, at most, rare instances of spread to a close contact).

■ When WHO increases the Pandemic Alert Level (Phase 4 & 5)

WHO
Phase

4

5

If and when we move to Phase 4 (small cluster(s) with limited human to human transmission), pandemic planning activity will increase significantly. This activity will take place in the expectation that the virus will gain momentum, that pandemic influenza will develop and that it will eventually reach Ireland.

This section outlines the key elements of the health service plan during Phases 4 and 5 of the WHO alert.

① COMMUNICATIONS STRATEGY

- All health staff will be familiarised with the national plan and their role in that plan
- An information leaflet will be distributed to all households when the pandemic is imminent
- An information campaign consisting of posters, newspaper, television and radio advertisements will commence
- Newspaper, television and radio will also be used to keep you regularly updated on developments
- The influenza pandemic website will give up to date advice at each phase.

② TELEPHONE HOTLINE

- The telephone hotline will be launched when WHO raises the alert level to Phase 5.

③ YOUR RESPONSIBILITIES

Develop your household/family plan with the other members of your household/family to ensure that everyone is familiar with it. In particular:

- Identify somebody you could call on for help if you were to become ill and were unable to leave your home
- Identify somebody who would get groceries and other supplies for you and your family if you were unable to leave your house, and discuss this with them
- Think about childcare arrangements if schools are closed and you have to go to work
- Stockpile enough food and essential supplies to last you and your family at least one week.

Home Stockpile

During a pandemic, it may at times be difficult to obtain food and other essentials so it makes sense to have a supply of basic necessities in the house in case you are unable to leave or you or a relative are unwell.

Make sure you have the following items:

- a thermometer
- paracetamol or ibuprofen
- portable radio with batteries
- can opener (manual).

You should also put together a one week supply of the following:

- basic household items, including detergent and other cleaning agents
- food (canned, packet and dried foods last longer. Cereals, crackers, protein bars and nuts are useful), fruit juices, soups, etc.
- baby food
- pet food
- plenty of tissues and plastic bags in which to dispose of the tissues
- soap or an alcohol based gel
- toiletries
- fuel to keep warm.

4 SURVEILLANCE

- Surveillance will be enhanced once the alert level increases.

5 ANTIVIRAL MEDICINES

- The antiviral stockpile will be reviewed.

6 PANDEMIC VACCINE

- WHO will try to isolate the virus that may cause a pandemic to speed development of a vaccine.

7 REORGANISATION OF HEALTH SERVICES AND REDEPLOYMENT OF HEALTH SERVICE STAFF

- Some non-essential services will be cancelled or postponed
- Rosters will be drawn up to reallocate staff.

8 ESSENTIAL SUPPLIES

- As the WHO alert level rises, the adequacy of the national stockpile will be assessed continuously
- In Phase 5, items held in the national stockpile will be distributed to healthcare locations for use during the pandemic.



■ **When WHO Declares A Pandemic But It Has Not Yet Arrived In Ireland (WHO Phase 6, Irish Alert Level 1)**



It is extremely unlikely that the index (first) case in the pandemic will occur in Ireland. The pandemic is far more likely to begin in Asia where the H5N1 virus is prevalent. When WHO declares a pandemic, the health services will rapidly implement any remaining elements of its plans to manage the arrival of the pandemic in Ireland.

Primary care workers (for example GPs, public health nurses and home carers) will have an important role at this stage. They will be involved in educating people about the pandemic and about infection control. They will play a part in surveillance and may well be the first to report Irish cases of pandemic influenza.

The health services will increase communications and surveillance and supplement the national stockpile as necessary. The health service will also implement plans to manage a sharp increase in demand for its services.

Pandemic activity will be monitored worldwide on a daily basis and plans will be adapted on the basis of a growing understanding of the probable impact of the pandemic in Ireland in terms of infection rate, duration, mortality (deaths) and morbidity (illnesses).

You must pay close attention to all communications from the health services and review your household/family plan. Once a pandemic is declared it is highly probable that it will reach Ireland.

① **COMMUNICATIONS STRATEGY**

- Specialist information and updates will be given to healthcare professionals
- The health services will publish information to keep you informed about how to react appropriately
- Television, radio and press advertisements will reinforce the information you received in the leaflet delivered to your home prior to this and will give regular updates on what is happening worldwide regarding the pandemic and how it may affect Ireland
- The pandemic influenza website will offer further support and information as the pandemic progresses and will provide daily updates to reinforce the radio and television messages.

② **TELEPHONE HOTLINE**

- This will operate on a 24-hour basis.

③ **YOUR RESPONSIBILITIES**

- Pay close attention to information provided through the media and the influenza pandemic website and follow the instructions and advice given
- Update your household/family plan and discuss it with all members of your household and family
- Confirm childcare arrangements
- Confirm arrangements with all those you have asked to help out with groceries and other supplies
- Check your stockpile and make sure you have enough supplies in your house to last for at least a week
- Replace any item that needs replacing.

4 SURVEILLANCE

- Surveillance will be enhanced as the alert level increases
- Hospitals, GPs and other healthcare providers will be on high alert for signs of the pandemic arriving in Ireland.

5 ANTIVIRAL MEDICINES

- The health services will prepare to distribute antiviral medicines.

6 PANDEMIC VACCINE

- Pharmaceutical companies will be working on developing a vaccine.

7 REORGANISATION OF HEALTH SERVICES AND REDEPLOYMENT OF HEALTH SERVICE STAFF

- Preparations will commence to postpone or cancel all but essential activity in the health services
- Preparations will intensify and staff redeployment will commence.

8 ESSENTIAL SUPPLIES

- Supplies will be distributed from the national stockpile to all healthcare settings.

WHO Phase 6 ■ When The Pandemic Reaches Ireland (WHO Phase 6, Irish Alert Levels 2, 3 & 4)

6 As soon as the first case of pandemic influenza appears in Ireland, plans will be implemented in order to delay its spread and to manage the pandemic until the first wave is over.

2 There may be restrictions on large gatherings of people. The vast majority of people who are ill with flu will remain at home with the support of family or friends. Special arrangements will be made for those who need hospital care.

3 Surveillance and contact tracing will be undertaken as necessary. There will be frequent information updates through the media and the pandemic influenza website. All non-essential health services will be cancelled or postponed.

4 Primary care workers will continue to provide education to the community. They may be asked to provide support to people who are ill at home. GPs and others may be asked to assist with administration of antiviral medicines and vaccinations.

1 COMMUNICATIONS STRATEGY

- Daily updates on pandemic influenza will be provided to health service staff, GPs and other healthcare professionals
- Public notices will advise the public of the current situation and offer advice
- As the pandemic reaches its peak, daily briefings and guidance by experts will be provided on television and radio
- The website will be updated daily with the latest information available.

2 TELEPHONE HOTLINE

- Will operate on a 24-hour basis.

3 YOUR RESPONSIBILITIES

- Pay close attention to information provided through the media and the influenza pandemic website
- Put your household/family plan into action as necessary
- Contact the telephone hotline if you or any member of your family shows signs or symptoms of influenza
 - You will be asked questions to establish whether you have pandemic influenza and about other conditions and other potential complicating factors
 - You may have influenza if you have a temperature of 38°C (100.4°F) or higher and two of the following:
 - a dry cough
 - aching muscles
 - headache
 - sore throat.
 - In this case then you should stay at home and:
 - take paracetamol or ibuprofen to treat the fever headache and general aches and pains
 - rest
 - drink plenty of fluids
 - avoid smoking.
 - You will be told what steps to take depending on the signs and symptoms. If you are prescribed an antiviral medicine, it is vital that you take it exactly as instructed. This way you will get the best from the treatment and will lessen the odds of a resistant strain of the virus emerging.
 - You should not visit your GP or the Accident and Emergency Department with influenza symptoms unless you fall into a high risk group. Staff manning the telephone hotline will identify if you fall into a high risk group and will refer you to the appropriate place.

High risk groups include:

- children less than one year old
- children who were born prematurely and are less than two years old
- children who were sick and in hospital within the previous three months
- pregnant women
- people with chronic medical conditions (e.g. asthma, cystic fibrosis, heart disease, diabetes, kidney disease)
- people with cancer.

If you are in one of the high risk groups and have signs and symptoms of pandemic influenza, the telephone hotline will direct you to the appropriate source of care. If you are unwell but do not have signs and symptoms of influenza, then you should access the health services in the usual way, bearing in mind that normal services will be severely disrupted. You will be given advice via information bulletins in the media regarding what services are available at the time.

Infection control

The influenza virus is passed by droplet transmission such as coughing and sneezing. The virus can also live on people's hands and on surfaces such as doorknobs, telephones, taps and tables. There are many simple things that you can do to help prevent the spread of the virus.

Hand hygiene

- Always wash your hands before eating, after contact with other people, and after coughing, sneezing or blowing your nose
- Wash your hands thoroughly with warm water and soap
- Spend at least 10-15 seconds washing and pay attention to your fingers, nails, wrists and palms
- Rinse off the soap and dry your hands in a clean, dry towel
- Keep your hands away from your face as much as possible.

Cough and sneeze etiquette

- If you need to cough or sneeze, cover your nose and mouth
- Use disposable tissues, rather than a cloth handkerchief
- Dispose of the tissues immediately into a closed bin
- Wash your hands afterwards.

Household and workplace hygiene

- Clean common surfaces (taps, doorknobs etc) with hot water and detergent every day
- Do not share utensils, cups, plates etc with other people
- If someone in your home is ill, try to keep them and their wash things separate from everyone else in the house
- Do not visit anyone with influenza, unless it is strictly necessary.

4 SURVEILLANCE (IRISH ALERT LEVEL 2)

- Surveillance will be increased to identify the first few cases of pandemic influenza in Ireland
- Hospitals and GPs will increase surveillance significantly
- All health care workers will be on the alert, observing patients for signs and symptoms of pandemic influenza
- Public health authorities will try to locate anyone with pandemic influenza and to identify the people they have been in contact with
- The emphasis will be on treating and isolating the index case and treating contacts
- Staff will be rostered to undertake contact tracing.

Surveillance (Irish Alert Level 3)

- Increased surveillance will continue
- When someone presents to a hospital or GP with signs and symptoms of influenza, a swab will be taken and the specimen sent to a laboratory for immediate testing.

Surveillance (Irish Alert Level 4)

- Surveillance will be undertaken on a sample basis at this stage.

5 ANTIVIRAL MEDICINES

- Antiviral medicines will be distributed as necessary
- If you need antiviral medicine, you will be told how to get it from the health services.

6 PANDEMIC VACCINE

- Efforts will continue internationally to develop a pandemic vaccine.

7 REORGANISATION OF HEALTH SERVICES AND REDEPLOYMENT OF HEALTH SERVICE STAFF

- All non-essential activities will be postponed or cancelled
- You will be advised about any hospital, GP or other health service appointments you may have
- No new hospital appointments will be made unless absolutely necessary
- Plans will be put in place regarding treatment locations for those with influenza.

8 ESSENTIAL SUPPLIES

- Supplies will be delivered to health care facilities around the country
- Stocks will be replenished as necessary.

■ When The First Wave Of The Pandemic In Ireland Is Over

The health services have two key tasks to undertake between waves of the pandemic influenza. These are to:

- 1 Begin to recover from the first wave while assessing priorities to allow a return to normal service; and
- 2 Prepare for the next pandemic wave.

The health services will have been under extreme pressure during the first wave. Once that wave is over, the lessons learned from it will be used to prepare for subsequent waves. If the second wave follows swiftly after the first, there will be no chance for services to return to pre-pandemic levels. Services will be prioritised to get help to those who need it most.

① COMMUNICATION STRATEGY

- Television, radio and press advertisements will tell you what is happening worldwide and when the second wave is expected.
- Daily updates and bulletins on the websites will guide you as to what to do and how to behave between pandemic waves.
- You will be told what health services are available at this stage and how to access them.

② TELEPHONE HOTLINE

- Will remain in operation.

③ YOUR RESPONSIBILITIES

- Pay close attention to information provided through the media and the influenza pandemic website
- Review your household/family plan and replenish your stockpile.

④ SURVEILLANCE

- Surveillance will be maintained nationally and internationally in an attempt to pinpoint the beginning of the second wave.

⑤ ANTIVIRAL MEDICINES

- Antiviral medicines will be replenished as necessary.

⑥ PANDEMIC VACCINE

- This will be administered as soon as it is available.

⑦ REORGANISATION OF HEALTH SERVICES AND REDEPLOYMENT OF HEALTH SERVICE STAFF

- Rosters will be organised to prepare for the second wave
- The health services will examine the possibility of resuming some non-essential services.

⑧ ESSENTIAL SUPPLIES

- The stockpile will be replenished for the second wave.

■ **When The Pandemic Is Completely Over**

Pressure on the health services during the pandemic will be unprecedented. It may be a long time before the health services recover enough to provide a service equivalent to that offered before the pandemic. During this stage, the emphasis will be on assessing our position and focusing on recovery.

Surveillance will return to pre-pandemic levels. Health staff will return to their normal work schedules. You should continue to pay close attention to information provided through the media and on the website. This will tell you when services suspended during the pandemic are likely to return to normal.



Section Five

Pandemic Response: Roles and Responsibilities

■ Introduction

The Department of Defence's Strategic Emergency Planning Guidance 2004 introduced the concept of assigning lead roles to Government Departments in emergency planning in Ireland.

The Department of Health and Children is the lead Government Department in responding to a public health emergency and the Health Service Executive is the lead agency. These two bodies work closely together in preparing Ireland for a response to a pandemic influenza.

The public health emergency management structures include:

- Cabinet Committee as required
- Government Task Force on Emergency Planning
- Interdepartmental Committee on Public Health Emergency Planning
- National Public Health Emergency Team
- HSE Planning and Crisis Management Teams
- Pandemic Influenza Expert Group.

■ Cabinet Committee

A Cabinet Committee will give policy direction, as necessary, on actions recommended by the Department of Health and Children following an assessment by the National Public Health Emergency Team. The Department of An Taoiseach, in consultation with the Department of Health and Children, will make arrangements for convening the Cabinet Committee.

■ Government Task Force on Emergency Planning

The Task Force is chaired by the Minister for Defence and co-ordinates and oversees the emergency planning activities of all Government Departments and public authorities. The Department of Health and Children and the HSE are represented on the Task Force.

■ Inter-Departmental Committee

The Department of Health and Children has established a Standing Inter-Departmental Committee on Public Health Emergency Planning to consider issues which go beyond the health aspects of a public health emergency. The committee's initial focus is on pandemic influenza. The HSE is represented on this committee.

■ National Public Health Emergency Team

The National Public Health Emergency Team is the forum for managing the interface between the Department of Health and Children and the Health Service Executive during the planning and response phases of a public health emergency. The team is chaired by the Secretary General of the Department of Health and Children. The Chief Executive Officer leads the HSE team.

■ **HSE Planning and Crisis Management Teams**

National/Area Planning and Crisis Management Teams have been established to prepare for and manage the HSE's response to an influenza pandemic.

■ **Pandemic Influenza Expert Group**

This group provides expert advice to the Minister for Health and Children and the HSE. It provides authoritative information on pandemic influenza and clinical guidance and public health advice to health professionals and others involved in pandemic influenza preparedness and response.

The current expert guidance is contained in *Pandemic Influenza Preparedness for Ireland : Advice of the Pandemic Influenza Expert Group*.

■ **International Context**

Ireland works closely with international bodies on pandemic preparedness activities. These include the European Commission, the European Centre for Disease Prevention and Control, and the World Health Organization.

Work is ongoing with the United Kingdom on coordinated communications strategies and with Northern Ireland on cross-border issues in relation to pandemic influenza.



Section Six

Pandemic Influenza Legal Issues

A number of legal issues may arise from the public health management of pandemic influenza. The Department of Health and Children is considering these issues.

The World Health Organization has identified and categorised non-pharmaceutical public health interventions as follows:

1. Information for the public, communications
2. Measures to reduce the risk of cases transmitting infection to others
3. Measures to reduce the risk that contacts of cases transmit infection
4. Measures to increase social distance e.g. school closures
5. Measures to decrease the time gap between symptom onset and patient isolation
6. Disinfection measures
7. Measures for people entering or exiting an infected area within a country
8. Measures at borders for people entering or exiting a country
9. Measures at borders for international travellers coming from or going to affected areas
10. Entry screening
11. Exit screening
12. Measures for travellers on board ships or planes coming from affected areas.

The Influenza Pandemic Expert Group used these categories when considering possible public health interventions for use in Ireland.

■ International Measures

The measures numbered 8 to 12 above are international measures. Our approach to them will be influenced by international commitments, such as the International Health Regulations (IHR), and by advice from the World Health Organization and the European Union.

The 2005 IHR will become effective in June 2007. Their aim is to protect people as far as possible against the international spread of diseases while minimising interference with world travel and trade. Ireland has already put considerable resources in place for the implementation of the IHR. We expect to be fully compliant with the regulations by June 2007.

■ National Measures

Some of the measures aimed at preventing infection and increasing social distance have legal implications. A number of existing legal provisions deal with infectious diseases and the extent to which these meet needs in relation to pandemic influenza is being examined.

For instance, part IV of the Health Act 1947 (sections 29 to 45) deals with infectious diseases. Section 31 gives power to the Minister to make regulations to prevent the spread of an infectious disease and to treat people suffering from infectious disease. The regulations envisaged by the Act include:

- Compulsory notification of all suspected cases of the virus
- Requirement for adults and children to submit to examination, vaccination, immunisation and the taking of bloods and other specimens for examination and investigation
- Requirement for adults and children to stay in their homes
- Prohibition on sending children to school.

As a first step, the Infectious Disease Regulations are being amended to include pandemic influenza in the list of notifiable diseases.

Examination of legal issues in relation to pandemic influenza is continuing.



Section Seven

Business Continuity Planning

This plan focuses mainly on the health response to an influenza pandemic, however pandemic planning is not solely a public health issue. It is of concern to everyone and will require a co-ordinated response from all Government departments and all sectors of society.

The Department of Health and Children has established a Standing Inter-Departmental Committee on Public Health Emergency Planning to consider issues which go beyond the health aspects of an influenza pandemic. These include border controls and suspension of travel, travel advice, school closures, suspension of other gatherings, possible security issues.

All organisations, including those in the private sector, need to consider the implications of an influenza pandemic for their business and make business continuity plans.

The following key points need to be addressed in business continuity plans:

1. Identify those essential functions and posts, and perhaps individuals, whose absence would place business continuity at particular risk
2. Put in place measures to maintain core business activities for several weeks with high levels of staff absenteeism
3. Identify which services could be curtailed or closed down during all, or the most intense period, of the pandemic
4. Make sure the business continues to meet its health and safety responsibilities to employees
5. Identify inter-dependencies between organisations and make sure they are resilient. For example, suppliers delivering services under contract should have arrangements in place to continue to provide their service
6. Consider how customer needs might be different during a pandemic.
7. Support Government and health service efforts to reduce the impact of the pandemic by:
 - a. taking all reasonable steps to make sure that employees who are ill or think they are ill are encouraged not to come to work
 - b. ensuring that employees are aware of official advice on how to reduce the risk of infection during a pandemic. (This will be available as part of the HSE communications plan during a pandemic)
 - c. ensuring that adequate hygiene (e.g. hand-washing) facilities are routinely available.

■ Absence from Work

During a pandemic, staff will be absent from work:

- if they are ill with influenza. Current expert advice is that people ill with influenza should be isolated (and so they will not be available for work) for at least seven days.
- or if they need to care for others who are ill with influenza.

At the core of business continuity planning should be an estimate of the number of staff likely to be absent from work at the peak of the pandemic.

Estimates of likely levels of absence from work caused by influenza or by the need to care for others ill with influenza are set out in Table 2 against a range of assumptions on the clinical attack rate of the pandemic virus. This table has been extracted from the UK Cabinet Office Guidance: Contingency planning for a possible influenza pandemic (2006).

Table 2 Estimates of likely levels of absence from work (% of total workforce) during an influenza pandemic

	Clinical attack rate		
	10%	25%	50%
Large organisation or unit			
% of people ill at peak	2%	5%	10%
% of people ill & carers taking time off at peak	3%	7%	15%
Small organisation or unit*			
% of people ill and carers taking time off at peak	6%	14%	30%
Cumulative total of those ill over whole period of pandemic	10%	25%	50%

* A small organisation or unit can be defined as a group of up to 15 people

Small organisations and small teams within larger organisations may experience higher rates of staff absence at the peak of a pandemic than large organisations or large teams.

The figures illustrated in **Table 2** do not include 'normal' absenteeism levels, people taking time off due to family bereavement or the psychosocial impact of pandemic. To estimate the total number of staff likely to be absent from work at the peak of a pandemic, employers should add data appropriate to their circumstances on the:

- average number of staff 'normally' absent from work
- nature of their business and their employment practices.

Absentee rates could be higher if the nature of the virus means that people take longer to recover from infection than assumed, or if some age groups are affected more severely than others.

In reality, clinical attack rates and death rates are likely to vary across age-groups. If mostly working age adults are affected, this will have a greater impact on the provision of services and on business continuity. If children and older people are those most affected, this will place a greater burden on the health services.

Furthermore, different parts of the country may be affected by the pandemic at different times. Therefore, plans will need to consider the possibility of staff re-deployment from one area to another, for instance after they have recovered from influenza and are immune.

The Department of Enterprise, Trade and Employment, through Forfás, has commissioned a study to assess the impact on enterprise of an influenza pandemic. It is hoped that this work will lead to the compilation of a generic checklist of actions needed for business contingency planning.



Section Eight

Additional Information

This document has given you information about pandemic influenza, including what you need to do if there is a pandemic.

We have also outlined the measures taken by the Government and the health services to prepare for, and deal with, a worldwide influenza pandemic.

This *National Pandemic Influenza Plan* is available on-line on the websites of the **Department of Health and Children** (www.dohc.ie) and the **Health Service Executive** (www.hse.ie).

It will be reviewed and updated as necessary. Any additional information will be posted on-line at www.dohc.ie/issues/flu_pandemic/ and www.hse.ie

Further information about pandemic flu and avian flu (bird flu) is available on the following websites:

World Health Organization

www.who.int/en/

World Organisation for Animal Health

www.oie.int/eng/en_index.htm

Food and Agriculture Organization of the United Nations

www.fao.org/ag/againfo/subjects/en/health/diseases-cards/special_avian.html

European Commission

www.ec.europa.eu/health/ph_threats/com/Influenza/influenza_en.htm

European Centre for Disease Prevention and Control

www.ecdc.eu.int/

Department of Agriculture and Food

www.agriculture.gov.ie/

Food Safety Authority of Ireland

www.fsai.ie/

HSE Health Protection Surveillance Centre

www.hpsc.ie

Safefood (Food Safety Promotion Board)

www.safefoodonline.ie/

Health Service Executive

Oak House
Limetree Avenue
Millennium Park
Naas
Co. Kildare

Tel: +353 (0)45 880400 / +353 (0)1 2744208

Email: pandemicflu@maild.hse.ie

Department of Health and Children

Hawkins House
Hawkins Street
Dublin 2

Tel: + 353 (0)1 6354000

Fax: + 353 (0)1 6354001

Email: pandemicflu@health.irlgov.ie

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