

Flu pandemic preparedness



July 2006

Standing ready in case of a flu pandemic

A severe **worldwide epidemic caused by a new strain of a human influenza virus**, i.e. a pandemic, could have severe public health and socioeconomic impacts if authorities across the globe do not stand prepared.

The EU has developed a **pandemic influenza preparedness plan**, which sets out orientations for planning at national level and comprises coordination provisions between EU Member States and with the rest of the world. In addition, it tackles key issues such as international outbreak assistance and increasing the capacities of vaccine production.

CONTEXT AND NEED FOR EUROPEAN ACTION

1. Why is the risk of a flu pandemic causing concern?

- Three influenza pandemics occurred in the 20th century – in 1918-1920, in 1957 and in 1968. Experts warn that another pandemic could occur at any time, as pandemics regularly hit the world population.
- The World Health Organisation (WHO) estimates that once a human pandemic virus emerges, it could encircle the globe within months.
- Because a pandemic strain would be of a new type that has not previously circulated in humans, the development of sufficient doses of a new vaccine could take months.
- This is due to the lack of production capacities worldwide and also because of the technology used to cultivate seed strains.

2. What is the potential impact on public health?

- First and foremost, many people across the globe could become ill because pandemic viruses are spread readily

and are highly pathogenic. Worst case scenarios anticipate that within 2-4 months up to one third of the total population could become ill, and it is assumed that more than 0.3% of those affected could die.

- Flu viruses cause respiratory complications. Every year, seasonal flu kills between 250 000 and 500 000 people in the world. These are mostly elderly persons in poor health.
- Hospitals could be under considerable pressure to cope with the flow of patients. Supplies of vaccines and antiviral drugs could be inadequate, especially at the start of the epidemic.

3. What are the possible economic repercussions?

- Mass work absenteeism may occur because of illness. Certain services or companies might be unable to operate in the absence of essential staff and may need to close down. Authorities may decide that public gatherings should be avoided and schools should be closed (containment measures). This could cause major economic disruption.

- Even if the outbreak is not very severe, secondary economic costs could arise from public fears of the disease, leading to a fall in tourism and damage to the retail and transport sectors.
- A recent European Commission report on the macroeconomic effects of a flu pandemic found that a human pandemic could cost up to €180 billion in lost economic output in the European Union if a pandemic were to strike in 2006. This would reduce the economic output by at least 1.5% because of a slump in overall hours worked, as well as in travel and leisure activities.

4. What is the added value of pandemic preparedness efforts at EU level?

- Viruses do not respect borders – in case of a pandemic, international cooperation and EU action would be crucial in order to stem the crisis.
- Member States working together will collectively achieve a better level of preparation by exchanging best practices, setting up mutual assistance mechanisms and addressing common issues while exploring possible synergies.
- This has become a priority due to the increased probability of a pandemic and because the efficiency of the response will greatly depend on the capacity to act quickly and in a consistent manner at the beginning of a pandemic.

Key data

- Relatively conservative estimates predict between 2 and 7.4 million deaths worldwide over the course of around three months in the event of a deadly human influenza pandemic.
(Source: WHO Pandemic Preparedness)
<http://www.who.int/csr/disease/influenza/pandemic/en/>
- The world would face up to 100 million outpatient visits and more than 25 million hospital admissions globally, within a very short period.
(Source: WHO Checklist for influenza pandemic preparedness planning)
http://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_4/en/



THE EU'S ACTION

1. What does the EU intend to achieve via its pandemic preparedness efforts?

- The Commission is aiming for the highest possible level of preparedness across the EU and at Member State level in the event of an influenza pandemic.
- The EU is developing a coordinated EU-wide response and is working with Member States and industry to improve stocks of antivirals and vaccines.

2. Which initiatives has the EU taken to achieve the maximum degree of preparedness?

Influenza preparedness in the EU

- An EU Influenza Pandemic Preparedness Plan was adopted in March 2004 – this plan has been fully reviewed in order to ensure better coherence with the WHO recommendations and full recognition of the role of the **European Centre for Disease Prevention and Control (ECDC)**.
- All the Member States have now drawn up, strengthened and evaluated their pandemic influenza preparedness with assistance from the Commission, the ECDC and the WHO.

- Since 1998, the EU has made use of an early warning and response system (EWRS) in order to ensure a rapid and coordinated reaction between Member States to any major disease outbreak.
- A mechanism to ensure full coordination of Commission services (ARGUS) has also recently been set up.
- The Commission's public health services continue to work closely together with the ECDC and the WHO to update and regularly test these preparedness plans.

Vaccine

- The European Union has recently provided new funding worth €20 million to boost research on developing new vaccines and new technologies for their production, establish surveillance networks, monitor drug resistance and assess the use of antivirals.
- Fast-track procedures to produce and authorise future pandemic vaccines have been put in place by the European Agency for the Evaluation of Medicinal Products (EMA).

Helping third countries

- The Commission and the Member States actively support the work of the UN Agencies such as the WHO (World Health Organisation), FAO (Food and Agriculture Organisation), OIE (World Organisation for Animal Health) and the World Bank to assist third countries, especially countries which are currently affected by avian influenza – an animal disease which might trigger a human flu pandemic if it mutates into a new

virus strain, transmissible from human to human. The European Commission and EU Member States together have pledged €214 million to fight avian influenza across the globe and prepare for a possible flu pandemic.

- The EU and WHO organised three joint workshops in 2005-2006 in order to discuss national influenza preparedness plans with representatives from the 52 countries of the WHO European Region.

EXAMPLES OF CONCRETE ACTIONS

Increasing seasonal influenza vaccine coverage

- At the initiative of Commissioner Kyprianou and following up recommendations adopted by the WHO in 2003, most Member States have taken action to increase vaccination of risk groups against seasonal flu. This helps to reduce mortality every year and also contributes to increasing production capacity for a “pandemic vaccine”.

provide for a **fast track approval procedure** for virtual dossiers of future pandemic vaccines, without taking a fee for the evaluation work. Four submissions to the EMEA have been announced already. Several months can therefore be saved when a vaccine is developed and made available for public use.

Flusecure

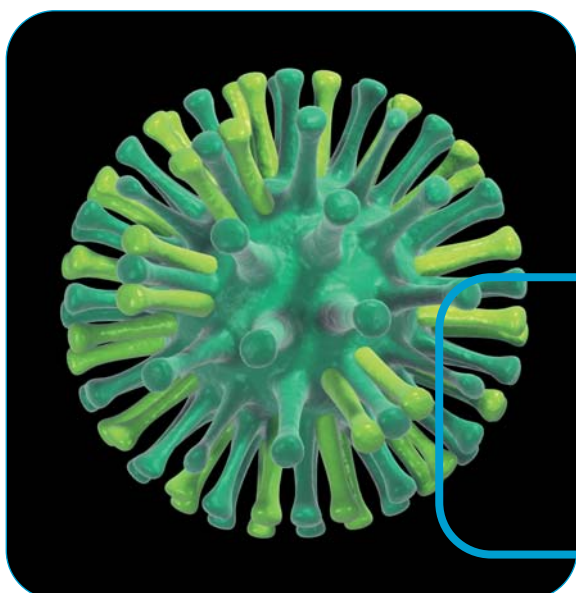
- Financed by the European Commission’s Public Health Programme, the Flusecure project has created a network of public health institutes which facilitate the establishment and management of a public-private partnership on European pandemic influenza vaccines. This will enable fast production and sufficient manufacturing capacity of the most effective pandemic vaccine for the EU population. Other priorities of the Flusecure project include improving vaccine efficacy, increasing availability and decreasing the lead-time of vaccine production.

Common Ground exercise

- The “Common Ground” evaluation exercise, undertaken in November 2005, tested how the Member States’ national preparedness plans would work together in the event of an influenza pandemic. It also evaluated the coordination and communication between the Commission, Member States, EU agencies, international organisations and the pharmaceutical industry.

EMEA

- The Commission has asked the European Agency for the Evaluation of Medicinal Products (EMEA) in London to



Historical overview

- **1918-19**
“Spanish flu” pandemic is believed to have killed up to 50 million people.
- **1957-58**
Asian influenza pandemic killed between one and three million people.
- **1968-69**
Hong Kong influenza pandemic killed between one and three million people.
- **2003**
Severe Acute Respiratory Syndrome (SARS) outbreak killed 800 people. Estimates put the losses at €15-30 billion, mainly for the Asian economies.
- **Since november 2003**
Outbreaks of bird flu in South-East Asia and elsewhere have continued to cause human fatalities and have sparked fears of a new flu pandemic. As of 20 June 2006, the total number of human cases reported was 228, including 130 deaths.

- The evaluation report concluded that the exercise was “a successful event” which showed considerable improvements from an earlier exercise. It also identified recommendations for further improvement, including the need to review, enhance and develop communications systems. The report revealed that issues of common concern which need further consideration include antivirals, vaccines, travel restrictions, quarantining and border closures.

Country visits to strengthen national preparedness

- In 2005, joint teams from the Commission, ECDC and WHO Europe visited three EU Member States (Greece, Poland, UK) and three countries in the wider WHO European Region (Kazakhstan, Turkey, Ukraine) to help them review their preparedness and develop a standard methodology for assessing preparedness.
- In the first half of 2006, ECDC teams visited a further six EU Member States (France, Germany, Italy, Lithuania, Portugal, Slovakia) to help them review their preparedness. Plans are in place for ECDC teams to complete visits to all EU Member States by mid-2007. Meetings of groups of the Member States not yet visited will take place this autumn to further review their state of preparedness.

Provisions to set up emergency teams in case of avian flu outbreaks

- In order to respond to outbreaks of avian influenza promptly and efficiently, the Commission has proposed the establishment of a **Community Veterinary Emergency team**.

This team of specialised experts, immediately available to provide sound scientific, technical and managerial expertise, would work closely together with the appropriate authorities in the affected Member State or third country.

- Experts from the European Commission and ECDC have participated in **international teams** to assist countries in the European neighbourhood – e.g. Turkey, Romania, Azerbaijan and Iraq – in dealing with avian influenza outbreaks. EU countries will benefit from this experience in case of an outbreak.

Integrated Zoonoses Initiative

- Since 2005 – as a follow-up to an initiative launched under the Dutch Presidency – the EU (along with the respective presidencies) has regularly brought together senior EU policy decision makers, such as the Chief Medical and Chief Veterinary Officers or their representatives. Their aim has been to improve cooperation among national animal and public health sectors on issues of common concern in the area of avian and pandemic influenza preparedness and intervention.

Network of media officers

- Coordination and sharing of media messages in a crisis should be strengthened – to this effect, a **network of media contacts** in national ministries has been established. Following the informal Health Council meeting in Vienna on 24 February 2006, the Commission and ECDC are now coordinating a network of Member States’ press officers in order to ensure the communication of clear and accurate messages to the public throughout Europe.

Further information

- Europa Public Health Portal:
http://ec.europa.eu/health-eu/health_problems/avian_influenza/index_en.htm
- DG SANCO page on EU influenza preparedness planning:
http://ec.europa.eu/health/ph_threats/com/Influenza/influenza_level_en.htm
- The EU Flu Pandemic Preparedness Plan - Communication from the Commission, (COM(2005) 607 final):
http://eur-lex.europa.eu/LexUriServ/site/fr/com/2005/com2005_0607fr01.pdf
- DG ECFIN report “The macroeconomic effects of a pandemic in Europe - A model-based assessment”:
http://ec.europa.eu/economy_finance/publications/economic_papers/2006/economicpapers251_en.htm
- WHO Q&A page on pandemic influenza:
<http://www.who.int/csr/disease/influenza/pandemic10things/en/index.html>