



EPIDEMICS

Responding to epidemics

This thorough checklist can be adapted to local and community outbreak of diseases.

EPIDEMIC
ALERT &
RESPONSE

WHO checklist for influenza pandemic preparedness planning



Department of Communicable Disease
Surveillance and Response
Global Influenza Programme

<http://www.who.int/csr/resources/publications/influenza/FluCheck6web.pdf>

Preface

Some time in the future

Rumours of an outbreak of unusually severe respiratory illness in two villages in a remote province reach the ministry of health in one of the World Health Organization's (WHO's) Member States. A team is dispatched to the province and learns that the outbreak started about a month earlier. The team is able to identify at least 50 cases over the previous month. All age groups have been affected. Twenty patients are currently in the provincial hospital. Five people have already died of pneumonia and acute respiratory failure. Surveillance in surrounding areas is increased, and new cases are identified throughout the province. Respiratory specimens collected from several patients are tested at the national laboratory and are found to be positive for type A influenza virus, but they cannot be further subtyped. The isolates are sent to the WHO Reference Centre for Influenza for further characterization, where they are characterized as influenza A(H6N1), a subtype never isolated from humans before. Gene sequencing studies further indicate that most of the viral genes are from a bird influenza virus, with the remaining genes derived from a human strain. This information is immediately transmitted back to the ministry of health where the cases were first identified, and reported throughout the WHO Global Influenza Surveillance Network.

More cases appear in surrounding towns and villages. The new influenza virus begins to make headlines in every major newspaper, and becomes the lead story on news networks. Countries are asked by WHO to intensify influenza surveillance and control activities. Key government officials throughout the region are briefed on a daily basis, while surveillance is intensified.

Over the next two months, outbreaks begin to take place in neighbouring countries. Although cases are reported in all age groups, young adults seem to be the most severely affected. One in every 20 patients dies. The rate of spread is rapid, and countries initiate travel restrictions and quarantine measures. Educational institutions are closed. Widespread panic begins because supplies of antiviral drugs are severely limited and a suitable vaccine is not yet available.

One week later, there are reports that the H6N1 virus has been isolated from airline passengers with respiratory symptoms arriving from affected countries.

A few weeks later, the first local outbreaks are reported from other continents. Rates of absenteeism in schools and businesses begin to rise. Phones at health departments ring constantly. The spread of the new virus continues to be the major news item in print and electronic media. Citizens start

to clamour for vaccines, but they are still not available. Antiviral drugs cannot be obtained. Police departments, local utility companies and mass transit authorities experience significant personnel shortages that result in severe disruption of routine services. Soon, hospitals and outpatient clinics are critically short-staffed as doctors, nurses and other healthcare workers themselves become ill or are afraid to come to work. Fearing infection, elderly patients with chronic medical conditions do not dare to leave home. Intensive care units at local hospitals are overwhelmed, and soon there are insufficient ventilators for the treatment of pneumonia patients. Parents are distraught when their healthy young adult sons and daughters die within days of first becoming ill. Several major airports close because of high absenteeism among air traffic controllers. Over the next 6-8 weeks, health and other essential community services deteriorate further as the pandemic sweeps across the world.

Are you prepared?

Are you prepared to prevent or minimize the human morbidity and mortality, the social disruption and the economic consequences caused by an influenza pandemic?

An influenza pandemic

An influenza pandemic (or global epidemic) occurs when a new influenza virus subtype appears, against which no one is immune. This may result in several simultaneous epidemics worldwide with high numbers of cases and deaths. With the increase in global transport and urbanization, epidemics caused by the new influenza virus are likely to occur rapidly around the world.

A new influenza virus: how it could cause a pandemic

Annual outbreaks and epidemics of influenza are caused by influenza A and B viruses. They are the result of minor changes in the influenza viruses that enable them to evade the immunity we have developed after previous infections with the viruses, or in response to vaccinations. Only the influenza A virus can cause pandemics. When a major change in either one or both surface proteins of the influenza A virus occurs, no one will be immune, as this represents a completely new virus. When the virus also has the capacity to spread from person to person, a pandemic may develop.

Global pandemics have been reported for many hundreds of years. The best documented pandemics occurred in 1918 (H1N1, the Spanish flu), 1957 (H2N2, the Asian flu) and 1968 (H3N2, the Hong Kong flu).

Consequences of an influenza pandemic

During the 20th century, influenza pandemics caused millions of deaths, social disruption and profound economic losses worldwide. Influenza experts agree that another pandemic is likely to happen but are unable to say

when. The specific characteristics of a future pandemic virus cannot be predicted. Nobody knows how pathogenic a new virus would be, and which age groups it would affect. The impact of improved nutrition and health care needs to be weighed against the effect of increased international travel or simultaneous health threats that weaken the immune system, such as HIV/AIDS. The level of preparedness will also influence the final death toll. However, even in one of the more conservative scenarios, it has been calculated that the world will face up to 233 million outpatient visits, 5.2 million hospital admissions and 7.4 million deaths globally, within a very short period.

In addition to their human toll, epidemics can have enormous social and economic consequences in a closely interconnected and interdependent world. For example, in 2003 the outbreak of severe acute respiratory syndrome (SARS) caused economic losses and social disruption far beyond the affected countries and far out of proportion to the number of cases and deaths. While influenza is distinctly different from SARS, it can be anticipated that a pandemic would have a similarly disruptive effect on societies and economies.

Pandemics do not occur frequently. The last major influenza pandemic was in 1968. Since then, however, highly pathogenic avian influenza (HPAI), which has previously infected only birds, has caused illness in humans several times. HPAI outbreaks remind us that the next pandemic could occur at any time if an influenza virus were to combine the high case-fatality rate associated with HPAI infections in humans and the high transmissibility of seasonal influenza. Governments and their partners need to develop strategies and programmes to prepare for a pandemic.

Why prepare?

The objective of pandemic planning is to enable countries to be prepared to recognize and manage an influenza pandemic. Planning may help to reduce transmission of the pandemic virus strain, to decrease cases, hospitalizations and deaths, to maintain essential services and to reduce the economic and social impact of a pandemic.

In addition, blueprints for an influenza pandemic preparedness plan can easily be used for broader contingency plans encompassing other disasters caused by the emergence of new, highly transmissible and/or severe communicable diseases.

How to use the pandemic preparedness checklist

The capacity of countries for influenza pandemic planning varies, and they may be at different stages of the planning process. The aim of the pandemic preparedness checklist is primarily to provide an outline of the essential minimum elements of preparedness, as well as elements of preparedness that are considered desirable. It is recommended that responsible authorities or institutes in countries that are in the process of planning should consider the specific aspects of the checklist for which they are responsible. Countries that already have a national pandemic prepared

ness plan in place may use the checklist to evaluate the completeness of the current plan.

In addition to this checklist, a more comprehensive guideline, based on the checklist, is being drafted by WHO to assist countries in the development of a national plan according to a more stepwise approach. This comprehensive guideline will contain more background information explaining why certain activities are thought to be important. Countries that have not yet started on pandemic planning are advised to read the essential checklist in conjunction with the comprehensive guideline, as soon as it becomes available.

Planning will require the commitment and input of the countries themselves. The checklist cannot be a substitute for a country's preparedness plan.

Pandemic preparedness is not a quick process

It would be unrealistic for any country, unless it has a very small population with a centralized infrastructure and bureaucracy, to consider that it could prepare and implement a detailed and comprehensive pandemic plan in weeks, or even months. The two main reasons are that there is a need for a multisectoral approach and that the community should be involved.

A multisectoral approach means the involvement of many levels of government, and of people with various specialties including policy development, legislative review and drafting, animal health, public health, patient care, laboratory diagnosis, laboratory test development, communication expertise and disaster management. Community involvement means making optimal use of local knowledge, expertise, resources and networks. It is a powerful way to engage people and to build the commitment needed for policy decisions.

For additional information:

<http://www.who.int/csr/resources/publications/influenza/FluCheck6web.pdf>

<http://www.who.int/csr/resources/en/index.html>

http://www.publichealthreports.org/userfiles/116_SUP2/116092sup.pdf

<http://www.pandemicflu.gov/>

EPIDEMICSDiocesan Emergency Plan
Episcopal Diocese of West Texas

Responding to epidemics

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Description of Services:	