Michigan Department of State Police

Emergency Management Division

Informational Letter

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Volume: 06-06 **February 23, 2006**

TO: **Local and District Emergency Management Coordinators and Other Interested Parties**
SUBJECT: **Pandemic Flu Planning**

The following information is being provided to emergency management coordinators on behalf of the U.S. Department of Health and Human Services and the Michigan Department of Community Health.

The U.S. Department of Health and Human Services recently convened senior state and local officials to establish an integrated federal-state influenza-pandemic planning process.

In announcing a National Strategy for Pandemic Influenza on October 18, 2005, President Bush charged Health and Human Services (HHS) Secretary Mike Leavitt with convening state and local public health officials from across the nation to discuss their plans for a pandemic, and to help them improve pandemic planning at the community level.

"By their nature, pandemics happen across the globe – but their effects are excruciatingly local," Secretary Leavitt said. "Pandemic planning needs to go beyond public health. Discussion at the state and local level needs to address how schools, businesses, public agencies and others participate in pandemic preparedness."

An influenza pandemic has the potential to cause more death and illness than any other public health threat. If a pandemic influenza virus with similar virulence to the 1918 strain emerged today, in the absence of intervention, it is estimated that 1.9 million Americans could die and almost 10 million could be hospitalized over the course of the pandemic, which may evolve over a year or more. Although the timing, nature and severity of the next pandemic cannot be predicted with any certainty, preparedness planning is imperative to lessen the impact of a pandemic. The unique characteristics and events of a pandemic will strain local, state, and federal resources. It is unlikely that there will be sufficient personnel, equipment, and supplies to respond adequately to multiple areas of the country for a sustained period of time. Therefore, minimizing social and economic disruption will require a coordinated response. Governments, communities, and other public and private sector stakeholders will need to anticipate and prepare for a pandemic by defining roles and responsibilities and developing continuity of operations plans.

Attached you will find correspondence from Ms. Janet Olszewski, director of the Michigan Department of Community Health, regarding Michigan's planning efforts and other reference materials addressing Pandemic Influenza. Emergency management coordinators are urged to contact their local department of public health or visit www.pandemicflu.gov for more information.

Sincerely,

Kriste Etue

KRISTE ETUE, CAPTAIN
Deputy State Director of Homeland Security
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Attachments (5):
- Correspondence from Director of MDCH
- What is an Influenza Pandemic?
- How Does Seasonal Flu Differ From Pandemic Flu?
- Frequently Asked Questions about Pandemic Influenza
- Family Emergency Health Information Sheet

STATE OF MICHIGAN
DEPARTMENT OF COMMUNITY HEALTH
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

JANET OLSZEWSKI
DIRECTOR

February 9, 2006

With avian influenza outbreaks in Asia and Europe dominating the public's consciousness, it is important for every Michigan citizen to know that planning has been underway at all levels of government to address the potential threat of avian influenza, and its potential to become a worldwide pandemic.

First, citizens need to understand the differences between a potential threat of avian influenza and seasonal influenza that is dealt with annually. The avian flu that has sickened birds and people in Asia, parts of Eastern Europe, and most recently the country of Nigeria in Africa, is different from the flu that people get during cold weather months.

So far in these countries, avian flu only spread from bird to bird and bird to person. World health officials continue to remain concerned about the avian flu mutating into a version that is easily transmittable from person to person, but so far, that leap has not yet occurred.

It also is important to note that avian flu cases have not been found in humans anywhere in the Western Hemisphere, and experts believe this flu may appear first in the wild bird population and in commercial poultry before humans are affected. However, in Michigan and around the country, health experts continue to prepare for pandemic flu.

In November, the federal government released a national strategy to address the threat of pandemic influenza. This plan ensures that federal, state, regional, and local public health officials are on the same page in the event of a crisis. To further ensure the protection of the public health, the federal government has pledged $7 billion to improve the production of vaccine and purchase stockpiles anti-viral medications.

The state of Michigan has responded to the federal challenge by significantly upgrading its Pandemic Influenza Plan – first created in 2002 – to include the potential threat of avian flu. The Michigan Department of Community Health (MDCH), jointly with partners in the Department of Agriculture (MDA) and the Department of Natural Resources (DNR), is monitoring Michigan for cases of avian flu in bird and human populations. In the case of an avian influenza outbreak, Michigan's state health laboratory can rule out the disease within 24 hours of receiving a human sample from local public health partners.

The state's pandemic flu plan is available for the public to review at www.michigan.gov/influenza. At MDCH, we have already exercised this plan, and have scheduled more detailed activities in the future to further our preparedness efforts.

In addition, state officials, local health departments, and our emergency preparedness partners statewide participate on the Health Alert Network (HAN) – a statewide internet disease alert system for health care providers.

MDCH continues to work with local health departments, regional medical control partners, and state agency partners on preparedness activities. Updates are sent to the HAN whenever changes occur in MDCH response procedures, changes in the virus epidemiology or medical management, or new recommendations from the World Health Organization (WHO) or Centers for Disease Control and Prevention (CDC).

Each state department is continually keeping surveillance on all reportable diseases in human, domestic animals and wildlife. An Avian Influenza Interagency Working Group coordinates a state approach to prevent, prepare, respond, and recover from avian influenza that may affect both humans and animals. The group defines the roles and responsibilities of each agency in order to have a unified approach that considers humans, domestic animals, and wildlife.

Finally, it is vitally important for at-risk citizens, such as seniors over the age of 65, pregnant women, health care workers, young children, and people with compromised immune systems, to receive a flu shot every season to protect against seasonal influenza.

It is also important to maintain good health hygiene for yourself and those around you. Cover your mouth when you cough or sneeze, wash your hands frequently, and stay home when you are sick. Following this advice will not only prevent the flu this season, but will be useful tools in the event that avian flu becomes easily transmitted from person to person and develops into a pandemic that strikes around the world.

Additional state pandemic influenza information can be found at www.mdch.gov/influenza. The site contains information about current seasonal surveillance reports, avian influenza, and pandemic influenza.

We look forward to a continued partnership with our emergency partners across the state and will continue to update you on developments associated with avian influenza.

Sincerely,

Janet Olszewski,
Director

What Is an Influenza Pandemic?

A pandemic is a global disease outbreak. An influenza pandemic occurs when a new influenza A virus emerges for which there is little or no immunity in the human population, begins to cause serious illness, and then spreads easily person-to-person worldwide.

Historically, the 20th century saw three pandemics of influenza:

- 1918 influenza pandemic caused at least 500,000 U.S. deaths and up to 40 million deaths worldwide
- 1957 influenza pandemic caused at least 70,000 U.S. deaths and 1-2 million deaths worldwide
- 1968 influenza pandemic caused about 34,000 U.S. deaths and 700,000 deaths worldwide

Characteristics and challenges of a pandemic

(1) Rapid Worldwide Spread

- When a pandemic influenza virus emerges, its global spread is considered inevitable.
- (Preparedness activities should assume that the entire world population would be susceptible.
- Countries might, through measures such as border closures and travel restrictions, delay arrival of the virus, but cannot stop it.

(2) Health Care Systems Overloaded

- Most people have little or no immunity to a pandemic virus. Infection and illness rates soar. A substantial percentage of the world's population will require some form of medical care.
- Nations unlikely to have the staff, facilities, equipment and hospital beds needed to cope with large numbers of people who suddenly fall ill.
- Death rates are high, largely determined by four factors: the number of people who become infected, the virulence of the virus, the underlying characteristics and vulnerability of affected populations and the effectiveness of preventive measures.
- Past pandemics have spread globally in two and sometimes three waves.

(3) Medical Supplies Inadequate

- The need for vaccine is likely to outstrip supply.
- The need for antiviral drugs is also likely to be inadequate early in a pandemic.
- A pandemic can create a shortage of hospital beds, ventilators and other supplies. Surge capacity at non-traditional sites such as schools may be created to cope with demand
- Difficult decisions will need to be made regarding who gets antiviral drugs and vaccines.

(4) Economic and Social Disruption

- Travel bans, closings of schools and businesses and cancellations of events could have major impact on communities and citizens.
- Care for sick family members and fear of exposure can result in significant worker absenteeism.

Communications and Information are Critical Components of Pandemic Response

Education and outreach are critical to preparing for a pandemic. Understanding what a pandemic is, what needs to be done at all levels to prepare for pandemic influenza, and what could happen during a pandemic helps us make informed decisions both as individuals and as a nation. Should a pandemic occur, the public must be able to depend on its government to provide scientifically sound public health information quickly, openly, and dependably. For additional information on pandemic influenza, visit: www.pandemicflu.gov.

How Does Seasonal Flu Differ From Pandemic Flu?

Seasonal Flu	Pandemic Flu
Outbreaks follow predictable seasonal patterns; occurs annually, usually in winter, in temperate climates	Occurs rarely (three times in 20th century - last in 1968)
Usually some immunity built up from previous exposure	No previous exposure; little or no pre-existing immunity
Healthy adults usually not at risk for serious complications; the very young, the elderly and those with certain underlying health conditions at increased risk for serious complications	Healthy people may be at increased risk for serious complications
Health systems can usually meet public and patient needs	Health systems may be overwhelmed
Vaccine developed based on known flu strains and available for annual flu season	Vaccine probably would not be available in the early stages of a pandemic
Adequate supplies of antivirals are usually available	Effective antivirals may be in limited supply
Average U.S. deaths approximately 36,000/yr	Number of deaths could be quite high (e.g., U.S. 1918 death toll approximately 500,000)
Symptoms: fever, cough, runny nose, muscle pain. Deaths often caused by complications, such as pneumonia.	Symptoms may be more severe and complications more frequent
Generally causes modest impact on society (e.g., some school closing, encouragement of people who are sick to stay home)	May cause major impact on society (e.g. widespread restrictions on travel, closings of schools and businesses, cancellation of large public gatherings)
Manageable impact on domestic and world economy	Potential for severe impact on domestic and world economy

For additional information on seasonal flu visit: http://www.hhs.gov/flu/.

Frequently Asked Questions About Pandemic Influenza

What is an influenza pandemic?

A pandemic is a global disease outbreak. An influenza pandemic occurs when a new influenza A virus emerges for which there is little or no immunity in the human population, begins to cause serious illness and then spreads easily person-to-person worldwide.

How do pandemic viruses occur?

New influenza viruses emerge as a result of a process called antigenic shift, which causes a sudden and major change in influenza A viruses. These changes occur when proteins on the surface of the virus combine in new ways as a result of mutation or exchange of genetic material between multiple influenza viruses. If such changes result in a new influenza A virus subtype that can infect humans and spread easily from person to person, an influenza pandemic can occur.

Is a pandemic imminent?

Many scientists believe it is a matter of time until the next influenza pandemic occurs. However, the timing and severity of the next pandemic cannot be predicted. Influenza pandemics occurred three times in the past century — in 1918-19, 1957-58, and 1968-69.

Why is there concern about the H5N1 avian influenza outbreak in Asia and other countries?

Although it is unpredictable when the next pandemic will occur and what strain may cause it, the continued and expanded spread of a highly pathogenic—and now endemic—avian H5N1 virus across eastern Asia and other countries represents a significant threat.

Avian H5N1 influenza infection in humans was first recognized in 1997 when this virus infected 18 people in Hong Kong, causing 6 deaths. Concern has increased in recent years as avian H5N1 infections have killed large numbers of poultry flocks and other birds in Asia and Europe. Since 2003, more than 100 human H5N1 cases have been reported in Thailand, Vietnam, Cambodia, Indonesia, China, Turkey, and Iraq, and more than half have died.

The H5N1 virus has raised concerns about a potential human pandemic because:

- The H5N1 virus is widespread in poultry in many countries in Asia and has spread to Europe;
- The virus has been transmitted from birds to mammals and in some limited circumstances to humans;
- Wild birds and domestic ducks have been infected without showing symptoms and become carriers of viral infection to other domestic poultry species;
- A few cases of human-to-human transmission have been reported; and genetic studies confirm that H5N1 influenza viruses, like other influenza viruses, are continuing to evolve.

Is influenza A (H5N1) virus the only avian influenza virus of concern regarding a pandemic?

Although H5N1 probably poses the greatest current pandemic threat, other avian influenza A subtypes also have infected people in recent years. For example, in 1999, H9N2 infections were identified in Hong Kong; in 2002; and 2003, H7N7 infections occurred in the Netherlands and H7N3 infections occurred in Canada. These viruses also have the potential to give rise to the next pandemic.

Will H5N1 cause the next influenza pandemic?

Scientists cannot predict whether an avian influenza (H5N1) virus will cause a pandemic. That is why we are focusing on comprehensive public health efforts — increasing surveillance monitoring for outbreaks, international cooperation, antiviral and vaccine stockpiles and building more robust capacity for vaccine production — that will help protect us no matter what pandemic strain emerges or where.

Why won't the annual flu vaccine protect people against pandemic influenza?

Influenza vaccines are designed to protect against a specific virus, so a pandemic vaccine cannot be produced until a new pandemic influenza virus emerges and is identified. Even after a pandemic influenza virus has been identified, it could take at least six months to develop, test and produce vaccine.

How much time does it take to develop and produce an influenza vaccine?

The influenza vaccine production process is long and complicated. Traditional influenza vaccine production for the U.S. relies on long-standing technology based on chicken eggs. This production technology is labor-intensive and takes nine months from start to finish.

The flu vaccine production process is further complicated by the fact that influenza virus strains continually evolve. Thus, seasonal flu vaccines must be modified each year to match the strains of the virus that are known to be in circulation among humans around the world. As a result of this constant viral evolution, seasonal influenza vaccines cannot be stockpiled year to year.

The appearance of an influenza pandemic virus would likely be unaffected by currently available flu vaccines. Researchers are making and testing possible H5N1 vaccines now.

Large amounts of vaccine cannot be made before knowing exactly which virus will cause the pandemic. It could then take up to six months before a vaccine is available and in only limited amounts at first. Research is underway to make vaccines more quickly.

How many influenza vaccine manufacturers have production facilities in the United States?

Currently, Sanofi Pasteur and Medimmune have influenza vaccine production facilities in the United States, although only Sanofi Pasteur’s entire production process is based in this country.

HHS has made the establishment and expansion of U.S.-based manufacturing facilities for influenza vaccine a key component of its strategy to improve the security of the influenza vaccine supply.

How will vaccine be distributed if a pandemic breaks out?

Most likely, the federal government will work with manufacturers, distributors and states and the states will develop distribution plans at the local level. States are developing and improving plans to distribute a vaccine rapidly. These plans build on experience gained from other emergencies.

In addition, influenza vaccine makers already have systems in place to distribute vaccine. Tens of millions of doses of seasonal influenza vaccine are shipped every year, and during past shortages, vaccine makers have responded to urgent situations.

Fairness in vaccine distribution and use during a pandemic is important. Protecting people at high risk and protecting essential day-to-day services are also important considerations.

What age groups are most likely to be affected during an influenza pandemic?

Although scientists cannot predict the specific consequences of an influenza pandemic, it is likely that many age groups would be seriously affected. Factors to consider include the following:

- Few if any people would have immunity to the virus
- The virus could spread rapidly.
- An influenza pandemic could temporarily disrupt activities important to overall public health, the economy, and essential community services.

What is the difference between a vaccine and an antiviral?

Vaccines are usually given as a preventive measure. Currently available viral vaccines are usually made from either killed virus or weakened versions of the live virus or pieces of the virus that stimulate an immune response to the virus. When immunized, the body is then poised to fight or prevent infection more effectively.

Antivirals are drugs that may be given to help prevent viral infections or to treat people who have been infected by a virus. When given to treat people who have been infected, antiviral medications may help limit the impact of some symptoms and reduce the potential for serious complications, especially for people who are in high risk groups.

How would antivirals be used?

Antivirals may help prevent infection in people at risk and lessen the impact of symptoms in those infected with influenza. It is unlikely that they would substantially modify the course or effectively contain the spread of an influenza pandemic.

A number of antiviral medications (antivirals) are approved by the U.S. Food and Drug Administration to treat and sometimes prevent flu. At this time, Tamiflu® and Relenza® are the most likely antivirals to be used in a pandemic. There are efforts to find new drugs and to increase the supply of antivirals. If everyone follows the recommended uses of antivirals there will be more available for those who need it most.

What other strategies will help protect Americans?

In the event of a pandemic, certain public health measures may be important to help contain or limit the spread of infection as effectively as possible. The following actions could include:

- Treating sick and exposed people with antivirals,
- Isolating sick people in hospitals, homes, or other facilities,
- Identifying and quarantining exposed people,
- Closing schools and workplaces as needed,
- Canceling public events, and
- Restricting travel.

In addition, people should protect themselves by:

- Getting seasonal flu shots,
- Washing hands frequently with soap and water,
- Staying away from people who are sick, and
- Staying home if sick.

How many people would die in a pandemic?

The consequences of an influenza pandemic are difficult to predict. Pandemics occurred three times in the past century. The most recent (1968) was the mildest and killed about 34,000 people in the United States. The most severe influenza pandemic in the past century occurred in1918 and killed about 500,000 Americans and up to 40 million people worldwide.

Could terrorists spread the avian influenza viruses to create a worldwide pandemic?

Experts believe it highly unlikely that a pandemic influenza virus could be created by terrorists. Developing a pandemic influenza virus would require extraordinary scientific skill as well as sophisticated scientific equipment and other resources.

What is the Government doing now to prepare for a pandemic flu outbreak?

Federal, State, and local health agencies are making plans to prepare for, respond to, and contain an outbreak of pandemic flu. HHS activities to prepare for a pandemic flu include:

- Supporting Federal, State, and local health agencies' efforts to prepare for and respond to a pandemic flu outbreak;
- Working with the World Health Organization (WHO) and other nations to help detect and contain outbreaks;
- Developing a national stockpile of antiviral drugs to help treat and control the spread of disease;
- Supporting the manufacture and testing of possible vaccines, including finding more reliable and quicker ways to make large quantities of vaccines; and
- Working with other Federal agencies to prepare and to encourage communities, businesses, and organizations to plan for a pandemic influenza outbreak.

How many state and local governments are prepared for a pandemic outbreak?

Funding from CDC's Public Health Preparedness Cooperative Agreements has allowed state and local health agencies to enhance the capacity of their public health systems to respond to public health threats, including pandemic influenza.

All states have emergency plans for responding to an influenza pandemic. All states have reviewed their public health legal authorities pertaining to isolation and quarantine. States are in various phases of updating regulations and legislation after reviewing their current authorities. CDC's Public Health Law program is cataloging all state quarantine authorities.

As part of planning for smallpox, all states have developed plans for mass immunization. In the past 12 months, all states conducted exercises to test components of their smallpox plans and 46 conducted exercises related to components of their pandemic influenza plan. Exercises such as these allow states and communities to identify weaknesses and take corrective action.

How would pandemic flu affect communities and businesses?

If an influenza pandemic occurs, many people could become sick at the same time and would be unable to go to work. Many would stay at home to care for sick family members. Schools and businesses might close to try to prevent disease spread. Large group gatherings might be canceled. Public transportation might be scarce. These are examples of challenges that local communities, schools, civic organizations, and businesses will have to work together on to plan for a pandemic response.

Family Emergency Health Information Sheet

It is important to think about health issues that could arise if an influenza pandemic occurs, and how they could affect you and your loved ones. For example, if a mass vaccination clinic is set up in your community, you may need to provide as much information as you can about your medical history when you go, especially if you have a serious health condition or allergy.

Create a family emergency health plan using this information. Fill in information for each family member in the space provided. Like much of the planning for a pandemic, this can also help prepare for other emergencies.

1. Family Member Information:

Family Member	Blood Type	Allergies	Past/Current Medical Conditions	Current Medications/ Dosages

2. Emergency Contacts:

Contacts	Name/Phone Number
Local personal emergency contact	
Out-of-town personal emergency contact	
Hospitals near: Work	
School	
Home	
Family physician(s)	
State public health department (See list on www.pandemicflu.gov)	
Pharmacy	
Employer contact and emergency information	
School contact and emergency information	
Religious/spiritual organization	
Veterinarian	