Pandemic Flu & You

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know what to do

It was the autumn of 1918 in Michigan. Newspapers reported on the sacrifices American soldiers were making "over there." While troops were being moved around the world, a dangerous new flu virus was moving with them. The 1918 pandemic would eventually affect every country in the world—and every community in Michigan.

The Pandemic Challenge

A pandemic is a global disease outbreak. A pandemic influenza would be a new flu virus, for which people have little or no immunity, that emerges and spreads easily person-to-person worldwide. A pandemic will last much longer than normal flu outbreaks and may include "waves" of influenza activity lasting six to eight weeks that return months later.

Experts say we are overdue for a pandemic. Pandemics typically occur about three times per century. While it is impossible to predict exactly when we will experience the next pandemic, experts agree that day will come.

There were three influenza pandemics in the 20th-Century (1918, 1957 and 1968). The most devastating was in 1918. The health care system became so overwhelmed that there is no accurate count of how many people died in Michigan. At least 500,000 people in the U.S. died in just four months. Every community in Michigan was affected. Despite advances in science and medicine, what helped limit the negative impact of pandemic flu in 1918 will still be important in a new pandemic.

Hopefully, we will have many more years before a pandemic occurs. Frankly, it could happen next year or next month. Some of the recommendations in this guide might seem premature. In 1918, many Michigan communities thought public health officials were overreacting — until it was too late to contain the pandemic flu's rapid spread.

If a pandemic happens again, a large portion of the population may become ill and everyone may be required to limit their contact with others. A pandemic influenza vaccine can't be produced until the virus emerges and is identified. Once the virus has been identified, the vaccine would likely take four to six months to develop before being available for distribution. Many things we take for granted may be temporarily disrupted including transportation, food and water, health care, work, and schools.

Knowledge is the Best Defense

Michigan had no warning in 1918 — but we do. Timely, accurate information is critical. Use this guide, follow the links to further information, and keep informed of new flu developments. In the event of a pandemic flu, following the instructions of public health officials will be critical.

This guide is designed to help you and your family prepare. It includes information about:

- Different Types of Flu
- Hygiene
- Challenges You May Face
- What To Have On Hand

Pandemic Flu Facts

How does the bird flu risk causing a pandemic flu in humans?

Currently, people are only likely to contract bird flu when in direct contact with an infected bird. But flu viruses mutate (change and adapt) very rapidly. The spread of bird flu viruses from an infected person to another person has been reported very rarely and has not been reported to continue beyond one person. A worldwide pandemic could occur if a bird flu virus were to change so that it could easily be passed from person to person.

The current bird flu outbreak in Asia, Europe and Africa is caused by a highly pathogenic avian influenza virus — H5N1. More than 150 human infections and deaths due to the H5N1 virus have occurred there. These cases primarily involved direct contact with infected birds or surfaces contaminated from feces of infected birds.

Will the seasonal flu shot (vaccine) protect me against pandemic influenza?

No, it can only protect you against seasonal flu. It is important to get a flu vaccine every year so that if you are infected with a pandemic flu your body will be stronger to fight off the infection.

What is pandemic influenza?

Influenza viruses cause infection of the respiratory tract. For some, complications of influenza can be severe, including pneumonia.

Pandemic influenza is a global outbreak of disease affecting humans due to a new influenza virus that people have not been exposed to before. Because people have not been infected with the same virus in the past, most or all people will not have any natural immunity (protection) from a new pandemic virus.

Why is pandemic flu so dangerous?

Because most or all people would not have immunity to a pandemic flu virus, large numbers of persons around the world can be infected.

Seasonal flu causes about 36,000 deaths per year in the U.S., primarily among senior citizens. Some people such as older people, young children, and people with certain health conditions are a higher risk for severe complications from seasonal flu. A pandemic flu strain would likely infect more people and kill a much higher percentage of those it infects. The virus may not discriminate by age.

Once a pandemic virus develops, it can spread rapidly causing outbreaks around the world. The U.S. Centers for Disease Control and Prevention (CDC) predict 25% to 30% of the U.S. population could be affected — 3 million people in Michigan alone.

High levels of illness and death during a flu pandemic could lead to social and economic disruption. With so many people becoming ill, caring for the ill, and looking after their children at home, the workforce will be reduced. The impact of a pandemic will be broad and simultaneous and may include school and business closings, the interruption of basic services such as public transportation and food delivery, and cancellation of public gatherings.

Can pandemic flu be prevented?

It is not possible to prevent or stop a pandemic flu once it begins spreading. Infected people can spread the disease from one day prior to the onset of symptoms to about five days after onset. This makes it extremely easy for the virus to spread rapidly.

Strategies for slowing the spread of a pandemic flu outbreak may include temporarily closing schools, sports arenas, theaters, restaurants, taverns, places of worship, and other public gatherings.

There is currently no vaccine to protect humans against a pandemic flu virus because a pandemic virus has not yet emerged. However, vaccine development efforts are underway to protect humans against a pandemic influenza virus that might develop from the current bird flu virus.

Why aren't we all given antiviral drugs?

Although the federal government is stockpiling medical supplies and antiviral drugs, no country in the world has enough antiviral drugs for all their citizens. Antiviral drugs should be used to treat severe cases as long as there is a reasonable chance that the drugs might help save lives. The more that antivirals are used, the faster flu viruses will be able to adapt and become resistant to them.

Antiviral drugs might also need to be prioritized for people who work in essential occupations, such as health care workers.

When is a flu pandemic expected?

Influenza pandemics occur naturally. There were three pandemics in the 20th century (1918-19, 1957-58 and 1968). The pandemic of 1918-19 was the most severe on record. More than 40 million people worldwide died, including at least 500,000 Americans.

It is not possible to predict accurately when a flu pandemic will occur or how severe it will be. However, the current outbreak of avian influenza in Asia, Europe and Africa has flu experts concerned that a severe pandemic may develop.

types of flu

Seasonal flu *is a respiratory illness transmitted person-to-person that occurs every year. It is a significant public health concern, causing an average of 36,000 deaths annually in the United States. Most people have some immunity, and a vaccine is available.*

Avian (bird) flu *is a disease of birds caused by the influenza virus that is continually present in waterfowl and shorebirds. The H5N1 variant is deadly to domestic fowl and can be transmitted from birds to humans. Currently, humans at risk are those who are in very close contact with birds.*

Pandemic flu *is a virulent influenza virus that causes a global outbreak (pandemic). People have little or no immunity because they have never been exposed to the virus before. The virus spreads easily from person to person. Once the virus is discovered, it may take four to six months to develop a vaccine.*

Vaccines & Antivirals fact sheet

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 a killed virus or weakened versions of the live virus. This stimulates the body's immune response. 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 already infected by a virus. When given to treat people already infected, antiviral medications may limit the severity of some symptoms and reduce the potential for serious complications, especially for seniors and other higher-risk groups.

Is there a vaccine for a pandemic flu?

A pandemic flu vaccine cannot be produced until the virus emerges and is identified. Once the virus has been identified and a sample is collected, the vaccine would likely take four to six months to develop and begin distribution.

How would antivirals be used?

Antivirals may help prevent infection in people at-risk and lessen the severity of symptoms in those infected with influenza. They would not substantially slow or contain the spread of pandemic flu. Anitvirals must be given within 48 hours of illness onset to be effective for treatment.

A number of antivirals are approved by the U.S. Food and Drug Administration (FDA) to treat and sometimes prevent flu. At this time, oseltamivar (Tamiflu ®) and zanamivir (Relenza ®) are the most likely antivirals to be used in a pandemic. There are ongoing efforts to find new drugs and to increase the supply of antivirals.

Bird Flu fact sheet

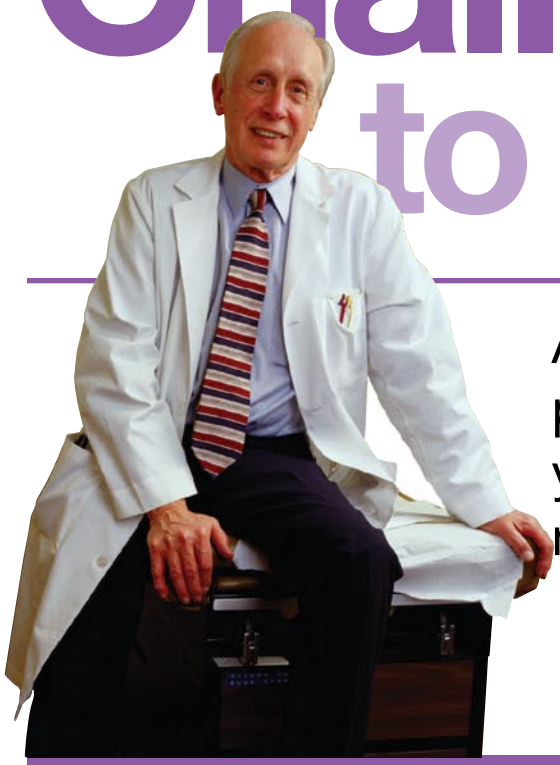
Should the highly pathogenic H5N1 virus appear in the U.S., spread of the disease from birds to humans, though unlikely, is possible through contact with feces and fluids when handling or dressing an infected bird. The virus does not persist very long on surfaces and can be neutralized with heat and disinfectants.

Michigan and the federal government are proactively monitoring poultry and wild bird populations to detect the H5N1 virus. If detected, infected birds and birds in contact will be culled to help contain the virus.

These tips on handling birds safely are helpful now— and **critical** if bird flu is detected in North America.

- Do not handle birds that are obviously sick or are found dead.
- Do not eat, drink or smoke while cleaning birds.
- Wear rubber gloves and washable clothing when in contact with birds.
- Wash your hands with soap and water or alcohol wipes immediately after handling birds.
- Wash tools and working surfaces with soap and water, then disinfect with a 10 percent solution of chlorine bleach.
- Place uncooked poultry in a plastic bag or container for transport.
- Cooking poultry to an internal temperature of 165 F° will kill influenza viruses and many other pathogens.

Challenges to prepare for



As you and your family plan for a flu pandemic, think about the challenges you might face. You can start preparing now to be able to respond.

Services You Depend on **May Be Disrupted**

- Plan for the possibility that usual services may be disrupted. These could include hospitals, clinics, banks, restaurants, government offices and post offices, and telephone and cell phone companies.
- Gatherings, such as volunteer meetings and worship services, may be canceled. Prepare contact lists including conference calls, telephone chains and email lists.
- Consider that the ability to travel, even by car if there are fuel shortages, may be limited.
- Talk to your family about where family members will go in an emergency and how they will receive care in case you can't communicate with them.
- Widespread illness could result in the closing of ATMs and banks. Keep a small amount of cash or traveler's checks in small denominations for easy use.

Food and Water

- Food and water supplies may be interrupted and you may be unable to get to a store.
- Maintain a two-week supply of nonperishable food that doesn't need refrigeration, preparation (including the use of water), or cooking.
- Ensure formulas for infants and any child's or older person's special nutritional needs are part of your planning.
- Store two weeks of water, one gallon of water per person per day (two quarts for drinking, two quarts for food preparation/sanitation), in plastic containers. Avoid containers that decompose or break, such as milk cartons or glass bottles.

Schools and Day Care Centers May Close

Schools, childcare, trade schools and universities may be closed to limit the spread of pandemic flu. School closings may be a public health tool for containing disease early in a pandemic, and could occur on short notice.

- Talk to teachers, administrators, and parent-teacher organizations about your school's pandemic plan, and offer your help.
- Plan now in case children must stay at home for extended periods. School closings may accompany restrictions on public gatherings, including malls and movie theaters.
- Plan learning activities your children can do at home. Have learning materials, such as books, school supplies, and educational computer activities and movies on hand.
- Talk to teachers, administrators and parent-teacher organizations about possible activities, lesson plans and exercises that children can do at home if schools are closed. This could include continuing courses by TV or Internet.

Work May Be Difficult or Impossible

- Ask your employer how business will continue during a pandemic.
- Discuss staggered shifts or working at home with your employer.
- Discuss telecommuting possibilities and needs, accessing remote networks, and using portable computers.
- Discuss possible flexibility in leave policies. Talk with your employer about how much leave you can take to care for yourself or a family member.
- Plan for possible loss of income if you can't work or your company temporarily closes.

Medical Care Could be Disrupted

In a pandemic, hospitals and doctors' offices may be overwhelmed.

- If a family member has a chronic disease, make sure you have the appropriate supplies, such as glucose and blood pressure monitoring equipment.
- Talk to your health care provider about ensuring access to medications.
- If you receive ongoing medical care such as dialysis, chemotherapy or other therapies, talk with your health care provider about plans to continue care during a pandemic.

For more information,
visit **www.michigan.gov/prepare.**

Hygiene

helpful now, critical in a pandemic

If a pandemic flu occurs, personal hygiene will be one of the most effective tools to prevent spreading the virus.

When a pandemic flu strain establishes itself in humans, it is spread like any other flu.

Droplets are spread by coughs and sneezing. These droplets are infectious in adults from one day prior to the onset of symptoms to about five days after onset. This means it will spread very easily.

You can take common-sense steps now to limit the spread of flu.

You **must** follow these steps if there is a pandemic flu.

- Wash your hands often with soap and water, especially after you cough or sneeze.
- If you are not near soap and water, use an alcohol-based hand sanitizer.
- Cover your nose and mouth with a tissue when you cough or sneeze. Immediately throw the tissue away in a closed wastebasket after using it.
- Cough or sneeze into your elbow if you don't have a tissue.
- Avoid close contact with people who are sick.
- When you are sick, keep your distance from others to protect them from getting sick too.
- If you get the flu, stay home from work, school and social gatherings. This will help prevent the spread of flu.
- Try not to touch your eyes, nose or mouth. Viruses often spread this way.
- In a pandemic, following the instructions of public health officials will be crucial — and in some cases, the law.

For more information, talk to your health care provider, visit **www.michigan.gov/prepare** or call the Centers for Disease Control and Prevention (CDC) Hotline at 888-246-2675.

Preparing Your Business

In a pandemic flu, Michigan businesses will play a key role in protecting employees' health and safety as well as limiting the negative impact on the economy and society.

All companies—but especially those providing power and communications—have a responsibility to prepare to continue operations in a crisis.

Planning for a flu pandemic can also help prepare your business for other emergencies, such as a natural disaster or terrorist attack.

In a pandemic, it is very easy for the virus to spread rapidly to large numbers of people. Businesses may have to implement telecommuting options to reduce the number of employees in the work place, and require employees who may be ill or are ill to stay home. A quarter or more of the working population may have to take days off because they are sick or they have to care for a child or family member who is sick.

A sudden and prolonged workforce reduction may require some businesses to prioritize their essential business functions and temporarily suspend others. Some business services may be in greater demand and more important for economic stability and community well-being, such as grocery stores, banking services and medical supply delivery.

Each pandemic is different. The impact on business will not be fully understood until more is known about how a pandemic is evolving. But there are things your businesses can do now to be prepared.

business checklist

- **Designate a pandemic coordinator or team** with defined roles and responsibilities for preparedness and response planning.
- **Identify the essential employees, materials, suppliers, subcontractors and logistics** that will be required to maintain business operations during a pandemic.
- **Establish and regularly update an emergency communications plan.** This plan should include key contacts (with back-ups), a chain of communications (including suppliers and customers), and processes for tracking and communicating business and employee status.
- **Prepare and allow for employee absences during a pandemic** due to personal illness, family member illness, community containment measures and quarantines, school closures, and public transportation closures. Establish policies for compensation and sick leave unique to a pandemic (non-punitive, liberal leave), including policies on when a previously ill person may safely return to work.
- **Establish policies for flexible worksites (telecommuting) and flexible work hours (staggered shifts).** Develop methods (hotlines, dedicated websites) for timely communication of pandemic status and actions to employees, vendors, suppliers, and customers.
- **Plan for scenarios that greatly increase or decrease demand for your services,** such as restrictions on public gatherings or the need for hygiene supplies.
- **Determine the potential impact of a pandemic on your business** using multiple scenarios that affect different product lines or production sites.
- **Evaluate employee access to and availability of health care services** during a pandemic, and improve services as needed.
- **Share your pandemic plans with insurers and local health care facilities**, and become familiar with their plans. Participate in the planning processes of federal, state and local public health agencies, and share your pandemic plans with them.
- **Communicate with local and state public health agencies and emergency responders** about the assets and services your business could contribute to the community during a pandemic.
- **Encourage hygiene practices that can slow or stop the spread of germs and viruses.**

For further information on preparing your business and employees, visit ***michigan.gov/prepare.***

The Big Picture

. . . the importance of being prepared.

The effects of a pandemic can be reduced if you prepare ahead of time. Planning for a disaster will help bring peace of mind and confidence in the event of a pandemic.

When a pandemic starts, everyone around the world will be at risk of infection. The United States has been working closely with other countries and the World Health Organization (WHO) to strengthen systems to detect outbreaks of influenza that might cause a pandemic.

A pandemic would touch every aspect of society — so every part of society must begin to prepare. Everyone has a role planning for pandemic flu. Federal, state, tribal, and local governments are developing, improving, and testing their plans for an influenza pandemic. Businesses, schools, universities, and other faith-based and community organizations are also preparing their plans.

Michigan is Preparing

The State of Michigan will help you prepare. Since 2002, Michigan has been updating and improving its plan for a flu pandemic. The departments of Community Health, Agriculture, Natural Resources and Environmental Quality are working in partnership with local public health agencies, the federal government and community organizations so that Michigan is prepared.

Michigan is continually conducting bird flu surveillance and monitoring the health of poultry, livestock and people. If a Michigan resident were to show pandemic flu-like symptoms, the state health laboratory — one of the finest in the world — will be able to rule out pandemic influenza within 24 hours of receiving a human sample.

Knowledge is Your Best Defense

Knowing the facts is the best way to prepare. You have an obligation to know what's going on. Public health officials will continue to provide up-to-date information and guidance to the public if an influenza pandemic begins. For more information, visit www.michigan.gov/prepare.

In tragedies such as 9/11 or the Gulf coast hurricanes, Americans nationwide aided victims and helped with recovery. But a pandemic will happen almost everywhere at nearly the same time. Few communities will have resources to spare. Preparedness depends on all of us. Ultimately, it is every family's responsibility to be prepared.

You have an obligation to prepare yourself and your family. As you begin your individual or family planning, learn about the planning efforts of your community and get involved.

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