

DEVELOPING A PANDEMIC PLAN

PURPOSE

To establish a coordinated response to an actual or potential pandemic influenza outbreak

BACKGROUND

A pandemic is a global disease outbreak. An influenza pandemic occurs when a new influenza 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. A worldwide influenza pandemic could have a major effect on the global economy, including travel, trade, tourism, food, consumption and eventually, investment and financial markets. Planning for pandemic influenza by business and industry is essential to minimize a pandemic's impact.

In the event of an influenza pandemic, employers will play a key role in protecting employees' health and safety as well as in limiting the impact on the economy and society. Employers will likely experience employee absences, changes in patterns of commerce, and interrupted supply and delivery schedules. Proper planning will allow employers in the public and private sectors to better protect their employees and lessen the impact of a pandemic on society and the economy.

This pandemic influenza planning guidance is based upon the Occupational Safety and Health Administration's (OSHA) traditional infection control and industrial hygiene practices. It is important to note that of this date, June 2007, there is currently no pandemic. This guidance is intended for planning purposes and is not specific to a particular viral strain. Additional guidance may be needed as an actual pandemic unfolds and more is known about the characteristics of the virulence of the virus, disease transmissibility, clinical manifestation, drug susceptibility, and risks to different age groups and subpopulations. Employers and employees should use this planning guidance to help identify risk levels in workplace settings and appropriate control measures that include good hygiene, cough etiquette, social distancing, the use of personal protective equipment, and staying home from work when ill. (Up-to-date information and guidance is available to the public through the <http://www.pandemicflu.gov> website.)

The Difference Between Seasonal Influenza, Pandemic Influenza, and Avian Influenza

- **Seasonal influenza** refers to the periodic outbreaks of respiratory illness in the fall and winter in the United States. Outbreaks are typically limited; most people have some immunity to the circulating strain of the virus. A vaccine is prepared in advance of the seasonal influenza; it is designed to match the influenza viruses most likely to be circulating in the community. Employees living abroad and international business travelers should note that other geographic areas have different influenza seasons which may require different vaccines.

BACKGROUND *(continued)*

The Difference Between Seasonal Influenza, Pandemic Influenza, and Avian Influenza *(continued)*

- **Pandemic influenza** refers to a worldwide outbreak of influenza among people when a new strain of the virus emerges that has the ability to infect humans and to spread from person to person. During the early phases of an influenza pandemic, people might not have any natural immunity to the new strain; so the disease would spread rapidly among the population. A vaccine to protect people against illness from a pandemic influenza virus may not be widely available until many months after an influenza pandemic begins. It is important to emphasize that there currently is no influenza pandemic. However, pandemics have occurred throughout history, and many scientists believe that it is only a matter of time before another one occurs. Pandemics can vary in severity from something that seems simply like a bad flu season to an especially severe influenza pandemic that could lead to high levels of illness, death, social disruption, and economic loss. It is impossible to predict when the next pandemic will occur or whether it will be mild or severe.

- **Avian influenza (AI)** - also known as the bird flu - is caused by virus that infects wild birds and domestic poultry. Some forms of the avian influenza are worse than others. Avian influenza viruses are generally divided into two groups: low pathogenic avian influenza and highly pathogenic avian influenza. Low pathogenic avian influenza naturally occurs in wild birds and can spread to domestic birds. In most cases, it causes no signs of infection or only minor symptoms in birds. In general, these low path strains of the virus pose little threat to human health. Low pathogenic avian influenza virus H5 and H7 strains have the potential to mutate into highly pathogenic avian influenza and are, therefore, closely monitored. Highly pathogenic avian influenza spreads rapidly and has a high death rate in birds. Highly pathogenic avian influenza of the H5N1 strain is rapidly spreading in birds in some parts of the world.
 - Highly pathogenic H5N1 is one of the few avian influenza viruses to have crossed the species barrier to infect humans and it is the most deadly of those that have crossed the barrier. Most cases of H5N1 influenza infection in humans have resulted from contact with infected poultry or surfaces contaminated with secretions/excretions from infected birds.

 - As of February 2007, the spread of H5N1 virus from person to person has been limited to rare, sporadic cases. Nonetheless, because all influenza viruses have the ability to change, scientists are concerned that H5N1 virus one day could be able to sustain human to human transmission. Because these viruses do not commonly infect humans, there is little or no immune protection against them in the human population. If H5N1 virus were to gain the capacity to sustain transmission from person to person, a pandemic could begin.

BACKGROUND *(continued)*

The Difference Between Seasonal Influenza, Pandemic Influenza, and Avian Influenza *(continued) -- Avian influenza (AI) (continued)*

- An update on what is currently known about avian flu can be found at www.pandemicflu.gov.

How a Severe Pandemic Influenza Could Affect Workplaces

Unlike natural disasters or terrorist events, an influenza pandemic will be widespread, affecting multiple areas of the United States and other countries at the same time. A pandemic will also be an extended event, with multiple waves of outbreaks in the same geographic area; each outbreak could last from six to eight weeks. Waves of outbreaks may occur over a year or more. A workplace will likely experience:

- **Absenteeism** - A pandemic could affect as many as 40 percent of the workforce during periods of peak influenza illness. Employees could be absent because they are sick, must care for sick family members or for children if schools or day care centers are closed, are afraid to come to work, or the employer might not be notified that the employee has died.
- **Change in patterns of commerce** - During a pandemic, consumer demand for items related to infection control is likely to increase dramatically, while consumer interest in other goods may decline. Consumers may also change the ways in which they shop as a result of the pandemic. Consumers may try to shop at off-peak hours to reduce contact with other people, show increased interest in home delivery services, or prefer other options, such as drive-through service, to reduce person-to-person contact.
- **Interrupted supply/delivery** - Shipments of items from those geographic areas severely affected by the pandemic may be delayed or cancelled.

How Influenza Can Spread Between People

Influenza is thought to be primarily spread through large droplets (droplet transmission) that directly contact the nose, mouth or eyes. These droplets are produced when infected people cough, sneeze or talk, sending the relatively large infectious droplets and very small sprays (aerosols) into the nearby air and into contact with other people. Large droplets can only travel a limited range; therefore, people should limit close contact (within 6 feet) with others when possible. To a lesser degree, human influenza is spread by touching objects contaminated with influenza viruses and then transferring the infected material from the hands to the nose, mouth or eyes. Influenza may also be spread by very small infectious particles (aerosols) traveling in the air. The contribution of each route of exposure to influenza transmission is uncertain at this time and may vary based upon the characteristics of the influenza strain.

PLAN DEVELOPMENT

Who Should Plan for a Pandemic

To reduce the impact of a pandemic on your operations, employees, customers and the general public, it is important for all businesses and organizations to begin continuity planning for a pandemic now. Lack of continuity planning can result in a cascade of failures as employers attempt to address challenges of a pandemic with insufficient resources and employees who might not be adequately trained in the jobs they will be asked to perform. Proper planning will allow employers to better protect their employees and prepare for changing patterns of commerce and potential disruptions in supplies or services. Important tools for pandemic planning for employers are located at <http://www.pandemicflu.gov>.

The U.S. government has placed a special emphasis on supporting pandemic influenza planning for public and private sector businesses deemed to be critical industries and key resources (CI/KR). Critical infrastructure are the thirteen sectors that provide the production of essential goods and services, interconnectedness and operability, public safety, and security that contribute to a strong national defense and thriving economy. Key resources are facilities, sites, and groups of organized people whose destruction could cause large-scale injury, death, or destruction of property and/or profoundly damage our national prestige and confidence. With 85 percent of the nation's critical infrastructure in the hands of the private sector, the business community plays a vital role in en-suring national pandemic preparedness and response. Additional guidance for CI/KR business is available at: <http://www.pandemicflu.gov/plan/pdf/CIKRpandemicInfluenzaGuide.pdf>.

Critical Infrastructure and Key Resources

Key Resources

- Government Facilities
- Dams
- Commercial Facilities
- Nuclear Power Plants
- Critical Infrastructure
- Food and Agriculture
- Public Health and Healthcare
- Banking and Finance
- Chemical and Hazardous Materials
- Defense Industrial Base
- Water
- Energy
- Emergency Services
- Information Technology
- Telecommunications
- Postal and Shipping
- Transportation
- National Monuments and Icons

PLAN DEVELOPMENT *(continued)*

Classifying Employee Exposure to Pandemic Influenza at Work

Employee risks of occupational exposure to influenza during a pandemic may vary from very high to high, medium, or lower (caution) risk. The level of risk depends in part on whether or not jobs require close proximity to people potentially infected with the pandemic influenza virus, or whether they are required to have either repeated or extended contact with known or suspected sources of pandemic influenza virus such as coworkers, the general public, outpatients, school children or other such individuals or groups.

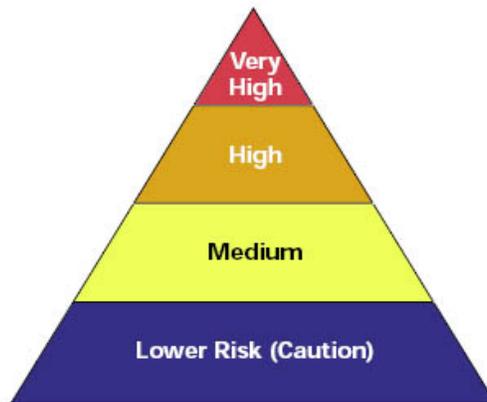
- *Very high exposure risk* occupations are those with high potential exposure to high concentrations of known or suspected sources of pandemic influenza during specific medical or laboratory procedures.
- *High exposure risk* occupations are those with high potential for exposure to known or suspected sources of pandemic influenza virus.
- *Medium exposure risk* occupations include jobs that require frequent, close contact (within 6 feet) exposures to known or suspected sources of pandemic influenza virus such as coworkers, the general public, outpatients, school children or other such individuals or groups.
- *Lower exposure risk (caution)* occupations are those that do not require contact with people known to be infected with the pandemic virus, nor frequent close contact (within 6 feet) with the public. Even at lower risk levels, however, employers should be cautious and develop preparedness plans to minimize employee infections.

Employers of critical infrastructure and key resource employees (such as law enforcement, emergency response, or public utility employees) may consider upgrading protective measures for these employees beyond what would be suggested by their exposure risk due to the necessity of such services for the functioning of society as well as the potential difficulties in replacing them during a pandemic (for example, due to extensive training or licensing requirements).

To help employers determine appropriate work practices and precautions, OSHA has divided workplaces and work operations into four risk zones, according to the likelihood of employees' occupational exposure to pandemic influenza. These zones are shown in the shape of a pyramid to represent how the risk will likely be distributed (see following diagram). The vast majority of American workplaces are likely to be in the medium exposure risk or lower exposure risk (caution) groups.

PLAN DEVELOPMENT (continued)

Occupational Risk Pyramid for Pandemic Influenza



Very High Exposure Risk:

- Healthcare employees (for example, doctors, nurses, dentists) performing aerosol-generating procedures on known or suspected pandemic patients (for example, cough induction procedures, bronchoscopies, some dental procedures, or invasive specimen collection).
- Healthcare or laboratory personnel collecting or handling specimens from known or suspected pandemic patients (for example, manipulating cultures from known or suspected pandemic influenza patients).

High Exposure Risk:

- Healthcare delivery and support staff exposed to known or suspected pandemic patients (for example, doctors, nurses, and other hospital staff that must enter patients' rooms).
- Medical transport of known or suspected pandemic patients in enclosed vehicles (for example, emergency medical technicians).
- Performing autopsies on known or suspected pandemic patients (for example, morgue and mortuary employees).

Medium Exposure Risk:

- Employees with high-frequency contact with the general population (such as schools, high population density work environments, and some high volume retail).

PLAN DEVELOPMENT *(continued)*

Lower Exposure Risk (Caution):

- Employees who have minimal occupational contact with the general public and other coworkers (for example, office employees).

How to Maintain Operations During a Pandemic

As an employer, you have an important role in protecting employee health and safety, and limiting the impact of an influenza pandemic. It is important to work with community planners to integrate your pandemic plan into local and state planning, particularly if your operations are part of the nation's critical infrastructure or key resources. Integration with local community planners will allow you to access resources and information promptly to maintain operations and keep your employees safe.

Develop a Disaster Plan

Develop a disaster plan that includes pandemic preparedness. See <http://www.pandemicflu.gov/plan/businesschecklist.html> and review it and conduct drills regularly.

- Be aware of and review federal, state, and local health department pandemic influenza plans. Incorporate appropriate actions from these plans into workplace disaster plans.
- Prepare and plan for operations with a reduced workforce.
- Work with your suppliers to ensure that you can continue to operate and provide services.
- Develop a sick leave policy that does not penalize sick employees, thereby encouraging employees who have influenza-related symptoms (e.g., fever, headache, cough, sore throat, runny or stuffy nose, muscle aches, or upset stomach) to stay home so that they do not infect other employees. Recognize that employees with ill family members may need to stay home to care for them.
- Identify possible exposure and health risks to your employees. Are employees potentially in contact with people with influenza such as in a hospital or clinic? Are your employees expected to have a lot of contact with the general public?
- Minimize exposure to fellow employees or the public. For example, will more of your employees work from home? This may require enhancement of technology and communications equipment.

PLAN DEVELOPMENT *(continued)*

Develop a Disaster Plan *(continued)*

- Identify business-essential positions and people required to sustain business-necessary functions and operations. Prepare to cross-train or develop ways to function in the absence of these positions. It is recommended that employers train three or more employees to be able to sustain business-necessary functions and operations, and communicate the expectation for available employees to perform these functions if needed during a pandemic.
- Plan for downsizing services, but also anticipate any scenario which may require a surge in your services.
- Recognize that, in the course of normal daily life, all employees will have non-occupational risk factors at home and in community settings that should be reduced to the extent possible. Some employees will also have individual risk factors that should be considered by employers as they plan how the organization will respond to a potential pandemic (e.g., immuno-compromised individuals and pregnant women).
- Stockpile items such as soap, tissue, hand sanitizer, cleaning supplies and recommended personal protective equipment. When stockpiling items, be aware of each product's shelf life and storage conditions (e.g., avoid areas that are damp or have temperature extremes) and incorporate product rotation (e.g., consume oldest supplies first) into your stockpile management program.
- Make sure that your disaster plan protects and supports your employees, customers and the general public. Be aware of your employees' concerns about pay, leave, safety and health. Informed employees who feel safe at work are less likely to be absent.
- Develop policies and practices that distance employees from each other, customers, and the general public. Consider practices to minimize face-to-face contact between employees such as e-mail, websites, and teleconferences. Policies and practices that allow employees to work from home or to stagger their work shifts may be important as absenteeism rises.
- Organize and identify a central team of people or focal point to serve as a communication source so that your employees and customers can have accurate information during the crisis.
- Work with your employees and, if applicable, their union(s), to address leave, pay, transportation, travel, childcare, absence, and other human resource issues.
- Provide your employees and customers in your workplace with easy access to infection control supplies, such as soap, hand sanitizers, personal protective equipment (such as gloves or surgical masks), tissues, and office cleaning supplies.

PLAN DEVELOPMENT *(continued)*

Develop a Disaster Plan *(continued)*

- Provide training, education and informational material about business-essential job functions and employee health and safety, including proper hygiene practices and the use of any personal protective equipment to be used in the workplace. Be sure that informational material is available in a usable format for individuals with sensory disabilities and/or limited English proficiency. Encourage employees to take care of their health by eating right, getting plenty of rest and getting a seasonal flu vaccination.
- Work with your insurance companies, and state and local health agencies to provide information to employees and customers about medical care in the event of a pandemic.
- Assist employees in managing additional stressors related to the pandemic. These are likely to include distress related to personal or family illness, life disruption, grief related to loss of family, friends, or coworkers, loss of routine support systems, and similar challenges. Assuring timely and accurate communication will also be important throughout the duration of the pandemic in decreasing fear or worry. Employers should provide opportunities for support, counseling, and mental health assessment and referral should these be necessary. If present, Employee Assistance Programs can offer training and provide resources and other guidance on mental health and resiliency before and during a pandemic.

Protect Employees and Customers

Educate and train employees in proper hand hygiene, cough etiquette, and social distancing techniques. Understand and develop work practice and engineering controls that could provide additional protection to your employees and customers, such as: drive-through service windows, clear plastic sneeze barriers, ventilation, and the proper selection, use and disposal of personal protective equipment.

These are not comprehensive recommendations. The most important part of pandemic planning is to work with your employees, local and state agencies, and other employers to develop cooperative pandemic plans to maintain your operations and keep your employees and the public safe. Share what you know, be open to ideas from your employees, then identify and share effective health practices with other employers in your community and with your local chamber of commerce.

Sources:

http://www.osh.gov/Publications/influenza_pandemic.html

<http://www.pandemicflu.gov/plan/businesschecklist.html>