

Postal Service Pandemic Influenza Plan

This plan establishes Postal Service (USPS) policies and procedures to facilitate preparation for, response to, and recovery from, an epidemic or pandemic outbreak of influenza. Pursuant to the current advice provided by the Center for Disease Control and Prevention (CDC), those policies and procedures are also generally applicable to a potential COVID-19 pandemic. (See specific COVID -19 transmittal document for guidance) *The guidance in this plan is intended for the internal management of the USPS and is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or equity by any party against the USPS or its agents.*

Definition

An influenza outbreak may produce an epidemic, a disease outbreak which affects a large number of people in a short period of time, or a pandemic, a disease outbreak which spreads globally. Influenza is one of several groups of viruses known to cause disease and to be highly contagious (spread easily from person to person).

Some viruses have the ability to mutate (change) quickly. Influenza (flu) viruses are constantly changing. When a virus emerges that is different from current and recently circulating human seasonal viruses, people have little or no immunity and there is initially no vaccine or effective antiviral medication available. Therefore, such a virus has the potential to be more infectious, more contagious, cause serious illness, and sweep across the world in a short period of time.

Many viruses are zoonotic, meaning that they originated in animals, but they changed to allow transmission to and/or within a human population. Often the animals carry the virus but do not get sick. When the carrier animal travels long distances in the wild, such as bird populations, they can spread disease across continents during migration. When the source animals are ones that humans use for food such as chickens, pigs or even wild “bush” animals, this also can spread the virus to human populations. Influenza A is found in humans and a few animal hosts (including birds, pigs and bats) and has many subtypes, many of which don't produce serious disease. Previously non-human Influenza A viruses can change in a way that specifically allows them to be transferred from animals to humans and then to spread efficiently from person to person. In comparison, Influenza B viruses circulate widely only in humans, mutate much more slowly than Influenza A viruses and are therefore much less likely to cause a pandemic.

Public health officials are able to predict the potential severity of a pandemic based upon how serious the effects of the disease associated with the virus are and the ease by which the virus is transmitted. These two factors combined are used by the CDC to guide public health recommendations during the pandemic.

Historical Context

Since the early 20th Century, influenza pandemics have caused extremely significant incidents. Influenza A viruses, inflicting acute respiratory distress, caused the 1918 “Spanish flu” pandemic.

A serious epidemic or pandemic can place extraordinary demands on public health, health care systems and essential community services. In 1997, in response to an avian influenza A (H5N1) virus which spread from poultry directly to humans in Hong Kong, the World Health Organization

(WHO) and the United States government increased their pandemic preparedness planning. In 2005, officials at the United States Department of Health and Human Services (HHS) developed the first iteration of a pandemic influenza plan to coordinate and improve efforts to prevent, control, and respond to novel viruses with pandemic potential. The United States government has developed tools aligned with the World Health Organization's (WHO) global framework to guide the national, state and local planning for preparedness, response, and recovery in serious epidemic or pandemic situations.

Common Ways a Virus Spreads

The primary means of viral disease transmission is from an infected person who coughs or sneezes, or even talks, dispersing the virus via respiratory droplets. These droplets may be directly inhaled by nearby uninfected persons or transferred when such persons touch their face without washing their contaminated hands.

Viruses do not live long outside of a host, but some viruses are able to persist on a contaminated surface for a few hours to a few days in optimal conditions. An inanimate item which has the potential to transfer a disease agent is called a fomite. Porous surfaces such as paper are poor fomites. The most effective practice that a person can take to prevent secondary transfer infections is to practice regular and thorough hand-washing and to avoid touching an infected person or a potentially contaminated surface or object and then touching their own mouth, nose, or eyes.

Rates of contagiousness and transmission vary by virus. Novel viruses often behave like their close relatives, but they can develop different traits. Generally, people infected with a virus are most contagious in the first three to four days after symptoms of their illness present; however, seemingly healthy adults may be able to infect others beginning one day **before** symptoms develop and up to five to seven days **after symptoms begin**. Children and some people with weakened immune systems may remain virulent longer and thus be able to transmit the virus for an extended period.

Symptoms can begin from one to four days after the virus enters the body, with two days being the average. **That means that an infected person may be able to pass the virus/disease on to an uninfected person before they realize that they are sick.** Some people can be carrying and transmitting viruses while they have no apparent symptoms of disease (asymptomatic). The best practice to avoid disease transmission is to avoid contact with others if there is any chance that you have been exposed.

Policy

To the extent deemed appropriate and feasible, the USPS intends to follow national epidemic or pandemic directives and guidance issued by the President of the United States, the U. S. Department of Homeland Security (DHS), the U. S. Department of Health and Human Services (HHS), and state and local authorities.

The objective of those directives will be to stop, slow, or otherwise limit the spread of an epidemic or pandemic, and thereby mitigate illness, suffering and death while sustaining infrastructure and lessening the effects on the economy and society as a whole.

Scope

This plan applies to all USPS facilities where administrative support, business, retail, or operational activities occur.

Federal Guidance

Presidential Directive for Pandemic Influenza Planning

On November 1, 2005, the President of the United States announced the National Strategy for Pandemic Influenza and launched the primary Federal Web Site www.pandemicflu.gov to provide up-to-date information and pandemic links (website has been renamed to <https://www.cdc.gov/flu/pandemic-resources/index.htm>). The plan was formally published on May 6, 2006, by the U.S. Homeland Security Council. The Strategy provided direction and specific implementation actions for all federal departments as well as guidance for state, local, and tribal governments and the private sector. HHS framed its 2005 Pandemic Influenza Plan around a doctrine that laid out guiding principles for pandemic influenza preparedness and response; this plan went through interim updates in 2006 and 2009, with its last major update released in 2017.

- 2005 National Strategy: <https://www.dhs.gov/sites/default/files/publications/cikrpandemicinfluenzaguide.pdf>
- 2006 Implementation Plan: <https://www.cdc.gov/flu/pandemic-resources/pdf/pandemic-influenza-implementation.pdf>
- 2017 HHS Pandemic Influenza Plan Update: <https://www.cdc.gov/flu/pandemic-resources/pdf/pan-flu-report-2017v2.pdf>

The *2005 National Strategy* and *2006 Implementation Plan* recommended that each federal department and agency develop its own plan to accomplish the following four goals:

1. Protect its employees during a pandemic.
2. Sustain essential functions during times of significant absenteeism.
3. Communicate guidance to stakeholders during a pandemic.
4. Support the overall federal response to a pandemic.

Federal Emergency Management Agency

The *2006 Implementation Plan* recognized that federal continuity of operations planning (COOP) would be influenced by the unique characteristics of an epidemic or pandemic. Because it is believed that a pandemic flu event will come in “waves,” each lasting six to eight weeks with several months between waves and causing an absenteeism rate of up to 40 percent at the height, traditional COOP planning must be modified. The following Federal Emergency Management Agency (FEMA) guidance materials, using *Federal Continuity Directive (FCD) 1* (January 17, 2017) as a foundation, recognize this need for COOP plan customization:

- Pandemic Influenza Continuity of Operations Annex Template: https://www.fema.gov/pdf/about/org/ncp/pandemic_influenza.pdf

- Continuity Planning for Pandemics and Widespread Infectious Diseases: https://www.fema.gov/media-library-data/1537897784532-95e513b308bdcfb52711a97a9882507c/brochure_pandemic_ncp_508_082918.pdf
- Continuity Planning for Pandemic Influenza: https://www.fema.gov/media-library-data/1410875581685-0729ba3e23e9b0016bbf18efcd6daa59/COOP_Pandemic_Influenza.pdf

Office of Personnel Management

The *2006 Implementation Plan* tasked the U.S. Office of Personnel Management (OPM) with two initiatives:

1. Provide guidance on human capital management and COOP planning.
2. Update telework guides.

In response, OPM provided guidance that is largely technical in nature and intended for human resources professionals. It is available on the OPM website at <https://www.opm.gov/policy-data-oversight/pandemic-information/>.

USPS Planning

The following sections provide USPS policies based on the four goals of the President's *Strategy and Implementation Plan* (see previous page).

1. Protect Employees During a Pandemic

Infection Control Measures

A pandemic may come in waves, each lasting weeks or months. Consequently, not all susceptible people will become infected during the first wave of the outbreak. By limiting exposure during the first wave of the pandemic it may mean that: (1) people who are not ill may have an increased chance of receiving virus-specific vaccine as it becomes available, and (2) the number of people that become ill over any one time period may be fewer, thus lessening the social and economic impact of the pandemic. Infection control measures intended to limit such exposure include the following:

- Personal hygiene.
- Social distancing.
- Travel restrictions.
- Vaccine and antiviral medications.
- Quarantines.
- Other federal, state, or local measures.

If disease transmission in a community is deemed significant and sustained, state and local public health authorities may consider other community-based disease containment measures to reduce extensive disease transmission rates that perpetuate the influenza pandemic. Closures of office buildings, stores, shopping malls, schools, and public transportation and cancellation of public events and recreational facilities may be feasible community containment measures during a pandemic.

Personal Hygiene

Viruses that infect the nose, throat, and lungs cause illnesses like the flu, which is usually spread from person-to-person via virus-laden droplets when an infected person coughs or sneezes. Infection control starts with maintaining good personal hygiene. Individual infection control measures to assist in stopping the spread of viral particles include:

- *Cover your mouth and nose when you sneeze or cough.* Cough or sneeze into a tissue and then throw it away. Cough or sneeze into your upper sleeve not your hands if you do not have a tissue.
- *Clean your hands often.* To the extent feasible, wash your hands or use hand sanitizers after you cough or sneeze, use the bathroom, before eating, and before touching your eyes, mouth, or nose. When hands are visibly dirty or soiled with bodily fluids, wash your hands with soap and warm water then rub your hands vigorously together and scrub all surfaces. It is the soap combined with the scrubbing action that helps dislodge and remove germs. Wash for 15-20 seconds. Rinse hands with water and dry thoroughly with a disposable towel. Use a towel to turn off the faucet to prevent re-contamination. Avoid using hot water because repeated exposure to hot water may increase the risk of skin irritation. In situations where soap and water is not available, the frequent use of hand sanitizers containing alcohol should be encouraged.
- *Avoid touching your eyes, nose, or mouth.* Viruses are often spread when a person touches nonporous surfaces (e.g., door knobs, telephones, pens, etc.) that are contaminated with germs and then touches the eyes, nose, or mouth.
- *Stay home when you are sick or have flu symptoms.* Get plenty of rest and consult your health care provider. Call your work location to report that you are sick. Remember, staying home when sick may protect others from getting sick. Common symptoms of the flu include:
 - Fever (usually high)
 - Headache
 - Extreme tiredness
 - Cough
 - Sore throat
 - Runny or stuffy nose
 - Muscle aches
 - Nausea, vomiting and diarrhea, (much more common among children than adults)

Note: Typical influenza or “flu-like” symptoms, such as fever, may not always be present in elderly patients, young children, patients in long-term care facilities, or persons with underlying chronic illnesses.

- *Practice good health habits.* Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious foods.

Social Distancing

[CDC MMWR, April 21, 2017] Even though the evidence base for the effectiveness of some of these measures is limited, CDC might recommend the simultaneous use of multiple social distancing measures to help reduce the spread of influenza in community settings (e.g., schools, workplaces, and mass gatherings) during severe, very severe, or extreme influenza

pandemics while minimizing the secondary consequences of the measures. Social distancing measures may include the following:

- Offer telecommuting and replace in-person meetings in the workplace with video or telephone conferences.
- Modify, postpone, or cancel mass gatherings.
- Increasing the distance between persons to an appropriate distance (3-6 feet with specifics based on the specific guidance for the unique characteristics of the pandemic) when possible might help reduce person-to-person transmission.
- Persons in community settings who show symptoms consistent with influenza and who might be infected with (probable) pandemic influenza should be separated from well persons as soon as practical, be sent home, and practice voluntary home isolation.”

While the use of facemasks is voluntary pursuant to the terms of Management Instruction (MI) EL 810-2009-4, *Personal Protective Equipment and Respiratory Protection Programs*, CDC guidance needs to be consulted with regard to each specific virus.

Travel Restrictions

Business-related travel must be kept to a minimum during a pandemic. Both federal and state authorities may institute travel restrictions in areas of the country where the rate of illness is highest. Foreign travel restrictions may be enforced through travel warning or outright travel bans to affected countries.

Vaccine and Antiviral Medications

The primary medical methods for preventing epidemic or pandemic influenza are the same as those for seasonal flu:

- Vaccination.
- Early detection and treatment with antiviral medications.
- Use of infection control measures to prevent the transmission of disease.

The supply of antiviral drugs may also be limited throughout an epidemic or pandemic. Until sufficient supplies of antiviral drugs become available, the use of vaccines and antiviral drugs may be prioritized first for medical staff, police, firefighters, and other first responder agencies.

Quarantine and other Federal, State, or Local Measures

A White House Executive Order can place pandemic flu viruses on the list of communicable diseases that require a quarantine. The Secretary of the HHS is given the responsibility for preventing the spread of communicable diseases from foreign countries into the United States and within the United States and its territories/possessions. If necessary, the CDC can enact a quarantine. (The term “quarantine” refers to the ability of CDC or state and local public health authorities to separate and restrict movement of persons who have been exposed to an infectious agent and therefore may become infectious.)

For pandemic influenza, CDC may recommend voluntary home quarantine of individuals when possible. However, state and/or local public health could enact a far broader and more restrictive quarantine that could disrupt postal operations. The USPS should be prepared for either of these eventualities.

The USPS intends to follow the advice and recommendations for quarantine as it deems appropriate when recommended by the relevant public health authorities.

Infection Control Measures for Potential Implementation

Managers and supervisors should consider implementation of the following infection control measures to protect USPS employees and customers to the extent feasible:

- Release employees who become ill at work.
- Increase attention to sick leave use and other employee absences; this may include directly contacting the employee.
- Eliminate non-critical business travel, especially to areas of the country experiencing the most flu-like illness.
- Coordinate with local public health authorities to establish guidelines concerning sick employees' return to work.
- Promote social distancing between employees and customers.
- CDC does not recommend that individual people who are well wear a facemask to protect themselves from respiratory diseases, including COVID-19. The Postal Service will provide surgical masks, upon request, to employees. See Management Instruction EL-810-2009-4.
- Where appropriate, use telework, alternative work locations, or alternative work schedules for applicable employees to ensure that work is performed in the safest manner possible for employees and customers.
- Post infection control guidelines in prominent locations, i.e., personal hygiene steps, what to do if you become ill at work.

Human Resources Policies for Employee Protection

Managers and supervisors should do the following:

- Coordinate with local public health authorities to establish guidelines concerning sick employees' return to work.
- Encourage employees to follow appropriate health measures and instruct them about ways to stay healthy through frequent safety talks and in regular staff meetings.
- Use materials issued through USPS Postal Operations Center and National Operations Center (POC/NOC)24 email account as well as materials posted on the Safety Resources page at: <http://safetytoolkit.usps.gov:12/>.
- Promulgate pertinent messages and materials prepared by USPS Corporate Communications for distribution to USPS employees.
- Maintain employee privacy and confidentiality of records as provided in applicable rules and regulations. Occupational Health Services physicians and registered nurses who are custodians of restricted medical records and documents, along with managers to whom any medical records are provided, must protect restricted medical information.
- Ensure that employees who have contracted pandemic influenza are not harassed or ostracized.
- Use administrative leave in accordance with the ELM 519.211, where appropriate.
- Determine on a case-by-case basis, ensuring consistency with USPS regulations, granting leave for employees who are prevented from reporting to work because of an epidemic or pandemic health crisis.
Note: Labor Relations or Employee Resource Management will assist supervisors and managers as necessary to determine whether leave is appropriate and, if so, the proper leave category.
- Where appropriate, use telework or alternative work schedules for applicable employees and alternative work locations to ensure that work is performed in the safest manner possible for employees and customers.

Sanitation and Decontamination

While transmission of influenza resulting from contact with contaminated surfaces is unlikely, influenza viruses may live up to two days on such surfaces. To minimize transmission resulting from contact with sinks, handles, railings, and counter tops, and to ensure worker safety, procedures are required in addition to those provided under the *Personal Hygiene* section.

- Surfaces that are frequently touched should be cleaned at least daily during disease outbreaks.
- USPS procedures for cleaning common areas will be upgraded to include use of an approved (registered) antimicrobial product.
- Employees and custodial procedures for cleaning their workspaces and surfaces will be updated to include use of an approved (registered) antimicrobial product.
- Procedures for cleaning and disinfecting common surface areas and mail processing equipment, MMO-031-20 "*Influenza and Coronavirus Cleaning Contingency*" developed by the Maintenance Technical Support Center (MTSC), are posted on the MTSC website at <http://www.mtsc.usps.gov/pdf/mmo/2020/mmo03120.pdf>

Note: There is no evidence to support widespread disinfection of the environment or air.

2. Sustain Essential Functions during Times of Significant Absenteeism

Postal COOP Planning

The existing Headquarters (HQ) COOP Plan involves moving officers and key support staff to alternate operating facilities due to the loss of the HQ facility, either because a Federal Emergency Management Agency (FEMA) Continuity of Government Condition (COGCON) change necessitates activation of the HQ Emergency Relocation Group (ERG) or because a localized event at or around the HQ facility necessitates temporary relocation of all HQ staff. The balance of HQ employees will telecommute, relocate to an alternate reporting location, or be placed on administrative leave temporarily. Each of the 30 HQ organizations are finalizing their own COOP plans which leverage one standardized template; these would be activated in conjunction with the broader HQ COOP Plan to ensure continuance of each organization's primary functional activities.

Existing field COOP plans also address the disruption of normal operations due to the degradation or loss of a facility damaged or inaccessible due to an emergency, and are coordinated through district or area management depending on the scope of the emergency. Area and district office COOP plans detail how essential administrative functions will be handled from alternate locations. Mail processing and customer service COOP plans include redirection or diversion of transportation, processing, delivery and retail operations.

Pandemic COOP Planning

Traditional COOP plans, including those of the USPS, anticipate having to relocate essential functions to an alternate facility for 30 days. The dynamic nature of a pandemic influenza requires that federal government COOP planning take a non-traditional approach to continuity planning and readiness; existing COOP plans must be modified to account for the unique characteristics of a pandemic:

- COOP plans must be capable of sustaining operations until normal business activity can be resumed, which could be up to twelve weeks.
- COOP plans must ensure essential services can be provided for levels of employee absenteeism of up to 40 percent.

As such, USPS COOP plans will need to be reviewed and adjusted. Because a pandemic will occur in geographically different areas at different times, COOP prep and activation will be based on pandemic alert levels, the proximity of the outbreak to offices or facilities, and on recurring outbreaks. Decisions concerning the scope of mail processing and delivery operations during periods of absenteeism of up to 40 percent will need to be coordinated by headquarters with affected areas and districts.

3. Communicate Guidance to Stakeholders during a Pandemic

Should a pandemic influenza be detected with resulting implementation of protective measures in the United States, its territories or possessions, the vice president, Corporate Communications, will be responsible for developing and implementing a communications plan concerning pandemic influenza.

- The objective of the plan will be to create clear and effective channels of communication to reach all intended audiences with a consistent message.
- The plan will include all necessary internal and external communications.
- The key audiences will be USPS employees, government leaders, union and management organizations, and customers.
- The messages will outline policies and procedures that the USPS will implement throughout the pandemic influenza event.
- All media outlets will be used, including the various social media channels which the USPS leverages. Messages will be quickly delivered through the USPS intranet to employees and to the public at USPS.com, to ensure consistent communications are delivered to both internal and external audiences, including customers and suppliers.

4. Support Overall Federal Response to a Pandemic

The USPS is part of the National Response Framework, as a support agency within multiple emergency support functions. However, resources may not be provided to one of the primary agencies without being formally authorized at the Headquarters level. The scope and magnitude of any USPS support would be decided at the time of the event.

Roles and Responsibilities

This person/organization . . .	Will . . .
Headquarters	
Chief Human Resources Officer	<ul style="list-style-type: none"> ▪ Issue the Postal Service Pandemic Influenza Plan (PIP). ▪ Designate HQ pandemic coordinators as outbreaks require.
Preparedness and Response	<ul style="list-style-type: none"> ▪ Assist in maintaining the Postal Service PIP, especially as concerns associated checklists. ▪ Support HQ and field COOP adjustments; coordinate design of 40 percent absenteeism operations for the COO. ▪ Coordinate with HHS ASPR and CDC. ▪ Coordinate the development of lives shipment stoppage protocols.
Employee Resource Management (ERM)	<ul style="list-style-type: none"> ▪ Maintain the Postal Service PIP ▪ Implement sick leave policies.
Safety and OSHA Compliance	<ul style="list-style-type: none"> ▪ Make recommendations for personal protective equipment and related supplies. ▪ Coordinate logistical management of pandemic flu supplies with Supply Management.
Manager, Injury Compensation & Medical	<ul style="list-style-type: none"> ▪ Recommend infection control requirements. ▪ Update and utilize sick leave monitoring program. ▪ Coordinate with state public health agencies. ▪ Provide guidance to field medical personnel. ▪ Support related employee safety and health efforts.
Corporate Communications	<ul style="list-style-type: none"> ▪ Develop comprehensive PI communications plan ▪ Implement PI communications
Inspection Service	<ul style="list-style-type: none"> ▪ Coordinate with federal, state, and local law enforcement on quarantine or social distancing requirements. ▪ Implement PI security requirements.
Supply Management	<ul style="list-style-type: none"> ▪ Determine sources and arrange for purchase of PPE and other PI related supplies. ▪ Coordinate with Preparedness and Response; Safety and OSHA Compliance; and Sustainability to develop PPE scoping, distribution, and disposal scheme.
Processing and Maintenance	<ul style="list-style-type: none"> ▪ Develop and implement procedures for cleaning and disinfecting common surface areas, Mail Processing Equipment, and vehicles.
Chief Information Officer	<ul style="list-style-type: none"> ▪ Provide technical solutions in support of telecommuting and teleconferencing policies ▪ Ensure mission critical systems and technologies are monitored and supported ▪ Partner with internal organizations to ensure sufficient mobile technologies are available
Areas	
VP Area Operations	<ul style="list-style-type: none"> ▪ Implement the PIP within the area
Manager National Preparedness	<ul style="list-style-type: none"> ▪ Coordinate PI adjustments to area level COOP. ▪ Coordinate with Area OHNA and state authorities on PI.
Manager Operations Support	<ul style="list-style-type: none"> ▪ Provide support on area COOP adjustments.
Manager Human Resources	<ul style="list-style-type: none"> ▪ Provide support on area COOP adjustments. ▪ Ensure HR, Safety and Health PIP elements are

This person/organization . . .	Will . . .
	implemented.
Occupational Health Services Physicians and Registered Nurses	<ul style="list-style-type: none"> ▪ Provide related medical support and coordination with public health authorities.
Manager, Strategic Communications	<ul style="list-style-type: none"> ▪ Implement internal and external communication plans based on HQ guidance and materials. ▪ Coordinate with the vice president, Area Operations, to ensure area-specific communications are in place.

Districts

District Manager	<ul style="list-style-type: none"> ▪ Ensure all district COOP plans align with the area's PIP implementation.
Senior Plant Manager	<ul style="list-style-type: none"> ▪ Ensure mail processing COOP plans align with the area's PIP implementation.
Human Resource Manager	<ul style="list-style-type: none"> ▪ Ensure HQ and area guidance on personnel procedures and employee protection is followed.
District Safety Manager	<ul style="list-style-type: none"> ▪ Provide support with, and coordination on, the distribution of pandemic flu supplies.
Occupational Health Nurse Administrator	<ul style="list-style-type: none"> ▪ Provide medical support and coordination with public health authorities.
Strategic Communications Specialist	<ul style="list-style-type: none"> ▪ Ensure local communications to all internal and external stakeholders are consistent with HQ and area communications.
District Emergency Management Team, including National Preparedness Specialists	<ul style="list-style-type: none"> ▪ Coordinate adjustment of district COOP plans to ensure alignment with the area plan and national guidance. ▪ Coordinate with local emergency officials.
Maintenance Managers	<ul style="list-style-type: none"> ▪ Follow decontamination/sanitation guidance for equipment and surfaces.
Installation Heads	<ul style="list-style-type: none"> ▪ Ensure installation COOP plans align with the district plan.
Managers and Supervisors	<ul style="list-style-type: none"> ▪ Deliver and disseminate PI safety talks and other PI information. ▪ Encourage national PI guidance be followed and enforce procedures for employee protection, personnel management, and sanitation.
Employees	<ul style="list-style-type: none"> ▪ Practice good personal hygiene and health measures based on the HHS guidance disseminated. ▪ Practice social distancing and other protective measures as recommended. ▪ Follow personnel policies. ▪ Have a family PI plan.

Additional Resources

CDC: <https://www.cdc.gov/>; <https://www.cdc.gov/flu/pandemic-resources/index.htm>

- Influenza (Flu), *National Pandemic Influenza Plans*, June 15, 2017, <https://www.cdc.gov/flu/pandemic-resources/planning-preparedness/national-strategy-planning.html>.
- Influenza (Flu), *Past Pandemics*, August 10, 2018, <https://www.cdc.gov/flu/pandemic-resources/basics/past-pandemics.html>
- Influenza (Flu), *Influenza Historic Timeline*, January 30, 2019, <https://www.cdc.gov/flu/pandemic-resources/pandemic-timeline-1930-and-beyond.htm>
- Influenza (Flu), *National Pandemic Strategy*, June 15, 2017, <https://www.cdc.gov/flu/pandemic-resources/national-strategy/index.html>
- Influenza (Flu), *Information on Avian Influenza*, March 21, 2019, <https://www.cdc.gov/flu/avianflu/index.htm>
- Influenza (Flu), *How Flu Spreads*, August 27, 2018, <https://www.cdc.gov/flu/about/disease/spread.htm>

National Institutes of Allergy and Infectious Diseases (NIAID): <http://www.niaid.nih.gov/>

WHO: <https://www.who.int/>

U.S. Department of Labor (OSHA): <https://www.osha.gov/>

U.S. Environmental Protection Agency: <https://www.epa.gov/>

U.S. Food and Drug Administration (FDA): <https://www.fda.gov/>

The White House: <https://www.whitehouse.gov>

Definitions

Antimicrobial: A substance, such as an antibiotic, that kills or stops the growth of microbes, including bacteria, fungi or viruses. Also includes agents such as bleach for surface disinfecting.

Antiviral medications: Medications presumed to be effective against potential pandemic influenza virus strains. These antiviral medications include the neuraminidase inhibitors oseltamivir (Tamiflu®) and zanamivir (Relenza®).

Asymptomatic: Without symptoms of infection.

Avian influenza: Disease caused by infection with avian (bird) influenza (flu) Type A viruses. These viruses occur naturally among wild aquatic birds worldwide and can infect domestic poultry and other bird and animal species. Avian flu viruses do not normally infect humans. However, sporadic human infections with avian flu viruses have occurred.

Centers for Disease Control and Prevention (CDC): The U. S. government agency at the forefront of public health efforts to prevent and control infectious and chronic diseases, injuries, workplace hazards, disabilities, and environmental health threats. CDC is one of 13 major operating components of the Department of Health and Human Services.

Contagious: Disease which is transmissible by direct or indirect contact with an infected person.

Containment: Disruption of epidemic amplification through the use of medical countermeasures and infection control techniques; "Containment" also refers more generally to delaying the geospatial spread of an epidemic.

Continuity of operations: Refers to the capability to ensure the performance of essential functions during any emergency or situation that may disrupt normal operations.

Cough etiquette: Covering ones mouth and nose while coughing or sneezing; using tissues and disposing them in no-touch receptacles; and washing your hands to avoid spreading an infection to others.

Countermeasures: Refers to influenza vaccine and antiviral medications.

Environmental Protection Agency (EPA): The U.S. government agency that leads the nation's environmental science, research, education, and assessment efforts.

Epidemic: A pronounced clustering of cases of disease within a short period of time; more generally, a disease whose frequency of occurrence is in excess of the expected frequency in a population during a given time interval.

Exposure: The state of being subjected to something (e.g., an infectious agent) that could have a harmful effect.

Fit test: The use of a protocol to qualitatively or quantitatively evaluate the adequacy of a respirator to protect an individual.

Geographic quarantine (cordon sanitaire): The isolation, by force if necessary, of localities with documented disease transmission from localities still free of infection.

Hand hygiene: Hand washing with either plain soap or antimicrobial soap and water and use of alcohol-based products (gels, rinses, foams) containing an emollient that do not require the use of water.

Infectious agent: An organism, such as a bacteria, virus, fungi or parasite, that is capable of causing disease.

Infection control: Measures practiced to decrease transmission of infectious agents (e.g., proper hand hygiene, scrupulous work practices, use of personal protective equipment (PPE) [surgical masks or respirators, gloves, gowns, and eye protection]).

Influenza: A contagious respiratory illness caused by influenza viruses that infect the nose, throat, and sometimes the lungs. It can cause mild to severe illness, and at times can lead to death.

Isolation: Separation of infected individuals from those who are not infected.

Laboratory Response Network: National network of local, State, and Federal public health, food testing, veterinary diagnostic, and environmental testing laboratories supported by CDC that provide the laboratory infrastructure and capacity to respond to biological and chemical terrorism, and other public health emergencies.

Mutation: An alteration in the genetics of a living organism. In viruses such as influenza, this can alter the pathogenicity. Mutation in influenza viruses is difficult to predict.

Outbreak: An epidemic limited to localized increase in the incidence of disease, e.g., in a village, town, or closed institution; a cluster of cases of an infectious disease.

Pandemic: A worldwide epidemic when a new or novel strain of influenza virus emerges for which humans have little or no immunity and which develops the ability to infect and be passed between humans.

Pathogenic: Causing disease or capable of doing so.

Personal protective equipment (PPE): Specialized clothing and equipment which create a barrier designed to prevent exposure to health and safety hazards; examples include safety glasses, goggles, face shields, gloves, respirators and form fitting particle masks.

Quarantine: Separation of individuals who have been exposed to an infection but are not yet ill from others who have not been exposed to the transmissible infection.

R₀: Represents the basic reproductive rate of a pathogen, i.e., the average number of secondary infections caused by an infected individual within a given social context. An $R_0 = 2$ means that infected individuals, on average, transmit infection to two other people, so that every generation of disease transmission doubles the number of people infected. R_0 will change during an epidemic as public health interventions are applied, individuals' behavior changes, and as the pool of persons susceptible to the disease is depleted.

Seasonal influenza: Influenza A and B viruses that spread and cause illness in people during the time of year known as the "flu season." Seasonal influenza viruses cause annual U.S. influenza epidemics during fall, winter, and spring, and circulate among people worldwide. Seasonal influenza A and B viruses are continually undergoing evolution in unpredictable ways.

Social Distancing: Infection control strategies that reduce the duration and/or intimacy of social contacts and thereby limit the transmission of influenza. There are two basic categories of intervention: transmission interventions, such as the use of facemasks, may reduce the likelihood

of casual social contacts resulting in disease transmission; contact interventions, such as closing schools or canceling large gatherings, eliminate or reduce the likelihood of contact with infected individuals.

Strain: A group of organisms within a species or variety.

Transmission: The means by which contagious, pathogenic microorganisms are spread from one person to another, including contact, airborne, vehicle or vector.

Department of Agriculture (USDA): The U.S. government agency responsible for regulating the safety and development of food, agriculture, and natural resources.

Vaccine: A biological preparation used to stimulate the production of antibodies and provide immunity to a disease-causing organism.

Virulent: Highly lethal; causing severe illness or death.

Virus: A small infectious agent that replicates only inside the living cells of an organism. Viruses are not able to replicate without a host and are not typically considered living organisms.

Wave: The period during which an outbreak or epidemic occurs either within a community or aggregated across a larger geographical area. The disease wave includes the time during which disease occurrence increases rapidly, peaks, and declines back toward baseline.

World Health Organization (WHO): An agency of the United Nations established in 1948 to further international cooperation in improving health conditions.