



## **INFLUENZA PANDEMIC RESPONSE PLAN EXECUTIVE SUMMARY**

The purpose of the Pennsylvania Department of Health's (Department) Influenza Pandemic Response Plan (IPRP) is to provide a framework, methodology and recommendations for pandemic preparedness actions at the federal, state and local levels.

- Federal - Any federal government agency that possesses a role in the planning, response or recovery phases of an influenza pandemic.
- State - Activities in which the Department has responsibility during an influenza pandemic.
- Local - Activities include those performed by the Department's six District Offices, State Health Centers and the six County and four Municipal Health Departments (CMHDs).

### **AUTHORITY AND RESPONSIBILITIES**

The Governor is responsible for addressing threats to the Commonwealth and its citizens presented by disasters. The responsibilities and authority of the Governor include, but are not limited to, declaration of disease emergency, activation of disaster response and suspension of certain regulatory statutes.

The Department is responsible for the health of the Commonwealth's entire population. The Secretary of Health (Secretary) has the authority to determine and employ the most efficient and practical means for the prevention and control of the spread of disease. This includes coordinating response and recovery to an influenza pandemic with the Pennsylvania Emergency Management Agency and authorizing the furnishing of aid and assistance.

The Emergency Medical Services Office (EMSO) is responsible for establishing a standard outline for a service infection control guideline program. Other services include maintaining an ambulance and quick response service infection control coordinator database and providing training for individuals nominated as service infection control coordinators.

The Department of Public Welfare (DPW) is responsible for the coordination of mental health services in the event of an emergency.

## **SITUATION AND ASSUMPTIONS**

Influenza usually comes on suddenly, starting with a sore throat, fever, headache and profound fatigue, followed by dry cough, body aches, prostration and possibly nausea/vomiting. There are three main types of influenza viruses: A, B and C.

Influenza pandemic is most likely when the Influenza Type A virus makes a dramatic change (i.e., antigenic “shift”). This shift results in a new or “novel” virus to which the general population has no immunity. The appearance of a novel virus is the first step toward a pandemic. A pandemic is defined as a disease affecting or attacking the population of an extensive region, country or continent.

The estimated morbidity and mortality during an influenza pandemic within 12-16 weeks, nationwide, and in Pennsylvania is as shown below:

	United States	Pennsylvania
Require Outpatient Care	50 million	1.6 million
Hospitalizations	2 million	37,800
Deaths	500,000	9,100

An influenza pandemic is inevitable and will probably give little warning. To some extent, everyone will be affected.

It will take six to eight months after the novel virus is identified and begins to spread among humans before a specific vaccine would likely be available for distribution.

The Department will depend on local, community, state and federal services to provide the public health response necessary for, and appropriate to, an influenza pandemic.

An influenza pandemic may exhaust the availability of assistance from the federal government as well as regional, state and local resources.

## **INFLUENZA PANDEMIC RESPONSE ACTIONS**

Influenza pandemic response activities are delineated by periods within the following components: Pandemic Influenza Surveillance, Laboratory Diagnostics, Emergency Response, Community Disease Control and Prevention, Travel Management, Distribution of Vaccines and Antivirals, Clinical Guidelines, Public Health Communications and Workforce Support. For each component, the pandemic phases are categorized as Interpandemic Period, Pandemic Alert Period, Pandemic Period and Post-Pandemic Period.

<b>Interpandemic Period</b>	<b>Phase 1:</b> No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals.
	<b>Phase 2:</b> No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.
<b>Pandemic Alert Period</b>	<b>Phase 3:</b> Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.
	<b>Phase 4:</b> Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.
	<b>Phase 5:</b> Larger cluster(s), but human-to-human spread still localized; virus increasingly better adapted to humans, but not yet fully transmissible.
<b>Pandemic Period and Next Wave(s)</b>	<b>Phase 6:</b> Increased and sustained transmission in general population.
<b>Post-Pandemic Period</b>	Return to interpandemic period and evaluation/assessment.

- As of November 2005, cases of human H5N1 infection have been reported in Thailand, Vietnam, Cambodia, Indonesia and China.
- Reported death rate is 50%.
- Most cases occurred from direct contact with infected poultry or contaminated surfaces.
- Few instances where secondary transmission from person to person may have occurred.
- Given these events, the U.S. is currently in a Pandemic Alert Phase 3, as defined by World Health Organization (WHO) as “human infections with a new subtype but no human-to-human spread or at most rare instances of spread to a close contact.” There have been no H5N1 cases identified in the U.S.
- Sustained human-to-human transmission anywhere in the world will be a triggering event to initiate a pandemic response by the U.S.

## PANDEMIC INFLUENZA SURVEILLANCE

The goals of influenza surveillance are to detect the earliest appearance of a novel influenza virus and to describe the epidemiological features of the new virus circulating in Pennsylvania.

The Bureau of Epidemiology (BOE) currently reviews a number of surveillance activities, with four main sources of information that are used for influenza surveillance:

- Influenza Sentinel Provider Surveillance Data - Outpatient influenza-like-illness (ILI) reports are collected through the US Influenza Sentinel Provider Surveillance Network (ISPN). Pennsylvania participates in the ISPN program. Approximately 60 enrolled providers regularly report the total number of patients seen and the number of those patients with ILI by age group on a weekly basis. The minimum goal for each state is one provider for every 250,000 residents.
- Influenza Reports to PA-NEDSS – The Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS) receives reports of laboratory tests positive for influenza from laboratories, hospitals and physicians throughout the state. The PA-NEDSS database is scanned on a weekly basis for influenza test results and creates a report that plots trends in influenza incidence, gives breakdowns by geographic area and influenza type (A or B) and identifies deaths due to influenza by age, etc.
- RODS Data - BOE uses the Real-time Outbreak and Disease Surveillance System (RODS) as its primary syndromic surveillance system. The RODS system collects emergency department registration data in real time from participating hospitals in the Commonwealth. RODS also collects point-of-sale data for over-the-counter medications from pharmacies and grocery stores, representing about 70% of market share in Pennsylvania.
- Reports of Influenza Outbreaks - BOE receives reports of outbreaks of influenza from institutions and other sources. The information is reported to public health field staff.

## LABORATORY DIAGNOSTICS

The Department's Bureau of Laboratories (BOL) provides the framework, methodology and recommendations for actions at the Public Health laboratory testing level. The BOL is responsible for accurate and timely testing of clinical specimens for the detection of influenza. The BOL maintains local emergency response plans to assure operational integrity by addressing:

- Increased workload for individual staff during an emergency response;
- Reduced staffing resulting from effects of the emergency situation; and
- Cross training and redirection from routine responsibilities.

## **EMERGENCY RESPONSE**

An influenza pandemic will pose unique challenges:

- Medical services and health care workers will be overwhelmed.
- Health care workers may not be able to provide essential care to all patients in need.
- First responders, such as health care personnel, police, firefighters and emergency medical technicians may be more impacted by influenza than the general public.
- Community services will be impacted due to widespread absenteeism in the workforce.
- Food distribution, home meal deliveries, childcare services, garbage collection and other critical services will be affected or unavailable.

To overcome these challenges, the following activities will be conducted:

- Assessing and reviewing capacity plans and working with acute and long-term health care facilities to prepare for an increase in the patient capacity resulting from influenza stricken individuals.
- Providing technical assistance on maintaining current plans for care of mass casualties.
- Providing guidance and review emergency preparedness response plans to integrate and maintain critical business functions in the event of a pandemic.
- Reviewing pandemic plans by hospitals and nursing care facilities to ensure that they meet the needs of a pandemic.
- Developing emergency response plans with adjoining states for collaboration of public services, health care personnel and security services.

## **COMMUNITY DISEASE CONTROL AND PREVENTION**

The Department provides recommendations for state and local partners on the use of disease containment strategies to prevent or decrease transmission during different pandemic phases. Some of those strategies include:

- Reviewing statutory powers and developing legal documents to carry out isolation and quarantine procedures.
- Discussing with partners how to address issues of children and other family members of the case or contact who were left without caregivers available to take care of the family members in case of the need for isolation or quarantine of a sole caregiver.
- Discussing with partners methods of transportation to the quarantine/isolation facilities for cases and contacts if isolation and quarantine become necessary.
- Ensuring actions are coordinated between state and local health jurisdictions.
- Issuing orders and recommendations, when necessary, that persons remain in their homes and/or take precautionary measures detailed by the Department to prevent and control the spread of influenza.

- Reviewing and identifying types of alternative facilities available for quarantine and isolation.
- Monitoring influenza cases and contacts to determine the need for quarantine and isolation.
- Consulting with the Centers for Disease Control and Prevention (CDC) and local health jurisdictions to determine whether to institute quarantine and isolation procedures of contacts and cases.
- Ordering isolation of the case or quarantine of the contacts, when necessary.
- Planning should include mechanisms for communication, access to food and supplies, medication, prevent termination of utility services, other basic supplies and availability of mental health/psychological support services if quarantine or isolation of a person or group of persons in their homes is necessary.

## **TRAVEL MANAGEMENT**

The Department provides recommendations for state and local partners on travel-related containment strategies that can be used during different phases of an influenza pandemic. These strategies include:

- Improving readiness to implement travel-related disease containment measures.
- Providing public health information to travelers who visit areas where non-human influenza strains are prevalent that can infect humans or human strains with pandemic potential have been reported.
- Evaluating and managing ill arriving passengers who might be infected with influenza strains or human strains with pandemic potential.
- Minimizing travel-related disease transmission using a range of isolation and containment strategies.
- Evaluating the need to implement or terminate travel-related isolation and containment measures as the pandemic evolves.

## **DISTRIBUTION OF VACCINES AND ANTIVIRALS**

Vaccines - Influenza vaccine and influenza vaccinations have long been considered the foundation for influenza prevention and control. It takes six to nine months to manufacture an influenza vaccine. This will necessitate the use of other methods of illness prevention in the interim from disease outbreak until vaccine is available.

Antivirals - There are several antiviral agents currently available for prophylaxis or treatment of Influenza Type A. Currently, national experts are assessing the use of antivirals during an influenza pandemic.

The following activities to distribute vaccines and/or antivirals include, but are not limited to:

- Prioritizing the use of vaccines and antivirals.
- Calculating potential vaccine and antiviral needs based on priority listing.
- Maintaining a database of influenza vaccine and antiviral sites within local communities.
- Establishing backup refrigerated storage facilities for large inventory of vaccines and adequate storage facilities for antivirals.
- Monitoring vaccine development and potential mode of distribution.
- Establishing partnerships with statewide organizations.
- Maintaining community volunteer lists to identify medical professionals in communities for staffing mass vaccination sites.
- Monitoring and investigating adverse events and vaccine coverage rates.
- Preparing protocols for increased workloads and personnel.
- Identifying specific community locations, services and individuals to utilize for emergency clinics and vaccinations sites.
- Keeping the health care and public workforce informed on projected timelines for availability of vaccines.
- Reviewing modifications, if any, to recommendations on vaccinating priority groups.
- Reviewing modifications, if any, to interim recommendations on antiviral prophylaxis in selected groups or circumstances.

## **CLINICAL GUIDELINES**

The Department provides clinical procedures for the initial screening, assessment and management of patients with suspected novel influenza during the Interpandemic, Pandemic Alert and Pandemic Periods. Those activities include:

- Educating local health care providers about novel and pandemic influenza.
- Providing or facilitating testing and investigation of suspected influenza cases.
- Conducting follow-up of suspected novel influenza cases.
- Updating providers regularly as the influenza pandemic unfolds.
- Providing or facilitating testing and investigation of pandemic influenza cases.
- Working with the CDC to investigate and report special pandemic situations.

## **PUBLIC HEALTH COMMUNICATIONS**

During an emergency situation, accurate, consistent and timely messages are key to notifying, informing and educating the public; to notifying and facilitating the movement of emergency staff to their assigned duties and stations; and to implementing the IPRP as intended. Some of the key actions include:

- Designating, training and exercising Public Information Officer (PIO) support staff in local health jurisdictions.
- Designating an official spokesperson(s) to provide accurate and consistent news media updates for pandemic activities.
- Developing and disseminating clear, accurate and credible influenza, novel virus and other disease-related information.
- Providing credible continuing information, education and updates for providers, responders and the public.
- Following the CDC guidelines for public information.
- Providing key public information and messages in multi-lingual and accessible formats.
- Activating and assigning PIO support staff to respond to surge of public information needs.
- Coordinating and updating information with national, state and local partners, including the CDC, neighboring states, local health jurisdictions, city government, legislators, police, fire, emergency management, EMS and hospitals.

## **WORKFORCE SUPPORT**

The institutionalization of psychosocial support services will help workers manage emotional stress during the response to an influenza pandemic and resolve related personal, professional and family issues.

The goal of this program is to train staff and first responders on how to help victims of a disaster emergency, deal with the trauma directly associated with an emergency or disaster, provide immediate support and make appropriate referrals for continuing services.

The DPW is responsible for developing a mental health response to disaster and has been building capacity to respond to the psychosocial needs of those impacted by bioterrorism or other public health emergencies.