

Introduction

Pandemic influenza occurs when a novel influenza virus appears that causes readily transmissible human illness against which most of the population lacks immunity. A pandemic is a public health emergency that rapidly takes on significant political, social, and economic dimensions.

The purpose of the *New York State Department of Health Pandemic Influenza Plan* is to assist public health officials and health care providers in preparing for and responding rapidly and effectively to an influenza pandemic, consistent with national guidance. The New York State guidance document was originally released in February 2006. The 2006 plan was developed using the U.S. Department of Health and Human Services' *Pandemic Influenza Plan*, issued November 2005 (<http://www.dhhs.gov/nvpo/pandemicplan/>). Part two of the federal plan, *Public Health Guidance for State and Local Partners*, outlined the key planning and preparedness issues to be considered by state and local public health officials.

In 2008, the *New York State Department of Health (NYSDOH) Pandemic Influenza Plan* was updated based on federal guidance documents released since the issue of the 2006 plan and lessons learned from drills and exercises conducted over the past two years.

Main Federal Guidance Documents Released Since February 2006

Since the 2006 version of the NYSDOH plan was released, there has been significant refinement of federal planning guidance for state and local health departments. Between February 2006 and Spring 2008, the Department of Health and Human Services (DHHS), Centers for Disease Control and Prevention (CDC) and other federal agencies released several key guidance documents. These documents were reviewed and incorporated, where appropriate, into the 2008 NYSDOH Pandemic Influenza Plan.

- *Updated Interim Guidance for Laboratory Testing of Persons with Suspected Infection with Avian Influenza A (H5N1) Virus in the United States* (CDC, June 2006). This guidance provides an updated case definition of a suspected H5N1 human case for the purpose of determining when testing should be undertaken. It also provides more detailed information on laboratory testing.
- *Interim Pre-pandemic Planning Guidance: Community Mitigation Strategy for Pandemic Influenza Mitigation in the United States- Early, Targeted, Layered Use of Nonpharmaceutical Interventions* (CDC, February 2007). This document includes guidelines and triggers for health departments to implement community-based strategies to decrease the spread of the pandemic virus through the population. It also includes a classification system for pandemics based on pandemic severity.
- *Pandemic Influenza Preparedness and Response Guidance for Healthcare Workers and Healthcare Employers* (Occupation Safety and Health

Administration [OSHA], May 2007). This document provides the guidelines for the use of personal protective equipment by healthcare workers based on occupational risk.

- *Interim Public Health Guidance for the Use of Facemasks and Respirators in Non-Occupational Community Settings During an Influenza Pandemic* (CDC, May 2007). This document outlines the recommendations on the use of surgical masks and respirators by the general public.
- *Draft Guidance on Allocating and Targeting Pandemic Influenza Vaccine* (CDC, October 2007). This draft guidance includes a new prioritization scheme based on comments from stakeholders and the public.
- *Update: Status of Pandemic Influenza Vaccine Manufacturing Capacity, Pre-pandemic Stockpile, and Planning for Vaccine Distribution* (HHS, November 2007). This update provides information for state and local health departments on how much pandemic influenza vaccine may be manufactured and when and how it will be distributed.
- *Federal Guidance to Assist States in Improving State-Level Pandemic Influenza Operating Plans* (U.S. Government, March 2008). This multi-agency document introduces the federal government's new concept of "pandemic intervals."

Selected Exercises, Drills, and Workshops Conducted Since February 2006

Exercises and drills have been extremely useful to test our pandemic influenza and all-hazards plans and to identify gaps in planning and response. A number of drills, exercises and workshops have occurred since the 2006 plan was released; lessons learned from these activities have been incorporated into the 2008 Plan.

- *Western New York Communicable Disease Exercise* (June 2006). A large-scale functional exercise that tested the ability of state and local health departments along with planning partners such as the New York State Office of Homeland Security, New York State Emergency Management Office and law enforcement to respond to a pandemic.
- *School Closure Discussion-Based Exercise Workshop* (January 2007-state level; summer 2007-regional). A facilitated discussion among educational, public health, law enforcement and emergency management representatives and other planning partners to consider the process of school closure and how school closure would effect their organizations and communities.
- *Hospital Surge Table-Top Exercises* (Summer 2007). Exercises were held at a number of sites throughout New York State to assess the capability of hospitals to

increase their capacity to treat more patients than they normally serve.

- *Social Distancing Legal Consultation Meeting* (September 2008). Facilitated discussion regarding the legal feasibility of implementing social distancing measures such as isolation, quarantine, closing public events during a pandemic. This not only discussed the feasibility of the State and local health departments to perform these actions, but also the ability of planning partners such as law enforcement and emergency management organizations to support those measures.

Major Changes in the 2008 Plan

Similar to the 2006 plan, the 2008 New York State plan is divided into 13 sections:

- 1) Command and Control,
- 2) Surveillance and Laboratory Testing,
- 3) Healthcare Planning,
- 4) Infection Control,
- 5) Clinical Guidelines,
- 6) Vaccine Procurement, Distribution and Use,
- 7) Antiviral Medication Procurement, Distribution and Use,
- 8) Community Containment,
- 9) Communications,
- 10) Training and Education,
- 11) Workforce Support,
- 12) Highly Pathogenic H5N1 Avian Influenza in Non-Human Animals, and
- 13) Public Health Preparedness and Informatics.

Below are the major changes, by section, in the 2008 plan.

1) Command and Control

Three new appendices were added to address 1) child day care closures during an emergency, 2) college and university closures during an emergency, and 3) proposed/requested waivers of state laws and regulations.

2) Surveillance and Laboratory Testing

The criteria for assessing and reporting possible cases of possible pandemic influenza cases was updated to reflect the most current CDC guidance.

3) Healthcare Planning

This section was significantly reorganized. Additional information was included on standards of care and scope of practices; non-traditional triage and alternate care sites; bed availability; surge capability; volunteers; care of children; and mass fatality management. Five new appendices were added, including 1) modeling estimates for patient care needs by region, 2) hospital pandemic influenza plan template, 3) concept of operations document on the healthcare volunteer program, SERVNY, 4) guidance document on ventilator allocation, and 5) mortality projections by county.

4) Infection Control

Guidance on the use of respirators and facemasks for healthcare workers was updated to reflect the most current CDC and OSHA guidance.

5) Clinical Guidelines

No major changes.

6) Vaccine Procurement, Distribution and Use

The prioritization scheme for pandemic influenza vaccine was updated to include draft federal guidance which places a greater emphasis on the vaccination of persons in critical occupations, pregnant women, and children. Additional details were added on planning considerations, sites for vaccine administration, administering a second dose of vaccine, information technology in support of vaccine distribution and safety monitoring, and staffing and training for vaccination clinics. An appendix with a site certification checklist was added.

7) Antiviral Medication Procurement, Distribution and Use

Four new appendices were added, including information on 1) antiviral dispensing scenarios, 2) clinical algorithm for the use of antiviral medications, 3) antiviral procurement, and 4) MedWatch, a federal surveillance system for monitoring the post-marketing safety of medications.

8) Community Containment

Information was added to reflect the February 2007 federal guidance document, *Interim Pre-pandemic Planning Guidance: Community Mitigation Strategy for Pandemic Influenza Mitigation in the United States- Early, Targeted, Layered Use of Nonpharmaceutical Interventions*. This section includes new guidance on voluntary quarantine of household contacts, triggers for day care and school closures, and the use of specific community containment measures based on the severity of a pandemic.

9) Communications

Information was added about communications with special needs populations. An appendix was expanded to form a pandemic influenza “shelf kit” with sample documents such as news releases, talking points, and message maps.

10) Training and Education

No major changes.

11) Workforce Support

Additional language was included about designing tailored services and resource materials for vulnerable populations.

12) Highly Pathogenic H5N1 Avian Influenza in Non-Human Animals

Information was updated on highly pathogenic avian influenza in wild birds and mammals.

13) Public Health Preparedness and Informatics

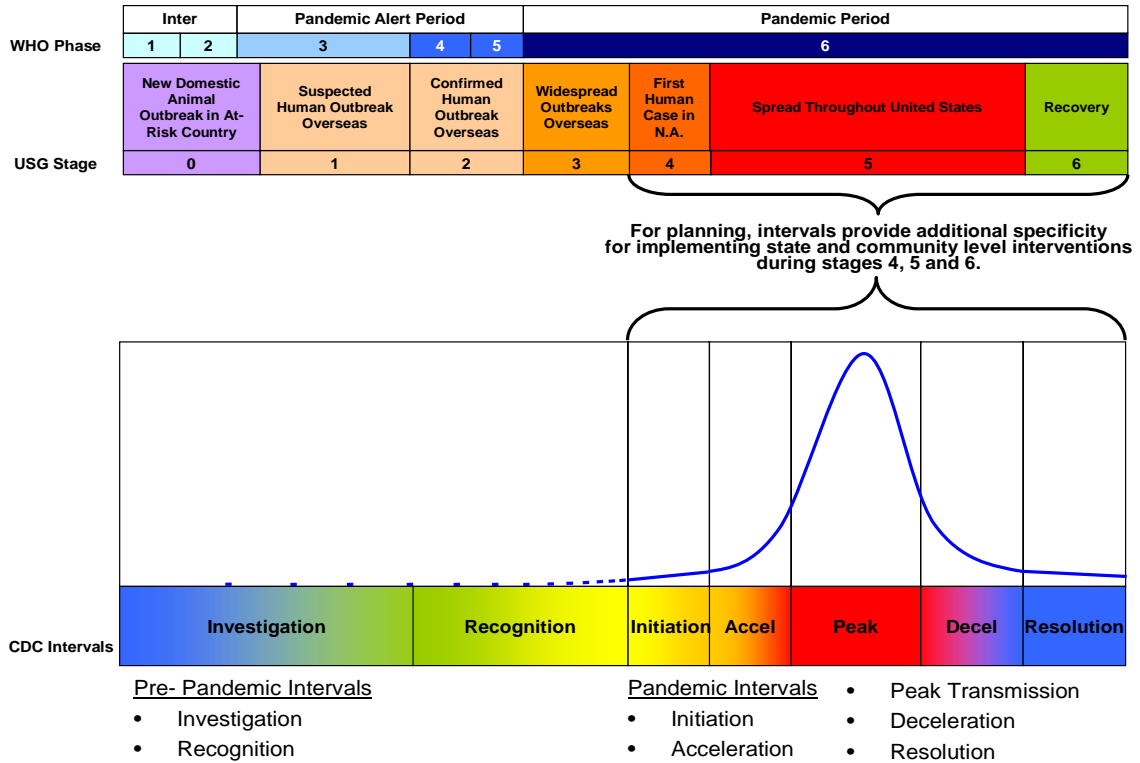
Appendices were added on 1) data sharing agreements and data access schedules, and 2) the executive dashboard.

Addition of CDC Pandemic Intervals

In March 2008, federal guidance was released that introduced the CDC’s concept of “pandemic intervals” to describe the progression of an influenza pandemic within communities in a state. The seven CDC pandemic intervals (investigation, recognition, initiation, acceleration, peak transmission, deceleration, and resolution) provide a greater level of specificity than the World Health Organization’s (WHO) pandemic periods/phases and the U.S. Government’s pandemic stages (see chart below). Thus the *NYSDOH Influenza Pandemic Plan* was revised to include the CDC pandemic intervals.

Each section of the plan includes a description of the activities to be undertaken by WHO pandemic period and CDC pandemic interval. These classifications are intended to specify the triggers for actions that will help lessen the effect of the pandemic. Activities are designated as to whether they are the role of the state health department, local health department and/or providers and public health partners.

WHO Pandemic Periods/Phases, US Government Stages and CDC Pandemic Intervals



Planning Assumptions

Several features set pandemic influenza apart from other public health emergencies or community disasters. The *NYSDOH Pandemic Influenza Plan* was based on the following planning assumptions:

- Susceptibility to the pandemic influenza subtype will be universal. The clinical disease attack rate will be 30% in the overall population. Illness rates will be highest among school-aged children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak.
- Of those who become ill with influenza, 50% will seek outpatient medical care. The number of hospitalizations and deaths will depend on the virulence of the pandemic virus. Estimates differ about 10-fold between more and less severe scenarios.
- Risk groups for severe and fatal infections cannot be predicted with certainty. During annual fall and winter influenza season, infants and the elderly, persons with chronic illnesses, and pregnant women are usually at higher risk of complications from influenza infections. In contrast, in the 1918 pandemic, most deaths occurred among young, previously healthy adults.
- The typical incubation period (the time between acquiring the infection until becoming ill), for influenza averages 2 days. We assume this would be the same for a novel strain that is transmitted between people by respiratory secretions.
- Persons who become ill may shed virus and can transmit infection for one-half to one day before the onset of illness. Viral shedding and the risk for transmission will be greatest during the first 2 days of illness. Children will shed the greatest amount of virus and, therefore are likely to pose the greatest risk for transmission.
- Multiple waves (periods during which community outbreaks occur across the country) of illness are likely to occur, with each wave lasting 2 to 3 months. Historically, the largest waves have occurred in the fall and winter, but the seasonality of a pandemic cannot be predicted with certainty.
- Vaccine will likely not be available for 4-6 months after the pandemic strain is detected.
- Vaccine will probably be administered as a 2-dose regimen, 30 days apart.
- Antiviral medications will likely be in short supply and will be used primarily for treatment, not prophylaxis.
- To maximize the impact of limited supplies, vaccine and antiviral drugs will be distributed according to priorities established by the federal government. The State

will promote and coordinate use of vaccines and/or antivirals based on their availability and the best scientific evidence at the time.

- The healthcare system itself will likely be overwhelmed. This may have a cascading effect on those seeking medical attention for other (non-pandemic) illnesses and diseases.
- New York's public health system relies on local health departments (LHDs) with authority and responsibility for public health preparedness and response at the local level. The State Department of Health provides leadership, support, and coordination of this effort, including during a multi-jurisdictional emergency. Although pandemic influenza may affect multiple jurisdictions simultaneously, all jurisdictional responsibilities are maintained. The State will provide additional support to leadership at the local level, without usurping the authority of LHDs.
- The State may need to implement protective actions (non-medical containment) that will likely be unfavorable to the general public. This may include closing schools, restricting travel, suspending mass gatherings and imposing isolation or quarantine measures on the general public.
- Decisions about non-medical containment measures will be made in an atmosphere of considerable scientific uncertainty. Containment measures must be adapted to the epidemiological context of each pandemic influenza phase of the pandemic.
- Non-medical containment measures will be the principal means of disease control until adequate supplies of vaccine and/or antiviral medications are available.
- Response actions need to be swift and decisive, necessitating the use of a variety of State and Federal statutes and authorities to effectively respond to and recover from a pandemic.

Conclusion

Pandemic influenza planning and preparedness activities should build upon response planning efforts for other emergencies, such as a smallpox recurrence, chemical spills, and natural disasters. In addition, efforts to prepare for an influenza pandemic will significantly enhance New York State's ability to respond to other emergencies and disasters.

This version of the *New York State Department of Health Pandemic Influenza Plan* reflects currently available scientific knowledge regarding the potential for an influenza pandemic, the expected ramifications on New Yorkers, and the most effective strategies and tactics to support our response. **It is important to understand that this plan will be updated and revised regularly as additional information and guidance become available.** Also, during a pandemic, guidance in this document may change. For example, at this time, it is realistic to expect that there will be limits on availability of

vaccine and antiviral medications, and most people will not have access to these resources. This fact may change and result in modifications to the current plan. Other revisions to the plan may cover imposition of alternate standards of patient care in response to problems of surge capacity or depletion of essential medical supplies during a pandemic.

The document and any revisions will be available on the public website of the New York State Department of Health at www.nyhealth.gov. It is our intention to encourage all New Yorkers to fully familiarize themselves with the contents of the plan. Redactions, if any, will apply only to information that must be kept confidential to protect public security.