

DELAWARE PANDEMIC INFLUENZA PLAN

Table of Contents

	<u>Page</u>
1.0 Purpose.....	3
2.0 Planning Assumptions	3
3.0 Concept Of Operations.....	3
3.1 General.....	3
3.2 Pandemic Phases and Periods.....	3
4.0 Agencies	3
5.0 Roles and Responsibilities	3
6.0 Situation Monitoring and Assessment	3
6.2 Surveillance	3
6.3 Laboratory Assessment	3
6.4 Medical Surge Capacity	3
7.0 Prevention and Containment.....	3
7.2 Vaccine Management and Immunization.....	3
7.3 Vaccination Dispensing	3
7.4 Influenza Antiviral Medications (Reference Tab D, CDC Guidelines)	3
7.5 Pandemic Vaccine Priorities	3
7.6 Infection Control.....	3
8.0 Health and Risk Communications.....	3
9.0 Coordination and Planning.....	3
9.2 Command and Control.....	3
9.3 Reporting	3
9.4 Plan Development and Maintenance.....	3

9.5	Training and Exercises	3
9.6	Evaluation and Quality Improvement	3
10.0	Tables	
	Table 1 Comparison of New Pandemic Phases and Phases Published in 1999	9
	Table 2-Antiviral Medication for Prophylaxis and Treatment of Influenza.....	30
	Tab A Glossary.....	39
	Tab B References	40
	Tab C World Health Organization (WHO) Phases and Periods of Response to a Pandemic influenza.....	41
	Tab D CDC Guidelines for Antiviral Medications and Priority Groups	44
	Tab E Job Action Sheets.....	55
	Tab F Acronyms.....	89
	Tab G Forms	91
	Tab H Distribution.....	97

This plan is intended to be used as a guide. As such, it does not address all conceivable situations or contingencies and should not be used as a substitute for sound judgment.

1.0 Purpose

- 1.1 Provides a guideline for the State of Delaware to prepare and respond to a pandemic influenza outbreak.
- 1.2 Outlines preparedness actions during the inter-pandemic period to strengthen capabilities for an effective response to a pandemic influenza outbreak and to minimize the risk of transmissions to humans by situation monitoring and assessment, prevention and containment, health system response, communication, and planning and coordination;
- 1.3 Outlines response actions during a pandemic alert and/or pandemic periods to ensure rapid characterization of the new virus subtype, maximize efforts to contain and delay the spread to possibly avert a pandemic, and to minimize the impact of the pandemic by situation monitoring and assessment, prevention and containment, health system response, communication, and planning and coordination;
- 1.4 Defines the roles and responsibilities of the Department of Health and Social Services (DHSS), the Division of Public Health (DPH), other primary State Agencies, and outside partners during the different phases and periods of inter-pandemic, pandemic alert, and pandemic influenza; and
- 1.5 Outlines the command, control, and management structure during the different phases and periods of inter-pandemic, pandemic alert, and pandemic influenza.

2.0 Planning Assumptions

2.1 Planning Specific

- 2.1.1 The Governor of Delaware may declare either a State of Emergency or a State of Emergency resulting from a Public Health Emergency in order to provide effective command and control for response to a pandemic influenza. The Delaware Emergency Management Agency (DEMA) will act as the lead agency for the Department of Safety and Homeland Security to coordinate these operations. DEMA will coordinate operations through the Delaware Emergency Operations Center (EOC) as described in the *Delaware Emergency Operations Plan* and *Emergency Support Function 8–Public Health and Medical Services* to that plan.
- 2.1.2 Division of Public Health (DPH) response to a pandemic influenza in Delaware will be coordinated and controlled from the State Health Operations Center (SHOC). Operations of the State Health Operations Center (SHOC) are described in detail in the *State Health Operations Center Plan*.
- 2.1.3 Some specific social interventions, such as isolation and quarantine, may be required to slow the spread of disease. In all instances where such procedures are required they will be implemented as prescribed in Delaware law (§ 505 of Title 16 & *Communicable Diseases; Regulations; Quarantine* § 3136 of Title 20 *Isolation and Quarantine during Public Health Emergency*).

- 2.1.4 Specific policies, processes, and procedures to be used for isolation and quarantine are described in the *Isolation and Quarantine Plan (currently under development)*.
- 2.1.5 Effective prevention and therapeutic measures, including vaccine and antiviral agents, will be delayed and in short supply.
- 2.1.6 The Division of Public Health will work with health care providers to coordinate distribution of vaccines and antiviral medications.
- 2.1.7 Response to the pandemic will require swift and coordinated action by all levels of the government.
- 2.1.8 Hospitals and outpatient care facilities will need to expand their capacity to accommodate anticipated patient loads.
- 2.1.9 Health care workers and other first responders may be at a higher risk of exposure and illness than the general population, further straining the health care system.
- 2.1.10 Widespread illness in the state could increase the likelihood of sudden and potentially significant shortages of personnel in other sectors who provide critical public safety and necessary services.
- 2.1.11 When a novel virus is identified, it will likely take between three to eight months to produce and deliver sufficient vaccine to inoculate the entire U.S. population.

2.2 Disease and Pandemic Specific

- 2.2.1 Pandemic influenzas are expected but unpredictable and arrive with very little warning.
- 2.2.2 There are two types of influenza viruses which cause significant disease in humans: type A and type B.
 - 2.2.2.1 Influenza A viruses are unique because they can infect both humans and animals and are usually associated with more severe illness than type B influenza virus.
 - 2.2.2.2 Influenza viruses are composed of two major antigenic structure essentials to the production of influenza vaccines and the induction of immunity: hemagglutinin (H) and neuraminidase (N).
- 2.2.3 A pandemic or global epidemic will occur following a major mutation of the influenza “A” virus, and people are exposed to the new virus.
- 2.2.4 Certain conditions make an pandemic influenza more likely:
 - 2.2.4.1 A new influenza A virus arising from a major genetic change i.e., an antigenic shift;
 - 2.2.4.2 A susceptible population with little or no immunity;
 - 2.2.4.3 A virus transmitted efficiently from person-to-person, and/or;
 - 2.2.4.4 A virulent virus with the capacity to cause serious illness and death.

- 2.2.5 Influenza causes seasonal epidemics resulting in an average of 36,000 deaths in the United States each year.
- 2.2.6 Historic evidence suggests that pandemics occurred three to four times per century.
- 2.2.7 In the last century there were three pandemic influenzas (The Spanish flu in 1918; Asian flu in 1957, and the Hong Kong flu in 1968. The 1918 Spanish Flu pandemic killed approximately 20 to 40 million people.
- 2.2.8 During each of the last three pandemics, the greatest increase in death rates occurred among persons less than 60 years of age; in 1918, the greatest number of deaths occurred in those 20 to 40 years of age.
- 2.2.9 In January 2004, health authorities in Viet Nam and Thailand reported their first human cases of infection with Avian Influenza, caused by an H5N1 strain. The cases in humans are directly linked to outbreaks of highly pathogenic H5N1 Avian Influenza in poultry initially reported in the Republic of Korea in December 2003 and subsequently confirmed in an additional seven Asian countries.

3.0 Concept Of Operations

3.1 General

- 3.1.1 A response to a pandemic will largely reflect the states ability to coordinate a number of state agencies and outside partners to effectively plan well in advance and respond to such an event.
- 3.1.2 The inter-pandemic, pandemic alert, and pandemic response operations are implemented in several different phases and periods. These functions are, but are not limited to, situation monitoring and assessment, prevention and containment, health system response, communication, and planning and coordination.
- 3.1.3 The Division of Public Health (DPH) and the State Health Operations Center (SHOC) will provide command, control, and management for planning and response during the inter-pandemic and pandemic alert periods and phases.
- 3.1.4 In preparation of a pandemic, DPH will monitor and provide yearly influenza vaccinations, procure and store antiviral medications in the In-state Stockpile (ISS) for public health care workers, first responders, and recommended priority groups, and administer influenza public education.
- 3.1.5 During the pandemic period or phase six, a State of Emergency and/or Public Health Emergency will be declared and the Delaware Emergency Management Agency (DEMA) will act as the state's lead agency for the Department of Safety and Homeland Security. DEMA will provide operational coordination for all state agencies and outside partners, and the SHOC will delineate operation priorities and decisions for public health and the health care system.

- 3.1.6 During the pandemic period, the SHOC will provide vaccinations and antiviral medications to the public through the use of Neighborhood Emergency Help Centers (NEHCs). The NEHC(s) will be staffed by DPH, DHSS, and other outside agencies.
- 3.1.7 During the pandemic period, hospitals, local health care providers, health care clinics, and large employers (1000 or more employees) with medical personnel will be responsible for vaccinating their employees and families.
- 3.1.8 Isolation and quarantine laws will be enforced throughout Delaware.

3.2 Pandemic Phases and Periods

- 3.2.1 To better cope with “false alarms” resulting from intensive surveillance, the World Health Organization (WHO) has defined a series of “Preparedness Phases and Periods” that can be applied before the beginning of a pandemic is declared. This will assist DPH to report on novel virus infections of humans and initiate precautionary responses, without creating unnecessary panic. The definition of phases and periods described below will provide a basis for DPH to determine its planning and response to such situations as they are assessed.

3.2.2 Inter-pandemic Period

- 3.2.2.1 **Phase 1.** No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection or disease may or may not be present in animals. If present in animals, the risk of human infections or disease is considered to be low.

- **Rationale.** It is likely that influenza subtypes that have caused human infection and/or disease will always be present in wild birds or other animal species. Lack of recognized animal or human infections does not mean that no action is needed. Preparedness requires planning and action in the beginning.

- 3.2.2.2 **Phase 2.** No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.

- **Rationale.** The presence of animal infection caused by a virus of known human pathogenicity may pose a substantial risk to human health and justify public health measures to protect persons at risk.

3.2.3 Pandemic Alert Period

- 3.2.3.1 **Phase 3.** Human infections(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.

- **Rationale.** The occurrence of cases of human disease increase the chance that the virus may adopt or re-assort to become transmissible from human to human, especially if coinciding with a seasonal outbreak of influenza. Measures are needed to detect and prevent

spread of disease. Rare instances of transmissions to a close contact may occur -for example, in a household or health-care setting-but do not alter the main attribute of this phase, i.e., the virus is essentially not transmissible from human to human.

3.2.3.2 **Phase 4.** Small cluster(s) with limited human-to-human transmissions, but spread is highly localized, suggesting that the virus is not well adapted to humans.

- **Rationale.** Virus has increased human-to-human transmissibility, but is not well adapted to humans and remains highly localized once adapted to humans, so that its spread may possibly be delayed or contained.

3.2.3.3 **Phase 5.** Larger cluster(s), but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not be yet fully transmissible (substantial pandemic risk).

- **Rationale.** Virus is more adapted to humans, and therefore, more easily transmissible among humans. It spreads in larger clusters, but spread is localized. This is likely to be the last chance for massive coordinated global intervention, targeted to one or more foci, to delay or contain spread. In the view of possible delays in documenting spread of infection during pandemic phase 4, it is anticipated that there would be a low threshold for progressing to Phase 5.

3.2.4 **Pandemic Period**

3.2.4.1 **Phase 6.** Increased and sustained transmission in the general population.

- **Rationale.** Major change in global surveillance and response strategy, since pandemic risk is imminent for all countries. The national response is determined primarily by the disease impact within the country.

3.2.5 **Post-pandemic Period**

3.2.5.1 A return to the inter-pandemic period (the expected levels of disease with a seasonal strain) follows with continued need to maintain surveillance and regularly update planning. An intensive phase of recovery and evaluation may be required.

3.2.6 **Criteria for downscaling of phases**

3.2.6.1 All phases, except phase 1, are anticipated to be temporary. With every announcement of a new phase, WHO will set a time period at which the designation will be reviewed.

3.2.6.2 In consideration of downscaling, the following criteria will be used:

- Lack of ongoing disease activity meeting the criteria for the current phase.
- Adequate national surveillance and international reporting as assessed by WHO and, for issues relating to infection in animals, in partnership with other organizations.
- A risk assessment by WHO in partnership with affected countries and for issues relating to infection in animals.
- A risk assessment considering the factors that led to designation of the phase, as well as other potential factors.

3.2.6.3 Designation of phases, including decisions on up-scaling and downscaling, will be made by the Director General of WHO.

Table 1 Comparison of New Pandemic Phases and Phases Published in 1999

PHASES AS PUBLISHED BY WHO IN 1999	NEW PANDEMIC PHASES	ADDITIONAL NATIONAL SUBDIVISIONS OF NEW PHASES
Interpandemic period Phase 0	Interpandemic period Phase 1. No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk ^a of human infection or disease is considered to be low.	
	Phase 2. No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk ^a of human disease.	Affected or extensive travel/trade links with affected country. Not affected.
Phase 0. Preparedness level 1: human case.	Pandemic alert period Phase 3. Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.	Affected or extensive travel/trade links with affected country.
		Not affected.
Phase 0. Preparedness level 2: limited human transmission.	Phase 4. 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	Affected or extensive travel/trade links with affected country.
		Not affected.
Phase 0. Preparedness level 3: spread in general population.	Phase 5. Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk). ^b	Affected or extensive travel/trade links with affected country.
		Not affected.
Pandemic period Phase 1. Multiple countries.	Pandemic period Phase 6. Pandemic phase: increased and sustained transmission in general population. ^b	Not yet affected.
Phase 2. Multiple regions.		Affected or extensive travel/trade links with affected country.
Phase 3. Subsiding in initially affected countries but not in other countries.		Subsided.
Phase 4. Next wave.		Next wave.
Postpandemic period Phase 5. Return to phase 0.	Postpandemic period Return to interpandemic period.	Return to interpandemic period.

^a The distinction between *phase 1* and *phase 2* is based on the risk of human infection or disease resulting from circulating strains in animals. The distinction would be based on various factors and their relative importance according to current scientific knowledge. Factors may include: pathogenicity in animals and humans; occurrence in domesticated animals and livestock or only in wildlife; whether the virus is enzootic or epizootic, geographically localized or widespread; other information from the viral genome; and/or other scientific information.

^b The distinction between *phase 3*, *phase 4* and *phase 5* is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. Factors may include: rate of transmission; geographical location and spread; severity of illness; presence of genes from human strains (if derived from an animal strain); other information from the viral genome; and/or other scientific information.

4.0 Agencies

4.1 State Agencies

- 4.1.1 The Office of the Governor
- 4.1.2 Department of State
 - 4.1.2.1 Division of Professional Regulation (DPR)
- 4.1.3 Department of Agriculture (DDA)
- 4.1.4 Department of Education (DOE)
- 4.1.5 Department of Natural Resources and Environmental Control (DNREC)
- 4.1.6 Department of Safety and Homeland Security (DSHS)
 - 4.1.6.1 Delaware State Police (DSP)
 - 4.1.6.2 Delaware Emergency Management Agency (DEMA)
- 4.1.7 Department of Health and Social Services (DHSS)
 - 4.1.7.1 Division of Public Health (DPH)
 - 4.1.7.2 Division of Substance Abuse and Mental Health (DSAMH)
 - 4.1.7.3 Office of the Chief Medical Examiner (OCME)
 - 4.1.7.4 Division of Services for Aging Adults with Physical Disabilities (DSAAPD)
 - 4.1.7.5 Division of Social Services (DSS)
 - 4.1.7.6 Division of Long-Term Care Residents Protection (DLTCRP)
- 4.1.8 Delaware National Guard (DNG)

4.2 County and Local Agencies

- 4.2.1 County and Local Emergency Management Agencies
- 4.2.2 Local Police Agencies
- 4.2.3 Local Fire Services
- 4.2.4 Local Basic Life Support (BLS) Providers
- 4.2.5 Advanced Life Support (ALS) Providers

4.3 Partner Organizations

- 4.3.1 Local Hospitals
- 4.3.2 Delaware Pharmacists Society (DPS)
- 4.3.3 Federally Qualified Health Centers (FQHC)
- 4.3.4 Community Health Centers (CHC)
- 4.3.5 American Red Cross of the Delmarva Peninsula (ARC)

- 4.3.6 Medical Society of Delaware (MSD)
- 4.3.7 Delaware Healthcare Association (DHA)
- 4.3.8 Delaware Health Care Facilities Association (DHCFA)

4.4 Federal Agencies

- 4.4.1 U.S. Department of Health and Human Services
 - 4.4.1.1 U.S. Public Health Service
 - 4.4.1.2 U.S. Centers for Disease Control and Prevention (CDC)
- 4.4.2 Dover Air Force Base (DAFB)

5.0 Roles and Responsibilities

5.1 State Agencies

5.1.1 The Office of the Governor

- 5.1.1.1 Inter-pandemic and Pandemic Alert Responsibilities
 - Provides oversight for pandemic influenza planning through the Public Health Emergency Planning Commission.
- 5.1.1.2 Pandemic Responsibilities
 - Considers declaring a Public Health Emergency and/or a State of Emergency.

5.1.2 Department of State (Division of Professional Regulation)

- 5.1.2.1 Inter-pandemic and Pandemic Alert Responsibilities
 - Licenses health care professionals.
 - Coordinates with DPH, the Medical Society of Delaware (MSD), provider organizations, and volunteers to develop plans for licensing health care professionals to meet contingency staffing requirements.
- 5.1.2.2 Pandemic Responsibilities
 - Implements plans to credential license health care professionals to meet contingency staffing requirements.

5.1.3 Department of Agriculture (DDA)

- 5.1.3.1 Inter-pandemic and Pandemic Alert Responsibilities
 - Conducts surveillance of disease outbreaks in animals.
 - Destroys and disposes of infected flocks to limit the spread of disease to poultry workers.
 - Coordinates with DPH about the results of surveillance activities.

- Coordinates with DPH to assure that agricultural workers are closely monitored and vaccinated or treated as needed.

5.1.3.2 Pandemic Responsibilities

- Conducts increased surveillance of disease outbreaks in animals.
- Destroys and disposes of infected flocks to limit the spread of disease to poultry workers and contamination of the food supply.
- Coordinates with DPH about the results of surveillance activities.
- Coordinates with DPH to assure that agricultural workers are closely monitored, vaccinated, or treated as needed.

5.1.4 Department of Education (DOE)

5.1.4.1 Inter-pandemic and Pandemic Alert Responsibilities

- Prepares to monitor absentee rates in schools.
- Prepares to assist local school districts and individual schools in determining when and how to close schools, cancel non-essential meetings, etc.

5.1.4.2 Pandemic Responsibilities

- Analyzes absentee rates.
- Disseminates infection control messages to districts for students, faculty, and administrators.
- Assists local school districts and schools in determining when and how to close schools, cancel non-essential meetings, etc.
- Coordinates with DPH to vaccinate students and staff, as needed.
- Coordinates with the SHOC to provide facilities, if available, for operation of NEHC(s).

5.1.5 Department of Natural Resources and Environmental Control (DNREC)

5.1.5.1 Inter-pandemic and Pandemic Alert Responsibilities

- Prepares to conduct surveillance of wildlife habitat during a pandemic influenza to assist in determining whether the disease is spreading through wildlife populations, if needed.
- Prepares to close parks and recreation areas, if necessary, to prevent the spread of the disease.

5.1.5.2 Pandemic Responsibilities

- Implements increased surveillance of wildlife habitat, if needed and coordinate results with the SHOC Situation Unit.

- Closes parks and recreation areas, if needed and post appropriate notices at these areas in order to limit the spread of the disease.

5.1.6 **Department of Safety and Homeland Security (DSHS)**

5.1.6.1 Inter-pandemic and Pandemic Alert Responsibilities

- Prepares to act as lead agency through DEMA during a State of Emergency for integration of state emergency management activities in support of pandemic influenza response efforts.
- Coordinates with DHSS to provide assistance in planning and preparations for a pandemic influenza.

5.1.6.2 Pandemic Responsibilities

- Acts as lead agency through DEMA for integration of state emergency management activities in support of pandemic influenza response efforts if a State of Emergency is declared.
- Provides oversight for state response operations.

5.1.7 **Delaware State Police**

5.1.7.1 Inter-pandemic and Pandemic Alert Responsibilities

- Prepares to provide crowd control and traffic support for vaccination clinics.
- Prepares to enforce isolation and quarantine orders to limit the spread of the disease in accordance with the *Isolation and Quarantine Plan (currently under development)*.

5.1.7.2 Pandemic Responsibilities

- Provides crowd control and traffic support for vaccination clinics.
- If required, provide escort for vaccine shipments.
- Enforce isolation and quarantine orders in accordance with the *Isolation and Quarantine Plan (currently under development)*.

5.1.8 **Delaware Emergency Management Agency (DEMA)**

5.1.8.1 Inter-pandemic and Pandemic Alert Responsibilities

- Prepares to act as the lead state agency for coordination of response to a pandemic influenza in Delaware.
- Coordinates with DPH to prepare plans needed for an effective response to a pandemic influenza.
- Assists the Office of the Governor and DHSS in preparing a State of Emergency or a Public Health Emergency declaration.

- Prepare to provide oversight of operations of the state EOC in support of a pandemic influenza response.

5.1.8.2 Pandemic Responsibilities (In a State of Emergency or Public Health Emergency)

- Assists the Office of the Governor and Department of Safety and Homeland Security in preparing a State of Emergency or a Public Health Emergency declaration.
- Acts as the lead state agency for coordination of response to a pandemic influenza in Delaware.
- Activates the EOC to provide overall command and control for state pandemic influenza operations.
- Coordinates, as needed, and provides, within overall capabilities, the equipment, supplies, transportation, personnel, and other support requested by the SHOC to conduct effective response operations.
- Coordinates with the SHOC, as required, to obtain DPH support for overall state response efforts.

5.1.9 Department of Health and Social Services (DHSS)

5.1.9.1 Inter-pandemic and Pandemic Alert Responsibilities

- Provides support for DPH pandemic influenza preparations.

5.1.9.2 Pandemic Responsibilities

- Provides assistance, as required, to support response operations.

5.1.10 Division of Public Health

5.1.10.1 Inter-pandemic and Pandemic Alert Responsibilities

- Provides oversight for pandemic influenza, surveillance, laboratory assessment, vaccine management, immunization, mass care, mass fatality, influenza public education, and health and risk communication planning.
- Procures and stores stocks of vaccine(s) and antiviral medications for use in DPH clinics.
- Coordinates with providers to protect and treat residents of long-term care facilities during a pandemic outbreak.
- Coordinates with administrators through the Department of Services for Children, Youth, and Their Families (DSCYF) and DOE to prepare to implement disease containment training for their staff, identify supplies and equipment needed to screen students for influenza-like illness (ILI), and care for students until such time as they can be taken home for care.

- Coordinates with funeral home directors to implement disease containment training for their staff, prioritize essential functions, and prepare to minimize mortuary service disruptions.
- Coordinates with religious and cultural groups to assist them in preparing to implement disease containment training and procedures.
- Coordinates with major employers to provide vaccination and treatment for employees and their families and to implement disease containment training and practices.
- Coordinates planning for stockpiling and distribution of vaccines, antiviral medications, and clinic supplies, staffing, and operation of DPH clinics.
- Coordinates with Department of Agriculture (DDA) in the development and maintenance of a plan to respond to an outbreak of Avian Influenza in chickens.
- Assures that training exercises are done once every other year on the *Pandemic Influenza Plan*.

5.1.10.2 Pandemic Responsibilities

- Activates the SHOC to provide command and control for pandemic influenza, surveillance, laboratory assessment, vaccine management, immunization, mass care, mass fatality, and health and risk communication planning.
- Develops and distributes patient care guidelines and infection control procedures to hospitals, health care facilities, CHC, and EMS.
- Notifies providers of long-term care facilities about the need to protect residents.
- Notifies administrators through DSCYF and schools about the need to provide disease containment refresher training for their staff.
- Notifies funeral home directors about the need to implement disease containment refresher training for their staff.
- Coordinates with religious and cultural groups to assist them in implementing disease containment training and procedures.
- Provides information to major employers and health care providers about the effective treatment and infection control practices.
- Coordinates distribution of vaccines, antiviral medications, clinic supplies, staffing, and operation of DPH vaccination clinics.

- Coordinates distribution of vaccines and antiviral medications to hospitals, local health care providers, health care clinics, and large employers (1000 or more employees) with medical personnel.
- If Strategic National Stockpile (SNS) antiviral resources are deployed to the state, DPH will provide oversight through the SHOC for receipt, storage, distribution, and dispensing as described in the *Strategic National Stockpile Plan*.

5.1.11 Division of Substance Abuse and Mental Health

5.1.11.1 Inter-pandemic and Pandemic Alert Responsibilities

- Provide mental health training, as needed.
- Plans for mental health support to the SHOC and other locations, when necessary.
- Plans for mental health support to Neighborhood Emergency Help Center (NEHC) and ACC health care providers, within capabilities, by providing mental health expertise.

5.1.11.2 Pandemic Responsibilities

- Implement plans to support SHOC, NEHC, and ACC operations, within capabilities.

5.1.12 Office of the Chief Medical Examiner (OCME)

5.1.12.1 Inter-pandemic and Pandemic Alert Responsibilities

- Investigate influenza-like illness (ILI) deaths and provide scientific data to the State Epidemiologist.
- Provide specimens to Delaware Public Health Laboratory (DPHL) for confirmation of type of influenza virus.
- Prepare and provide support for multiple fatality planning.

5.1.12.2 Pandemic Responsibilities

- Investigate influenza deaths and provide scientific data to the Situation Branch Director in the SHOC.
- Provide specimens to DPHL for confirmation of type of influenza virus.
- Prepare and provide support for multiple fatalities and coordinate with the Multiple Fatality Group Supervisor in the SHOC.

5.1.13 Delaware National Guard (DNG)

5.1.13.1 Inter-pandemic and Pandemic Alert Responsibilities

- Prepares to support pandemic response requirements for transportation that are beyond the existing capabilities of state agencies.
- Prepares to provide supplementary staffing to state and local response organizations consistent with other mission requirements and federal law.

5.1.13.2 Pandemic Responsibilities

- Supports transportation requirements beyond the existing capabilities of state agencies.
- Provides supplementary staffing to state and local response organizations consistent with other mission requirements and federal law such as law enforcement, SNS, Receipt, Staging and Storage (RSS) site support, Medical Needs Shelter (MNS) staffing, and transportation.

5.2 County and Local Governments

5.2.1 County and Local Emergency Management Agencies

5.2.1.1 Inter-pandemic and Pandemic Alert Responsibilities

- Plan for support of local health care providers.
- Prepare to maintain essential community services for the duration of the pandemic.

5.2.1.2 Pandemic Responsibilities

- Coordinate with state and other agencies to provide support to local health care providers.
- Coordinate with state and other agencies to maintain essential community services for the duration of the pandemic.

5.2.2 Police and Local Law Enforcement Agencies

5.2.2.1 Inter-pandemic and Pandemic Alert Responsibilities

- Participate in planning to provide crowd control and traffic support for clinics, health care facilities, hospitals, and ACC(s).
- Participate in planning and training on enforcing isolation and quarantine orders to limit the spread of infectious diseases as prescribed in the *Isolation and Quarantine Plan (currently under development)*.

5.2.2.2 Pandemic Responsibilities

- Provide crowd control and traffic support for clinics, health care facilities, hospitals, and ACC(s).

- Enforce isolation and quarantine orders to limit the spread of infectious diseases.

5.2.3 County and Local Emergency Medical Services (EMS)

5.2.3.1 Inter-pandemic and Pandemic Alert Responsibilities

- Plan for identifying, treating, and transporting patients during pandemic influenza outbreaks.

5.2.3.2 Pandemic Responsibilities

- Provide support for identifying, treating, and transporting patients during pandemic influenza outbreaks.
- Provide EMT-B(s) for supporting Neighborhood Emergency Help Centers.

5.3 U.S. Government

5.3.1 Inter-pandemic and Pandemic Alert Responsibilities

- 5.3.1.1 Conducts national and global surveillance to detect new strains of the influenza “A” virus that are easily transmitted between humans.
- 5.3.1.2 Investigates national and global influenza outbreaks.
- 5.3.1.3 Develops diagnostic protocols and recommends reagents to detect influenza outbreaks.
- 5.3.1.4 Develops reference strains and recommends reagents for use in vaccine production.
- 5.3.1.5 Evaluates the safety and efficacy of vaccines and license their use.
- 5.3.1.6 Determines populations at the greatest risk from infection and develops strategies for vaccination and antiviral use.
- 5.3.1.7 Assesses the need for and recommends measures to decrease transmission.
- 5.3.1.8 Deploys federally-purchased vaccines.
- 5.3.1.9 Deploys federally-purchased antiviral medications in the Strategic National Stockpile.
- 5.3.1.10 Equips, trains, and deploys the Commissioned Corps Readiness Force (CCRF) and Epidemiological Intelligence Service (EIS) officers when appropriate.

5.3.2 Pandemic Responsibilities

- 5.3.2.1 Coordinates national response to the pandemic event.
- 5.3.2.2 Develops immunization and treatment protocols for use by states.

- 5.3.2.3 Monitors the virulence and lethality of disease strain(s).
- 5.3.2.4 Deploys federally-purchased vaccines.
- 5.3.2.5 Deploys federally-purchased antiviral medications in the Strategic National Stockpile.

5.4 Private Partner Organizations

5.4.1 Local Hospitals

5.4.1.1 Inter-pandemic and Pandemic Alert Responsibilities

- Prepare to treat significantly increased patient numbers during a pandemic influenza.
- Coordinate with the DHA during inter-pandemic periods to expand their capabilities for treatment of patients through activation of ACC(s). Procedures for activation and operation of these faculties are described in the *Acute Care Center Plan*.

5.4.1.2 Pandemic Responsibilities

- Activate internal surge capacity plans.
- Treat patients in existing facilities within capabilities.
- Coordinate with SHOC to move non-affected patients to LTC facilities.
- Coordinate with the SHOC to activate and operate ACC(s) as described in the *Acute Care Center Plan*.
- Vaccinate staff and their families.

5.4.2 Delaware Pharmacist Society (DPS)

5.4.2.1 Inter-pandemic and Pandemic Alert Responsibilities

- Coordinates with members to disseminate information about vaccine and antiviral drug effectiveness.
- Coordinates with members to assist in vaccination campaigns and antiviral dispensing clinics.

5.4.2.2 Pandemic Responsibilities

- Coordinates with members to disseminate information about vaccine and antiviral drug effectiveness.
- Assist in vaccination clinics as requested by DPH.

5.4.3 Federally Qualified Health Centers (FQHC)

5.4.3.1 Inter-pandemic and Pandemic Alert Responsibilities

- Develop plans to provide vaccination and treatment for regular patients.
- Develop plans to host activation of NEHC(s), if required, to support mass vaccination programs.
- Host activation of NEHC(s) during vaccine shortage periods to support DPH vaccination operations.
- Vaccinate staff and their families.

5.4.3.2 Pandemic Responsibilities

- Continue to provide vaccination and treatment, within capabilities for regular patients.
- Host activation of NEHC(s), if required, to support mass vaccination programs.

5.4.4 Community Health Centers

5.4.4.1 Inter-pandemic and Pandemic Alert Responsibilities

- Provide vaccination and treatment of the patients.
- Prepare to treat significantly increased numbers of patients during a pandemic influenza.
- Prepare to host and/or provide staff for NEHC(s) or ACC(s).

5.4.4.2 Pandemic Responsibilities

- Continue to treat patients within capabilities.
- Host and/or provide staff for NEHC vaccination clinics or ACC(s).
- Vaccinate staff and their families.

5.4.5 Medical Society of Delaware

5.4.5.1 Inter-pandemic and Pandemic Alert Responsibilities

- Assists DPH with staffing support for NEHC(s) and ACC(s) through recruitment, credentialing, and volunteer management.

5.4.5.2 Pandemic Responsibilities

- Coordinates with the SHOC the distribution of influenza information to providers.

5.4.6 Delaware Healthcare Association

5.4.6.1 Inter-pandemic and Pandemic Alert Responsibilities

- Coordinates planning activities of member hospitals during inter-pandemic periods.

- Publishes the *Acute Care Center Plan* in cooperation with member hospitals and DPH.
- 5.4.6.2 Pandemic Responsibilities
- Provides support for SHOC and ACC operations within capabilities.

6.0 Situation Monitoring and Assessment

6.1 Situation monitoring and assessment actions include the following:

- 6.1.1 Active and passive state surveillance systems that are for detection, characterization, and assessment of clusters of influenza-like illness or respiratory death in both humans and animals;
- 6.1.2 Reporting routine and unusual surveillance findings to the appropriate agencies;
- 6.1.3 Assessing seasonal influenza to help estimate additional needs during a pandemic;
- 6.1.4 Performance of situation monitoring and assessment by Epidemiology, the Delaware Public Health Laboratory, Investigative Response Teams, the State Health Operation Center (Pandemic Period only), CDC surveillance components, and other sentinel health care providers; and
- 6.1.5 Planning and developing provisions for medical surge capacity.

6.2 Surveillance

6.2.1 Background

- 6.2.1.1 One of the most important functions of surveillance is to ensure the detection of unusual clusters of cases and the occurrence of human-to-human transmissions at the earliest possible stage.
- 6.2.1.2 Because the antigenic properties of influenza viruses are constantly changing, both virologic surveillance, in which influenza viruses are isolated for antigenic and genetic analysis, and disease surveillance, in which the epidemiologic features and clinical impact of new variants are assessed, should be viewed as equally critical for pandemic preparedness.
- 6.2.1.3 National surveillance in the United States is coordinated by the CDC, with state health departments assuming primary responsibility for carrying out virologic, mortality, and morbidity components.
- 6.2.1.4 The U.S. influenza surveillance system has different components (**see section 6.2.1.5**) that allows the State of Delaware to:
 - Find out when and where influenza activity is occurring;
 - Determine what types of influenza viruses are circulating;
 - Detect changes in the influenza viruses;
 - Track influenza-like illness (ILI); and

- Measure the impact influenza is having on deaths in the U.S.

6.2.1.5 **The Seven Components of Influenza Surveillance:**

- **(1)WHO and National Respiratory and Enteric Virus Surveillance System (NREVSS) Collaborating Laboratories.** About 75 WHO and 50 NREVSS collaborating laboratories located throughout the U.S. report total number of respiratory specimens tested and the number for influenza A and B each week.
- **(2) U.S. Influenza Sentinel Providers Surveillance Network.** Each week, approximately 1,000 health-care providers around the country report the total number of patients seen and the number of those patients with ILI by age group.
- **(3) 122 Cities Mortality Reporting System.** Each week, the vital statistics offices of 122 cities report the total number of death certificates filed and the number of those for which pneumonia or influenza was listed as the underlying or as a contributing cause of death.
- **(4) State and Territorial Epidemiologists Reports.** State health departments report the estimated level of influenza activity in their states each week. States report influenza activity as no activity, sporadic, local, regional, or widespread.
- **(5) Influenza-associated pediatric mortality.** Laboratory-confirmed influenza-associated deaths in children less than 18 years old are reported through the Nationally Notifiable Disease Surveillance System (NNDSS).
- **(6) Emerging Infections Program (EIP).** The EIP conducts surveillance for laboratory-confirmed influenza related hospitalizations in persons less than 18 years of age in 57 counties covering 11 metropolitan areas of 10 states.
- **(7) New Vaccine Surveillance Network (NVSN).** The NVSN provides population-based estimates of laboratory-confirmed influenza hospitalization rates for children less than five years old residing in three counties: Hamilton County (OH), Davidson County (TN), and Monroe County (NY).

6.2.2 **Inter-Pandemic and Pandemic Alert Surveillance (Phase 1 to 5)**

- ##### 6.2.2.1
- The State Epidemiologist provides oversight for influenza surveillance operations during inter-pandemic and pandemic alert periods as a means to quickly detect outbreaks of disease, identify the virus subtype(s) involved, and facilitate timely public health response.

- 6.2.2.2 During inter-pandemic and pandemic alert periods the Division of Public Health and other state agencies will utilize passive and active surveillance to monitor and track influenza viruses.
- 6.2.2.3 Active surveillance is accomplished by public health entities requesting data on a regular basis from the health care community (physicians, hospitals, and public health departments) to report the number of patients presenting at their offices with ILI. The program is used from October through May each year, regardless of whether or not there is a pandemic influenza or not. Weekly analysis of associated demographic and syndromic data assists in characterizing the virulence and morbidity of associated virus strains.
- 6.2.2.4 Detailed procedures for conducting inter-pandemic and pandemic alert epidemiological surveillance are described in DPH *Epidemiological Surveillance Standard Operating Guidelines (currently under development)*.
- 6.2.2.5 As and when directed by the DPH Director, acting as SHOC Incident Commander, the Planning Section Chief will assemble and dispatch Investigative Response Teams (IRTs) to conduct field investigation of disease cases, patterns, etc through the IRT Unit Leader. Procedures used by IRT(s) to conduct field epidemiological investigations are described in detail in DPH *Investigative Response Team Standard Operating Guidelines (currently under development)*.
- 6.2.2.6 During inter-pandemic and pandemic alert periods, the State Epidemiologist monitors data from the CDC's seven components of influenza reporting.
- 6.2.3 **Pandemic Surveillance (Phase 6)**
- 6.2.3.1 During an actual pandemic influenza the SHOC is activated and oversight for surveillance activities is provided by the Planning Section Chief. Oversight for IRT activities is coordinated by the IRT Unit Leader.
- 6.2.3.2 In addition to inter-pandemic and pandemic alert surveillance activities, the following, additional surveillance operations will be initiated:
- (a) Daily monitoring of influenza activity reports from hospitals;
 - (b) Analysis of disease surveillance data from participating health care providers;
 - (c) Review of reports of non-hospital, influenza-related deaths;
 - (d) Coordination with the Immunization Program Director to collect data on adverse reactions to available vaccine(s);

- (e) Coordination with public health epidemiologists in neighboring jurisdictions and at CDC to monitor regional and national disease patterns; and
- (f) Investigation of new disease outbreaks, particularly outbreaks that can be linked to recent travel to the Far East.

6.3 Laboratory Assessment

6.3.1 Inter-Pandemic and Pandemic Alert Periods

- 6.3.1.1 The Director of the Delaware Public Health Laboratory (DPHL) provides oversight for laboratory assessment operations during inter-pandemic and pandemic alert periods.
- 6.3.1.2 DPHL analyzes strains of influenza virus collected from sentinel physicians in Delaware. These nasopharyngeal specimens are tested and analyzed to assist in determining which virus strains are present and the effectiveness of available vaccine(s). This information can also be used to help formulate effective antiviral drug treatment and prophylaxis protocols. This program is most effective in the early and late stages of each influenza season, but it is crucial to early detection of a pandemic influenza.
- 6.3.1.3 Detailed processes and procedures used by the DPHL to analyze these specimens are described in detail in the *State Public Health Laboratory Standard Operating Guidelines (currently under development)*.

6.3.2 Pandemic Period

- 6.3.2.1 During pandemic response operations, the SHOC is activated and oversight for laboratory assessment is provided by the Planning Section Chief and the Laboratory Unit Leader.
- 6.3.2.2 Detailed processes and procedures used by DPHL to analyze specimens during a pandemic influenza event are described in the *State Public Health Laboratory Standard Operating Guidelines (currently under development)*.
- 6.3.2.3 The SHOC will work with the DPHL to ensure proper collection, transport, and testing of influenza specimens throughout all stages of a pandemic influenza.

6.4 Medical Surge Capacity

6.4.1 Inter-Pandemic and Pandemic Alert Periods

- 6.4.1.1 Inter-pandemic and pandemic alert medical surge capacity preparations for pandemic influenza events are the responsibility of individual hospitals. The Delaware Healthcare Association (DHA), working with the Public Health Preparedness Section (PHPS), provides support for medical surge capacity planning.

- 6.4.1.2 DHA publishes the *Acute Care Center Plan*, in cooperation with PHPS, to describe how hospitals can activate additional facilities that provide a total of 400 additional beds for the treatment of stabilized patients throughout the state.
- 6.4.1.3 PHPS will assist the hospitals in medical surge capacity by:
- Providing the facilities and consumable supplies to support operations;
 - Purchasing and provide the equipment needed to support operations; and
 - Reimbursing consumed supplies during exercises under existing agreements with individual hospitals.
- 6.4.1.4 Hospitals will work with PHPS and the Medical Reserve Corp program to identify, credential, and assign volunteers to perform appropriate tasks in the ACC(s).
- 6.4.1.5 During pandemic periods, hospitals prepare to coordinate, through the SHOC, to transfer stable patients to long-term care facilities.
- 6.4.1.6 During pandemic periods, hospitals prepare to expand medical surge capacity by canceling elective surgeries and other prudent measures to make appropriate bed spaces available.

6.4.2 Pandemic Period

- 6.4.2.1 During a pandemic influenza, the SHOC is activated and oversight for medical surge capacity is provided by the Hospital/ACC Group Supervisor, under the general oversight of the Operations Section Chief.
- 6.4.2.2 As the number of people presenting for treatment increases, so too will the number of patients requiring hospitalization, especially for those in high risk groups.
- 6.4.2.3 Local hospitals will monitor their patient loads by the Facility Resources Emergency Database (FRED) system and coordinate with the SHOC, as required, to activate procedures to transfer stable patients to long-term care facilities.
- 6.4.2.4 Local hospitals will also coordinate with the SHOC to activate ACC(s) to further expand medical surge capabilities.
- 6.4.2.5 As described above, operation of ACC(s) is described in the *Acute Care Center Plan*.
- 6.4.2.6 Hospitals will document supplies and consumables used by ACC(s). Documentation needs to be forwarded to PHPS for reimbursement according to existing memorandums of agreement.

7.0 Prevention and Containment

7.1 Prevention and containment actions include vaccine management and immunization, increase in the availability of vaccine in the event of a pandemic, develop a strategy to stockpile and ensure access to antiviral medications for use, set priorities and criteria for deployment and use of vaccine and antiviral medications, and define infection control measure including isolation and quarantine.

7.2 Vaccine Management and Immunization

7.2.1 Inter-Pandemic and Pandemic Alert Periods

- 7.2.1.1 The Immunization Program Director provides oversight for forecasting vaccine requirements, procurement, and distribution to DPH clinics during inter-pandemic and pandemic alert periods.
- 7.2.1.2 The Immunization Branch will work with the CDC and manufactures to ensure adequate supply of vaccines for the State of Delaware during inter-pandemic, pandemic alert and pandemic periods.
- 7.2.1.3 When there is an adequate supply of effective vaccine(s), Northern Health Services (NHS) and Southern Health Services (SHS) operate DPH vaccination clinics throughout the state; however, the majority of people see their own health care provider to obtain vaccination. This arrangement is considered optimal because it makes the best use of public and private resources to provide the best vaccine support for the greatest number of people.
- 7.2.1.4 Vaccines for distribution through DPH are received, stored, and managed by the DPH Pharmacy, located at the Delaware Hospital for the Chronically Ill (DHCI) in Smyrna. Vaccines are then ordered by Northern and Southern Health Services, as needed, to support vaccination clinics in their respective areas of the state.
- 7.2.1.5 *Vaccine Management Inventory and Distribution Plan* (see **Tab G4**) spreadsheet is an example spreadsheet that can be used for tracking vaccine stocks and ordering the preparation of vaccines to conduct DPH vaccination clinics. The Immunization Program Director will utilize this spreadsheet, with modifications required by the types of vaccine(s) available, during inter-pandemic periods.
- 7.2.1.6 Private health care providers forecast their needs for vaccine separately under the general oversight of DPH. Each provider makes separate arrangements to purchase, receive, store, and maintain their own stocks of vaccines. Vaccines are then used as determined by each provider.
- 7.2.1.7 The following vaccines are recommended for different age groups:
 - Six months to 3 years, health care providers should use inactivated influenza vaccine. Inactivated influenza vaccine from Sanofi

Pasteur (FluZone split-virus) is approved for use among persons aged $\geq$ six months.

- Inactivated influenza vaccine from Chiron (Fluvirin) is labeled in the United States for use among persons aged $\geq$ four years.
- Live, attenuated influenza vaccine from MedImmune (FluMist) is approved for use by health persons aged 5 to 49 years.

7.2.1.8 The following annual vaccination distribution scheduled should be followed:

- **Vaccinations before October.** To avoid missed opportunities for vaccination of person at high risk for serious complications, such persons should be offered vaccine beginning in September during routine health care visits or hospitalizations, if vaccine is available. In facilities housing older persons, vaccination before October should be avoided because antibody level can begin to decline.
- **Vaccination in October and November.** ACIP recommends that vaccine providers focus their vaccination efforts in October and November on person age $\geq$ 50 years at increased risk for influenza-related complications, children 6 to 23 months, and household contacts of persons at high risk.
- **Vaccination in December and Later.** If substantial amounts of vaccine are left over and to improve vaccination coverage, influenza vaccine should continue to be offered in December and throughout the influenza season. In recent seasons influenza activity has not reached peak levels until late December through early March. Adults develop peak antibody protection against influenza infection two weeks after vaccination.

7.2.2 Pandemic Period and Vaccine Shortage

7.2.2.1 During pandemic response operations and periods when there is insufficient vaccine available to use normal procedures, the SHOC will be activated. Oversight for immunization activities will be provided by the Immunization Program Representative (Technical Specialist). This person advises the Medical Unit Leader in the Planning Section.

- The ACIP will publish additional guidance regarding the prioritized uses of inactivated influenza vaccine to be implemented only during periods when there is a shortage of influenza vaccine.

7.2.2.2 The Planning Section Chief will work with the Influenza Vaccine Advisory Group through the Medical Unit Leader to develop priorities for vaccinating those groups at the greatest risk from the disease. These priorities will be disseminated as voluntary or mandatory guidelines for use in public and private vaccination clinics.

- 7.2.2.3 During pandemic response operations and periods of limited vaccine availability, vaccine management including private vaccine may be centralized at the DPH pharmacy under the general supervision of the Immunization Program Representative (Technical Specialist) and the direct control of the Pharmaceutical Group Supervisor.
- In these circumstances the SHOC Incident Commander will determine the quantity of vaccines that will be provided to hospitals, businesses, schools, health care facilities, and other entities.
 - Whether providing part or all of the vaccinations for the public, operation of DPH vaccination clinics during pandemic and vaccine shortage periods will be conducted according to *the Neighborhood Emergency Help Center (NEHC) Plan*.
- 7.2.2.4 Centralized management of vaccine would only be undertaken when it is clearly in the public interest as a means to provide the greatest benefit to the greatest number of people. The following situations would include, but not be limited to:
- Situations in which or when a continuing pattern of provider failure to comply with voluntary or mandatory orders could logically be predicted to result in unnecessary spread or morbidity.
 - Ensuring vaccination of high-risk groups.
 - Private health care providers who turn their stocks of influenza vaccines over to the State of Delaware pursuant to an order. Providers will be reimbursed for the original purchase price after providing appropriate documentation.
- 7.2.2.5 The *Vaccine Management Inventory and Distribution Plan* (see **Tab F4**) spreadsheet can also be used for tracking and monitoring vaccine stocks for distribution to NEHC(s), hospitals, schools, health care clinics, businesses, and other entities during a pandemic period. The SHOC Planning Section will utilize this spreadsheet, with modifications required by the types of vaccine(s) available, during a pandemic period.

7.3 Vaccination Dispensing

7.3.1 Inter-Pandemic and Pandemic Alert Periods

- 7.3.1.1 NHS and SHS provide oversight for DPH vaccination dispensing in their respective areas during inter-pandemic periods. Clinic managers request vaccines from the DPH Pharmacy and vaccinate patients, as needed. Non-DPH health care providers also provide vaccination services for their patients, but procure and store vaccines separately.
- 7.3.1.2 During the height of the flu season, demands for vaccination may stress the health care system, but operation of mass vaccination clinics may not be required.

7.3.2 Pandemic Period

- 7.3.2.1 Vaccination is the primary means of preventing influenza.
- 7.3.2.2 During a pandemic and periods when there is a shortage of effective vaccine(s), the number of people requesting vaccination will be significantly greater, especially for those in high risk groups.
- 7.3.2.3 During a pandemic period when vaccines or prophylactic medications, such as antiviral medications, are available and the demand for vaccinations is increasing significantly, the SHOC Incident Commander may direct activation of NEHC (s) to provide public vaccinations and/or dispense prophylactic medications. Activation, deployment, and operation of NEHC(s) are described in the *Neighborhood Emergency Help Center Plan*.
- 7.3.2.4 Under the direction of the SHOC, hospitals, health care providers, businesses, schools, and other entities may vaccinate their staff, students, and families and distribute antiviral medications.
- 7.3.2.5 The SHOC will provide a suitable and appropriate vaccine schedule.

7.4 Influenza Antiviral Medications (Reference Tab D, CDC Guidelines)

- 7.4.1 Antiviral medications are effective treatment and prophylaxis. They are important adjunct to vaccination as a strategy for managing influenza.
- 7.4.2 Current supplies of antiviral medications are very limited and surge capacity is negligible. The State of Delaware will work with area hospitals and pharmaceutical companies to provide and manage an antiviral stockpile through the CDC's Shelf Life Extension Program (SLEP) and the Delaware In-state Stockpile (ISS).
- 7.4.3 The options for antiviral medications depend on the size of the available antiviral supply, the size of the priority groups targeted for antiviral use, and the specific goals to be achieved in the pandemic response.
- 7.4.4 The State of Delaware's use of antiviral medications will include:
 - 7.4.4.1 **Prophylaxis**
 - Long-term prophylaxis (prevention) of defined populations for the duration of a pandemic wave of activity (minimum of four weeks)
 - Prophylaxis during outbreaks in closed institutions (usually lasting about two weeks)
 - Protection of individuals for the period between vaccination and the development of protection (could range from two to six weeks depending on whether one or two doses of vaccine is recommended)
 - Prophylaxis of individuals following exposure to pandemic influenza (approximately one week per course)

7.4.4.2 Treatment

- Treatment of ill persons within 48 hours of their illness.
- Not treating exposed persons for whom influenza vaccinations is contraindicated

7.4.5 Prophylaxis is more likely to prevent serious complications from influenza than treatment because prophylaxis prevents cases of influenza from developing in the first place. However, use of antiviral medications for prophylaxis purposes will require a much larger drug supply and would be cost prohibitive. Vaccination should be the primary method of prophylaxis.

7.4.6 Four antiviral agents are currently approved by the U.S. Food and Drug administration for preventing or treating influenza as shown in Table 2-“Antiviral Medication for Prophylaxis and Treatment of Influenza.”

Table 2-Antiviral Medication for Prophylaxis and Treatment of Influenza

Antiviral Medication	Trade Name	Flu Type	Use	Age Restrictions
Amantadine	Symmetrel [®]	A	Prophylaxis/Treatment	≥ 1 year
Rimantadine	Flumadine [®]	A	Prophylaxis/Treatment	Adults only for treatment ≥ 1 year for prophylaxis
Zanamivir	Relenza [®]	A and B	Treatment Only	≥ 7 years
Oseltamivir	Tamiflu [®]	A and B	Prophylaxis/Treatment	1 year for Treatment ≥ 13 years for prophylaxis

7.4.6.1 Amantadine and Rimantadine are effective against Type A virus strains only. Amantadine is approved for treatment of persons one year of age and older. Rimantadine is only approved for treatment of adults.

- If used prophylactically and during an outbreak or pandemic, both medications are 70% to 90% effective in preventing disease.

- Some people who take these medications for prophylaxis will develop sub-clinical infections and will develop increased resistance to that virus strain.

7.4.6.2 Zanamivir and Oseltamivir are neuraminidase inhibitor agents that are effective against influenza A and B type strains. Zanamivir is not approved by the FDA for prophylaxis, but Oseltamivir is. Both medications can be used to treat symptoms.

7.4.7 Inter-Pandemic and Pandemic Alert Periods

7.4.7.1 During inter-pandemic and pandemic alert periods health care providers may prescribe antiviral medications for both prophylaxis and treatment.

- Prophylaxis will be more appropriate for isolated populations when providers have a higher degree of certainty that at risk patients will not be exposed to people who have not received prophylaxis.
- Prophylaxis is less desirable when patients are in groups that have extensive interactions with the public and exposure to people who have not received prophylaxis cannot be confirmed.
- The amantadane derivatives (amantadine and rimantadine) are best suited for prophylaxis (preventive care) because of the high potential for viral resistance to emerge during treatment, the potential supply, and cost.
- Neuraminidase inhibitors (oseltamivir and zanamivir) should be used for therapy because of the potential for viral resistance when adamantanes are used for therapy.

7.4.8 Pandemic Periods

7.4.8.1 During a pandemic influenza, the primary goal of antiviral prophylaxis and therapy would be to decrease adverse health impact (morbidity and mortality) and reduce social and economic disruption.

7.4.8.2 The relative importance of antiviral medication uses is likely to be greatest early in the pandemic when vaccines are not available or their supply is limited.

7.4.8.3 Antiviral medication use should not be considered as a strategy for altering the overall course of a pandemic.

7.4.8.4 There is a theoretical ability of intensive prophylaxis and therapy, in conjunction with quarantine and isolation, to decrease the spread of a novel influenza strain early in the pandemic.

7.4.8.5 The SHOC will implement these strategies for antiviral medication use:

- (1) Target antiviral medication use to defined target groups (**see section 7.5**) because antiviral drug supply is limited: Planners

should utilize CDC priority group guidelines to determine antiviral drug distribution.

- (2) Prophylaxis: Use when vaccine is not available. Provide to health care and emergency workers.
- (3) Treatment: Use antiviral medications within 48 hours of onset of illness. The use of antiviral medications as a treatment has a high risk for complications.
- (4) Maintain flexibility and responsiveness to local conditions: Planners should be flexible in deciding optimal use of antiviral drug supply based on the available supply and the local impacts and epidemiology of the pandemic.
- (5) Consider efficiency: The duration of prophylaxis is estimated to be six to eight weeks if used while influenza is circulating in a community or may be longer if used during the entire influenza season.
- (6) Use antiviral medications appropriately: Use of adamantanes for therapy can lead to development and subsequent spread of resistant influenza viruses. Administering antiviral medication therapy more than 48 hours after onset of influenza symptoms is likely to be much less effective than earlier treatment and generally should be avoided.

7.5 Pandemic Vaccine Priorities

- 7.5.1 Identifying priority groups for vaccination is important because vaccine supply will be less than demand.
- 7.5.2 Priority groups can be defined based on national vaccination program goals.
- 7.5.3 Because the attack rates of infection and the severity of disease caused by a pandemic strain cannot be predicted with certainty, this goal-oriented approach will allow the SHOC to modify priority groups, if needed, to achieve defined objectives.
- 7.5.4 Goals may need to be adjusted in each state or region according to local needs and epidemiological circumstances. The federal government and state officials reserve the right to change priority groups goals based on epidemiological, medical, and essential circumstances.
- 7.5.5 Vaccination Goals
 - 7.5.5.1 **Goal 1.** Maintain the ability to provide quality health care, implement pandemic response activities and maintain vital community services.
 - Protecting the health care workforce is essential to providing the quality of care that will decrease morbidity and mortality.

- Protecting those who maintain essential services such as EMS, police, fire, and public health are high priorities.
- 7.5.5.2 **Goal 2.** Protect persons at highest risk for influenza mortality.
 - Vaccinating older adults and those who have underlying diseases have the highest risk of death during a pandemic.
- 7.5.5.3 **Goal 3.** Decrease transmission of infection to those at highest risk for influenza mortality (provide indirect protection).
 - Vaccinating health care providers and staff in institutional settings decrease transmission to persons at high risk.
 - Vaccinating school-aged children is a strategy to decrease transmission in the community.
- 7.5.5.4 **Goal 4. Maintain other important community services.**
 - Vaccinating workers who provide important community services such as utilities and transportation.
- 7.5.5.5 **Goal 5. Protect the susceptible population at large.**

7.6 Infection Control

7.6.1 Inter-Pandemic and Pandemic Alert Periods

- 7.6.1.1 Even non-pandemic influenza viruses are spread easily from person to person, primarily through inhalation of small aerosolized particles and larger droplets. In general, people are contagious one day before symptoms manifest themselves and five days after onset of the illness. However, children can be infectious for longer periods. The main options for controlling influenza include prophylactic immunization and the use of antiviral medications, as described above.
- 7.6.1.2 Additional measures and precautions can be used during inter-pandemic and pandemic alert periods and annual influenza seasons to lessen the probability of spreading influenza viruses.
- 7.6.1.3 The following measures are recommend for health care workers:
 - Hand washing
 - Disposable gloves
 - Masks (Disposable N-95 masks)
 - Bed Management
- 7.6.1.4 The following measures will be communicated to the public during inter-pandemic and pandemic alert periods and annual influenza seasons to lessen the probability of spreading influenza viruses.
 - Avoid close contact.

- Stay home when you are sick.
- Cover your mouth and nose.
- Clean your hands.
- Avoid touching your eyes, nose or mouth.

7.6.1.5 Education—DPH staff will be trained annually on the prevention and control of influenza, with particular emphasis on infection control.

7.6.2 Pandemic Period

7.6.2.1 Infection control measures that are successful during normal, inter-pandemic influenza season are even more important in preventing the spread of a pandemic and will be re-emphasized in risk communication messages to appropriate audiences.

7.6.2.2 Increased consideration should be given to cohorting ill patients, since private rooms are not likely to be available for influenza patients during a pandemic. ACC(s) may be opened for this purpose. Movement and transport of patients should be limited, if possible.

7.6.2.3 Education-All DPH staff will be given refresher training on prevention and control of influenza, with particular emphasis on infection control.

7.6.2.4 Travel advisories and precautions, such as screening people arriving from affected areas, closing schools, and restricting public gatherings, may be important strategies for reducing transmission of the disease during early phases of the pandemic because of limited or no availability of vaccines and antiviral medications.

7.6.2.5 The SHOC and other state agencies and authorities will address other infections control measures such as:

- School closures
- Travel restrictions
- Shelter-in-place
- Isolation and Quarantine

8.0 Health and Risk Communications

8.1 Because of anticipated shortages of both vaccine and antiviral medications, planning around messages informing the population about availability and addressing the rationale for priority groups and measures to be taken until such are available will be critical.

8.2 Other important topics include basic information about influenza, information about the course of the pandemic, information about which symptoms should prompt seeking

medical assistance and which symptoms should be managed at home, information about school and business closures and suspended public meetings, and information about travel restrictions and quarantine laws.

8.3 Inter-Pandemic and Pandemic Alert Periods

- 8.3.1 The Chief of Health and Risk Communications provides oversight for risk communications activities during inter-pandemic periods.
- 8.3.2 Health and risk communication activities can play a key role in preventing the spread of influenza, whether it is a pandemic virus strain or not. These activities are described in the *Crisis and Risk Communication Plan*. They include, but are not limited to:
 - 8.3.2.1 Providing annual information to health care providers and the general public about infection control measures such as hand washing, use of gloves and masks, and bed management.
 - 8.3.2.2 Monitoring CDC and WHO bulletins and alerts about influenza-related alerts, clinical findings associated with new virus strains, etc.
 - 8.3.2.3 Distributing timely and appropriately tailored information to specific audiences such as DPH staff, health care providers, and members of the public. Whenever possible, multiple media sources will be used to maximize total coverage.
 - 8.3.2.4 Preparing fact sheets and news releases related to vaccination clinics and other measures for preventing disease, limiting the spread of disease, and orders issued by the State Health Officer (SHO).
 - 8.3.2.5 Prepare the general public for the possibility of quarantine and isolation.
 - 8.3.2.6 Disseminating information through the Delaware Health Alert Network (DHAN).
 - 8.3.2.7 Communicating information about the disease to groups at higher risk for developing complications from influenza.
 - 8.3.2.8 Managing media requests for related information.

8.4 Pandemic Period

- 8.4.1 During pandemic response operations the SHOC is activated, and the Public Affairs Officer provides oversight for risk communications as described in the *Crisis and Risk Communication Plan* and the *State Health Operations Center Plan*.
- 8.4.2 In addition to inter-pandemic and pandemic alert risk communication activities stated above, the following pandemic activities will also be initiated:
 - 8.4.2.1 Update and distribution of timely and appropriately tailored information to specific audiences such as DPH staff, health care providers, and members of the public. Whenever possible, multiple media sources will be used to maximize total coverage.

- 8.4.2.2 Update and preparation of fact sheets and news releases related to vaccination clinics and other measures for preventing disease, limiting the spread of disease, and orders issued by the SHOC Incident Commander.
- 8.4.2.3 Dissemination of updated information through the Delaware Health Alert Network (DHAN).
- 8.4.2.4 Communication of updated information about the disease to groups at higher risk for developing complications from influenza.
- 8.4.2.5 Management of media requests for related information through coordination of media activities with DHSS Communications staff.
- 8.4.2.6 Coordination of news conferences if a Joint Information Center (JIC) has not been established.
- 8.4.2.7 Provision of a Public Information Officer (PIO) to participate in JIC operations, if a JIC has been activated.
- 8.4.2.8 Provision of information about travel advisories and other precautions advised by the CDC and DPH.

9.0 Coordination and Planning

9.1 Coordination and planning actions include the following:

- 9.1.1 To establish a command and control structure to provide leadership and coordination of resources;
- 9.1.2 To establish and maintain trust across all agencies and organizations;
- 9.1.3 To provide guidance to the public; and
- 9.1.4 To develop, maintain, and exercise state pandemic influenza contingency plans.

9.2 Command and Control

9.2.1 Reference the *State Health Operations Center (SHOC) Plan* and Tab B.

9.2.2 Inter-Pandemic and Pandemic Alert Periods

9.2.2.1 Existing Division of Public Health command and control system structure will be applied to inter-pandemic to pandemic alert periods unless conditions warrant DPH officials to activate the SHOC at levels I through III. The following conditions warrant early activation of the SHOC:

- Knowledge of vaccine and antiviral shortages;
- Rate of extremely high mortality;
- Resistance of influenza virus to vaccine and antiviral medications; and

- Other criteria specified in the *State Health Operations Center (SHOC) Plan*.

9.2.3 Pandemic Period

- 9.2.3.1 The Governor of Delaware may declare either a State of Emergency and/or a Public Health Emergency in order to provide effective command and control for response to a pandemic influenza.
- 9.2.3.2 The Delaware Emergency Management Agency (DEMA) will act as the lead agency for the Department of Safety and Homeland Security to coordinate these operations. DEMA will coordinate operations through the Delaware Emergency Operations Center (EOC) as described in the *Delaware Emergency Operations Plan and Emergency Support Function 8-Public Health and Medical Services* to that plan.
- 9.2.3.3 Division of Public Health (DPH) response to a pandemic influenza in Delaware will be coordinated and controlled from the State Health Operations Center (SHOC). Operations of the State Health Operations Center (SHOC) are described in detail in the *State Health Operations Center Plan*.

9.3 Reporting

9.3.1 Inter-Pandemic and Pandemic Alert Periods

- 9.3.1.1 The Division of Public Health reports influenza activity weekly to the CDC via the Public Health Laboratory Information System by noon each Tuesday (September through May).
 - The report will characterize activities as no activity, sporadic, local, regional, or widespread.
 - The report will also include the number of severe respiratory illness and/or febrile related illnesses in acute care facilities.
 - The Sentinel Provider Program Manager will provide weekly influenza reports to the CDC via the internet.
 - The State Epidemiologist will conduct weekly analyses of overall influenza activity levels in the state and report this data the DPH Administrators and Section Chiefs.
 - Hospital emergency departments, long-term care facilities, and physicians' offices will report to the State Epidemiologist not later than noon on Monday, on a by-patient-name basis, any unusual deaths due to respiratory infection.

9.3.2 Pandemic Period

9.3.2.1 During a pandemic, the SHOC is activated and oversight for reporting is provided by the Planning Section.

9.3.2.2 The Incident Commander and the Planning Section Chief will decide the reporting procedures and format.

9.4 Plan Development and Maintenance

9.4.1 The Division of Public Health, Public Health Preparedness Section, is responsible for development and maintenance of this plan.

9.4.2 The Pandemic Influenza Working Group and Pandemic Influenza Steering Group made up of DPH administrators and key personnel will advise PHPS on development and maintenance of the plan.

9.4.3 PHPS will coordinate annual review and update of this plan.

9.5 Training and Exercises

9.5.1 The Public Health Preparedness Section (PHPS) is responsible to coordinate training on this plan and implementing guidance for DPH employees and partner organizations.

9.5.2 Individuals selected to serve on Investigative Response Teams will attend further training on applicable subject matter.

9.5.3 DPHL staff will attend training as required on applicable subject matter.

9.5.4 Required training will be offered annually for newly assigned personnel.

9.5.5 Applicable sections of training programs will be offered whenever there are substantive changes to the plan or key guidance documents.

9.5.6 This plan will be exercised annually. This may be accomplished through a tabletop, functional, or full-scale exercise.

9.6 Evaluation and Quality Improvement

9.6.1 PHPS will assure that an After Action Report (AAR) is prepared to document findings from each exercise and actual implementation of this plan.

9.6.2 PHPS will review applicable AAR(s) and other documents in order to identify opportunities to improve the plan.

9.6.3 Quality assurance and improvement activities including reviews of policy, procedures, protocols and processes are incorporated as part of the annual plan review.

Department of Health and Social Services
Division of Public Health
Tab A Glossary

- 1.0 Closed Institutions.** Facilities which provide long term care for the special needs population such as the chronically ill and the elderly.
- 2.0 Defined Populations.** Specific priority group and/or identified priority group of citizens who are at higher risk of contracting influenza. The CDC and state officials are responsible for defining priority groups.
- 3.0 Influenza Vaccine Advisory Group.** A group of DPH officials who defined priority groups for vaccination during the influenza season.
- 4.0 Pandemic Influenza Working Group.** A working group of DPH officials who are responsible for planning, guidance, development, and maintenance of the Pandemic Influenza Plan.
- 5.0 Pandemic Influenza Steering Group.** A group of DPH officials including the state health officer, DPH administrators, and SHOC management who are responsible for plan approval, training and exercises, and plan implementation.

Department of Health and Social Services
Division of Public Health
Tab B References

- 1.0 Acute Care Center Plan, Delaware Health Care Association.
- 2.0 Crisis and Risk Communication Plan, Division of Public Health.
- 3.0 Delaware Emergency Operations Plan (DEOP), Delaware Emergency Management Agency.
- 4.0 Delaware Public Health Laboratory Standard Operating Guidelines (Currently Under Development).
- 5.0 DPH Epidemiological Surveillance Standard Operating Guidelines.
- 6.0 DPH Investigative Response Team Standard Operating Guidelines (Currently Under Development).
- 7.0 Emergency Support Function (ESF) 8, Public Health and Medical Services, Delaware Emergency Management Agency.
- 8.0 Health Communications Standard Operating Guidelines, Division of Public Health.
- 9.0 Isolation and Quarantine Plan, Division of Public Health (Currently under development).
- 10.0 Prevention and Control of Influenza, “*Recommendations of the Advisory Committee on Immunization Practices (ACIP)*”. MMWR, “Recommendations and Reports”, July 13, 2005 / 54(Early Release); 1-40.
- 11.0 Multiple Fatality Management Plan, Office of the Chief Medical Examiner.
- 12.0 Neighborhood Emergency Help Center Plan, Division of Public Health.
- 13.0 Pandemic Influenza Plan. The Role of World Health Organization and Guidelines for National and Regional Planning, dated April 1999.
- 14.0 Pandemic Influenza Preparedness and Response Plan, Department of Health and Human Services, dated August 2004.
- 15.0 State Health Operation Center (SHOC) Plan.
- 16.0 Strategic National Stockpile (SNS) Plan.
- 17.0 U.S. Department of Homeland Security publication *National Incident Management System* (NIMS), dated March 1, 2004.
- 18.0 WHO Global Influenza Preparedness Plan, “*Epidemic Alert & Response*”. World Health Organization, dated 2005.
- 19.0 WHO Consultation on Priority Public Health Interventions Before and During an Influenza Pandemic, “*Epidemic Alert & Response*”. World Health Organization, dated March 16, 2004.

State of Delaware

Department of Health and Social Services

Division of Public Health

Tab C World Health Organization (WHO) Phases and Periods of Response to a Pandemic influenza

1.0 Purpose

1.1 Details the World Health Organization (WHO) phases and periods of response to a pandemic influenza outbreak; and

1.2 Describes response phases.

PHASE	DESCRIPTION	SHOC LEVEL
1 – Inter-pandemic Period	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection or disease may or may not be present in animals. If present in animals, the risk of human infections or disease is considered to be low. Rationale. It is likely that influenza subtypes that have caused human infection and/or disease will always be present in wild birds or other animal species. Lack of recognized animal or human infections does not mean that no action is needed. Preparedness requires planning and action in the beginning.	Not Activated. Normal command and controls performed where State Epidemiologist and Delaware Public Health Laboratory Director provide and participate in surveillance actions. Sends regular updates to DPH Section Chiefs and Administrators and SHOC Management Structure.
2 – Inter-pandemic Period	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease. Rationale. The presence of animal infection caused by a virus of known human pathogenicity may pose a substantial risk to human health and justify public health measures to protect persons at risk.	Not Activated. Normal command and controls performed where State Epidemiologist and Delaware Public Health Laboratory Director provide and participate in surveillance actions. Sends regular updates to DPH Section Chiefs and Administrators and SHOC Management Structure.
PHASE	DESCRIPTION	SHOC LEVEL

3 – Pandemic Alert Period	Human infections(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact. Rationale. The occurrence of cases of human disease increase the chance that the virus may adopt or re-assort to become transmissible from human to human, especially if coinciding with a seasonal outbreak of influenza. Measures are needed to detect and prevent spread of disease. Rare instances of transmissions to a close contact – for example, in a household or health-care setting – may occur, but do not alter the main attribute of this phase, i.e. that the virus is essentially not transmissible from human to human.	Under normal conditions SHOC is not activated. Command and controls performed where State Epidemiologist and Delaware Public Health Laboratory Director provide and participate in surveillance actions. Sends regular updates to DPH Section Chiefs and Administrators and SHOC Management Structure. SHOC may be activated at Level I or II if a vaccine shortage exist.
4 – Pandemic Alert Period	Small cluster(s) with limited human-to-human transmissions but spread is highly localized, suggesting that the virus is not well adapted to humans. Rationale. Virus has increased human-to-human transmissibility but is not well adapted to humans and remains highly localized, so that its adapted to humans and remains highly localized, so that its spread may possible be delayed or contained.	Under normal conditions SHOC is not activated. Command and controls performed where State Epidemiologist and Delaware Public Health Laboratory Director provide and participate in surveillance actions. Sends regular updates to DPH Section Chiefs and Administrators and SHOC Management Structure. SHOC may be activated at Level I or II if a vaccine shortage exist.

PHASE	DESCRIPTION	SHOC LEVEL
5 – Pandemic Alert Period	Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not be yet fully transmissible (substantial pandemic risk). Rationale. Virus is more adapted to humans, and therefore more easily transmissible among humans. It spreads in larger clusters, but spread is localized. This is likely to be the last chance for massive coordinated global intervention, targeted to one or more foci, to delay or contain spread. In the view of possible delays in documenting spread of infection during pandemic phase 4, it is anticipated that there would be a low threshold for progressing to phase 5.	Under normal conditions SHOC is not activated. Command and controls performed where State Epidemiologist and Delaware Public Health Laboratory Director provide and participate in surveillance actions. SHOC may be activated at Level II or III if conditions warrant Public Health officials to activate the SHOC. The following conditions warrant early activation of the SHOC: (1) Knowledge of vaccine and antiviral shortages; (2) Rate of mortality is extremely high; and (3) The influenza virus is resistant to vaccine and antiviral medications.
6 – Pandemic Period	Increased and sustained transmission in the general population. Rationale. Major change in global surveillance and response strategy, since pandemic risk is imminent for all countries. The national response is determined primarily by the disease impact within the county.	SHOC Level III (Full Activation) – State of Emergency The SHOC will coordinate efforts with DEMA and other healthcare partners to provide planning and response efforts to the Pandemic influenza.

Note: This table does not give every conceivable scenario. It is the judgment and decision of the Director of DPH and Administrators to activate the SHOC and brief the Secretary of Delaware Health and Social Services (DHSS)

Tab D CDC Guidelines for Antiviral Medications and Priority Groups



INFLUENZA (FLU)

FACT SHEET

Antiviral Agents for Influenza: Background Information for Clinicians

Introduction

Four prescription medications with antiviral activity against influenza viruses are commercially available in the United States (amantadine, rimantadine, oseltamivir, zanamivir). The four drugs are classified into two categories, the adamantane derivatives and the neuraminidase inhibitors, on the basis of their chemical properties and activities against influenza viruses.

Controlled clinical trials have demonstrated the efficacy of all four antiviral medications in reducing symptom duration when used for treatment of influenza infections. Three of the antiviral drugs have been approved for use as chemoprophylaxis. Table 1 summarizes information about the use of antiviral medications in the United States for influenza.

Neuraminidase Inhibitors (Zanamivir, Oseltamivir)

The neuraminidase inhibitors, zanamivir and oseltamivir, are chemically related drugs that have activity against both influenza A and B viruses.

- Zanamivir is an orally inhaled powdered drug that is approved for treatment of influenza in persons aged 7 years and older. Zanamivir is not approved for chemoprophylaxis of influenza.
- Oseltamivir is an orally administered capsule or oral suspension that is approved for treatment of influenza in persons aged 1 year and older. Oseltamivir is also approved for chemoprophylaxis of influenza in persons aged 13 years and older.

How do the neuraminidase inhibitor drugs work?

Zanamivir and oseltamivir block the active site of the influenza viral enzyme neuraminidase, which is common to both influenza A and influenza B viruses. This effect results in viral aggregation at the host cell surface and reduces the number of viruses released from the infected cell.

How effective are the neuraminidase inhibitor drugs?

Treatment

When used within 48 hours of illness onset, both drugs decrease shedding and reduce the duration of influenza symptoms by approximately 1 day compared with placebo. Summary results from randomized, placebo-controlled double-blinded studies of oseltamivir showed a significant reduction in influenza related lower respiratory tract complications (pneumonia and bronchitis) associated with antibiotic use and a significant reduction in hospitalizations. These impacts occurred in both healthy and high-risk adolescents and adults. No studies have assessed the impact of antiviral drug therapy on mortality. For both drugs, the recommended duration of treatment is 5 days. One study of healthy and high-risk adolescents and adults treated with oseltamivir compared with placebo showed a reduction in influenza-related lower respiratory tract complications associated with antibiotic therapy.

Chemoprophylaxis

Oseltamivir, but not zanamivir, is approved for chemoprophylaxis of influenza.

December 16, 2003

Page 1 of 5

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™

Antiviral Agents for Influenza: Background Information for Clinicians

(continued from previous page)

Side effects of the neuraminidase inhibitor drugs:

Zanamivir and oseltamivir were approved in 1999, and therefore clinical experience to assess adverse effects is limited.

- Oseltamivir has been associated with nausea and vomiting during controlled treatment studies compared with placebo.
- Nausea, diarrhea, dizziness, headache, and cough have been reported during zanamivir treatment, but the frequencies of adverse events were similar to inhaled powdered placebo drug.
- Few serious CNS adverse effects have been reported for the neuraminidase inhibitor drugs.
- Zanamivir generally is not recommended for use in persons with underlying respiratory disease because of the risk of precipitating bronchospasm. Serious adverse respiratory events resulting from zanamivir use have been reported in persons with chronic pulmonary disease and in healthy adults.
- There are limited data about the use of neuraminidase inhibitors during pregnancy.

Antiviral resistance to the neuraminidase inhibitor drugs:

Data are limited on antiviral resistance to the neuraminidase inhibitor drugs.

- Studies have identified some evidence for the development of neuraminidase inhibitor-resistant influenza virus strains, but the studies have been limited by the short time that the neuraminidase inhibitors have been available for clinical use and by the lack of optimal methodology to detect viral resistance to these drugs.
- One pediatric study of oseltamivir treatment reported that 5.5% of influenza isolates had evidence of neuraminidase resistance.
- In vitro studies have found that cross-resistance occurs between the neuraminidase inhibitor drugs, but does not affect susceptibility to adamantane drugs.

Adamantane Derivatives (Amantadine, Rimantadine)

The adamantane derivatives, amantadine and rimantadine, are chemically related, orally administered drugs that are approved for treatment and chemoprophylaxis of influenza A. Amantadine and rimantadine specifically inhibit replication of influenza A viruses, but not influenza B viruses.

- Amantadine is approved for the treatment of influenza A in children aged 1 year and older and in adults.
- Rimantadine is approved for treatment of influenza A in adults.
- Both drugs are approved for chemoprophylaxis to prevent influenza A in people aged 1 year and older.

Antiviral activity: How do the adamantane drugs work?

Amantadine and rimantadine are thought to interfere with influenza A virus M2 protein, a membrane ion channel protein, and inhibit virus uncoating, which inhibits virus replication, resulting in decreased viral shedding.

How effective are the adamantane drugs?

Treatment

When administered within 48 hours of illness onset, controlled studies have found that both drugs decrease viral shedding and reduce influenza A illness by approximately 1 day compared with placebo. The usual recommended duration of treatment is 5 days.

Chemoprophylaxis

When used for chemoprophylaxis, amantadine and rimantadine are approximately 70% - 90% effective in preventing symptoms of influenza A illness. The efficacy and effectiveness of amantadine and rimantadine

December 16, 2003

Page 2 of 5

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™

Antiviral Agents for Influenza: Background Information for Clinicians

(continued from previous page)

to prevent complications of influenza A are unknown. Both drugs are effective when used for chemoprophylaxis during outbreaks of influenza A in institutions, such as nursing homes.

Side effects of the adamantane drugs:

Chemoprophylactic use of both drugs has been associated with

- Gastrointestinal and central nervous system (CNS) adverse effects in healthy adults and elderly nursing home residents.
- CNS toxicity, such as lightheadedness, difficulty concentrating, nervousness, insomnia, and seizures in patients with pre-existing seizure disorders. Rimantadine use has been associated with fewer CNS side effects than amantadine.

Amantadine is teratogenic and embryo toxic in animals. Rimantadine has not been found to be mutagenic. The safety of amantadine and rimantadine when used during pregnancy has not been established.

Antiviral resistance:

When used for treatment, amantadine and rimantadine have been associated with the rapid development of resistant viruses.

- Drug-resistant viruses can be spread to contacts of treated individuals, including persons receiving chemoprophylaxis.
- The mechanism of resistance is the same for both adamantane derivatives, and influenza A viruses resistant to one drug are also resistant to the other.
- No evidence indicates that adamantane-resistant viruses are more transmissible or more virulent than adamantane-sensitive viruses.
- Resistance to adamantanes does not affect susceptibility to neuraminidase inhibitors.
- Most influenza viruses isolated from the general population are not resistant to amantadine or rimantadine.

Adamantanes Compared with Neuraminidase Inhibitors

- No controlled studies have directly compared the adamantanes (amantadine, rimantadine) with the neuraminidase inhibitors (zanamivir, oseltamivir) for treatment or chemoprophylaxis of influenza A. A meta-analysis and a systematic review of published studies concluded that both the adamantanes and the neuraminidase inhibitor drugs reduce the duration of symptoms of influenza A by approximately 1 day compared with placebo.
- Data are very limited on the efficacy or effectiveness of any of the antiviral drugs in preventing complications from influenza in high-risk populations.
- The costs, routes of administration, adverse effects, contraindications, and potential for antiviral resistance differ among the four drugs.
- There are insufficient data on the use of any of the four antiviral agents during pregnancy.
- In general, clinical studies have reported that the neuraminidase inhibitors have resulted in fewer serious side effects compared to placebo than have been reported for amantadine and rimantadine. However, the relative frequency or severity of adverse effects of the adamantanes compared with the neuraminidase inhibitors has not been directly compared in controlled trials when used for treatment or chemoprophylaxis.

December 16, 2003

Page 3 of 5

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™

Antiviral Agents for Influenza: Background Information for Clinicians
(continued from previous page)

Table 1: Recommended Daily Dosage of Influenza Antiviral Medications for Treatment and Prophylaxis

Antiviral Agent	Age Groups (yrs)				
	1-6	7-9	10-12	13-64	≥65
Amantadine*					
Treatment, influenza A	5mg/kg/day up to 150 mg in 2 divided doses [†]	5mg/kg/day up to 150 mg in 2 divided doses [†]	100mg twice daily [§]	100mg twice daily [§]	≤100 mg/day
Prophylaxis, influenza A	5mg/kg/day up to 150 mg in two divided doses [†]	5mg/kg/day up to 150 mg in two divided doses [†]	100mg twice daily [§]	100mg twice daily [§]	≤100 mg/day
Rimantadine[¶]					
Treatment,** influenza A	NA ^{††}	NA	NA	100mg twice daily ^{§§}	100 mg/day
Prophylaxis, influenza A	5mg/kg/day up to 150 mg in two divided doses [†]	5mg/kg/day up to 150 mg in two divided doses [†]	100mg twice daily [§]	100mg twice daily [§]	100 mg/day ^{¶¶}
Zanamivir*** †††					
Treatment, influenza A and B	NA	10mg twice daily	10mg twice daily	10mg twice daily	10mg twice daily
Oseltamivir					
Treatment, §§§ influenza A and B	Dose varies by child's weight ^{¶¶¶}	Dose varies by child's weight ^{¶¶¶}	Dose varies by child's weight ^{¶¶¶}	75mg twice daily	75mg twice daily
Prophylaxis, influenza A and B	NA	NA	NA	75mg/day	75mg/day

NOTE: Amantadine manufacturers include Endo Pharmaceuticals (Symmetrel ®--tablet and syrup) and Geneva Pharms Tech (Amantadine HCL--capsule); USL Pharma (Amantadine HCL – capsule and tablet); and Alpharma, Carolina Medical, Copley Pharmaceutical, HiTech Pharma, Mikart, Morton Grove, and Pharmaceutical Associates (Amantadine HCL--syrup). Rimantadine is manufactured by Forest Laboratories (Flumadine (R)--tablet and syrup); Corepharma, Impax Labs (Rimantadine HCL – tablet), and Amide Pharmaceuticals (Rimantadine HCL – tablet). Zanamivir is manufactured by Glaxo Smithkline (Relenza (R) -- inhaled powder). Oseltamivir is manufactured by Hoffman-LaRoche, Inc. (Tamiflu (R) – tablet). Information based on data published by the US Food and Drug Administration at www.fda.gov.

* The drug package insert should be consulted for dosage recommendations for administering amantadine to persons with creatinine clearance ≤50 mL/min/1.73m².

† 5 mg/kg of amantadine or rimantadine syrup = 1 tsp/22 lbs.

§ Children ≥10 years who weigh <40 kg should be administered amantadine or rimantadine at a dosage of 5 mg/kg/day.

¶ A reduction in dosage to 100 mg/day of rimantadine is recommended for persons who have severe hepatic dysfunction or those with creatinine clearance ≤10 mL/min. Other persons with less severe hepatic or renal dysfunction taking 100 mg/day of rimantadine should be observed closely, and the dosage should be reduced or the drug discontinued, if necessary.

** Only approved by FDA for treatment among adults.

†† Not applicable.

§§ Rimantadine is approved by FDA for treatment among adults. However, certain experts in the management of influenza consider it appropriate also for treatment among children. (See American Academy of Pediatrics, 2000 Red Book.)

¶¶ Older nursing-home residents should be administered only 100 mg/day of rimantadine. A reduction in dosage to 100 mg/day should be considered for all persons aged ≥65 years if they experience possible side effects when taking 200 mg/day.

*** Zanamivir administered via inhalation using a plastic device included in the medication package. Patients will benefit from instruction and demonstration of the correct use of the device.

††† Zanamivir is not approved for prophylaxis.

§§§ A reduction in the dose of oseltamivir is recommended for persons with creatinine clearance <30 mL/min.

¶¶¶ The dose recommendation for children who weigh ≤15 kg is 30 mg twice a day, for >15 to 23 kg children the dose is 45 mg twice a day, for >23 to 40 kg children the dose is 60 mg twice a day, and for children >40 kg, the dose is 75 mg twice a day.

December 16, 2003

Page 4 of 5

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™

Antiviral Agents for Influenza: Background Information for Clinicians

(continued from previous page)

References

CDC. Prevention and control of influenza. Recommendations of the Advisory Committee on Immunizations Practices (ACIP). MMWR 2003;52(RR-8):1-34.

CDC. Neuraminidase inhibitors for treatment of influenza A and B infections. MMWR 1999;48:RR-14.

Cooper NJ, Sutton AJ, Abrams KR, Wailoo A, Turner DA, Nicholson KG. Effectiveness of neuraminidase inhibitors in treatment and prevention of influenza A and B: systematic review and meta-analyses of randomized controlled trials. British Med J 2003;326:1-7.

Demicheli V, Jefferson T, Rivetti D, Deeks J. Prevention and early treatment of influenza in healthy adults. Vaccine 2000;18:957-1030.

Gubareva LV, Kaiser L, Hayden FG. Influenza virus neuraminidase inhibitors. The Lancet 2000;355:827-835.

Jefferson TO, Demicheli V, Deeks JJ, Rivetti D. Amantadine and rimantadine for preventing and treating influenza A in adults (Cochrane Review). In: *The Cochrane Library*, Issue 1, 2002. Oxford: Update Software.

Jefferson T, Demicheli V, Deeks J, Rivetti D. Neuraminidase inhibitors for preventing and treating influenza in healthy adults (Cochrane Review). In: *The Cochrane Library*, Issue 1, 2001. Oxford: Update Software.

Kaiser L, Wat C, Mills T, Mahoney P, Ward P, Hayden F. Impact of oseltamivir treatment on influenza-related lower respiratory tract complications and hospitalizations. Arch Intern Med 2003;163:1667-1672.

Uyeki TM. Influenza diagnosis and treatment in children: a review of studies on clinically useful tests and antiviral treatment for influenza. Pediatr Infect Dis J 2003;22:164-177.

For more information, visit www.cdc.gov/flu or call the CDC Flu Information Line at 800-CDC-INFO (English and Spanish) or 888-232-6358 (TTY).

December 16, 2003

Page 5 of 5

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™



GUIDELINES & RECOMMENDATIONS

Influenza Antiviral Medications: 2004-05 Interim Chemoprophylaxis and Treatment Guidelines

November 3, 2004 (Revised with updated information on antiviral use in children)

Influenza antiviral medications are an important adjunct to influenza vaccine in the prevention and treatment of influenza. In the setting of the current vaccine shortage, CDC has developed interim recommendations on the use of antiviral medications for the 2004-05 influenza season. These interim recommendations are provided, in conjunction with previously issued recommendations on use of vaccine, to reduce the impact of influenza on persons at high risk for developing severe complications secondary to infection. The recommendations are not intended to guide the use of these medications in other situations, such as outbreaks of avian influenza. These interim recommendations may be updated as more information on the supply of influenza vaccine and antiviral medications becomes available.

Background

Influenza antiviral medications have long been used to limit the spread and impact of institutional influenza outbreaks. They also are used for treatment and chemoprophylaxis of persons in other settings. In the United States, four antiviral medications (amantadine, rimantadine, oseltamivir, and zanamivir) are approved for treatment of influenza, though limited supplies of zanamivir are currently available. When used for treatment within the first two days of illness, all four antiviral medications are similarly effective in reducing the duration of illness by one or two days. Only three antiviral medications (amantadine, rimantadine, and oseltamivir) are approved for chemoprophylaxis of influenza. **More detailed information about each medication, including dosage and approved persons for use, may be found in [Antiviral Information for Health Care Professionals](#).**

2004-05 Antiviral Medications Usage Guidelines

CDC is issuing interim recommendations for the use of antiviral medications during the 2004-05 season. Local availability of these medications may vary from community to community, which could impact how these medications should be used.

1. CDC encourages the use of **amantadine or rimantadine for chemoprophylaxis and use of oseltamivir or zanamivir for treatment** as supplies allow, in part to minimize the development of adamantane resistance among circulating influenza viruses.
2. **People who are at high risk of serious complications** from influenza may benefit most from antiviral medications. Therefore, in general, people who fall into these high risk groups should be given **priority for use of influenza antiviral medications**:

Treatment

- Any person experiencing a potentially life-threatening influenza-related illness should be treated with antiviral medications.

November 3, 2004

Page 1 of 3

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™

Influenza Antiviral Medications: 2004-05 Interim Chemoprophylaxis and Treatment Guidelines (continued from previous page)

- Any person at high risk for serious complications of influenza and who is within the first 2 days of illness onset should be treated with antiviral medications. (Pregnant women should consult their primary provider regarding use of influenza antiviral medications.)

Antiviral Use in Children: Rimantadine is approved for prophylaxis of influenza among children aged ≥ 1 year and for treatment and prophylaxis of influenza among adults. Although rimantadine is approved only for prophylaxis of influenza among children, certain specialists in the management of influenza consider it appropriate for treatment of influenza among children. Also available for treatment of children are amantadine (children aged ≥ 1 year), oseltamivir (children aged ≥ 1 year), or zanamivir (children aged ≥ 7 years).

Chemoprophylaxis

- All persons who live or work in **institutions** caring for people at high risk of serious complications of influenza infection should be given antiviral medications in the event of an institutional outbreak. This includes nursing homes, hospitals, and other facilities caring for persons with immunosuppressive conditions, such as HIV/AIDS. When vaccine is available, vaccinated staff require chemoprophylaxis only for the 2-week period following vaccination. Vaccinated and unvaccinated residents should receive chemoprophylaxis for the duration of institutional outbreak activity. Rapid tests or other influenza tests should be used to confirm influenza as the cause of outbreaks as soon as possible. However, treatment and chemoprophylaxis should be initiated if influenza is strongly suspected and test results are not yet available. Other outbreak control efforts such as cohorting of infected persons, and the practice of respiratory hygiene and other measures also should be implemented. For further information on detection and control of influenza outbreaks in acute care facilities, see [Detection and Control of Influenza Outbreaks in Acute Care Facilities](#).
 - All persons at high risk of serious influenza complications should be given antiviral medications if they are likely to be exposed to others infected with influenza. For example, when a high-risk person is part of a family or household in which someone else has been diagnosed with influenza, the exposed high-risk person should be given chemoprophylaxis for 7 days.
3. Antiviral medications can be **considered** in other situations when the available supply of such medications is locally adequate.
- Chemoprophylaxis** of persons in communities where influenza viruses are circulating, which typically lasts for 6-8 weeks:
 - Persons at high risk of serious complications who are not able to get vaccinated.
 - Persons at high risk of serious complications who have been vaccinated but have not had time to mount an immune response to the vaccine. In adults, chemoprophylaxis should occur for a period of 2 weeks after vaccination. In children aged <9 years, chemoprophylaxis should occur for 6 weeks after the first dose, or 2 weeks after the second dose, depending on whether the child is scheduled to receive one or two doses of vaccine.
 - Persons with immunosuppressive conditions who are not expected to mount an adequate antibody response to influenza vaccine.
 - Health-care workers with direct patient care responsibilities who are not able to obtain vaccine.

November 3, 2004

Page 2 of 3

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™

Influenza Antiviral Medications: 2004-05 Interim Chemoprophylaxis and Treatment Guidelines
(continued from previous page)

- **Treatment** of infected adults and children aged >1 year who do not have conditions placing them at high risk for serious complications secondary to influenza infection.
4. Where the supplies of both influenza vaccine and influenza antiviral medications may not be sufficient to meet demand, CDC does not recommend the use of influenza antiviral medications for chemoprophylaxis of non-high risk persons in the community.

Private Sector Sources of Influenza Antiviral Medications

Pharmaceutical distributors should be contacted directly for availability and procurement of antiviral medications.

Strategic National Stockpile

The United States has a limited supply of influenza antiviral medications stored in the Strategic National Stockpile for emergency situations. Efforts are underway by Health and Human Services to procure additional supplies of antiviral medications. Some of the supply will be held in reserve in the event of an influenza pandemic. However, some of the supply will be made available to States and Territories for use in **outbreak settings**, as might occur in a hospital or long term care facility.

Requesting Influenza Antiviral Medications from the SNS

Influenza antiviral medications in the SNS can be requested **only by State or Territory Health Departments**. Institutions (hospitals or long-term care facilities) experiencing an urgent need for such medications should convey their request to the State or Territory Health Department.

1. The State or Territory Health Department should call (770) 488-7100, the CDC 24/7 emergency number, to make a request for antiviral medications. A logistics plan is being drafted and will be available to all state and territorial health departments in the near future.
2. The State or Territory Health Department should indicate that there is an urgent priority use situation (as defined previously) that can be addressed by use of antiviral medications, and should indicate that all reasonable efforts have been made to procure influenza antiviral medications from private distributors.

For more information, visit www.cdc.gov/flu or call the CDC Flu Information Line at (800) CDC-INFO (English and Spanish) or (800) 243-7889 (TTY).

November 3, 2004

Page 3 of 3

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™



INFLUENZA (FLU)

Updated Interim Influenza Vaccination Recommendations— 2004–05 Influenza Season December 22, 2004

On October 5, 2004, CDC was notified by Chiron Corporation that none of its inactivated influenza vaccine (Fluvirin®) would be available for distribution in the United States for the 2004–05 influenza season. At that time, CDC, in coordination with the Advisory Committee on Immunization Practices (ACIP), issued interim recommendations to direct available inactivated influenza vaccine to persons in certain priority groups. CDC has been working with Aventis Pasteur, Inc., to distribute the remaining supply of its inactivated influenza vaccine Fluzone® so that it reaches persons in the priority groups established on October 5. In addition, on December 7, the U.S. Department of Health and Human Services announced that up to 4 million doses of the GlaxoSmithKline influenza vaccine Fluarix®, authorized for use by the Food and Drug Administration under an Investigational New Drug (IND) application, would be available to help alleviate the influenza vaccine shortage this season.

The primary goal of the annual influenza vaccination recommendations by CDC and ACIP is to reduce the risk for complications from influenza among persons who are most vulnerable. This year, the reduced national supply of inactivated influenza vaccine led CDC and ACIP to issue interim influenza vaccination recommendations that were more restrictive than usual. Since the interim recommendations were issued on October 5, the influenza vaccine supply and demand situation has continued to evolve in the United States such that some, but not all, local areas appear to have adequate supplies to meet the demand for vaccine from persons in the interim priority groups. This has resulted in unused vaccine in some areas of the country.

Influenza disease activity in the United States has remained relatively low but is expected to increase during the weeks ahead. In addition, influenza vaccination coverage among this season's interim priority groups is lower than it has been in recent influenza seasons. Given these considerations, CDC recommends that aggressive efforts should continue to reach unvaccinated persons in high-risk priority groups and use available vaccine to vaccinate such persons. Adequate time remains for persons in these priority groups to receive the benefits of vaccination before influenza begins to widely circulate in most communities. CDC will continue to allocate available vaccine to states that have insufficient supplies of vaccine to reach these priority groups.

In addition to these ongoing activities, in coordination with ACIP, CDC is issuing updated interim recommendations for influenza vaccination during the 2004–05 season. If the locally available supply is sufficient to meet the local demand for vaccine from persons listed below under the heading, [Priority Groups for Inactivated Influenza Vaccination](#), vaccination may expand to also include persons listed below under the heading, [Additional Priority Groups for Inactivated Influenza Vaccination in Areas of Sufficient Supply](#). Decisions to expand priority groups are left to the discretion of state and local health departments. Vaccine providers and health departments with vaccine should aggressively reach out to vaccinate persons in the priority groups established on October 5. These persons include those at highest risk for complications from influenza and health-care professionals caring for persons at high risk, and should remain a focus even where vaccine supplies are sufficient to support expansion to other groups.

These recommendations were formally approved by ACIP on December 17, 2004, to take effect on January 3, 2005. Implementation is being delayed to allow extra time for vaccine to reach the initial

December 22, 2004

Page 1 of 3

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™

Updated Interim Influenza Vaccination Recommendations—2004–05 Influenza Season
(continued from previous page)

priority groups and to allow time for state and local health departments to prepare for increased requests for vaccination.

Priority Groups for Inactivated Influenza Vaccination*

Inactivated influenza vaccine is recommended for persons in the following priority groups:

- all children aged 6–23 months;
- adults aged ≥65 years;
- persons aged 2–64 years with underlying chronic medical conditions;
- all women who will be pregnant during the influenza season;
- residents of nursing homes and long-term care facilities;
- children aged 2–18 years on chronic aspirin therapy;
- health-care workers involved in direct patient care; and
- out-of-home caregivers and household contacts of children aged <6 months.

Additional Priority Groups for Inactivated Influenza Vaccination in Areas of Sufficient Supply*

Where supply is sufficient, inactivated influenza vaccine also is recommended for persons in the following additional priority groups:

- out-of-home caregivers and household contacts of persons in high-risk groups (e.g., persons aged ≥65 years; persons with chronic conditions such as diabetes, heart or lung disease, or weakened immune systems because of illness or medication; and children aged <2 years); and
- all adults aged 50–64 years.

Use of Live, Attenuated Influenza Vaccination

Intranasally administered, live, attenuated influenza vaccine, if available, should be encouraged for all healthy persons who are aged 5–49 years and are not pregnant, especially health-care workers and out-of-home caregivers and household contacts of persons in high-risk groups (e.g., persons aged ≥65 years; persons with chronic conditions such as diabetes, heart or lung disease, or weakened immune systems because of illness or medication; and children aged <2 years).

However, health-care workers who care for severely immunocompromised patients in special care units should receive the inactivated vaccine.

Other Vaccination Recommendations

Persons in the priority groups identified above should be encouraged to search locally for vaccine if their regular health-care provider does not have vaccine available.

Children aged <9 years require 2 doses of vaccine if they have not previously been vaccinated. All children who are at high risk for complications from influenza, including those aged 6–23 months, should be vaccinated with a first or second dose, depending on vaccination status. However, doses should not be held in reserve to ensure that 2 doses will be available. Instead, available vaccine should be used to vaccinate persons in priority groups on a first-come, first-serve basis.

December 22, 2004

Page 2 of 3

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™

Updated Interim Influenza Vaccination Recommendations—2004–05 Influenza Season
(continued from previous page)

Vaccination of Persons in Nonpriority Groups

Persons who are not included in one of the priority groups or additional priority groups described above should be informed about the vaccine supply situation and asked to forego or defer vaccination with inactivated influenza vaccine. Live, attenuated influenza vaccine, if available, should be encouraged for all healthy persons aged 5–49 years.

Persons Who Should Not Receive Influenza Vaccine

Persons in the following groups should not receive influenza vaccine without the recommendation of their physicians:

- persons with a severe allergy (i.e., anaphylactic allergic reaction) to hens' eggs; and
- persons who previously had onset of Guillain-Barré syndrome during the 6 weeks after receiving influenza vaccine.

*Persons in groups for which the IND influenza vaccine Fluarix® is indicated should follow these recommendations where applicable, per FDA-approved protocol.

For more information, visit www.cdc.gov/flu, or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6358 (TTY).

December 22, 2004

Page 3 of 3

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™

**State of Delaware
Department of Health and Social Services
Division of Public Health
Tab E Job Action Sheets**

**By DPH Functional Area for Inter-Pandemic, Pandemic Alert and Post
Pandemic Preparatory Operations**

1.0 Purpose

- 1.1 Provides assistance to DPH personnel in preparation during inter-pandemic to pandemic alert periods for a pandemic influenza outbreak. These periods occur during Phase 1 (Inter-pandemic) to Phase 5 (Pandemic Alert) and Post Pandemic Period.

Table of Contents

**Job Action Sheets by DPH Position for
Inter-Pandemic and Pandemic Alert Preparatory Operations**

Chief, Public Health Preparedness Section	56
Chief, Support Services	59
State Epidemiologist	61
Director, Public Health Laboratory	65
Immunization Program Director.....	68
Manager, PHPS Logistics and Support Services	72
Director, Office of Health and Risk Communication	74
Medical Director, Public Health.....	77
Director, Office of Emergency Medical Services	83
Director, Information Resources Management	86

Job Action Sheet
Chief, Public Health Preparedness Section

Done	Task
	Phase 1 and Phase 2 (Inter-pandemic Period)
	1. Coordinate with public and private sector partners to plan for pandemic response.
	2. Maintain lists of response contacts, resources, and facilities.
	3. Coordinate with the Chief of Support Services to plan for voice, data, and record communication systems necessary to implement this plan.
	4. Coordinate with the Public Health Medical Director and county health county health administrators to bulk purchase and stockpile extra medical supplies.
	5. Develop and maintain protocols to credential and provide both liability and worker's compensation insurance coverage for medically trained and non-medically trained volunteers during a pandemic influenza.
	6. Coordinate development of guidelines on the type and quantities of equipment and supplies needed to treat patients for a one-month period based on the population served.
	7. Coordinate with the Public Health Medical Director and county health administrators to identify, procure, store and distribute sufficient personal protective equipment, supplies, and equipment to supply state response personnel for 30 days.
	8. Maintain inventory data on supplies, equipment, and consumables for use by the SHOC upon activation.
	9. Develop procedures to coordinate with community pharmacies and pharmacists to identify available and anticipated stocks of vaccines and antiviral medications.
	10. Coordinate within DPH to identify and prioritize work to be continued during periods of reduced staffing.
	11. Coordinate with the DPH Medical Director and the Immunization Program Director to develop plans for just-in-time training and redeployment of DPH, paramedics, nurses in private industry, and Medical Reserve Corps (MRC) personnel to administer vaccines during a pandemic.

Job Action Sheet Chief, Public Health Preparedness Section	
	Phase 3 (Pandemic Alert Period)
	12. Review actions required during Phase 1 to Phase 3 to ensure these actions are implemented when appropriate.
	13. Coordinate preparation and dissemination of a HAN notification regarding WHO and CDC announcements.
	Phase 4 (Pandemic Alert Period)
	14. Review actions required during lower phases to ensure these actions are implemented when appropriate.
	15. Coordinate preparation and dissemination of a HAN notification regarding WHO and CDC announcements.
	16. Confirm availability of facilities and resources needed to support the SHOC.
	Phase 5 (Pandemic Alert Period)
	17. Review actions required during lower phases to ensure these actions are implemented when appropriate.
	18. Coordinate preparation and dissemination of a HAN notification regarding WHO and CDC announcements.
	19. Coordinate with the SHO to recall all SHOC section chiefs, and alternates to review and assess the situation.
	20. Prepare the SHOC for activation within 12 hours.
	21. Prepare to coordinate and publish SHOC shift schedules for use if required.
	22. Prepare to cancel other uses of facilities that will be used by the SHOC.
	23. Direct prepositioning of supplies, references, equipment, and support required to operate the SHOC primary location.
	24. Coordinate with the Immunization Program Director to finalize training of immunization staff and others, as required, to conduct and document immunizations (including two-dose regimens) provided.

Job Action Sheet Chief, Public Health Preparedness Section	
	25. Conduct training for relevant agencies and partner groups regarding vaccine delivery protocols and procedures.
	26. Coordinate, as required, inventory of publicly and privately held stocks of antiviral medications.
	Post Pandemic Period
	27. Coordinate assessment of the overall impact of the pandemic on the State.
	28. Coordinate compilation of “After-Actions Report” from the pandemic that will assist in planning for and responding to future pandemics.

Job Action Sheet Chief, Support Services	
Done	Task
	Phase 1 to Phase 2 (Inter-pandemic Period)
	1. Coordinate with public and private sector partners to plan and purchase supplies for pandemic influenza operations.
	2. Maintain lists of response contacts, resources, and facilities.
	3. Coordinate with the Chief, Public Health Preparedness Section, to plan for voice, data, and record communication systems necessary to implement this plan.
	Phase 3 (Pandemic Alert Period)
	4. Review actions required during phases 1 and 2 to ensure these actions are implemented when appropriate.
	5. Coordinate with public and private sector partners to plan and purchase supplies for pandemic influenza operations.
	6. Maintain lists of response contacts, resources, and facilities.
	7. Coordinate with the Chief, Public Health Preparedness Section to plan for voice, data, and record communication systems necessary to implement this plan.
	Phase 4 (Pandemic Alert Period)
	8. Review actions required during lower phases to ensure these actions are implemented when appropriate.
	9. Coordinate, as required, to implement emergency procurement of supplies, equipment, kits, and consumables for SHOC and DPH response organizations.
	10. Maintain lists of response contacts, resources, and facilities.
	11. Coordinate with the Chief, Public Health Preparedness Section to plan for voice, data, and record communication systems necessary to implement this plan.

Job Action Sheet Chief, Support Services	
	Phase 5 (Pandemic Alert Period)
	12. Review actions required during lower to ensure these actions are implemented when appropriate.
	13. Coordinate with public and private sector partners to plan and purchase supplies for pandemic influenza operations.
	14. Maintain lists of response contacts, resources, and facilities.
	15. Coordinate with the Chief, Public Health Preparedness Section to plan for voice, data, and record communication systems necessary to implement this plan.
	16. Coordinate as required to implement emergency procurement of supplies, equipment, kits, and consumables for SHOC and DPH response organizations.
	Post Pandemic Period
	17. Coordinate assessment of functional pandemic response, compile “After-Action Report,” and submit inputs to PHPS for compilation.
	18. Revise procedures to incorporate after-actions, as appropriate.

Job Action Sheet State Epidemiologist	
Done	Task
	Phase 1 and Phase 2 (Inter-pandemic Period)
	1. Coordinate with the CDC and other state and local agencies to develop and publish standard operating guidelines for efficient and effective inter-pandemic influenza surveillance.
	2. Prepare to utilize the Delaware Electronic Reporting and Surveillance System (DERSS) to collect, collate, and report data as a means to assess the effectiveness of pandemic response.
	3. Develop and prepare to implement disease impact tracking measurement systems including, but not limited to: a. Sentinel provider data, b. Rates of school absence, c. Absenteeism rates for major employers throughout the state, d. Number of severe respiratory illness/febrile related illness surveillance in acute care facilities.
	4. Report influenza activity each week to the CDC during the period September to May, unless directed to report more frequently or for a longer period of time due to a pandemic.
	5. Develop and publish standard operating guidelines for collection and analysis of outbreak-related data in order to provide trend and status information to enable the SHOC to optimize response activities.
	6. Develop and publish standard operating guidelines for sharing response and surveillance data with clinicians, laboratories, health care agencies, and DPH.
	7. Develop procedures for participation in special collaborative studies with CDC on surveillance issues such as, mechanisms for vaccine and antiviral uptake, vaccine safety and efficacy, and resistance to antiviral medications.
	8. Prepare to coordinate development of recommendations for statewide management of the investigation of people infected by the new Type “A” influenza virus sub-strains and for those meeting the national case definition developed by CDC for use in the pandemic.

Job Action Sheet State Epidemiologist	
	9. Prepare to coordinate development of strategies, policies, and protocols to limit the spread of the pandemic within the general population.
	10. Prepare to coordinate development of strategies, policies, and protocols to limit the spread of the pandemic in patient care settings.
	11. Coordinate with sentinel providers at least weekly to follow-up on unusual reports.
	12. Coordinate with DPH Lab to identify sentinel physicians.
	13. Identify and coordinate with sentinel providers to encourage submission of specimens to the DPHL for viral culture when appropriate.
	14. Coordinate with the DPH Laboratory and sentinel providers to provide required patient information with specimens provided.
	15. Coordinate with the Chief, Public Health Laboratory, and the DPH Medical Director to develop clinical criteria for access to laboratory services during a pandemic.
	Phase 3 (Pandemic Alert Period)
	19. Review actions required during phases 1 and 2 to ensure these actions are implemented when appropriate.
	20. Reassess and revise or increase surveillance activities as appropriate.
	21. Coordinate with the DPH Laboratory and sentinel providers to provide required patient information with specimens provided.
	22. Continue collection and analysis of data related influenza cases resulting from known virus sub-strains.
	23. Report weekly to CDC the number of specimens tested and the number of positive influenza specimens by type/subtype. In addition, report activity as: no activity; sporadic, local; regional; widespread.
	24. Prepare to initiate studies to determine epidemiologic links between infected persons.
	25. Coordinate with the DPH Laboratory and sentinel providers to provide required patient information with specimens provided.

Job Action Sheet State Epidemiologist	
	26. Coordinate with the Public Health Preparedness Section and the Immunization Program Director to develop plans for just-in-time training of Investigative Response Teams (IRTs).
	Phase 4 (Pandemic Alert Period)
	27. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	28. Direct hospital laboratories and sentinel provider partners to send specimens collected to the state health laboratory for isolation and sub-typing where more stringent bio-containment facilities are available.
	29. Assess the need for further enhanced surveillance if efficient person-to-person transmission of the novel virus should be confirmed.
	30. Coordinate with the DPH Laboratory and sentinel providers to provide required patient information with specimens provided.
	Phase 5 (Pandemic Alert Period)
	31. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	32. Implement real-time morbidity surveillance.
	33. Assess the need to screen travelers arriving in Delaware from affected states and countries.
	34. Coordinate with hospitals and emergency departments to notify DPH regarding any increase in laboratory diagnosis of influenza based on rapid antigen detection tests.
	35. Provide oversight for investigation of outbreaks and increases in ILIs, including those detected through the influenza sentinel provider surveillance system.
	36. Review emerging CDC and WHO recommendations and recommend any needed changes to protocols for public health management of influenza cases and disease containment strategies.
	37. Coordinate with the SHO to recommend/order cancellation of large gatherings in affected areas based on the level of person-to-person transmission.

Job Action Sheet State Epidemiologist	
	38. Advise the Director of Public Health on the need for travel advisory notices.
	39. Coordinate with the Director of Health and Risk Communication to issue travel advisories to recommend limiting travel to the affected regions and screening travelers returning from affected regions.
	40. Coordinate with the DPH Laboratory and sentinel providers to provide required patient information with specimens provided.
	Post Pandemic Period
	41. Assess the quality of surveillance activities and recommend improvements as required.
	42. Coordinate assessment of functional pandemic response, compile “After-Action Report,” and submit inputs to PHPS for compilation.
	43. Revise procedures to incorporate after-actions, as appropriate.

Job Action Sheet Director, Public Health Laboratory	
Done	Task
	Phase 1 and Phase 2 (Inter-pandemic Period)
	1. Prepare and publish standard operating guidelines for collecting, transporting, and storing specimens for analysis.
	2. Receive and analyze specimens from patients with Influenza Like Illnesses (ILI).
	3. Prepare and publish standard operating guidelines to enhance the timeliness and quality of communication between the DPH Lab, hospitals, and commercial laboratories.
	4. Coordinate with the CDC to develop procedures for testing, identification, and rapid reporting of new sub-strains detected.
	5. Coordinate with the State Epidemiologist to develop procedures for rapid reporting and detection of new virus sub-strains.
	6. Coordinate with other public and private laboratories in the State of Delaware to expand and provide redundant capabilities for testing, identification, and rapid reporting of new virus sub-strains.
	7. Prepare to type isolates of influenza.
	8. Coordinate with the Delaware Healthcare Association Laboratory Services group to develop comprehensive training programs for laboratory staff.
	9. Prepare to implement protocol for prioritizing laboratory services during times of high service demand and supply and staff shortages.
	10. Develop and publish procedures to identify and communicate laboratory services that must be maintained during a pandemic.
	11. Coordinate with the State Epidemiologist and the DPH Medical Director to develop clinical criteria for access to laboratory services during a pandemic.
	12. Identify key sites for operations during a pandemic.
	13. Identify and maintain adequate supplies for testing required.

Job Action Sheet Director, Public Health Laboratory	
	14. Coordinate with the State Epidemiologist and sentinel providers to capture and provide required patient information with specimens provided.
	Phase 3 (Pandemic Alert Period)
	15. Review actions required during phases 1 and 2 to ensure these actions are implemented when appropriate.
	16. Isolate and subtype influenza virus specimens collected by health care providers.
	17. Coordinate with the State Epidemiologist and sentinel providers to capture and provide required patient information with specimens provided.
	18. Coordinate with the State Epidemiologist to continue weekly influenza reporting to the CDC.
	19. Identify, assess, and modify laboratory testing procedures, if required, to ensure the adequacy of pandemic-related surge capabilities.
	20. Coordinate with the SHO to expand testing and related activities, if required.
	21. Assess the need for any changes to existing laboratory operational and safety protocols resulting from surge testing operations.
	Phase 4 (Pandemic Alert Period)
	22. Review actions required during lower phases to ensure these actions are implemented when appropriate.
	23. Assume primary responsibility for in-state testing to isolate virus sub-types.
	24. Assess the accuracy of reports from other laboratories and make recommendations, if appropriate.
	25. Notify CDC and the SHOC of any influenza A viruses that cannot be sub-typed.
	26. Coordinate with CDC to obtain reagents to detect and identify novel virus strain(s).
	27. Coordinate with the State Epidemiologist and the DPH Medical Director to develop clinical criteria for access to laboratory services during a pandemic.

Job Action Sheet Director, Public Health Laboratory	
	Phase 5 (Pandemic Alert Period)
	28. Implement surge plans to expand capabilities for specimen testing.
	29. Coordinate with CDC regarding triage of specimens and to determine which isolates should be sent to CDC.
	30. Initiate daily reporting of test results to CDC.
	31. Coordinate with the State Epidemiologist and sentinel providers to provide required patient information with specimens provided.
	Post Pandemic Period
	32. Coordinate assessment of functional pandemic response, compile “After-Action Report,” and submit inputs to PHPS for compilation.
	33. Revise procedures to incorporate after-actions, as appropriate.

Job Action Sheet
Immunization Program Director

Done	Task
	Phase 1 and Phase 2 (Inter-pandemic Period)
	1. Develop and publish standard operating guidelines for procurement, storage, and distribution of sufficient influenza vaccines and associated supplies to provide a sufficient dosage for all the people who typically reside in Delaware for at least 30 days between September and May and who are determined to be at risk by CDC and the SHO.
	2. Review the storage systems available in the private and public sectors.
	3. Finalize memorandums of agreement for storage and distribution of vaccines to health care facilities.
	4. Review, revise as required, and update Vaccine Management (VACMAN) systems.
	5. Coordinate with CDC to develop procedures to rapidly assess vaccine effectiveness against influenza and during a pandemic.
	6. Develop a plan for equitable distribution of vaccine throughout the state including populations under federal jurisdictions.
	7. Collaborate with manufacturers and the CDC to develop systems for tracking vaccine production, delivery, and consumption in order to validate that immunization strategies are being implemented.
	8. Develop systems to coordinate and, if necessary, control equitable allocation of vaccines to public and private sector health care providers based on need.
	9. Prepare to assist the SHO in issuing policy guidance on possible restriction of vaccine delivery (broadcast fax, email, DHAN, etc.).
	10. Prepare to develop plans for emergency distribution of unlicensed vaccines using emergency investigational new drug (IND) provisions.
	11. Prepare to review and update model/example plans for emergency distribution of unlicensed vaccines using emergency investigational new drug (IND) provisions.

Job Action Sheet Immunization Program Director	
	12. Coordinate collection and analysis of vaccine uptake data from the statewide registry and Behavioral Risk Factors Surveillance System (BRFSS) regarding particular populations as a means to improve strategies for immunization.
	13. Assist the Public Health Medical Director and the Public Health Preparedness Section to develop plans for just-in-time training and subsequent redeployment of DPH, paramedics, nurses in private industry, and Medical Reserve Corps (MRC) personnel to administer vaccines during a pandemic.
	14. Prepare a statewide immunization registry that is capable of providing reminders to patients who need multiple vaccinations. Ensure that all health care providers who are likely to immunize have access to the registry.
	15. Coordinate with CDC and other DPH agencies to identify and prioritize population segments to ensure vaccination of those groups at greatest risk during a pandemic influenza.
	16. Encourage use of influenza and pneumococcal vaccines to assist in protecting hard-to-reach populations.
	17. Develop strategies to promote use of pneumococcal vaccine in high priority population groups.
	Phase 3 (Pandemic Alert Period)
	18. Review actions required during phases 1 and 2 to ensure these actions are implemented when appropriate.
	19. Assess and initiate changes to plans for acquisition, storage, and equitable distribution of vaccines to priority population groups previously identified.
	20. Apply CDC and State recommendations/directives on prioritization of vaccines.
	21. Coordinate, as required, to assess the status of vaccination programs within the State of Delaware with particular emphasis on high risk groups. Consult statewide immunization registry and BRFSS data.
	22. Coordinate with the Public Health Preparedness Section and the Immunization Program Director to develop plans for just-in-time training and redeployment of DPH, paramedics, nurses in private industry, and Medical Reserve Corps (MRC) personnel to administer vaccines during a pandemic.

Job Action Sheet Immunization Program Director	
	Phase 4 (Pandemic Alert Period)
	23. Review actions required during lower phases to ensure these actions are implemented when appropriate.
	24. Coordinate as required to inventory current public and private stocks of vaccines, antiviral medications, and formulations.
	25. Review and, if required, revise systems to coordinate the equitable distribution of vaccine based on need.
	26. Prepare to allocate vaccines to private and public sector providers.
	27. If possible, coordinate to ensure a continuing adequate supply of vaccines for all population groups.
	28. Review and update lists of all eligible providers, relevant professional organizations, hospitals, and vaccine distributors.
	29. Review and, if required, revise procedures for vaccine distribution based on approved distribution protocols.
	30. Provide oversight for distribution of vaccines and associated supplies to ensure equitable availability of vaccines to all population groups according to established priorities.
	31. Coordinate with the Public Health Preparedness Section and the DPH Medical Director to develop plans for just-in-time training and redeployment of DPH, paramedics, nurses in private industry, and Medical Reserve Corps (MRC) personnel to administer vaccines during a pandemic.
	Phase 5 (Pandemic Alert Period)
	32. Review actions required during lower phases to ensure these actions are implemented when appropriate.
	33. Review and modify, if necessary, contingency plans for storage, distribution, and administration of influenza vaccine.
	34. Review and confirm priority groups for immunization.
	35. Review estimates of the number of people in each of the priority groups to be vaccinated.

Job Action Sheet Immunization Program Director	
	36. Coordinate with the PHPS Training Administrator to finalize training of immunization staff members to conduct and document immunizations (including two-dose regimens) provided.
	37. Finalize preparations to distribute antiviral medications through Public Health and other providers to defined high-priority groups.
	38. Coordinate with the PHPS Training Administrator to conduct training for relevant agencies and partner groups regarding vaccine delivery protocols and procedures.
	Post Pandemic Period
	39. Coordinate assessment of functional pandemic response, compile “After-Action Report,” and submit inputs to PHPS for compilation.
	40. Revise procedures to incorporate after-actions, as appropriate.
	41. Develop recommendations for improvements to routine prevention and control techniques improvements as required.

Job Action Sheet Manager, PHPS Logistics and Support Services	
Done	Task
	Phase 1 and Phase 2 (Inter-pandemic Period)
	1. Prepare to provide equipment, supply, transportation, and facility support for pandemic influenza response operations.
	2. Coordinate, as required, to obtain and maintain voice, data, facsimile, and other communications required to support SHOC and field response operations.
	3. Report the results of inventory activity to PHPS.
	4. Conduct tests of DPH communications capabilities to ensure readiness for operations, when required.
	Phase 3 (Pandemic Alert Period)
	5. Review actions required during phases 1 and 2 to ensure these actions are implemented, when appropriate.
	6. Prepare to provide equipment, supply, transportation, and facility support for pandemic influenza response operations.
	7. Coordinate, as required, to obtain and maintain voice, data, facsimile, and other communications required to support SHOC and field response operations.
	8. Increase testing of DPH communications capabilities to ensure readiness for operations, when required.
	9. Report the results of inventory activity to PHPS.
	Phase 4 (Pandemic Alert Period)
	10. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	11. Prepare to provide equipment, supply, transportation, and facility support for pandemic influenza response operations.
	12. Coordinate, as required, to obtain and maintain voice, data, facsimile, and other communications required to support SHOC and field response operations.

Job Action Sheet Manager, PHPS Logistics and Support Services	
	13. Increase testing of DPH communications capabilities to ensure readiness for operations, when required.
	14. Report the results of inventory activity to PHPS.
	Phase 5 (Pandemic Alert Period)
	15. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	16. Increase testing of DPH communications capabilities to ensure readiness for operations, when required.
	17. Coordinate with the medical director and field health unit functions to forecast and obtain a continuous supply of appropriate PPE.
	18. Prepare to coordinate within DPH if required to provide food, fuel, electricity, and medical services to people who are ordered to be isolated during an epidemic or pandemic.
	Post Pandemic Period
	19. Coordinate assessment of functional pandemic response, compile “After-Action Report,” and submit inputs to PHPS for compilation.
	20. Revise procedures to incorporate after-actions, as appropriate.

Job Action Sheet Director, Office of Health and Risk Communication	
Done	Task
	Phase 1 and Phase 2 (Inter-pandemic Period)
	1. Coordinate preparation of all written DPH responses to media and public inquiries related to the pandemic.
	2. Provide individual to act as chief DPH spokesperson at news conferences and other live media and public information events.
	3. Develop integrated multi-level communication strategies to communicate the intent and status of DPH's response to the pandemic.
	4. Develop plans and procedures to quickly and consistently share information between public health agencies, hospitals, and other inpatient/outpatient care facilities.
	5. Develop procedures to staff, equip, and operate call centers to provide critical pandemic-related information to concerned citizens.
	6. Develop draft disease-specific press releases and Delaware Health Alert Network (DHAN) messages as part of DPH's Crisis and Risk Communication Plan. Provide maps, if possible, to assist in understanding information.
	7. Develop and distribute materials to educate and limit the spread of a potential pandemic within the population. Provide maps, if possible, to assist in understanding information.
	8. Ensure latest applicable fact sheets are available for distribution.
	9. Coordinate translation, republication, and/or broadcast of all possible public information in as many languages as possible.
	10. Develop appropriate messages and information products to meet the needs of low-literacy audiences.
	Phase 3 (Pandemic Alert Period)
	11. Review actions required during phases 1 and 2 to ensure these actions are implemented, when appropriate.
	12. Prepare necessary equipment and supplies needed to activate the call center.

Job Action Sheet Director, Office of Health and Risk Communication	
	13. Coordinate with public health officials and the media about what information will and will not be available during a pandemic.
	14. Coordinate with CDC and within DPH to update public information materials, files, and dissemination procedures.
	15. Respond to media and public inquiries about the status of the international influenza situation. Provide maps, if possible, to assist in understanding information.
	Phase 4 (Pandemic Alert Period)
	16. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	17. Respond to media and public inquiries about the status of the international influenza situation. Provide maps, if possible, to assist in understanding information.
	18. Review staffing requirements to ensure capabilities to continue planned activities if a pandemic develops.
	19. Monitor media coverage and take action to address misinformation.
	Phase 5 (Pandemic Alert Period)
	20. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	21. Review and revise messages and materials for public health partners and the general public based on emerging information.
	22. Respond to media and public inquiries about the status of the international influenza situation. Provide maps, if possible, to assist in understanding information. If operational, information will go through the JIC.
	23. Expand public education messages on infection control in homes, schools, and places of work.
	24. Provide regular DHAN notices, website postings, and press releases of status updates to include new and/or updated case definitions and clinical guidelines.
	25. Continue to monitor media coverage and take action to address misinformation.

Job Action Sheet Director, Office of Health and Risk Communication	
	Post Pandemic Period
	26. Coordinate assessment of functional pandemic response, compile “After-action report,” and submit inputs to PHPS for compilation.
	27. Revise procedures to incorporate after-actions, as appropriate.
	28. Review the effectiveness of community relations support protocols and implement improvements as required.
	29. Prepare after action report.

Job Action Sheet Medical Director, Public Health	
Done	Task
	Phase 1 and Phase 2 (Inter-pandemic Period)
	1. Coordinate with CDC and participating pharmacy partners to develop plans and programs to ensure an uninterrupted supply of appropriate antiviral medications.
	2. Coordinate with the Immunization Program Director to identify and prioritize population segments to receive vaccination and prophylaxis medications.
	3. Coordinate distribution of formal guidance on vaccine and antiviral management, distribution, and dispensing of available stocks in accordance with established priorities.
	4. Coordinate distribution of National Patient Safety Goals (NPSG) compliant clinical guidelines for antiviral use and patient care in long-term care facilities, hospitals, community clinics, and any other appropriate situations.
	5. Monitor and adjust distribution strategies to optimize antiviral and vaccine distribution and to minimize emergence of antiviral resistance and adverse reactions.
	6. Coordinate with DPH State Pharmacist regarding legal and operational issues regarding medications.
	7. Coordinate with the Public Health Preparedness Section and the Immunization Program Director to develop plans for just-in-time training and redeployment of DPH, paramedics, nurses in private industry, and Medical Reserve Corps (MRC) personnel to administer vaccines during a pandemic.
	8. Coordinate with the Director, Emergency Medical Services, and the Immunization Program Director to develop plans for just-in-time training and redeployment of DPH, paramedics, nurses in private industry, and Medical Reserve Corps (MRC) personnel to administer vaccines during a pandemic.
	9. Coordinate within DPH to develop and update sub-strain-specific treatment guidance/protocols to assist Delaware health care providers including, but not limited to, clinics, Acute Care Centers (ACC), hospitals, and other non-acute care facilities.

Job Action Sheet
Medical Director, Public Health

	10. Coordinate with the Office of Health and Risk Communication to develop and disseminate appropriate infection control, immunization, and any other appropriate information including, but not limited to, print articles, public service announcements, signs, etc.
	11. Maintain plans to mobilize personnel to assist within their capabilities in providing patient care.
	12. Assist PHPS in evaluating medical equipment and supplies requests from hospitals for items that will be needed to support ACC(s) and other patient care facilities during a pandemic influenza response.
	13. Develop procedures to prioritize and, if necessary, stop non-essential DPH health care operations and close non-essential state-run health care facilities as a means to augment staffing for patient care operations.
	14. Develop protocols for screening, outpatient (in-home) treatment, and transfer of patients among health care facilities.
	15. Coordinate within DPH to develop and disseminate guidance for the treatment of ill and vulnerable people, including special needs patients who do not otherwise require hospitalization.
	16. Coordinate protocols for the use of private transport services, volunteers, EMS, and other community based agencies.
	17. Coordinate with PHPS to prepare training for volunteers and other staff augmentees, as required.
	18. Coordinate, as required, to develop and maintain protocols to implement isolation and quarantine procedures in accordance with the <i>Isolation and Quarantine Plan (currently under development)</i> .
	19. Coordinate as required to develop and maintain protocols to close businesses and schools in accordance with existing laws during a pandemic influenza.
	20. Coordinate as required to develop and maintain protocols to suspend public meetings in accordance with existing laws during a pandemic influenza.
	21. Coordinate with the State Epidemiologist to identify essential data required to monitor the status and response to a pandemic influenza.

Job Action Sheet Medical Director, Public Health	
	22. Coordinate with PHPS to develop and present training to improve infection control, treatment, personal protective equipment (PPE) usage, and other pandemic response related capabilities.
	23. Coordinate with the Office of the Chief Medical Examiner (OCME) to develop protocols for transferring potentially much larger numbers of dead to funeral homes and other designated facilities for burial or cremation in accordance with the Multiple Fatality Management Plan.
	24. Prepare to coordinate support services and counseling for health care workers to address concerns such as, but not limited to, the psychosocial impact of high mortality rates on health care workers.
	25. Develop guidelines for health care providers to use in reporting mortality associated with a pandemic influenza.
	26. Develop procedures and any required supporting infrastructure needed to prioritize distribution of vaccines and medications as needed to prevent or respond to a pandemic influenza.
	27. Coordinate with the Director, Emergency Medical Services; Chief, Public Health Preparedness Section; State Epidemiologist; and Immunization Program Director to develop guidance on vaccination of DPH staff and health care providers.
	28. Coordinate with the State Epidemiologist and the Delaware Public Health Laboratory Director to develop clinical criteria for access to laboratory services during a pandemic.
	Phase 3 (Pandemic Alert Period)
	29. Coordinate, as required, to review and update plans for procurement, stockpiling, and distribution of vaccines and antiviral medications based on emerging data about the new virus sub-type.
	30. Coordinate as required to develop and conduct training for public health staff that could be involved in future distribution of antiviral medications.
	31. Coordinate with the PHPS, Immunization Program Director, and State Epidemiologist to develop plans for just-in-time training and redeployment of DPH, paramedics, nurses in private industry, and Medical Reserve Corps (MRC) personnel to administer vaccines during a pandemic.

Job Action Sheet Medical Director, Public Health	
	32. Coordinate, as required, to update contact and skill/competency information for Medical Reserve Corps (MRC) and other workers/volunteers.
	33. Disseminate audience-appropriate infection control, immunization, and any other appropriate information to health care providers.
	34. Coordinate with the Office of Health and Risk Communication to review, revise, and disseminate appropriate infection control, immunization, and any other appropriate information including, but not limited to, print articles, public service announcements, signs, etc.
	35. Prepare to recommend implementation of isolation and quarantine measures to contain the spread of pandemic influenza in accordance with the <i>Isolation and Quarantine Plan (currently under development)</i> .
Phase 4 (Pandemic Alert Period)	
	36. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	37. Coordinate review and emergency revision of laws and insurance requirements that might permit use of retired health care workers and volunteers to augment staffing.
	38. Coordinate review and emergency revision of licensing body requirements that might permit use of retired health care workers and volunteers to augment staffing.
	39. Coordinate with the Chief, Office of Health and Risk Communication to communicate information about emergency changes to insurance and licensing requirements that have been implemented as part of overall response operations.
	40. Coordinate with the Public Health Preparedness Section and the Immunization Program Director to develop plans for just-in-time training and redeployment of DPH, paramedics, nurses in private industry, and Medical Reserve Corps (MRC) personnel to administer vaccines during a pandemic.
	41. Prepare to recommend implementation of isolation and quarantine measures to contain the spread of pandemic influenza in accordance with the <i>Isolation and Quarantine Plan (currently under development)</i> .

Job Action Sheet Medical Director, Public Health	
	Phase 5 (Pandemic Alert Period)
	42. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	43. Report the results of inventory activity to PHPS.
	44. Review and revise plans for distribution of antiviral medications, as required.
	45. Review and modify screening tools used based on CDC recommendations for clinical management of cases.
	46. Coordinate inspection, inventory, and preparation of medications, supplies, and equipment for use on 4 hours notice.
	47. Coordinate inspection, inventory, and preparation of medications, supplies, and equipment for use on four hours' notice.
	48. Review and revise infection control and surveillance standards to ensure that they are uniformly applied.
	49. Ensure that appropriate occupational health and safety measures are in place and communicated.
	50. Coordinate development of protocols for prophylactic use of available antiviral medications.
	51. Coordinate with the Office of Health and Risk Communication to review, revise, and disseminate appropriate infection control, immunization, and any other appropriate information including, but not limited to, print articles, public service announcements, signs, etc.
	52. Prepare to recommend implementation of isolation and quarantine measures to contain the spread of pandemic influenza in accordance with the <i>Isolation and Quarantine Plan (currently under development)</i> .
	Post Pandemic Period
	53. Coordinate assessment of functional pandemic response, compile "After-action report," and submit inputs to PHPS for compilation.
	54. Review and revise protocols based on experience gained during the pandemic.

Job Action Sheet Medical Director, Public Health	
	55. Develop recommendations for the strategic use of antiviral medications during a pandemic based upon after-actions.

Job Action Sheet Director, Office of Emergency Medical Services	
Done	Task
	Phase 1 and Phase 2 (Inter-pandemic Period)
	1. Coordinate with the Public Health Medical Director to develop a plan for prophylactic vaccination of first responders.
	2. Coordinate within DPH, with Basic Life Support (BLS) providers, Advanced Life Support (ALS) providers, Long-Term Care Facilities (LTCF), patient transport companies, and local health care facilities to ensure that pandemic influenza related requirements are addressed in appropriate plans, protocols, and other guidance for EMS providers.
	3. Identify, procure, maintain, and provide guidance on the use of communications needed to support pandemic influenza response operations.
	4. Prepare to collect and analyze emergency response data from BLS/ALS providers, hospitals, clinics, and LTCF(s) in order to optimize emergency response during a pandemic influenza.
	5. Prepare to recommend optimal use of emergency response resources at various phases of response to a pandemic influenza.
	6. Recruit and maintain rosters of volunteers and service-oriented groups that could augment emergency medical capabilities during a pandemic.
	7. Prepare to provide guidance on how to provide and coordinate Emergency Medical Services during a declared pandemic influenza.
	8. Coordinate with EMS providers and County Emergency Management Agencies (EMA) to develop local contingency plans to provide food, fuel, oxygen, medications, medical and biomedical engineering services/repairs, and emergency social services for people confined to their homes by choice or by order of public health officials.
	9. Prepare to coordinate and provide information about reliable supply of fuel to agencies operating BLS/ALS vehicles, and those who travel by car to provide life-sustaining services.

Job Action Sheet Director, Office of Emergency Medical Services	
	Phase 3 (Pandemic Alert Period)
	10. Review actions required during phases 1 and 2 to ensure these actions are implemented, when appropriate.
	11. Disseminate information to BLS/ALS providers about WHO and CDC reports, current response activities, infection control precautions, and use of Personal Protective Equipment (PPE).
	12. Coordinate with appropriate partners to review and update appropriate sections of local, facility, and other applicable response plans.
	Phase 4 (Pandemic Alert Period)
	13. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	14. Coordinate with BLS/ALS providers to ensure that local response plans address foreseeable requirements.
	15. Coordinate dissemination of revised response protocols, recommendations, and technical information to EMS provider organizations.
	Phase 5 (Pandemic Alert Period)
	16. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	17. Meet with appropriate partners to review health sector and essential non-health sector response plans.
	18. Maintain estimates of the number of healthy (influenza-free) emergency services workers.
	19. Alert first responders to use standard precautions in responding to cases involving Influenza Like Illnesses (ILI).
	20. Alert first responders to report all ILI-suspect cases.
	21. Coordinate with the Office of Health and Risk Communication to ensure that first responders are aware of the pandemic spread and preparatory actions completed on their behalf.

Job Action Sheet Director, Office of Emergency Medical Services	
	Post Pandemic Period
	22. Coordinate assessment of functional pandemic response, compile “After-action report,” and submit inputs to PHPS for compilation.
	23. Review and revise protocols for response based on experience gained during the pandemic.
	24. Review and revise protocols for response based on experience gained during the pandemic.

Job Action Sheet Director, Information Resources Management	
Done	Task
	Phase 1 and 2 (Inter-pandemic Period)
	1. Coordinate DPH support for and operation of the Delaware Health Alert Network (DHAN) as a means to alert and inform key response personnel.
	2. Develop and test internal and external response communication networks needed for support of the SHOC and activated NEHC(s).
	3. Coordinate internal development or purchase of computer software needed to support SHOC, NEHC, and ACC operations.
	4. Coordinate development of phone, radio, data, and other communications systems needed to support pandemic influenza response operations.
	Phase 3 (Pandemic Alert Period)
	5. Review actions required during phases 1 and 2 to ensure these actions are implemented or accelerated, as appropriate.
	6. Ensure that the DHAN is operational.
	7. Provide oversight for distribution of internal and external response communication networks needed for support of the SHOC and activated NEHC(s) and ACC(s).
	8. Recommend strategies to accelerate procurement/development, testing, and implementation of any software and hardware systems needed to support DPH operations.
	9. Activate Help Line, Call Center, and DHAN.
	10. Ensure availability of sufficient lines to answer incoming flu-related calls and sufficient technical support to maintain operations under heavy call load.
	11. Coordinate with PHPS Logistics to ensure that available DPH radios are maintained at the highest levels of readiness possible.

Job Action Sheet Director, Information Resources Management	
	Phase 4 (Pandemic Alert Period)
	12. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	13. Ensure that the DHAN is operational.
	14. Ensure availability of sufficient lines to answer incoming flu-related calls and sufficient technical support to maintain operations under heavy call load.
	15. Coordinate with PHPS Logistics to ensure that available DPH radios are maintained in at the highest levels of readiness possible.
	16. Provide oversight for distribution of internal and external response communication networks needed for support of the SHOC and activated NEHC(s) and ACC(s).
	17. Recommend strategies to accelerate procurement/development, testing, and implementation of any software and hardware systems needed to support DPH operations.
	18. Activate Help Line, Call Center, and DHAN, as required.
	19. Coordinate with PHPS Logistics to ensure that available DPH radios are maintained at the highest levels of readiness possible.
	Phase 5 (Pandemic Alert Period)
	20. Review actions required during lower phases to ensure these actions are implemented, when appropriate.
	21. Ensure that the DHAN is operational.
	22. Ensure availability of sufficient lines to answer incoming flu-related calls and sufficient technical support to maintain operations under heavy call load.
	23. Coordinate with PHPS Logistics to ensure that available DPH radios are maintained in at the highest levels of readiness possible.
	24. Provide oversight for distribution of internal and external response communication networks needed for support of the SHOC and activated NEHC(s) and ACC(s).

Job Action Sheet Director, Information Resources Management	
	25. Recommend strategies to accelerate procurement/development, testing, and implementation of any software and hardware systems needed to support DPH operations.
	26. Activate Help Line, Call Center, and DHAN, as required.
	27. Coordinate with PHPS Logistics to ensure that available DPH radios are maintained at the highest levels of readiness possible.
	Post Pandemic Period
	28. Coordinate assessment of functional pandemic response, compile “After-actions report,” and submit inputs to PHPS for compilation.
	29. Review and revise protocols for response based on experience gained during the pandemic.
	30. Review and revise protocols for response based on experience gained during the pandemic.

Department of Health and Social Services
Division of Public Health
Tab F Acronyms

- 1.0 **ACC** - Acute Care Center
- 2.0 **ACIP** – Advisory Committee on Immunization Practices
- 3.0 **ACLF** - Adult Congregate Living Facilities
- 4.0 **ARC** - American Red Cross
- 5.0 **CDC** - Centers for Disease Control and Prevention
- 6.0 **CISM** - Critical Incident Stress Management
- 7.0 **CTS** - Casualty Transport System
- 8.0 **DAFB** - Dover Air Force Base
- 9.0 **DEMA** – Delaware Emergency Management Agency
- 10.0 **DERSS** - Delaware Electronic Reporting and Surveillance System
- 11.0 **DHAN** – Delaware Health Alert Network
- 12.0 **DHCI** - Delaware Hospital for the Chronically Ill
- 13.0 **DNREC** - Department of Natural Resources and Environmental Control
- 14.0 **DPHL** - Delaware Public Health Laboratory
- 15.0 **DPR** - Division of Professional Regulation
- 16.0 **DSHS** - Department of Safety and Homeland Security
- 17.0 **DSP** - Delaware State Police
- 18.0 **EIP** – Emerging Infections Program
- 19.0 **EMS** - Emergency Medical Services
- 20.0 **EMT** - Emergency Medical Technician
- 21.0 **EOC** - Emergency Operations Center
- 22.0 **FDA** - Food and Drug Administration
- 23.0 **FQHC** – Federally Qualified Health Center
- 24.0 **FRED** – Facility Resources Emergency Database
- 25.0 **HRSA** - Health Resources and Services Administration
- 26.0 **ILI** - Influenza Like Illness
- 27.0 **ILS** - Influenza Like Symptoms
- 28.0 **IND** - Investigational New Drug

- 29.0 **JAS** - Job Action Sheet
- 30.0 **LRN** - Laboratory Response Network
- 31.0 **NEHC** - Neighborhood Emergency Help Center
- 32.0 **NREVSS** – National Respiratory and Enteric Virus Surveillance System
- 33.0 **NVSN** – New Vaccines Surveillance Network
- 34.0 **OCME** - Office of the Chief Medical Examiner
- 35.0 **PHPS** - Public Health Preparedness Section
- 36.0 **PPE** - Personal Protective Equipment
- 37.0 **SHO** - State Health Officer
- 38.0 **SHOC** - State Health Operations Center
- 39.0 **SNS** - Strategic National Stockpile
- 40.0 **WHO** - World Health Organization

Department of Health and Social Services
Division of Public Health
Tab G Forms

Table G-1 Forms
Tab G1 – Vaccine Administration Record I
Tab G2 – Vaccine Administration Record II
Tab G3 – Vaccine Administration Record III
Tab G4 – Vaccine Management Inventory and Distribution Plan

Department of Health and Social Services
Division of Public Health
Tab G1–Vaccine Administration Record

Vaccine Administration Record I



Division of Public Health
 Division of Public Health

Date _____

Name _____ Age _____ Birthdate ____/____/____
Last First MI.

Address _____ Sex ☐ F ☐ M Race _____

City/Town _____ Zip Code _____

Medical History:

Have you or your child* ever had a serious allergic reaction to previous doses of influenza or pneumococcal vaccine? ☐ yes ☐ no _____

Have you or your child* ever had a serious allergic reaction to any medicines, foods (esp. eggs), or any other substance? ☐ yes ☐ no _____

Are you pregnant or do you plan to be pregnant by February 2005? ☐ yes ☐ no _____

Do you or your child* have any chronic diseases of the lungs, heart, kidneys, bloodstream or other vital organs, including asthma or diabetes? ☐ yes ☐ no _____

Are you 65 years of age or older? ☐ yes ☐ no _____

Is your child* on chronic aspirin therapy? ☐ yes ☐ no ☐ n/a

Are you or your child* in good health? ☐ yes ☐ no _____

*Child must be 9 years of age or older.

A signature and check mark next to the vaccine type means that I have been provided a copy of the appropriate Centers for Disease Control and Prevention Vaccine Information Statement(s) and have read, or have had explained to me, information about the disease(s) and the vaccine(s). I have had a chance to ask questions that were answered to my satisfaction. I understand the risks and benefits as set forth in the statement(s) received; and I ask that the vaccine(s) as checked below be given to me.

Patient/ Parent/Guardian _____

DO NOT WRITE BELOW THIS LINE

Vaccine(s) given

Check	Indicate needle size if appropriate	Date Given month/day	Site (Circle One)	Vaccine Manufacturer	Vaccine Lot Number	VTS Date	Nurse/Signat and Initial
	Influenza (IM) 5/8", 1", 1.5", N		RA LA				
	Pneumococcal (IM) 5/8", 1", 1.5", N		RA LA				

DOC. 003-05-20040210

Revised 1/12/04

I

**Department of Health and Social Services
Division of Public Health
Tab G2-Vaccine Administration Record II**

Vaccine Administration Record II							
 Department of Health and Social Services Division of Public Health							
Date _____							
Name _____ Age _____ Birthdate ____/____/____ Last First Middle							
Address _____ Sex ☐ F ☐ M Race _____							
City/Town _____ Zip Code _____							
Medical History:							
Have you ever had a serious allergic reaction to previous doses of influenza or pneumococcal vaccine? ☐ yes ☐ no _____							
Have you ever had a serious allergic reaction to any medicines, foods or any other substance? ☐ yes ☐ no _____							
Are you pregnant? ☐ yes ☐ no _____							
Do you have any chronic diseases of the lungs, heart, kidneys, bloodstream or other vital organs, including asthma or diabetes? ☐ yes ☐ no _____							
A signature and check mark next to the vaccine type means that I have been provided a copy of the appropriate Centers for Disease Control and Prevention Vaccine Information Statement(s) and have read, or have had explained to me, information about the disease(s) and the vaccine(s). I have had a chance to ask questions that were answered to my satisfaction. I understand the risks and benefits as set forth in the statement(s) received; and I ask that the vaccine(s) as checked below be given to me.							
Patient/ Parent/Guardian _____							
DO NOT WRITE BELOW THIS LINE							
Vaccine(s) given:							
Check	Indicate vaccine and if appropriate	Date Given month/day	Site (Circle One)	Vaccine Manufacturer	Vaccine Lot Number	VTS Date	Nurse/Signat and Initial
	Influenza(IM) 5/8", 1", 1.5", N		RA LA				
	Pneumococcal (IM) 5/8", 1", 1.5", N		RA LA				
DCC-PHS-05-20040310 Revised 10/23							

Department of Health and Social Services
Division of Public Health
Tab G3-Vaccine Administration Record III

Vaccine Administration Record III Order and fill out Section 2 only Division of Public Health							
Date _____							
Name _____		Age _____		Birthdate ____/____/____			
Last	First	Middle					
Address _____				Sex ☐ F ☐ M ☐ Race _____			
City/Town _____				Zip Code _____			
Medical History:							
Is your child 6 - 23 months of age?				☐ yes ☐ no _____			
Has your child ever had a serious allergic reaction to previous doses of influenza or pneumococcal vaccine?				☐ yes ☐ no _____			
Has your child ever had a serious allergic reaction to any medicines, foods (esp. eggs), or any other substance?				☐ yes ☐ no _____			
Is your child currently ill or running a fever?				☐ yes ☐ no _____			
Does your child have any chronic diseases of the lungs, heart, kidneys, bloodstream or other vital organs, including asthma or diabetes?				☐ yes ☐ no _____			
Is your child on chronic aspirin therapy?				☐ yes ☐ no _____			
Adolescents: Are you pregnant or do you plan to be pregnant by February 2005?				☐ yes ☐ no _____			
A signature and check mark next to the vaccine type means that I have been provided a copy of the appropriate Centers for Disease Control and Prevention Vaccine Information Statement(s) and have read, or have had explained to me, information about the disease(s) and the vaccine(s). I have had a chance to ask questions that were answered to my satisfaction. I understand the risks and benefits as set forth in the statement(s) received; and I ask that the vaccine(s) as checked below be given to me.							
Patient/ Parent/Guardian _____							
DO NOT WRITE BELOW THIS LINE							
Vaccine(s) given:							
Check	Indicate needle size if appropriate	Date Given month	Site (Circle One)	Vaccine Manufacturer	Vaccine Lot Number	VTS Date	Nurse/Signat and Initial
☐	Influenza(Im) 5/8", 1", 1.5", N		RL LL RA LA				
☐	Influenza, P-Free (Im) 5/8", 1", 1.5", N		RL LL RA LA				
DOH-PS-05-20040210 Revised 11/2004							

Department of Health and Social Services
Division of Public Health
Tab G4-Example Vaccine Inventory and Distribution Plan

Vaccine Inventory and Distribution Plan
(Date)

1. Current Inventory of Vaccines by Area, Location, Program, and Type:

Area/Source	Location	Program	Type	Lot Number	Number of Vials	Number Pre-Filled Syringes	Doses Per Vial	Total Doses in Full Vials	Single Doses	Total Doses
NHS	Limestone		Normal	U1521AB	71		10	710	0	710
NHS	Limestone		Normal	U1417AA	19		10	190	0	190
NHS	Limestone		Normal	U1379AA	1		10	10	0	10
NHS	Limestone		Normal	U1442AA	1		10	10	0	10
NHS	Limestone		Normal	U1499AA	30		10	300	0	300
NHS	Limestone		Preservative Free	U1472AA	29		10	290	5	295
NHS	Limestone		Preservative Free	U1435AA	16		10	160	1	161
NHS	Provider A		Normal	U1499AA	30		10	300	0	300
NHS	Provider B		Normal	U1443AA	30		10	300	0	300
NHS	Provider C		Normal	1490AA	6		10	60	0	60
SHS	Georgetown	VFC	Preservative Free			27	10	0	0	27
SHS	Georgetown	VFC			7		10	70	0	70
SHS	Georgetown		Normal		9		10	90	2	92
SHS	Georgetown		Preservative Free			138	10	0	0	138
SHS	Milford	VFC	Preservative Free			10	10	0	0	10
SHS	Milford	VFC			8		10	80	0	80
SHS	Milford		Normal		34		10	340	1	341
SHS	Milford		Preservative Free			154	10	0	0	154
SHS	Seaford	VFC	Preservative Free			0	10	0	0	0
SHS	Seaford	VFC			7		10	70	5	75
SHS	Seaford		Normal		8		10	80	1	81
SHS	Seaford		Preservative Free			138	10	0	0	138
SHS	Williams	VFC	Preservative Free			26	10	0	0	26
SHS	Williams	VFC			8		10	80	0	80
SHS	Williams		Normal		16		10	160	9	169
SHS	Williams		Preservative Free			138	10	0	0	138

2. Distribution Guidance

As of 4/19/2005 at 3:31 PM

Sheet1

Page 1 of 2 Pages

3. Distribution Plan

Clinic Location	Program	Type	Lot Number	Total Dose Requirement	Vials Required	Current Location	Agency to Provide Vaccine	Primary Use Vials to Deliver	Reserve Stock Vials to Deliver	Prefilled Syringes to Deliver
Site A	NA	NA	NA	1	0.1				0	0
	NA	NA	NA			DHCI	DHCI	0.1	0	0
Site B	NA	NA	NA	1	0.1				0	0
	NA	NA	NA			DHCI	DHCI	0.1	0	0
Site C	NA	NA	NA	1	0.1				0	0
	NA	NA	NA			DHCI	DHCI	0.1	0	0
Site E	NA	NA	NA	1	0.1				0	0
	NA	NA	NA			DHCI	DHCI	0.1	0	0
Site F	NA	NA	NA	1	0.1				0	0
	NA	NA	NA			DHCI	DHCI	0.1	0	0
Site G	NA	NA	NA	1	0.1				0	0
	NA	NA	NA			DHCI	DHCI	0.1	0	0
Site H	NA	NA	NA	1	0.1				0	0
	NA	NA	NA			DHCI	DHCI	0.1	0	0

As of 4/19/2005 at 3:31 PM

Sheet1

Page 2 of 2 Pages

Department of Health and Social Services
Division of Public Health
Tab H Distribution

Distribution:

Office of the Governor	1
Governor's Liaison Officer	1
Secretary DOE	1
Office of Lt. Gov.	1
Office of Senior Senator	1
Office of Junior Senator	1
HRSA	1
FEMA Region III	1
FBI Field Office, Baltimore	1
FBI Field Office, Wilmington	1
Federal Marshall Service	1
Secretary DDA	1
Secretary DHSS	1
DHSS PIO	1
DHSS Disaster Coordinators	9
Secretary DSHS	1
DSP	2
DEMA Director	1
DEMA EOC	1
DNG – AG	1
DNG – P&O	1
DNG Medical	1
DNREC SOO	1
DNREC Air & Water	1
DNREC Fish & Wildlife	1
DNREC Parks & Recreation	1
Secretary DOT	1
DELDOT TMC	1
DELDOT Del Trans Corp	1

Fire School	1
DUFA	1
Kent County EMA	1
New Castle County EMA	1
Sussex County EMA	1
City of Wilmington EMA	1
Dover AFB	1
Christiana Hospital	1
VA Hospital	1
A.I. DuPont Hospital	1
St. Francis Hospital	1
Kent General Hospital	1
Beebe Medical Center	1
Milford Memorial Hospital	1
Nanticoke Memorial Hospital	1
Christiana/Wilmington Hospital	1
Westside Health, Inc. (FQHC)	1
Henrietta Johnson Medical Center (FQHC)	1
Delmarva Rural Ministries (FQHC)	1
La Red Health Center	1
CDC	1
EHP Commission	1
Happy Harry's, Inc.	1
AstraZeneca	1
Long Term Care Association	1
Delaware Healthcare Facilities Association	1
Delaware Healthcare Association	1
Delaware Medical Society	1
Kent County ALS Chief	1
New Castle County ALS Chief	1
Sussex County ALS Chief	1
Delaware Volunteer Firemen's Association	1
Kent County 911 Center	1

New Castle County 911 Center	1
Sussex County 911 Center	1

Additional copies of this plan will be distributed to SHOC staff in accordance with the SHOC Plans Distribution Matrix that is maintained by PHPS under a separate cover.