

State of New Hampshire



Influenza Pandemic Public Health Preparedness & Response Plan

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NH DHHS Director, Division of Public Health Services	(603) 271-4501
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NH Bureau of Emergency Management	(603) 271-2231 or 1-800-852-3792
NH Division of Fire Standards & Training and Emergency Medical Services	(603) 271-4568
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Abbreviations Used in This Document

ACC	Acute Care Center
ACIP	Advisory Committee on Immunization Practices
AHEDD	Automated Hospital Emergency Department Data
AHHR	All Health Hazards Region
AII	Airborne Infection Isolation
ASTHO	Association of State and Territorial Health Officers
BCDHS	Bureau of Communicable Disease Control & Health Statistics
BSL	Biosafety Level
BT	Bioterrorism
CDCS	NH DHHS, Communicable Disease Control Section
CDSS	NH DHHS, Communicable Disease Surveillance Section
CDC	U.S. Centers for Disease Control and Prevention
CDECC	NH Communicable Disease Epidemic Control Committee
CHC	Community Health Center
CSTE	Council of State and Territorial Epidemiologists
DBHRT	Disaster Behavioral Health Response Team
DOS	NH Department of Safety
DPHS	NH DHHS, Division of Public Health Services
ED	Emergency Department
EIP	Emerging Infections Program
EIS	Epidemic Intelligence Service
EOC	Emergency Operation Center
EOP	Emergency Operation Plan
ERI	Epidemic Respiratory Infection
ESF	Emergency Support Function
EWIDS	Early Warning Infectious Disease Surveillance
FBI	Federal Bureau of Investigation
FSTEMS	Fire Standards & Training and Emergency Medical Services
HAN	Health Alert Network
HCP	Health care personnel
HRSA	U.S. HHS Health Resources and Services Administration
HSDMS	NH DHHS, Health Statistics & Data Management Section
HSEM	NH Homeland Security and Emergency Management
ICS	Incident Command Structure
ICD	International Classification of Disease
ILI	Influenza-like illness
IP	NH DHHS Immunization Program
LRN	Laboratory Response Network
MCIMS	Medical Crisis Information Management Software
MMWR	Morbidity & Mortality Weekly Report
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEHC	Neighborhood Emergency Help Center
NH	New Hampshire
NH DAMF	New Hampshire Department of Agriculture, Markets, and Foods
NH DHHS	NH Department of Health and Human Services
NHHA	New Hampshire Hospital Association
NIMS	National Incident Management System
NIOSH	National Institute of Occupational Safety & Health
NRDM	National Retail Data Monitor
NVSN	New Vaccine Surveillance Network

OEP	NH Office of Economic Planning
OMS	Outbreak Management System
OTC	Over-the-Counter
PCP	Primary Care Physician
PEP	Post-exposure Prophylaxis
PH EPRP	Public Health Emergency Preparedness and Response Plan
PHLIS	Public Health Laboratory Information System
PHL	NH DHHS, Public Health Laboratories
PHN	Public Health Nurse
PHP	Public Health Professional
PIO	NH DHHS, Public Information Office
POL	Physician's Office Laboratory
PPCC	Pandemic Planning Coordinating Committee
PPE	Personal protective equipment
RODS	Real Time Outbreak Disease Surveillance
RSA	Revised Statutes Annotated
SARS	Severe Acute Respiratory Syndrome
SDN	Secure Data Network
SNS	Strategic National Stockpile
TEMSIS	Trauma and Emergency Medical Services Information System
UCS	Unified Command Structure
U.S.	United States
USG	United States Government
U.S. HHS	U.S. Department of Health and Human Services
VACMAN	CDC's Vaccine Management System
VAERS	Vaccine Adverse Events Reporting System
WHO	World Health Organization

SECTION I. INTRODUCTION

1. BACKGROUND

Influenza is a highly infectious viral illness that causes yearly epidemics, which have been reported since at least the early 1500s. An increase in mortality, typically occurring during each epidemic year, is caused by influenza and pneumonia, and/or by exacerbations in underlying cardiopulmonary or other chronic diseases. In the United States (U.S.), influenza causes up to 36,000 deaths each year, primarily among the elderly. The virus is transmitted in most cases by droplets, but it can also be transmitted by direct contact. On average, maximum communicability of influenza viruses occurs one to two days before onset of symptoms to four to five days after symptom onset. The incubation period is usually two days, but can vary from one to five days. Based on the most recent data from the World Health Organization (WHO), the upper limit of incubation for the currently circulating influenza A (H5N1) virus is 7 days. Typical symptoms include abrupt onset of fever (101°F to 102°F), chills, myalgia, sore throat, and nonproductive cough, and may also include runny nose, headache, substernal chest burning, eye pain, or sensitivity to light. Gastro-intestinal symptoms, such as abdominal pain, nausea and vomiting, may also occur and are more commonly seen in children than adults. An annual influenza vaccination is the best protection against influenza. Other measures, such as frequent hand washing and the institution of public health measures for universal respiratory hygiene and cough etiquette, will help stop the spread of influenza in the community and in health care settings.

Two influenza virus types, A and B, are known to cause illness in humans. Influenza type A has further subtypes, determined by structures on the surface of the cell called surface antigens. These antigens, hemagglutinin (H) and neuraminidase (N), undergo periodic changes. A minor change in the antigens (antigenic drift) may result in epidemics, since incomplete protection remains from past exposure to similar viruses. A major change (antigenic shift) may result in a worldwide pandemic if the virus, for which humans have no protection, is efficiently transmitted from human to human.

Influenza viruses are distinctive in their ability to cause sudden, pervasive illness in all age groups on a global scale. Previous pandemics, however, caused disproportionate illness and death in young, previously healthy adults. Also, new data from recent epidemic years show that young children are at increased risk for complications, hospitalizations, and death from influenza. Within the 0- to 4-year-old age group, hospitalization rates are highest among children 0 to 1 year of age and are comparable to rates reported in persons ≥ 65 years of age. Influenza viruses present biological threats because of a number of factors, including a high degree of transmissibility, the presence of a vast reservoir of novel variants (primarily in aquatic birds), and unusual properties of the viral genome.

1.1. Influenza Pandemic

An influenza pandemic is considered to be a high probability event. Given this potential for rapid virus transmission and evolution, there may be as little as one to six months warning before outbreaks begin in the U.S. Outbreaks of influenza would present a unique public health emergency due to the fact that they are expected to occur simultaneously throughout much of the country and in the State, preventing shifts in human and material resources that normally occur in most other natural disasters. The impact of the next pandemic could have devastating effects on the health and well being of New Hampshire (NH) citizens. Further predicted complications include a delay in production of effective vaccine and potential shortages of vaccine and antiviral agents.

The primary reservoir for human influenza infections are other humans, however birds and mammals, such as swine, are likely sources of novel subtypes that may lead to the next pandemic. To date, the most threatening of these novel subtype reservoirs is avian. Recent avian influenza type A H5N1 reports highlight that the potential for efficient person-to-person transmission may be approaching. With the increase in global travel, as well as urbanization and overcrowded conditions, global epidemics due to a novel influenza virus are likely to spread rapidly around the world. This plan is intended to be used for any human influenza pandemic, regardless of its initial reservoir.

1.2. Avian influenza

Avian influenza type A viruses (“bird” flu viruses) naturally occur in a wide variety of domestic and wild birds. Cases of low and highly pathogenic avian influenza, based on bird mortality and genetic sequencing, occur periodically in the U.S. Avian influenza strains typically only infect and cause disease in birds (most notably domestic poultry), however several subtypes of avian influenza A have been shown to cause disease in humans.

The H5N1 virus is a highly pathogenic (HP) avian influenza subtype circulating in Southeast Asia since 1997. Outbreaks of this subtype have resulted in the death of millions of domestic and wild birds in Asia, Africa, Europe, the Pacific and the Near East. From January 2003 through December 2006, 261 human cases of H5N1 infection have been reported in association with these outbreaks. One hundred fifty- seven (60%) of these reported cases have died. Most of these human cases occurred from direct or close contact with infected poultry or contaminated surfaces. In rare instances, person-to-person spread has been documented, however has not been sustained. Wild bird migration and bird importation serve as possible sources for movement of highly pathogenic H5N1 avian influenza into new regions of the world, including the U.S. and NH. Should H5N1 (or any novel influenza strain) gain the ability to efficiently spread from person-to-person there is the possibility of a pandemic.

As avian influenza is a disease primarily of domestic poultry, the United States Department of Agriculture (USDA), in conjunction with the New Hampshire Department of Agriculture, Markets, and Foods (NH DAMF), will be responsible for non-human disease surveillance, response, and control if H5N1 (or another subtype) is detected in New Hampshire birds. Roles and procedures for such activities are discussed in the *Response to an Animal Influenza Emergency* NH DAMF Plan. This latter plan is in draft form and inquiries should be directed to NH DAMF (603-271-2404). Further details about the State response to animals or humans infected with avian influenza viruses, when there is no human influenza pandemic, may be found in Appendix 17.

1.3. WHO and US Government (USG) Pandemic Phases

The response to an influenza pandemic will be based on the *State of New Hampshire Public Health Emergency Preparedness and Response Plan*, and therefore, will require a similar infrastructure to what is used in other emergencies, such as bioterrorist events. However, in the event of a pandemic there are specific issues in surveillance, vaccine delivery, administration of antivirals, and communications that will need distinctive consideration. These considerations are particular to each phase of the pandemic. The pandemic phases described in this document are those that have been established by the World Health Organization and the United States Government (USG). The most recent classifications of WHO and their corresponding USG phases are outlined in Table 1.

1.4. Epidemic Respiratory Infection (ERI) Phases

In addition to the WHO pandemic phases, this plan also lists the corresponding ERI phases, which are based on the *Readiness Plan for Epidemic Respiratory Infection* (ERI) developed by the Dartmouth Hitchcock Medical Center (DHMC) Readiness Committee. The ERI plan establishes an alert matrix that outlines specific response activities to take place in a hospital setting at the various threat levels posed by an ERI, including an influenza pandemic. The ERI plan is currently being adopted by hospitals throughout the State. It may be modified to meet the needs of specific institutions, such as educational facilities, long term care facilities, or correctional facilities. The NH Department of Health and Human Services (NH DHHS) encourages communities to be aware of the ERI alert matrix system, as many of their local hospitals may implement it in the event of an influenza pandemic. The matrix is outlined in Table 2.

Table 1. WHO & USG Pandemic Phases

WHO Phases		Federal Government Response Stages	
INTER-PANDEMIC PERIOD			
1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused a human infection may be present in animals. If present in animals, the risk of human disease is considered to be low.	0	New domestic animal outbreak in at-risk country
2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza subtype poses a substantial risk of human disease.		
PANDEMIC ALERT PERIOD			
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.	0	New domestic animal outbreak in at-risk country
		1	Suspected human outbreak overseas
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.	2	Confirmed human outbreak overseas
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).		
PANDEMIC PERIOD			
6	Pandemic phase: increased and sustained transmission in general population.	3	Widespread human outbreaks in multiple locations overseas
		4	First human case in North America
		5	Spread throughout United States
		6	Recovery and preparation for subsequent waves

Source: U.S. Department of Homeland Security, PANDEMIC INFLUENZA PREPAREDNESS, RESPONSE, AND RECOVERY GUIDE FOR CRITICAL INFRASTRUCTURE AND KEY RESOURCES Publication date: September 19, 2006

Table 2. Epidemic Respiratory Infection (ERI) Alert Matrix

Five levels of alert corresponding to the type of transmission and the location of the cases.

What type of transmission is confirmed?	Where are the cases?	Are there cases at the institution?	Alert Level
None or sporadic cases only	Anywhere in the world	No	Ready
Efficient person-to-person transmission	Anywhere outside the US and bordering countries (Canada, Mexico)	No	Green
Efficient person-to-person transmission	In the U.S., Canada, or Mexico	No	Yellow
Efficient person-to-person transmission	In NH or bordering states; at facility	Doesn't matter; efficient transmission from known sources	Orange
Efficient person-to-person transmission	At facility	Yes, with efficient transmission, sources not clear	Red

1.5. Pandemic Severity Index (PSI) Categories

In addition to the WHO Phases, the USG Stages, and the ERI Alert Matrix, preparedness and response activities outlined in this plan will also take into consideration the Pandemic Severity Index, an index introduced by CDC in the *Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States—Early, Targeted, Layered Use of Nonpharmaceutical Interventions*, released in February 2007. The PSI categorizes the severity of the pandemic based on case fatality ratio (the proportion of deaths among clinically ill cases). Pandemics will be assigned to a PSI category, Category 1 being least severe and Category 5 being the most severe. The CDC director determines category designation. These categories are summarized in Table 3. CDC further separates the PSI categories into *Alert*, *Standby*, and *Activate* levels, reflecting the need for preparedness. These are outlined in Table 4.

Table 3. Pandemic Severity Index by Epidemiological Characteristics

Characteristics	Pandemic Severity Index (PSI)				
	Category 1	Category 2	Category 3	Category 4	Category 5
Case Fatality Ratio (percentage)	<0.1	0.1-<0.5	0.5-<1.0	1.0-<2.0	≥2.0
Excess Death Rate (per 100,000)	<30	30-<150	150-<300	300-<600	≥600
Illness Rate (percentage of the population)	20-40	20-40	20-40	20-40	20-40
Potential Number of Deaths (based on 2006 U.S. population)	<90,000	90,000-<450,000	450,000-<900,000	900,000-<1.8 million	≥1.8 million
20 th Century U.S. Experience	Seasonal Influenza (illness rate 5-20%)	1957,1968	None	None	1918 Pandemic

Source: *Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States—Early, Targeted, Layered Use of Nonpharmaceutical Interventions*, February 2007

Table 4. Triggers for Implementation of Mitigation Strategy by Pandemic Severity Index and US Government States

Pandemic Severity Index	WHO Phase 6, U.S. Government stage 3*	WHO Phase 6, U.S. Government Stage 4† and First human case in the United States	WHO Phase 6, U.S. Government Stage 5§ and First laboratory confirmed cluster in state or region¶
1	Alert	Standby	Activate
2 and 3	Alert	Standby	Activate
4 and 5	Standby**	Standby/Activate††	Activate

Source: *Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States—Early, Targeted, Layered Use of Nonpharmaceutical Interventions*, February 2007

2. PURPOSE

This plan is an update of the 2006 *State of New Hampshire Influenza Pandemic Public Health Preparedness and Response Plan*. The purpose of this plan is to describe the specific action to be taken by the Division of Public Health Services in the event of an influenza pandemic, including non-pharmaceutical interventions for community containment. This plan should be implemented in accordance with the *State of NH Public Health Emergency Preparedness & Response Plan (PH EPRP)*, which can be found at <http://www.dhhs.state.nh.us/DHHS/CDCS/LIBRARY/Policy-Guideline/dphs-health-emergency-plan.htm>. This document should also be used to advise health care personnel, health care facility administrators, state and local health department officials, and community officials in their response to an influenza pandemic.

3. SCOPE

This plan encompasses the various aspects of preparedness, emergency response, and the recovery and maintenance efforts to take place in the event of an influenza pandemic.

4. AUTHORITY

4.1. Federal Authority

The Department of Health and Human Services (U.S. HHS) is the U.S. Government’s lead agency for the preparation, planning, and response to pandemic influenza. As such, U.S. HHS will coordinate the U.S. Government’s response to the public health and medical requirements of pandemic influenza. The U.S. HHS Secretary’s Command Center will serve as the national incident command center for all health and medical preparedness, response, and recovery activities. On November 2, 2005 U.S. HHS released its *Pandemic Influenza Plan*, which can be found at <http://www.hhs.gov/pandemicflu/plan/>. This plan will follow those recommendations set forth in the federal plan.

As the component of U.S. HHS responsible for disease prevention and control, the Centers for Disease Control and Prevention (CDC) will have primary responsibility for tracking pandemic influenza and managing the operational aspects of the public health response. To this end, CDC will augment local and state resources for disease surveillance, epidemiologic response, diagnostic laboratory services and reagents, education and communication, and disease containment and control. As a pandemic unfolds, updated CDC guidelines and recommendations will be found on the CDC website <http://www.cdc.gov/flu/>.

The CDC has assumed primary responsibility for a number of key elements of the national plan, including:

- Vaccine research and development
- Coordinating national and international surveillance
- Assessing and potentially enhancing the coordination of vaccine and antiviral capacity, and coordinating public-sector procurement
- Assessing the need for and scope of a suitable liability program for vaccine manufacturers and persons administering the vaccine
- Developing a national "clearinghouse" for vaccine availability information, vaccine distribution, and redistribution
- Developing a vaccine adverse events reporting system (VAERS) at the national level
- Developing a national information database/exchange/clearinghouse on the Internet

4.2. State Authority

The State of NH has designated NH DHHS to oversee the influenza pandemic planning process in cooperation with local health agencies and other partners. NH DHHS will convene necessary experts as needed to review this plan and give technical advice. During a pandemic, NH DHHS will have primary responsibility for:

- Making recommendations to local health departments, health care providers and facilities, and the general public to aid in controlling the spread of influenza
- Maintaining surveillance systems to monitor the spread of disease
- Keeping the public informed
- Make recommendations to NH Governor to order standing up sites such as Acute Care Centers (ACCs) and Points of Dispensing (PODs)
- Make recommendations to NH Governor to establish population-based recommendations for vaccine and antiviral distribution

Applicable laws that may need to be taken into consideration during a pandemic are summarized in the *PH EPRP*.

4.3. Local Authority

During 2006 NH DHHS and the NH Department of Safety Homeland Security and Emergency Management (HSEM) coordinated the development of 19 All Health Hazard Regions (AHRs), which include every municipality in NH. Representatives from each municipality were asked to sign a Memorandum of Understanding (MOU) to formally align their community with a specific AHR. Each AHR is charged with developing a regional public health all hazards plan that includes the functional capabilities needed to respond to an influenza pandemic, including the following: community medical surge, mass prophylaxis, risk communication, community containment, command and control, and mass fatality management. The work of the AHR is managed by a regional coordinating committee, which

also has the ability to enter into MOUs with facilities, suppliers, and other entities to formalize each party's roles and responsibilities during a pandemic, including but not limited to the following:

- Opening acute care centers (ACCs) and neighborhood emergency help centers (NEHCs) to manage medical surge
- Opening mass prophylaxis clinics (i.e. points of dispensing)
- Coordinating public information
- Coordinating the delivery of services to individuals under quarantine
- Coordinating mass mortuary services
- Coordinating regional command and control functions as applicable to their AHHR

While state law (RSA 21-P: 39) provides authority to “political subdivisions” (i.e. cities, towns, and counties) to perform emergency management functions within their jurisdiction, the AHHR model recognizes that the potential scope and scale of a pandemic requires a regional approach for coordinated planning and response. This is due largely to the small population of the majority of NH communities. However, it is critical to note that political subdivisions will continue to be responsible to carry out the provisions of RSA 21-P: 39 during a pandemic or other large-scale public health emergency. An example of how this legal authority and the AHHR model can be operationalized during a pandemic is that while a local health officer may be asked to use their legal authority to implement community containment measures within their municipality, they may also help support a regional mass prophylaxis clinic or serve as a public information officer on behalf of the AHHR since these latter two functions are not dependent on any underlying legal authority.

4.4. Legal Preparedness

Legal preparedness is an essential component of pandemic influenza preparedness and response. While no provision of law addresses pandemic influenza specifically, numerous statutory provisions authorize relevant actions.

The State of NH is following recommendations for legal preparedness from the CDC and the Association of State and Territorial Health Officers (ASTHO, *State Health Official Checklist: Are You and Your State Ready for Pandemic Influenza?*). NH DHHS legal counsel confirms the following:

- NH's laws and procedures on quarantine and isolation have been reviewed and can be implemented to help control an influenza pandemic.
- For some persons (e.g., those providing essential community services), influenza vaccination may be required; for others, vaccination may be recommended (see RSA 21-P: 49, V & VI relative to public health emergencies).
- A new bill has been submitted to the current legislative session (2007) that will give NH DHHS the authority to issue orders for closing premises and suspending public meetings, as well as the authority to enforce such orders. This bill has not yet been passed.

Additional legal preparedness issues relevant to public health emergencies, including pandemic influenza, are addressed in the *PH EPRP*.

5. NH PANDEMIC INFLUENZA PLANNING HISTORY

The first NH influenza pandemic preparedness plan was completed in 2001 and was modeled on the CDC guidance, *Pandemic Influenza: Planning Guide for State and Local Officials*, Version 2.1, January 1999.

The New Hampshire Department of Health and Human Services' (NH DHHS) Communicable Disease Surveillance and Immunization Program staff developed this first plan with guidance from the Executive Committee that periodically reviewed and commented on the plan as it was being developed. Since New Hampshire's first pandemic plan was developed, bioterrorism preparedness activities have considerably changed the public health landscape. As a result, many details of the original influenza pandemic planning guidance are subsumed under other preparedness activities. An example of this, called for by the CDC's Bioterrorism Preparedness and Response cooperative agreement, is the development of effective communications systems to ensure connectivity among public health departments, health care organizations, public officials, and others.

The CDC's 2004 draft pandemic plan guidance steered revisions made to NH's pandemic preparedness plan, which in 2004 became the State of New Hampshire Interim Influenza Epidemiologic and Surveillance Pandemic Plan. Also, because of similarities in purpose, scope, and response, the State of New Hampshire Interim Severe Acute Respiratory Syndrome (SARS) Epidemic Preparedness Plan, Version January 7, 2004, was used as a model for influenza pandemic preparedness and response. In November of 2005, the U.S. HHS released their Pandemic Influenza Plan, which outlined additional considerations that were then incorporated into NH's Influenza Pandemic Public Health Preparedness and Response Plan (March 2006). All of these NH plans were reviewed by the NH Communicable Disease Epidemic Control Committee (CDECC), which consists of representatives from the two local health departments, physicians specializing in infectious diseases and epidemiology, representatives from the NH Department of Safety's (DOS) HSEM and Division of Fire Standards & Training and Emergency Medical Services (FSTEMS), the State and Deputy State Epidemiologists, other officials from NH DHHS, and partners such as the NH Hospital Association (NHHA). The revisions in this current plan are reviewed by CDECC prior to release.

In addition to the above-mentioned history, this document was originally adapted from plans and templates written by various states and organizations. We appreciate and acknowledge the work of our colleagues from the following agencies in particular: Massachusetts, Wisconsin, Florida, Connecticut, the Institute of Medicine, ASTHO, and the Council of State and Territorial Epidemiologists (CSTE).

6. PANDEMIC PLANNING COORDINATING COMMITTEE (PPCC)

In response to federal funding from the U.S. Centers for Disease Control and Prevention (CDC) awarded to the states during 2006, the NH DHHS convened a Pandemic Preparedness Coordinating Committee (PPCC). PPCC members include elected and appointed public officials, representatives from professional associations representing first responders and health care providers, the National Guard, the business community, and other stakeholders. NH DHHS proposed to the PPCC that funding to support regional public health and pandemic planning efforts be distributed to regions to now known as All Health Hazards Regions (AHR). PPCC unanimously supported the proposal to implement and fund AHR planning.

DHHS then issued a map of proposed AHRs for consideration by Regional Coordinating Committees (RCC), which had been formed to oversee the planning efforts. RCCs were also charged with proposing changes in the alignment of the proposed AHRs and overseeing a process for municipalities to demonstrate their commitment to the AHR process by signing a Memorandum of Understanding (MOU) with AHR representatives. The final determination of each AHR was based on these MOUs. These RCCs coordinate the development and implementation of all Public Health Emergency Planning in each AHR in New Hampshire. NH DHHS will pursue legislation to facilitate a more sustained and stable development for the above-mentioned regions.

7. COMMUNITY PROFILE

Past pandemics' illness and death data as well as recent predictions indicate that influenza, while affecting individuals of every age, may more significantly affect certain aged populations. For this reason, it is important to assess NH's age demographic. The 2005 population data for the State of NH is summarized in Table 5.

Table 5. NH Age Demographic: 2005

Age Group (years)	2005 Estimate	Percent of NH Total Population
0-4	73,542	5.61%
5-19	268,116	20.47%
20-64	806,947	61.60%
≥65	161,335	12.32%

Source: Health Statistics and Data Management Section (HSDMS), Bureau of Disease Control and Health Statistics (BDCHS), DPHS, NH DHHS. Population data is based on US Census data apportioned to towns using NH Office of Economic Planning (OEP) estimates and projections, and further apportioned to age groups and gender using Claritas Corporation estimates and projections to the town, age group, and gender levels. Data adds to US Census data at the county level between 1990 and 2005 but does not add to OEP or Claritas data at smaller geographic levels.

Typically, hospitalization rates due to influenza are highest among children 0 to 1 years of age and in persons ≥65 years of age. Using this age group data with statewide hospital data, the estimated maximum morbidity and mortality during an influenza pandemic can be calculated using CDC's FluSurge2.0 software (see Table 6). It is important to note that these numbers serve only as estimates of potential total impact, and they are not indications of how or when individuals will become ill. Attack, hospitalization and mortality rates used in the calculations were determined by consensus of regional medical surge planners at the New England Pandemic Influenza/Avian Influenza Regional Meeting in August 2006.

Table 6. Estimated impact of an influenza pandemic, nationwide and in New Hampshire

	United States ^a		New Hampshire
	Moderate (1958/68-based)	Severe (1918-based)	Most Likely Scenario ^b
Hospitalizations	865,000	9,900,000	15,719
Deaths	209,000	1,903,000	3,930

^a U.S. Numbers extrapolated from past pandemics in the U.S. Source: U.S. HHS Pandemic Influenza Plan, <http://www.hhs.gov/pandemicflu/plan/pdf/part1.pdf>, accessed 3 Nov 2005

^b Most Likely Scenario calculated using a 30% attack rate with an 8-week duration of pandemic, a 1% death rate, and a 4% rate of hospitalization. Estimates are calculated using NH's age demographic data, number of non-ICU hospital beds (2152 staffed; 2831 licensed), number of ICU beds (337 staffed, 374 licensed), and number of ventilators (246). Bed and ventilator data includes information from each NH hospital/ventilator resource. 62.47% of staffed ICU beds are med/surge beds, 19.30% cardiac, 16.09% neonatal, and 2.14% pediatric. 2.81% of ventilators are portable, 4.56% are pediatric, and 0.70% is neonatal.

SECTION II. SITUATIONS AND ASSUMPTIONS

1. SITUATIONS

An influenza pandemic is inevitable, and when it reaches the U.S., it will undoubtedly put the citizens of NH at risk. The goal of NH's Division of Public Health Services (DPHS) in the event of such a pandemic is to minimize the impact of adverse events on the State's population.

2. ASSUMPTIONS

The development of the current plan is based on the following assumptions:

- A novel influenza virus strain will likely emerge in a country other than the U.S., but could emerge first in the U.S. and possibly in NH.
- The federal government will assume the responsibility of influenza vaccine research, development, and procurement.
- It is highly likely that moderate or severe shortages of vaccine will exist early in the course of the pandemic and also possible that no vaccine will be available.
- The supply of antiviral medications used for prevention and treatment of influenza will be limited and possibly targeted to specific populations.
- With the emergence of a novel influenza virus strain, it is likely that all persons will need two doses of vaccine to achieve optimal antibody response.
- The federal government has limited resources allocated for state and local plan implementation, and therefore the State will provide supplementary resources in the event of a pandemic, which may include the redirection of personnel and monetary resources from other programs.
- The federal government has assumed the responsibility for developing materials and guidelines, including basic communication materials for the general public on influenza, influenza vaccine, antiviral agents, and other relevant topics in various languages; information and guidelines for health care providers; and training modules. Until these materials are developed, the State has the responsibility to develop such materials for its citizens.
- In the event of an influenza pandemic the State will have minimal personnel resources available for on-site local assistance, and therefore local authorities and regional planners will be responsible for region-specific pandemic preparedness and response plans, including the modification of this document so that it is region-specific.
- Emergency response, including maintenance of critical services and surge capacity issues, is addressed in the CDC and U.S. HHS Health Resources and Services Administration (HRSA) cooperative agreements, and will be included in the State Emergency Operations Plan (EOP) Emergency Support Function (ESF) 8, and should not be duplicated in the pandemic planning process.

SECTION III. OPERATIONS PLANS

1. PREPAREDNESS PHASE

WHO Phase:	USG Stage:	ERI Alert Matrix Phase:
<p>Interpandemic Period</p> <p><i>Phase 1:</i> No new influenza virus subtypes detected in humans. An influenza virus subtype known to cause human infection may be present in animals, but risk to humans is low.</p> <p><i>Phase 2:</i> Circulating animal influenza virus subtype poses substantial risk of human disease.</p>	<p><i>Stage 0:</i> New domestic animal outbreak in at-risk country</p>	<p>Ready</p> <p>None or sporadic cases only anywhere in the world, but no cases at the local facility.</p>
<p>Pandemic Alert Period</p> <p><i>Phase 3:</i> Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.</p> <p><i>Phase 4:</i> Small cluster(s) with limited human-to-human transmission but spread is highly localized.</p> <p><i>Phase 5:</i> Large cluster(s) but human-to-human spread still localized; the virus is becoming increasingly better adapted to humans, but perhaps not yet fully transmissible.</p>	<p><i>Stage 0:</i> New domestic animal outbreak in at-risk country</p> <p><i>Stage 1:</i> Suspected human outbreak overseas</p> <p><i>Stage 2:</i> Confirmed human outbreak overseas</p>	<p>Green</p> <p>Efficient person-to-person transmission has been reported somewhere outside of the US and its bordering countries, but no cases at the local facility.</p>

1.1. Vulnerability Assessment and Mitigation

If a surge of influenza cases overwhelms existing health care capacity, or if home isolation is not feasible for certain individual patients, then alternate facilities in the community may need to be used for isolating influenza cases and/or for quarantine of their asymptomatic contacts. In preparing for a public health emergency such as an influenza pandemic, it is the responsibility of the Homeland Security and Emergency Management (HSEM), in conjunction with NH DHHS to perform a vulnerability assessment of the State. HSEM is currently developing an assessment tool for those issues specific to public health emergencies, which will be included in the *State Hazard Mitigation Plan*. This tool may change as CDC releases new methodologies. Local emergency management personnel should also complete vulnerability assessments and mitigation activities specific to their communities, and may consult HSEM for guidance. These activities should be completed annually. The assessment should address those issues pertinent to a pandemic, specifically hospital surge capacity, the availability and use of existing structures for isolation and/or quarantine or use as acute care centers, the management of patients lodged in these facilities, and resources for securing supplies to isolated and quarantined individuals.

1.2. Surveillance

Surveillance for influenza requires global and national monitoring for both virus and disease activity. Influenza viruses are constantly changing and knowledge of which viruses are circulating is needed to make decisions about the annual influenza vaccine. Disease surveillance is required to track the impact of circulating viruses on the human population. The objectives of influenza surveillance are to determine when, where, and which influenza viruses are circulating; to determine the intensity and impact of influenza activity; and to detect the emergence of novel influenza viruses and unusual or severe outbreaks of influenza. Surveillance efforts, particularly in Asia and surrounding countries, have increased dramatically since the emergence of avian influenza A (H5N1).

Influenza surveillance in the U.S., conducted by the Centers for Disease Control and Prevention (CDC), is comprised of the following components: laboratory surveillance through the U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System Collaborating laboratories; outpatient influenza-like illness (ILI) surveillance reported through the U.S. Influenza Sentinel Provider Surveillance Network; pneumonia and influenza related mortality surveillance through the 122 Cities Mortality Reporting; pediatric mortality surveillance; assessment of influenza activity at the state level; and hospitalization surveillance through the Emerging Infections Program (EIP) and the New Vaccine Surveillance Network (NVSN).

In NH, influenza is not a reportable disease, but surveillance systems in place routinely will be used during the pandemic preparedness phase to help determine the extent of illness and current circulating influenza virus subtypes. Furthermore, expanded surveillance systems have been developed specifically to enhance the state's capacity for early detection. Early detection of influenza will allow us the opportunity to respond and implement containment measures during a pandemic. The systems are modeled after components of the national influenza surveillance system as well as national preparedness guidance. The surveillance systems in NH consist of:

1. *Virologic surveillance*: The NH Public Health Laboratories (PHL) isolates and subtypes influenza viruses year round and transmits these data electronically to CDC via the Public Health Laboratory Information System (PHLIS). Unusual specimens are sent to the CDC for further antigenic characterization. Influenza testing is provided to health care providers free of charge if they are participants in the sentinel provider system (see below).
2. *U.S. Influenza Sentinel Provider Surveillance Network participation*: Each year 25-30 volunteer NH health care providers (specializing in family practice, internal medicine, pediatric, or student health) report the number of patient visits for ILI by age group, and the total number of patient visits, each week during the influenza season (beginning of October through mid-May). Approximately 10 sentinel providers continue to report weekly during the summer months to contribute to establishing a baseline for ILI activity in the summer months and to help detect any unusual influenza virus subtypes.
3. *Estimated influenza activity*: Overall influenza activity in the State, reported weekly to CDC, is based on reports of ILI, reported numbers of patients with ILI or with fever and/or respiratory symptoms through the emergency department syndromic surveillance systems, reported outbreaks in facilities, and reports of confirmed influenza.
4. *Pneumonia and influenza-related deaths*: All death certificates recorded by NH's Bureau of Vital Statistics are recorded electronically. The cause of death provides a key tool for tracking influenza and pneumonia deaths, in addition to other categories of disease. The same method used by CDC to calculate influenza and pneumonia death rates as reported in *MMWR* is used for NH death data so that NH mortality rates can be compared to national mortality rates.

During a pandemic, surveillance activities will be enhanced to include active (regularly seeking out reports from data sources) and passive (receiving reports from data sources) surveillance methods of data collection. Current systems will be enhanced and new systems instituted. The data collected within these systems are assessed daily by the Communicable Disease Surveillance Section (CDSS) staff and monitored for changes, specifically any observed increases above baseline activity.

1.2.a. Early Detection Surveillance Systems

In addition to the influenza surveillance activities described above, expanded surveillance systems are in place. These systems are useful for assessing morbidity in the State and are an important component of pandemic preparedness and response. These include:

- *Automated Hospital Emergency Department Data (AHEDD)*. This system was implemented in 2005 and automatically collects real-time Emergency Department (ED) electronic data from hospitals using chief complaint and diagnosis codes (ICD-9 codes) from hospitals statewide. Influenza Like Illness (ILI) syndrome was added in the AHEDD surveillance system, based on relevant ICD-9 codes. Additionally, in 2006 query tools were developed and utilized to routinely query chief complaint text for ILI. During influenza season, these data are analyzed daily and compared to the influenza systems previously described. The goal of this surveillance system is to connect every NH hospital by 2008.
- *BioSense*: A national syndromic surveillance system maintained by CDC that was developed specifically to monitor syndromes (based upon CDC's 11 Biosense syndrome definitions). NH has access to local data reported to the Veterans Administration on NH residents, and all medical encounters occurring at Department of Defense facilities located within the state. LabCorp laboratory test results originating in NH are also mapped to syndromes by the Biosense application. These data are observed daily for alerts and unusual occurrences.
- *Over-the-Counter Pharmaceutical Surveillance (OTC)*: In NH, two OTC systems are used in parallel to obtain a representative sample of OTC sales data within the state. The OTC data collection is accomplished through a NH system that obtains pharmaceutical sales from a major chain within the state. This system is augmented by OTC data as collected through the Real-time Outbreak and Disease Surveillance (RODS) Laboratory National Retail Data Monitor (NRDM) system hosted by the University of Pittsburgh. Together, these two systems track approximately 40% of all over the counter pharmaceutical sales activity occurring within the state.
- *School Encounter Surveillance*: Collects daily encounter data on school nurse visits from all 22 schools within the Manchester School District and aggregates this information into syndromes. This represents approximately 8% of all school-aged children within the state. These data are monitored daily and are useful indicators of community illness activity within the greater Manchester area.
- *Trauma and Emergency Medical Services Information System (TEMSIS)*: This web-based system collects data from patient care reports entered by pre-hospital providers after each emergency medical response. This system is maintained by the NH Bureau of Fire Standards & Training and Emergency Medical Services (FSTEMS) and provides real-time data from across the state. All pre-hospital providers are required to file electronic incident reports within 24 hours of completing a call.
- *Death Data Surveillance*: NH maintains a unique query tool that facilitates access and prompt analytic capacity to electronically filed death records. These data are accessed from the NH Bureau of Vital Records database for the purpose of monitoring unusual or infectious death occurrences. The tool is used daily to access, query and analyze influenza and pneumonia related causes of death. The query tool has expanded the ability to characterize cause of death by demographics such as geographic location, age and gender.
- *Veterinary Surveillance*: In partnership with the State Veterinarian at the Department of Agriculture, the incidence of animal diseases that threaten human health are identified. This

surveillance includes monitoring several diseases that may affect migratory birds. Monthly activity reports are provided to the CDSS.

- *Early Warning Infectious Disease Surveillance (EWIDS)*: This surveillance system is within the framework of the Security and Prosperity Partnership Agreement between the US, Canada, and Mexico, and it focuses upon the development of relationships and systems to effectively communicate disease information and minimize the impact when disease threatens to cross the US, Canadian, or Mexican borders. The system is comprised of email notifications to border partners and provides an early warning capacity to potential or actual border health events.

The CDSS staff follows up on any increase to determine the cause and prompt disease control investigations if appropriate. Daily and weekly reports are compiled from these systems and used to characterize a potential or actual event and formulate a response strategy in collaboration with state and local agencies. Further descriptions of NH surveillance systems are outlined in the *PH EPRP*.

1.2.b. Surveillance Preparedness Activities

1.2.b.i. Activities for Health Care Providers and Facilities

Health care providers are responsible for maintaining strict infection control practices in their offices and facilities to help limit the spread of infectious diseases. Offices and facilities are encouraged to display a “Mask Hygiene Poster and Hand Hygiene Poster” in prominent locations in offices or facilities (posters can be found on the NH DHHS website at <http://www.dhhs.nh.gov>). Also, “Guidelines for Respiratory Hygiene and Cough Etiquette” should be instituted (see Appendix 2).

Surveillance activities to be undertaken by health care providers and facilities in the preparedness phases of a pandemic include:

- Keep alert for increased ILI in your facility or community and follow NH DHHS recommendations for the prevention and control of influenza (available on the NH DHHS website at <http://www.dhhs.nh.gov>)
- Consult with public health experts from the CDCS (603-271-4496) to determine whether influenza culture specimens for patients with ILI should be sent to the PHL
- Promptly report any suspect or actual cluster or unusual cases of ILI to the CDCS (603-271-4496, or after hours to 1-800-852-3345 ext. 5300)
- Educate staff in the different methods of influenza testing available; information can be obtained from the PHL (603-271-4660) or from the CDC website at <http://www.cdc.gov/flu/professionals/labdiagnosis.htm>
- Early in a respiratory outbreak, and if the cause is not known, consider performing rapid influenza testing on naso-pharyngeal swab or nasal-wash specimens from patients with recent onset of symptoms of ILI; report results to CDCS.

1.2.b.ii. Activities for State Agencies

The Communicable Disease Control Section (CDCS) Public Health Professionals (PHPs), Public Health Nurses (PHNs) and Epidemiologists, play an important role in ongoing preparedness planning. The CDCS staff, in coordination with the NH DHHS Public Information Office (PIO), routinely provide recommendations to health care facilities, health care providers, and the general public regarding the prevention and control of influenza. In the early stages of a pandemic, CDCS staff will be responsible for case and contact investigations. Annual review of pandemic influenza response protocols will ensure that protocols remain current.

In all phases of the pandemic, surveillance systems will be maintained and monitored by CDSS staff. Activities of CDSS and CDCS during preparedness phases are listed below.

- CDSS Section Chief will perform the following activities:
 - Ensure that all program staff are knowledgeable about their roles and responsibilities described in the EOP–ESF-8 that pertain to surveillance activities in the event that the EOP is activated (see State of NH EOP for ESF-8 activities) by including this in routine job duties
 - Assess the overall influenza activity level in the State (widespread, regional, local, sporadic, or no activity) and report to the CDC by noon each Tuesday via the Secure Data Network (SDN)
- CDSS staff will perform the following activities:
 - Support and monitor daily encounters and chief complaints associated with ILI in the AHEDD system
 - Maintain all existing surveillance systems;
 - Monitor and revise recommendations from the CDC for any additional surveillance activities that should be undertaken
 - CDSS will provide data management support for all NH DHHS-initiated vaccination campaigns
 - CDSS will assume responsibility to report required aggregated pandemic data to CDC via the SDN
- BT Surveillance program staff will monitor pneumonia and influenza death records received electronically by querying the database maintained by the NH Bureau of Vital Records
- The Influenza Surveillance Coordinator will perform the following activities:
 - Recruit and enroll additional sentinel providers, if necessary, to maintain the minimum of one regularly reporting provider for every 250,000 persons (minimum of 10 in states with smaller populations, such as NH)
 - Monitor ILI data by accessing the secure CDC sentinel provider website at least weekly for data accuracy and completeness; sentinel providers will be contacted by phone or email as needed
 - Monitor the completeness and timeliness of ILI data to ensure that at least the minimum number (10) of sentinel providers are reporting weekly to the CDC via the Internet year round
 - In coordination with PHL, send guidelines to sentinel providers regarding specimen collection from patients with ILI and submission of specimens to PHL
 - Provide feedback and maintain contact with sentinel providers at least weekly to encourage reporting, follow-up on unusual reports, and encourage testing of the patients as appropriate; if influenza has been identified in the area, lab testing may not be recommended
 - CDCS Public Health Professionals will investigate suspect or actual ILI outbreaks in facilities as they are reported

The Public Health Laboratories (PHL) play an integral role in influenza surveillance. PHL activities during preparedness phases include the following:

- Perform influenza testing, type/subtype influenza culture isolates, and send unusual isolates to the CDC for further antigenic characterization.
- Transmit influenza data (positives and negatives) to the CDC electronically via PHLIS each week.

- Provide influenza testing free of charge to participants in the U.S Influenza Sentinel Provider Surveillance System.
- Provide influenza testing free of charge to health care providers in facilities such as hospitals, long-term care facilities, or schools reporting outbreaks of ILI or unusual cases of ILI.
- Develop a contingency plan for laboratory surge capacity. This plan will ensure that there are sufficient staff trained for influenza testing as well as staff cross-trained for continued laboratory operations.
- Establish agreement(s) with appropriate private laboratory (ies) in the State to assist with testing. Because of reagent and protocol restrictions set by CDC, no labs in NH are testing using the same methods. PHL uses Laboratory Response Network (LRN) protocols to test for H5N1.
- Maintain Biosafety Level (BSL) 3 laboratory conditions.
- Subtype all influenza A viruses identified in submitted clinical specimens and immediately report to the CDC any that cannot be subtyped.
- When available, maintain reagents from the CDC to detect and identify the novel strain. LRN protocols and reagents have been secured from CDC and have been validated.
- Institute plans for handling substantially more influenza specimens than usual, including the development of a database for tracking specimen subtypes.

1.2.b.iii. Activities for Regional Planners

Data collection locally and statewide will focus on individual cases in the early stages of a pandemic and shift to aggregate data collection as the pandemic evolves. Regional planners will play a role in surveillance activities, including but not limited to the following:

- Identify key resources within region to provide data collection capacity during a pandemic. Examples of data are: individual case information, contacts to case, containment measures recommended and/or implemented to locally identified cases (i.e., treatment, isolation, quarantine of contacts).
- Establish a point of contact(s) to take reports of cases within respective region and/or locally determined points of care (i.e., ACCs, health care provider offices).
- Establish a point of contact to receive "just in time" surveillance tools from NH DHHS and disseminate to pre-identified points of care throughout the AHHR.

1.3 Epidemiologic Preparedness

1.3.a. Capacity for Epidemiologic Investigation

The New Hampshire Department of Public Health Services currently has the capacity of 9 Public Health Nurses (PHNs), 3 Epidemiologists, 1 Zoonotic Disease Veterinarian, 1 Epidemic Intelligence Service (EIS) Officer, 2.5 Program Specialists (from West Nile virus, Tuberculosis, and Hepatitis C programs), and 1 Food Safety Coordinator via the Communicable Disease Control and Surveillance sections to perform the functions outlined in the *PH EPRP* pertaining to epidemiologic investigations. In the event of an influenza pandemic, these functions will be defined more specifically to influenza and respiratory epidemiologic investigations.

1.3.b. Protocols and Standard Operating Procedures

Disease specific protocols and standard operating procedures for investigation of influenza cases are the responsibility of the Communicable Disease Control and Surveillance Sections. This document will outline such protocols. Case investigation protocols will be maintained by and located in the CDCS office at 29 Hazen Drive in Concord, NH. Those documents released to the public will be posted on the NH DHHS website at <http://www.dhhs.nh.gov>.

1.4. Laboratory Capacity

The PHL will be the primary laboratory providing support to the CDCS, and will be responsible for providing diagnostic technical expertise and specimen collection and handling information in disease investigations. Results of laboratory tests will be promptly shared with the ordering physician and the CDCS.

The PHL is equipped with a Bio-Safety Level 3 laboratory. In the preparedness phases of a pandemic, PHL will accept and test specimens free of charge from the sentinel sites. Beyond the preparedness phase, PHL will perform testing based on recommendations from CDCS.

Clinicians should follow PHL guidelines for specimen collection, packaging and delivery. These guidelines are posted on the NH DHHS website for influenza. Information on influenza testing, including proper specimen collection, handling, shipping, transport and submission procedures, can be obtained on this website or by calling the PHL at (603) 271-4660.

The PHL currently has the capacity to test specimens for influenza and subtypes by molecular techniques. Ongoing collaboration with reference laboratories continues in an effort to establish exchange of testing and/or personnel in the event of a pandemic. PHL will continue to cross-train staff to assist in testing during surge events. Laboratory surge capacity preparation includes specimen receipt, processing, isolation, typing, and reporting.

1.5. Risk Communication and Public Education

The purpose of public education and risk communication is to ensure a timely, accurate and continual flow of information to the public and the media about a public health emergency. Communications with the public and the media will be in keeping with the principles of Crisis and Emergency Risk Communication (CERC) whenever possible in order to keep the public informed and enable them to make informed decisions. Both State Public Information Offices (PIO) and regional planners on the local level will be involved in communication strategies.

In the case of pandemic influenza, because the incident may be national, the federal government will be heavily involved and may have a presence in New Hampshire. The level of involvement will depend on the incident, where and when it occurs, but it could include the FBI, Department of Homeland Security (DHS), or CDC assistance at DPHS or in the PIO.

1.5.a. Activities for State Agencies

When a crisis occurs in New Hampshire that is health related, such as an influenza pandemic, the Division of Public Health Services (DPHS) will notify the NH DHHS Public Information Office (PIO). To prepare for such notification, the NH DHHS PIO will perform the following functions:

- Prepare press releases, set up press conferences, provide fact sheets, prepare information for the NH DHHS web site, answer media calls, arrange interviews, and write and design materials such as posters and brochures, as appropriate.
- Coordinate with AHHRs in order to ensure consistent and accurate messages are provided statewide. AHHRs will be responsible to develop and disseminate messages that are specific to their region, such as the location and hours of operations of POD clinics.
- Assist in coordinating tapings, town meetings, and radio and television broadcasts, as needed and as feasible.
- Establish contact with the PIO for the Department of Safety (DOS), Homeland Security and Emergency Management (HSEM). Prepare to provide support as needed, if the State Emergency Operations Center (EOC) is activated.
- Designate a representative for the NH DHHS Incident Command Center (ICC).
- Designate a representative for consultation with DPHS through their ICC.

- Draft press releases in consultation with the appropriate subject matter expert at DPHS. The Commissioner of NH DHHS or his/her designee will give final approval before official release. The Governor's office may also be involved with vetting press releases, or alternatively his/her communications staff may write them. With a statewide emergency, the Governor's office may choose to be the lead on communications issues.
- Prepare to coordinate media at the Joint Information Center (JIC). The PIO will play an active role in coordinating the media at the JIC. The JIC is the responsibility of the DOS, HSEM, but in the event of pandemic influenza, where the emergency involves a health issue, NH DHHS PIO will work with HSEM to manage media inquiries.
- Act as a resource for AHHR partners, including health officers, town officials, hospital PIOs, and other local officials as needed.
- Coordinate with other state PIOs and establish protocols for requesting assistance from them if the incident warrants.
- Work in concert with the NH DHHS Minority Health Office to help address issues surrounding functional needs populations, such as New Hampshire residents who do not speak English, and people with sight or hearing deficiencies.

1.5.b. Activities for Regional Planners

- Develop a regional risk communications plan that includes reaching individuals with functional needs, such as hearing loss or mobility limitations.
- Develop working relationships with key local media outlets to improve the ability to provide coordinated media messages.
- Identify key individuals to receive training in Crisis and Emergency Risk Communication and NIMS/ICS who can serve as spokespersons for the region.

1.5.c. Resources

Current resources for pandemic preparedness may be found at the following websites:

- NH DHHS website for avian and pandemic influenza preparedness: www.avianflu.nh.gov
- CDC website for influenza: <http://www.cdc.gov/flu/>
- Federal HHS website for pandemic issues (has links to checklists): www.pandemicflu.gov
- NH DOS general brochure for individual emergency preparedness: <http://www.nh.gov/safety/divisions/bem/documents/emergency+planning+brochure.pdf>

1.6. Training and Education

While in the preparedness phase, the NH DHHS, in collaboration with other State agencies and organizations, continues to participate in many public and private forums to deliver consistent messaging and education about pandemic influenza. Participation varies, and includes but is not limited to hosting training sessions, giving guest speeches, contributing to drills and exercises, and joining round-table discussions. Topics typically covered include a background of influenza, defining a pandemic, current status of NH planning, and recommended preparedness activities. Examples of training activities that have occurred in the past year (2006) include:

- Veteran's Healthcare Administration Region 1 Pandemic Influenza Tabletop
- New Hampshire Hospital Association (NHHA) Exercise
- Fire and EMS trainings (w/FSTEMS)
- School Superintendents' Regional Meetings participation
- Faith-Based Community trainings (w/DOS, DBHRT)
- Disaster Behavioral Response Team Basic Training (w/DOS, DBHRT)
- Pandemic Influenza Preparedness sponsored by AHHR Regional Coordinating Committees

1.6.a. DPHS Staff Training and Education

The Division of Public Health Services staff, especially the Communicable Disease Control and Surveillance staff, will continue to be provided opportunities for skill development training necessary for effective influenza pandemic planning and response. Examples include:

- Mass Antibiotic Dispensing
- National Incident Management Systems (NIMS)
- Incident Command Structure (ICS)
- Emergency Planning
- Emergency Operations Center Training
- Risk Communication
- Laboratory Activities (e.g., specimen collection, handling, and transport)
 - Cross-train personnel to address surge capacity
- Epidemiology and Public Health Surveillance

In addition, the staff members of the Food Protection Section and other NH DHHS public health professionals will be cross-trained by Communicable Disease Control and Surveillance staff to act as a Back Up Team for the Communicable Disease Control Section (CDCS).

1.6.a.i. Disease Control Back Up Team

It can be anticipated that during a public health emergency, such as an influenza pandemic, the Communicable Disease Control Section (CDCS) will be overwhelmed with an influx of calls and investigations pertaining to that event. Personnel will simultaneously need to maintain their response to non-pandemic case investigations and inquiries. In addition, the CDCS staff, as a component of the public, is also susceptible to illness, and as a result, may be unable to work. For these and other reasons, the CDCS will call upon a *Disease Control Back Up Team* as they approach the case investigation threshold (see Section 2.5.f. below). This team will assist with case investigations, staffing hotlines, clinic operations, data entry, and any other pertinent tasks. Also, DPHS has established a contract with the Poison Control Center, which will assist in answering telephone calls from the general public when the number of calls exceeds the Section's capacity.

The CDCS will follow their chain of command to notify the State Epidemiologist when the case investigation threshold is near to being surpassed. The State Epidemiologist will notify the Back Up Team leaders who will coordinate the deployment of team members. The team's assigned tasks will vary with the phases of the pandemic and should be delegated by the State Epidemiologist. The decision to utilize the Poison Control Center will also be made through the Section's chain of command. Upon approval, the PCC will be notified at 1-800-222-1222.

1.7. Functional Needs Populations

Homeland Security and Emergency Management (HSEM) is responsible for identifying and assisting segments of the population that may require special needs or services during a public health emergency. Functional needs populations may include, but are not limited to the following:

Medical/Physical	Other Considerations	Fixed Facilities	Isolated Groups
<ul style="list-style-type: none">• Medically or chemically dependent• Blind or visually impaired• Deaf or hard of hearing• Emotional impairments• Cognitive impairments• Chronic conditions• Limited mobility	<ul style="list-style-type: none">• Single Adult Caregivers• Children• Frail elderly• Homebound• Homeless• Immigrants• Refugees• Vacationers• No access to transportation	<ul style="list-style-type: none">• Assisted Living• Correctional• Half-way Houses• Group Homes• Long-term Care• Religious Orders	<ul style="list-style-type: none">• Culturally• Geographically• Linguistically• Socio-economically

During an influenza pandemic, these populations may require particular services to ensure the protection of their health. The CDCS may provide guidance and technical assistance to HSEM and those officials accountable for individuals in fixed facilities, but it will be each organization's responsibility to create their own emergency preparedness, response, and recovery plans. Facilities may use this plan as a template for their documents. In the event of a pandemic, CDCS will advise health care professionals and will respond to clusters or outbreaks in these facilities, as is described in section 2.4, "Case Investigation."

Regional pandemic plans should incorporate individuals with functional needs. This plan should consider the diverse populations in their area and address the needs of this population specific to pandemic flu planning. The plan should include preparedness, response and recovery. The AHHR should perform outreach to the functional needs populations within their communities and the agencies, if any, which serve them. Planning should also address Points of Dispensing (POD) for potential medication/vaccine distribution, dissemination of information, transportation and outreach (see *The State of New Hampshire Functional Needs Guidance*, 12/29/06-Draft and *The State of New Hampshire POD Standard Operating Guideline (SOG)*, 12/29/06-Draft), ACCs, and Risk Communications.

The PIO is responsible for providing information on any public health emergency to the general public. Efforts will be made to provide important documents in at least the top five languages spoken after English if appropriate, and more languages if needed. The 19 AHHRs will disseminate appropriate guidance on any public health emergency to the above-listed populations according to each region's plan.

The PIO will also work with the NH DHHS Minority Health Office and the HSEM to help get communications out to persons whenever possible who may not receive them through standard channels, such as the deaf and hard of hearing, people who do not speak English, and the homebound. Such methods may include providing interviews, fact sheets, or posters in other languages, connecting with community partners to help deliver a message, or using nonstandard channels, such as grocery stores or mailings to help reach people.

1.7.a. Regulated Populations

- Long Term Care Facilities: Must comply with the federal CMS rules as well as any State licensing regulations. Appendix 8 can be referenced for specific guidance on preparedness and response.
- Residential Care Facilities: Must comply with State licensing rules. They will work closely with regional planners in their area and may access Appendix 8 for guidance on preparedness and response.
- Childcare Centers: Must comply with State regulations and may access Appendix 10 for guidance on preparedness and response plans.
- Correctional Facilities: Must comply with any State or federal regulations and can access Appendix 9 for guidance on preparedness and response plans.
- Adult Day Care: Must comply with state licensing rules. They will work closely with regional planners in their area regarding pandemic planning.
- Behavioral Health: Each AHHR will incorporate this group into their plan. The Bureau of Behavioral Health will be responsible for the overall guidance on preparedness and response. New Hampshire Hospital will follow guidance from Appendix 8 as well as comply with any appropriate state regulations.

1.8. Immunization in Preparedness Phase

Vaccine production will require 4–6 months from the time the pandemic vaccine strain is selected. Whether pandemic vaccine becomes available during or after the first wave of illness will depend on where the pandemic begins, how soon it is detected, the efficiency of spread, and the impact of containment measures. Once production has begun, the vaccine will likely be manufactured at a steady

rate. The number of vaccine doses that will be manufactured each month will be a function of both manufacturing capacity, and of the amount of antigen required per dose of vaccine. The planning assumption recommended by CDC is a manufacturing capacity of 50.4 million courses per year, or 4.2 million courses per month. This is based on use of vaccine with adjuvant that reduces antigen requirement to 30 µg per dose, and corresponds to each project area being able to vaccinate 1.5% of its population with 2 doses per month (Source: *Pandemic Influenza Vaccination: A Guide for State, Local, Territorial, and Tribal Planners*. CDC. December 11, 2006).

In the initial phases of a pandemic, there are certain activities that should take place in health care facilities as well as at the State level. Specific guidelines for the immunization of priority groups will be determined based on the epidemiology of the disease at the onset of the event, in consultation with CDC. The following is a summary of activities to occur in the preparedness phase. Because these activities will take place in the preparedness phase, the recommendations for vaccination apply to the regular influenza season and to available influenza vaccine, which is a separate activity from vaccination campaigns that may take place during the response phase of a pandemic. These recommendations are intended to reduce morbidity from seasonal influenza transmission in vital workers if pandemic strain emerges, to reduce diagnostic confusion if a pandemic strain emerges (one may have a higher suspicion for pandemic strain if the patient is known to have been vaccinated against seasonal influenza), and to prepare communities for providing vaccination clinics in the event that vaccination for a pandemic strain is necessary.

1.8.a Activities for Health Care Providers and Facilities

- Ensure that the most recent recommendations and guidelines for administration of influenza and pneumococcal polysaccharide vaccine are readily available to staff and education regarding the recommendations is provided.
- Encourage all health care personnel in office settings with direct patient contact to receive annual influenza vaccination; per RSA Section 151:9b, all licensed facilities (hospitals, residential care facilities, adult day care facilities, and assisted living facilities) are required to offer influenza vaccination to their health care personnel
- All licensed facilities (hospitals, residential care facilities, adult day care facilities, and assisted living facilities) shall document evidence of immunization of all consenting patients against both influenza and pneumococcal disease, per RSA Section 151:9b, in accordance with current ACIP recommendations
- DHHS adult immunization coordinator will support health facilities in implementing these steps

1.8.b Activities for State Agencies

- The DHHS Immunization Program (IP) will continue to implement annual plans to increase influenza and pneumococcal vaccination coverage in order to increase overall immunity to respiratory disease and reduce the risk of multiple and secondary infections
- IP and Homeland Security and Emergency Management (HSEM) will develop a plan for mass vaccination of the general public, to include the following:
 1. Continue to provide technical assistance to AHHR planning partners on planning for mass immunization. This activity has been ongoing, including: planning meetings with community partners, visits to clinic sites; trainings; and development of a clinic manual, the *Point of Dispensing Field Operations Guide: Avian Influenza Annex*.
 2. Develop and maintain a system of communication with all community vaccination sites.
 3. Conduct mass vaccination exercises with AHHR partners, to further develop regional capabilities.
 4. Assure readiness of vaccination clinic supplies, which may be in high demand nationally and may not be provided by the CDC in push packs

5. Coordinate with bordering states (VT, ME, MA) and with Canada in collaboration with federal authorities in vaccination plan development
 - NH DHHS, DPHS and HSEM will identify essential services groups following federal guidelines, including those necessary to keep the state's essential infrastructure operational (e.g. fire, utilities, postal services) and those necessary to respond to the pandemic (e.g. hospital, EMS), and, working with AHHR partners, establish a means to contact each, either by direct or indirect points of contact, to provide them with instructions on receiving immunizations in emergent situations
 - IP will ensure that contingency plans have been considered for emergency distribution of unlicensed vaccines using emergency investigational new drug (IND) provisions, including inventory control, record keeping, and completion of a signed consent form. It is expected that CDC will provide the protocol and sample IND forms
 - IP will develop a plan for enhanced reporting and investigation, to be led by IP's medical epidemiologist, of adverse events using the existing VAERS reporting system
 - IP will search for and then utilize the best available system to track vaccine supply, distribution, and use; an example of such a system is CDC's Vaccine Management (VACMAN) System
 - IP will consider CDC's recommendation to develop a recall-reminder system to track administration of both vaccine doses and conduct recall for second doses. The CDC is developing a tracking system for aggregate data collection in a pandemic.
 - IP will compare their fax blast database of vaccine providers to the Health Alert Network's (HAN) database of providers to identify any gaps or additions needed for information flow about vaccine in the pandemic context
 - DHHS Legal Counsel, NH Department of Safety (DOS) Legal Counsel, and the State Epidemiologist will ensure that appropriate legal authorities are in place that will allow for implementation of major elements of this plan
 - IP and HSEM will review and modify vaccination plans as needed, at least annually
 - HSEM, CDCS and IP will meet with partners and stakeholders to review and update major elements of the vaccination plan

1.8.c Activities for Regional Planners

- Develop Point of Dispensing (POD) plans that have the capability to provide vaccination to every AHHR resident within 10 days in accordance with guidance and recommendations from state agencies. (Note: The 10-day period should be used as a planning target, even though the amount of vaccine that may be available is not known).
- Develop plans to inform the public about local POD operations and priority populations for vaccination. Ensure the ability to provide information to individuals with functional needs.
- Conduct mass vaccination exercises to evaluate POD plans. Improve plans based on the findings included in After Action Reports.
- Collaborate with the DPHS to provide educational materials to residents that encourage annual vaccination against influenza and other primary prevention messages.

1.9. Additional Community Preparedness Activities

In addition to the above-mentioned preparedness activities, there are activities specific to community-based disease control that regional planners can complete during the Interpandemic and Pandemic Alert periods. Current mathematical modeling suggests the most effective way to reduce the peak of a pandemic's epidemic curve, and thus allow for a more manageable response to overwhelmed healthcare,

workplace absenteeism, etc., is to combine a variety of both pharmaceutical and non-pharmaceutical interventions. To implement either, the general public must be aware ahead of time that these intervention options exist, and they must be provided with the educational tools to prepare themselves, their families, and their workplaces. Therefore, a critical role for planners is to effectively communicate community-wide preparedness activities to their corresponding constituents (see “Risk Communication and Public Education”, section 1.5).

During the preparedness phases, planners should consider and make contingencies for the societal impact of each intervention listed below. Impacts may be economical, legal, ethical, logistical, and/or psychological. Some of these interventions, such as quarantine, may only be applicable at the very early stages of a pandemic.

1.9.a. Non-pharmaceutical Intervention Preparedness

Non-pharmaceutical interventions are based on the concept of “social distancing,” and are usually targeted to either specific groups of individuals or to an entire community. Social distancing implies reducing contact with other people, i.e., keeping a social distance. Suggested interventions for which communities should prepare include the following:

- Quarantine. Though quarantine of exposed, at-risk persons may not be an effective means of disease control as the pandemic progresses, in early phases it may be appropriate. Examples include when individuals are exposed to an influenza case at a group gathering, in a closed vehicle, or at their workplace. Isolation will also occur during the pandemic, where individuals who have influenza are physically separated from those persons who are not ill. Both isolation and quarantine are discussed in further detail in the Response Phase; section 2.6.b. “Non-pharmaceutical Interventions.” The factors associated with isolating and quarantining individuals that should be considered in the preparedness phase are:
 - Support of individuals in isolation and/or quarantine; working through the logistics of providing them with basic daily living needs.
 - Reducing stigmatization and psychological impact
- Respiratory hygiene/cough etiquette (see Appendix 2)
 - Mask and facial covering recommendations may differ depending on the extent of potential exposure. NH DHHS will continue to follow CDC guidelines in making recommendations regarding mask and facial covering use; these may be altered as CDC guidelines are updated.
 - *Health Care Personnel (HCPs)*
Health care personnel, and support staff in a health care setting, who have direct patient contact with influenza cases should review the most recent CDC recommendations at <http://www.pandemicflu.gov/plan/healthcare/maskguidancehc.html> which discusses both N-95 respirator and surgical mask use in health care settings. At this time, the recommendation states that N-95 respirators be used by HCPs during procedures that may generate aerosols and during direct patient care activities; N-95 respirators are also recommended for use by HCP support staff that has direct contact with pandemic influenza patients.
 - *General Public*
There is currently no recommendation for public stockpile of N-95 respirators, which are individually fitted masks that filter particles less than 5µm in size 95% of the time. Influenza droplets are typically contained using droplet precautions (see Appendix 4). At this time, there is insufficient evidence to support well persons wearing masks in public settings, and this is not a recommended measure. However, the general public should maintain an appropriate social distance of greater than 3 feet when near ill influenza cases. Well individuals may choose to wear masks, but community use should not interfere with the

supply for health care settings. Proper use and disposal messages must be communicated to the public.

- *Pandemic Influenza Cases*
Surgical mask or other facial covering use may be appropriate when worn by clinically ill individuals who remain in the home or cannot immediately be removed from a group setting.
- Snow days. The term “snow days” refers to days when a significant portion of the population is asked to stay at home, as if there were a major snowstorm. Employers and others should identify mission-critical personnel who are essential to maintaining societal infrastructure (i.e., gas, water, electricity).
- Self-shielding. This is a self-imposed measure where individuals stay at home so as to exclude themselves from infected persons. Communities should prepare for the fact that many individuals will choose to self-shield. This behavior may enhance compliance to requested snow days. Self-shielding differs from voluntary quarantine in that it is entirely self-imposed with no prompting from public officials.
- Restricted access and/or cancellation or closure. These interventions may include the following:
 - Restricted access or closure of specific buildings, such as public swimming pools and gyms
 - Cancellation of public events, such as sporting events, movie theaters, concerts
 - Closure of public buildings
 - Closure of private buildings

These interventions are based on federal guidance outlined in the US HHS *Pandemic Influenza Plan, Supplement 8 Community Disease Control and Prevention*, released November 2005 and the *Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States—Early, Targeted, Layered Use of Nonpharmaceutical Interventions*, released February 2007. Triggers for implementing these measures are discussed in the Response Phase, “Community-Based Containment Measures” section 2.6. Many of the interventions, such as closure of malls and offices, will be contingent on that entity’s own continuity of operations planning.

1.9.b. Pharmaceutical Intervention Preparedness

Pharmaceutical interventions include the dissemination of antivirals to treat and/or prevent illness and the administration of vaccine to prevent and decrease the impact of illness. Vaccine-related issues are addressed above in the “Immunization in Preparedness Phase,” section 1.8. Antivirals are addressed separately in Appendix 15, *New Hampshire Pandemic Influenza Antiviral Distribution Plan*, which is currently in review.

2. RESPONSE (EMERGENCY) PHASE

WHO Phase:	USG Stage:	ERI Alert Matrix Phase:
<p>Pandemic Alert Period</p> <p><i>Phase 3:</i> Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.</p> <p><i>Phase 4:</i> Small cluster(s) with limited human-to-human transmission but spread is highly localized.</p> <p><i>Phase 5:</i> Large cluster(s) but human-to-human spread still localized; the virus is becoming increasingly better adapted to humans, but perhaps not yet fully transmissible.</p>	<p><i>Stage 0:</i> New domestic animal outbreak in at-risk country</p> <p><i>Stage 1:</i> Suspected human outbreak overseas</p> <p><i>Stage 2:</i> Confirmed human outbreak overseas</p>	<p>Yellow</p> <p>Efficient person-to-person transmission in the US, Canada or Mexico, but no cases at the local facility.</p>
<p>Pandemic Period</p> <p><i>Phase 6:</i> Pandemic phase: increased and sustained transmission in general population.</p>	<p><i>Stage 3:</i> Widespread human outbreaks in multiple locations overseas</p> <p><i>Stage 4:</i> First human case in North America</p> <p><i>Stage 5:</i> Spread throughout United States</p>	<p>Orange</p> <p>Efficient person-to-person transmission in the region (NH/VT/MA or close to borders) and perhaps cases at the local facility. Nosocomial transmission from known sources only.</p> <p>Red</p> <p>Efficient person-to-person transmission with cases at the local facility and nosocomial transmission without clearly identified sources.</p>

2.1. Command and Control

The sustained, coordinated efforts required to control pandemic influenza lend themselves to the principles and structure of incident command and management systems. In the event of a pandemic, the Incident Command System (ICS) described in the *PH EPRP* will be utilized. To establish this command for a statewide response, HSEM should be contacted as soon ICS is initiated. The HSEM will then activate the NH Emergency Operations Plan (EOP). The EOP provides an all-hazards approach to disaster response and recovery and outlines the roles and responsibilities of organizations and State agencies that would likely be involved in an emergency situation. At the heart of the EOP are 16 Emergency Support Functions (ESFs). One or more of these ESFs might be activated in the event of an influenza pandemic. Each ESF is headed by one primary agency, with one or more support agencies assigned to the ESF to help with operations. NH DHHS is the primary agency for ESF-8, Health and Medical Services, and plays a support role in seven other ESFs. The State Emergency Operations Plan can be found on the Internet at <http://www.nhoem.state.nh.us/Planning/contents.shtm>.

When applicable, the NH DHHS Commissioner will recommend that HSEM activate the State of NH Emergency Operations Center (EOC), which will coordinate the incident response, utilizing the NH EOP described above. In the case of an influenza pandemic, the Department of Health and Human Services NH DHHS will act as the lead State agency, which may place the State Epidemiologist in the position of incident commander. Overall, during an influenza pandemic, the goal will be to reduce influenza-related morbidity and mortality and keep social disruption and economic loss at a minimum. To meet this goal, priorities are to maximize the use of limited resources, monitor the status of the outbreak, collect and organize situational information, manage staffing needs and requirements, monitor/supply persons in isolation and quarantine, maintain an inventory of respirators and other personal protective equipment

(PPE), track the status of/procure essential supplies, operate special/temporary facilities, and manage administrative and financial aspects of the response.

2.2. Risk Communication and Public Education

The following are communication-related issues that pertain to pandemic influenza in the response phase:

1. Assuring adequate communication systems will be a joint responsibility of federal, state and local public health departments
2. Messages will need to be revised as the pandemic unfolds; messages from CDC will be the template for state and local officials for crafting messages for their constituents
3. Because of anticipated shortages and delays in receiving vaccine and antivirals, messages informing citizens about the rationale for priority groups, as well as measures to be taken until such agents are available, will be critical
4. The public will likely encounter some unreliable and possibly false information in the media and on the Internet, underscoring the need for accurate, consistent and timely communication messages from NH DHHS/DPHS
5. Mechanisms for communication with the public will vary depending on the phase of the pandemic and its impact on New Hampshire communities and in neighboring states

2.2.a. Activities for State Agencies

In an emergency situation, including an influenza pandemic, accurate, consistent and timely messages are key in notifying and educating the public, facilitating the movement of emergency staff to their assigned duties and stations, and ensuring the emergency plan is followed as intended.

The Communicable Disease Control and Surveillance Sections will play a major role in all aspects of communication through the Health Alert Network (HAN) and other public health information dissemination mechanisms. The HAN is a statewide information and communication system that links the State health agency with local hospitals, physicians, and AHHR planners to alert communities of possible threats, exposures, critically ill patients, or patients needing decontamination. The HAN is a secure electronic exchange of information that will be used during a public health emergency. Activities performed by CDCS and CDSS will include the following responses:

- Provide expertise in presenting timely and accurate information about the influenza pandemic through the HAN and the PIO.
- Follow the communication guidelines set forth in the *PH EPRP*.
- CDCS will utilize CDC materials when establishing a response to health care providers and to the public regarding influenza recommendations. For seasonal influenza, the CDC materials include: basic communication materials on influenza, vaccine, and antivirals in various languages (mainly English and Spanish); recommendations and guidelines for health care providers; training modules (Web-based, printed, and video); “canned” presentations, slide sets, videos, and documentaries; and symposia on surveillance, treatment, and prophylaxis.

In addition, activities for NH DHHS PIO include the following:

- Maintain contact with the PIO for the Department of Safety (DOS), Homeland Security and Emergency Management (HSEM), providing support as needed, if the State Emergency Operations Center (EOC) is activated.
- Provide a representative at the NH DHHS Incident Command Center (ICC), if activated, as stated under the State’s ICS. The PIO will provide materials, consultation, and assistance as requested.
- Provide a representative for consultation with DPHS through their ICC, if it is activated.

All NH DHHS agencies will continually strive to communicate with all essential partners, keeping them well informed throughout the pandemic.

2.2.b. Activities for Regional Planners

- Implement the regional risk communications plan to provide accurate and timely information to the public.
- Activate a regional Joint Information Center as needed.
- Coordinate the dissemination of AHHR-specific information in collaboration with the State.
- Provide trained individuals who can serve as spokespersons for the region.

2.3. Surveillance

Surveillance systems will be enhanced as the pandemic progresses from the preparedness phases to emergency response phases. Efforts are currently being made by both the CDC and the NH DHHS to develop a database(s) that will be used to track individual cases at the start of the influenza pandemic. The previously described preparedness phases' surveillance activities will be ongoing and the following additional activities will take place.

2.3.a. Pandemic Surveillance System Development

Efforts are currently underway by NH DHHS to acquire, deploy and train users on database systems that will be used to effectively track individual cases at the state and local level throughout the influenza pandemic. The system attributes being sought will accurately monitor cases, contacts to cases and countermeasures provided throughout the pandemic. As the pandemic unfolds, and individual case investigation is no longer feasible, aggregate numbers will be collected and reported using the tracking systems described below, currently being evaluated for use. NH will establish the use of one or both of these surveillance systems in the event of a pandemic. The NH DHHS CDSS staff will serve as the primary resources for database training for the CDC Outbreak Management System (OMS) application. The NH DHHS will support state and local responders through the development and distribution of training materials and serve as training resources for pandemic surveillance system use.

Outbreak Tracking Management System (OMS): CDC has developed a web based software application that is intended for public health agencies to use as an outbreak event-tracking tool. The data-linked design of OMS supports data collection of the full scope of an event from individual case tracking, contact investigation and countermeasures. The application may be accessed locally, in clinic settings, or maintained on a local or state supported server and will accommodate multiple state and local data users concurrently. The system features a simplified database replication set-up process to facilitate data synchronization of remote clients with a central location at the state. The application may be installed and used off-line and then synchronized to the state or CDC to facilitate pandemic event reporting. The system allows fundamental development of supplemental forms, questionnaires, reports and charts of local and statewide data. The application has an open-ended interface that will support data import and export using numerous analysis tools such as EpiInfo and Microsoft Access.

HC Standard: This Medical Crisis Information Management Software (MCIMS) application is a comprehensive web based software tool to support day-to-day operational needs making this application valuable in times of crisis such as a pandemic. The application is web based and flexible in configuration and uses customized or preexisting forms to collect and submit data. The application facilitates rapid data entry and captures individual and aggregate patient totals during an event. The HC Standard application enables surge capacity monitoring and manages all critical infrastructure needs and supply-related issues that may occur during a pandemic. Through the combined technologies, select healthcare officials can be notified when supply levels are low or hospital beds are full.

2.3.b. Activities for Health Care Providers and Facilities

- Continue activities initiated in previous phases
- Isolate and/or cohort patients with influenza (see Section 2.6., Isolation and Quarantine)

- Refer to the most current CDC and NH DHHS guidelines; CDC guidance available on the internet at <http://www.cdc.gov/flu/> and the NH DHHS guidance at <http://www.dhhs.nh.gov/DHHS>

2.3.c. Activities for State Agencies

- CDSS will focus on epidemiological and laboratory data collection to characterize changing trends
- State Epidemiologist will use data to modify policy and/or redirect efforts
- CDCS will collaborate with PHL to triage specimens for testing and to choose which isolates to send to the CDC per CDC guidelines (<http://www.cdc.gov/flu/professionals/labdiagnosis.htm>)

As the pandemic unfolds and the CDCS's maximum capacity is approached, individual case investigations will no longer be feasible. Therefore, full case investigations will cease (see section 2.5.e., "Threshold for Ceasing Case Investigations") and aggregate numbers only will be collected and reported as resources allow and guidelines suggest during the pandemic.

2.3.d Activities for Regional Planners

- Implement surveillance resources identified in preparedness phase within region to provide requested data to NH DHHS. Data requests from State agencies will be communicated to AHHRs via appropriate Incident Command Systems.
- Utilize NH DHHS surveillance staff for educational training, data collection materials (including access to database tracking system), and for data requests
- Collect local data for compilation and transfer to state agency

2.4. Case Investigation

Once the CDCS has reason to believe that a novel strain of influenza is a risk to NH residents, a Health Alert Notification (HAN) will be disseminated to NH providers requesting their vigilance in reporting a normally non-reportable disease. As suspect or confirmed cases are reported, they will be assigned to the on-call Public Health Professional (PHP), a Public Health Nurse (PHN) or Epidemiologist, for case investigation. The PHP will utilize the following guidelines in performing the investigation. It should be noted that as the number of cases in NH increases, performing such detailed case and/or contact investigations will no longer be feasible for the CDCS (see section 2.5.e., "Threshold for Ceasing Case Investigations").

2.4.a. Confirmed Case

1. The CDCS staff member receiving the disease report will initiate the Disease Investigation Report Form (See Appendix 3). If during normal business hours (M-F, 8AM - 4:30PM), this form will be given to the PHN Office Coordinator who will then assign the investigation to a PHP.
2. The PHP assigned to the case will call the health care provider to confirm diagnosis and also request clinical and treatment information. The PHP should confirm case status, using CDC case definitions, if available, or, if the novel strain first appears in NH, using the case definition established by CDCS epidemiologists in conjunction with CDC. The PHP will also alert the CDCS Chief.
3. The PHP will determine whether the case lives in any type of institution or has been hospitalized, and, if so, will provide the following recommendations to health care providers (N Engl J Med. 2005 Sep 29;353(13):1374-85); recommendations may be altered in order to adhere to the most recent CDC guidelines:
 - Treat patients with enhanced precautions, which includes a combination of standard, contact, droplet, and airborne isolation precautions (see Appendix 4).
 - If possible, house patients alone in a negative-pressure room, or in a single room with the door closed. If this is not possible, cohort patients in multibed rooms or wards, keeping beds at least 1 meter apart and preferably separated by a physical barrier.

- Health care personnel should use high-efficiency masks (NIOSH-certified N-95 or equivalent), long-sleeved cuffed gowns, face shield or eye goggles, and gloves. (See <http://www.pandemicflu.gov/plan/healthcare/maskguidancehc.html> for most recent recommendations regarding mask use).
- Limit the number of health care personnel with direct contact with patients and limit access to the patient area. If possible, restrict these health care personnel from looking after other patients.
- Restrict visitors to a minimum and give them proper personal protective equipment with instructions in its use.
- Request affected population initiate their pandemic plan at the appropriate level.

Exposed health care personnel should follow the recommendations in section 2.5.c., “Recommendations for Post-Exposure Prophylaxis.”

If the case remains at home, the American Red Cross document, “Home Care for Pandemic Flu” will be provided (see Appendix 14).

4. The PHP will gather information for contact investigation as described in section 2.5.b, “Procedure for Investigating Contacts.”
5. The PHP should verify laboratory results by requesting a report from the Public Health Laboratories (PHL), if applicable.
6. The PHP will work with other CDCS personnel if necessary to notify all involved partners (i.e., health care providers, local Health Officers, All Health Hazard Region Points of Contact). Records of each notification should be given to the PHP assigned to the case. It will be this PHP’s responsibility to compile all notification records and to ensure all partners are notified as soon as possible.

2.4.b. Suspect Case

1. The PHP assigned to the case will call the health care provider to determine a diagnosis and/or the estimated time of arrival for pending lab results. The PHP will obtain a history, requesting clinical and treatment information. If the suspect case has not yet seen a health care provider, the PHP will refer this individual to his or her PCP for evaluation and testing, ensuring that the PCP’s office is alerted prior to the arrival of the suspect case in order to take the appropriate infection control measures. If the suspect case does not have a PCP, s/he will be referred by the PHP to a Community Health Center (CHC). A list of CHC’s can be found in the Resource Directory Appendix of the *PH EPRP*.
2. If the laboratory samples have yet to be collected, or if results are from a positive Rapid Antigen test performed in a Physicians’ Office Laboratory (POL), and the patient is deemed high risk (will depend on exposure assessment and case definition), then the PHP will request that any collected sample be forwarded to the Public Health Laboratory (PHL) for confirmation of the strain of influenza.
3. The PHP will determine whether the suspect case is in an institution or has been hospitalized, and will assess whether the suspect case requires additional isolation (see section 2.6.b.i., Isolation and Quarantine). If the suspect case has been hospitalized and is discharged prior to complete resolution of infection, or if never admitted, both the patient and the patient’s family should be contacted by the PHP to receive education on personal hygiene, infection-control measures (N Engl J Med. 2005 Sep 29;353(13):1374-85), voluntary isolation and quarantine as well as any necessary non-pharmaceutical interventions. The American Red Cross document, “Home Care for Pandemic Flu” will be provided (see Appendix 14).
4. The PHP will await contact investigation until the suspect case is confirmed. If time to confirmation is estimated to be longer than potential incubation time, contact investigation should begin and information gathered as described in section 2.5.b.
5. The PHP will work with other CDCS personnel if necessary to notify all involved partners (i.e., local Health Officers, the All Health Hazard Region Points of Contact, Infection Control Practitioners). Records of each notification should be given to the PHP assigned to the case. It

will be this PHP's responsibility to compile all notification records and to ensure all partners are notified as soon as possible.

6. The PHP will monitor the suspect case daily to assess symptoms and address any needs.

2.5. Contact Investigation

2.5.a. Definition of Contact

The criteria for defining a contact may be updated as new information becomes available. However, contacts are individuals who have had close contact (defined below) with a case at some point during the infectious period, which has exposed them to the infectious agent. Influenza is typically thought to transmit from human to human by respiratory droplets. However, in the case of pandemic influenza there is uncertainty regarding the exact routes of transmission, and therefore, individuals are to be considered having been exposed by direct contact, respiratory droplets, or even aerosolized virus, and perhaps by indirect (fomite) contact with self-inoculation (N Engl J Med. 2005 Sep 29;353(13):1374-85). Any unprotected individual having been in close contact (having spent >15 minutes within 3 feet of the case) with the case during the infectious period is considered a contact. The current WHO recommendation is to use 1 day before to two weeks after the case's onset of illness as the infectious period. Two weeks reflects two times the average incubation period of human cases of influenza A (H5N1). Though specific for the currently circulating H5N1 avian influenza A virus, this infectious period is also suggested for other viruses that have pandemic potential [*WHO guidelines for investigation of human cases of avian influenza A (H5N1)*, January 2007]. Exposure should be assessed by the PHP performing the investigation.

2.5.b. Procedure for Investigating Contacts

The contact investigation should be conducted promptly. Only those contacts having been deemed "exposed" may be eligible for post-exposure prophylaxis (PEP). Exposure is determined by the investigating PHP. Antiviral indications may be altered based on most current CDC recommendations; see Appendix 15 *New Hampshire Pandemic Influenza Antiviral Distribution Plan*. The PHP will advise exposed household and close contacts as follows:

1. If attending to the case, use appropriate hand hygiene, do not share utensils, avoid face-to-face contact with suspect or confirmed cases, and consider donning high-efficiency masks and eye protection (N Engl J Med. 2005 Sep 29;353(13):1374-85). Caregivers should follow the infection control measures outlined in Appendix 14.
2. See Primary Care Provider to address post-exposure prophylaxis (PEP) needs.
3. Monitor their own temperature twice daily and evaluate for symptoms for seven days after their last known exposure. PHP may refer contacts to Appendix 16 for quarantine guidelines.
4. In the event that the contact develops symptoms (fever, cough, shortness of breath, diarrhea, or other systemic symptoms), contacts should receive empirical antiviral treatment and undergo diagnostic testing. Contacts will be advised to see PCP for this course of action. The PHP will ensure that the PCP's office is alerted prior to the arrival of the symptomatic contact in order to take the appropriate infection control measures. If the contact does not have a PCP, s/he will be referred by the PHP to a CHC. A list of CHC's can be found in the Resource Directory Appendix of the *PH EPRP*.
5. Educate contacts. Consider distributing fact sheets.

The PHP will advise health care personnel who care for infected patients as follows:

1. Monitor their own temperature twice daily and report any febrile event.
2. If unwell for any reason, exclude from direct contact with patients.
3. In the event that symptoms develop, undergo appropriate diagnostic testing. If there is no alternative cause identified, immediately see PCP for treatment.
4. If potentially exposed to infectious aerosols, secretions, or other body fluids or excretions because of a lapse in aseptic technique, consider PEP.

5. If a high-risk exposure has occurred, consider PEP immediately. High-risk exposures would include aerosol-generating procedures.

2.5.c. Recommendations for Post-Exposure Prophylaxis

Contacts to both suspect and known cases should be advised by the PHP performing the investigation about the signs and symptoms of influenza. In a limited outbreak, close contacts of cases may be managed through either active or passive monitoring and without any restriction of movement *unless* they develop symptoms of disease. Consideration should be given to quarantine of contacts with high-risk exposures (e.g., health care personnel involved in aerosol-generating procedures on an influenza patient) even in the absence of symptoms.

Contacts of influenza cases may be advised to the above precautionary recommendations. Household and close contacts to cases, as well as any health care personnel with possible exposure, may be eligible for PEP. Antivirals will be administered in coordination with CDC's recommendations, which may indicate an update to this dosing, and these are to be incorporated in DPHS's *New Hampshire Pandemic Influenza Antiviral Distribution Plan* (see Appendix 15).

In the event of a large outbreak or high-risk exposure (e.g., exposure of health care personnel during intubation of a patient) quarantine of asymptomatic contacts may be considered as a means of interrupting disease transmission. Quarantine guidelines are outlined below. It will be at the discretion of the State Epidemiologist if contacts to suspect cases should be quarantined. Quarantine guidelines will be discussed with the contact by the PHP prior to or at the initiation of quarantine. When individuals are identified as contacts to suspect cases they should follow recommendations listed above and self-quarantine for one week after the last known exposure, or until the pandemic strain of influenza is ruled out. Local law officers will enforce this if proof of person-to-person transmission exists and if an order of quarantine has been issued using the appropriate judicial process.

Due to the potential shortage and questionable efficacy of antivirals for the treatment of pandemic influenza, healthcare providers will be advised on appropriate use by State and Federal recommendations.

2.5.d. Specimen Collection and Delivery

According to CDC guidelines, nasopharyngeal and nasal specimens (swab, aspirate, wash) are usually preferred over other samples, such as throat swabs, for diagnostic testing because of higher quantities of detectable virus. Specimens should be collected within the first 4 days of illness. The PHP assigned to the case investigation should refer to the PHL guidelines on specific specimen collection and delivery requirements particular to the pandemic influenza.

To sustain PHL testing capacity in the event of a pandemic, CDCS will institute stringent sample triage to ensure that only samples meeting the clinical case definition are sent to the PHL for testing. This will ensure that testing will continue until the threshold for ceasing case investigation has been reached.

This decision to cease investigations, and therefore cease specimen submissions, will be communicated directly from the State Epidemiologist to the Director of the PHL. The PHP will oversee specimen collection and delivery based on triage outcome, and may act as a liaison for initial communications between the PHL and the provider. PHL courier schedules will be available to CDCS to coordinate sample submission.

2.5.e. Threshold for Ceasing Case Investigations

Because influenza is not a reportable disease, case investigations will only be prompted if there is a known pandemic or reason to suspect a pandemic strain of the virus. At that time, case reports will be entered into the surveillance system created by the Communicable Disease Surveillance Section (CDSS) and case investigations will be performed by CDCS. Together, the CDCS and CDSS will monitor the number of cases to determine if the quantity and epidemiology resembles a cluster. If a cluster is identified, CDCS will proceed as described in the *PH EPRP*.

Currently the CDC defines seasonal influenza as follows:

No Activity: Low ILI activity and no laboratory-confirmed cases of influenza.

Sporadic: Low ILI activity and isolated laboratory-confirmed influenza cases or a single influenza outbreak has been reported.

Local: Increased ILI activity or influenza outbreaks in a single region of the state, and recent laboratory-confirmed influenza in that region.

Regional: Increased ILI activity or influenza outbreaks in 2, but less than half of state regions, and recent laboratory-confirmed influenza in affected regions.

Widespread: Increased ILI activity or influenza outbreaks in at least half of state regions, and recent laboratory-confirmed influenza in the state.

Using similar terminology for pandemic influenza, should NH reach “Regional” with no indication of decreasing, extensive case investigations will cease and mass prophylaxis, treatment, isolation, and quarantine measures will be implemented as deemed appropriate. Involved PHP’s should report any clusters immediately by following the ICS outlined in the *PH EPRP*. This chain of command must be consulted before declaring a cease of investigations.

In the event of an influenza pandemic, CDC’s activity should be reported on a weekly rather than monthly basis in order to monitor the section’s capacity. Beyond the threshold of maximum capacity, the Disease Control Back Up Team will be deployed (see section 1.6.a.i. “Disease Control Back Up Team”).

Other factors that will be considered in deciding to cease influenza case investigations include the following:

- Epidemiologic profile of the affected community
- Geographic spread of the event
- Number and frequency of cases
- Laboratory capacity
- Need for mass prophylaxis clinics and isolation and/or quarantine measures

Once full case investigations cease, they should be replaced by an enhanced surveillance tracking system, and large-scale response efforts should be initiated.

2.6. Community-Based Containment Measures

Current mathematical modeling suggests a combination of pharmaceutical and non-pharmaceutical interventions as an effective way to slow the spread of illness (reduce the amplitude of the epidemic curve of pandemic influenza). The decision to institute community containment measures, and the nature and scope of these measures, will primarily be based on the CDC determination of Pandemic Severity Index, but may also be based on the following factors: number of cases, characteristics of disease transmission (i.e., incidence rate, number of generations), types of exposure categories (i.e., travel-related, close contact, health care personnel, unlinked transmission), morbidity and mortality rates, community compliance, and the availability of local health care and public health resources. In addition, further consideration will need to take into account the expected benefit of the intervention, the feasibility of successful implementation, the direct and indirect costs associated, and the potential consequences on critical infrastructure, health care delivery and society.

Decision-makers will need to look for certain triggers as they assess whether or not to implement any of the interventions outlined in this plan. CDC currently recommends the primary trigger as the “arrival and transmission of pandemic virus,” defined by laboratory-confirmation of a cluster and evidence of community transmission (*Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States—Early, Targeted, Layered Use of Nonpharmaceutical Interventions*, February 2007). Additional factors for determining when interventions should be implemented include: number of cases, how the disease is transmitted (i.e., contact, droplet, airborne), types of exposure categories (i.e., travel-related, close contact, health care personnel, unlinked

transmission), morbidity and mortality rates (i.e. illness and death rates), community compliance, and the availability of local health care and public health resources. NH DHHS will closely monitor CDC recommendations as they are updated, and will utilize the methods described in the section 1.5 “Risk Communications and Public Education” and section 2.2 “Communications” to ensure that the public is aware of any and all implemented interventions.

At the start of the pandemic, community containment efforts will be more focused and targeted to specific groups, but as there becomes sustained transmission, interventions will expand to community-wide measures. These interventions are summarized with suggested timing in Table 7. For PSI Category 1, the only CDC-recommended intervention is the isolation of cases. Therefore, this category is excluded from Table 7. Similarly, USG Stages 1 and 2 consist of suspect and confirmed cases, respectively, overseas, which are not an indication for implementing community containment measures in the US on a state level; therefore, USG Stages 1 and 2 are also not included in Table 7.

Though some interventions are individual in nature, they may affect communities by calling for support or influencing disease transmission in community settings. The decision to implement these interventions will be made by a variety of individuals, and may include the Governor, State Commissioners, Superintendents, and Health Officers. These individuals may also assign a designee as appropriate. Who authorizes these decisions is dependent on current NH State law.

Table 7. Timing of Community Containment Interventions

Intervention	USG Stages[†] 3 & 4; PSI Categories 2 & 3	USG Stage 5; PSI Categories 4 & 5	Additional Comments/ Recommendations
Mandatory isolation of cases	Yes	No	Monitoring cases in and enforcement of mandatory isolation will be impractical in USG Stage 5 (PSI 4 & 5) due to overwhelmed demand on supporting agencies that are at decreased capacity. Isolation should be sustained for 7-10 days after onset of illness (will follow current CDC recommendations).
Voluntary isolation of cases	Yes	Yes	Non-hospitalized cases will be encouraged to self-isolate. Isolation should be sustained for 7-10 days after onset of illness (will follow current CDC recommendations).
Mandatory quarantine of household contacts	Yes	No	Monitoring contacts in and enforcement of mandatory quarantine will be impractical in USG Stage 5 (PSI 4 & 5) due to overwhelmed demand on supporting agencies that are at decreased capacity. Quarantine should be sustained for 7 days after the case’s onset of illness (will follow current CDC recommendations).

[†] PSI Category 1 and USG Stages 1 and 2 are excluded from Table 7 because the pandemic severity and situation at these levels do not merit implementation of community containment measures in the US. Isolation of cases is the only recommended non-pharmaceutical intervention at PSI Category 1.

Table 7. continued

Intervention	USG Stages 3 & 4; PSI Categories 2 & 3	USG Stage 5; PSI Categories 4 & 5	Additional Comments/ Recommendations
Voluntary quarantine of household contacts	Yes	Yes	This will be recommended to the general public but current capacity will not allow for enforcement of quarantine during a pandemic. Quarantine should be sustained for 7 days after the case's onset of illness (will follow current CDC recommendations).
Work quarantine			Work quarantine may be necessary for individuals who have been exposed to a case(s) but are essential to maintaining societal infrastructure. When in work quarantine the individual should only leave the home or place of quarantine for work purposes, and only when it is determined that risk of transmission can be mitigated by use of appropriate PPE.
<ul style="list-style-type: none"> Health Care Personnel (HCP) with direct patient contact 	No	Yes	It is likely that HCPs will be in short supply but high demand, and therefore, they may be requested to undergo work quarantine.
<ul style="list-style-type: none"> Other essential service providers with high-risk contact potential (e.g., electricians, gas delivery workers) 	No	Consider	There are individuals outside of health care who are essential for maintaining infrastructure. As demand increases for these individuals because of a decrease in supply, they may be requested to undergo work quarantine if identified as exposed contacts.
<ul style="list-style-type: none"> Business-critical personnel 	No	As determined by business Continuity of Operations Plans (COOP)	To maintain economical infrastructure, there may be instances in which business-critical individuals are requested to undergo work quarantine if identified as exposed contacts. Determining who is business-critical will be at the discretion of the business' COOP.
Mass Vaccination	Yes	Yes	Recommendation will depend on availability of vaccine.
Antiviral treatment of cases	Yes	Yes	Recommendation will depend on availability and efficacy of antiviral medications.

Table 7. continued

Intervention	USG Stages 3 & 4; PSI Categories 2 & 3	USG Stage 5; PSI Categories 4 & 5	Additional Comments/ Recommendations
Antiviral prophylaxis of asymptomatic contacts	According to priority groups only	Yes	Priority group determination will be based on CDC recommendations. In the absence of a CDC recommendation, the NH DHHS will provide guidance. Decision to use antivirals will depend on availability and efficacy of the medications as well as capacity to identify and dispense them to contacts.
Respiratory hygiene/ cough etiquette	Yes	Yes	Maintain basic measures (i.e., cover your cough campaigns) throughout pandemic
Mask/facial covering [‡] use			NH DHHS will follow current CDC recommendations regarding mask use (see section 2.4.Case Investigation).
<ul style="list-style-type: none"> Mask/facial covering use by confirmed cases 	Yes	Yes	To be used when within three feet of others
<ul style="list-style-type: none"> Mask/facial covering use by HCPs 	As recommended	As recommended	NH DHHS will continue to follow CDC guidelines for mask and respirator use (see section 2.4.Case Investigation).
<ul style="list-style-type: none"> Mask/facial covering use by asymptomatic, exposed contacts 	As recommended	As recommended	Close contacts should maintain 3 feet of social distance when exposure risk to confirmed case is present; if social distance is not possible, consider use of surgical mask or facial covering.
<ul style="list-style-type: none"> Mask/facial covering use by general public 	No	No	At this time, mask use is not recommended for the general public when in public. Consider surgical mask or facial covering when close contact (within 3 feet) with cases is anticipated.
<ul style="list-style-type: none"> Hospital use of airborne infection isolation (AII) 	Yes	No	Hospitals should follow their in-house protocols for airborne precautions. NH DHHS will follow CDC guidelines in recommending airborne isolation of pandemic influenza cases. Early cases will likely require AII until more is learned about modes of transmission of the pandemic influenza virus.
Snow days	No	Yes	A voluntary measure where community is asked to self-quarantine. Order or closure considered below (“Closure of public buildings”).

[‡] Facial covering refers to any article other than a traditional surgical mask or respirator, used as a barrier for nasal and oral passages.

Table 7. continued

Intervention	USG Stages [†] 3 & 4; PSI Categories 2 & 3	USG Stage 5; PSI Categories 4 & 5	Additional Comments/ Recommendations
Self-shielding (Shelter-in-place)	Yes	Yes	Self-shielding is a voluntary, individual response, a self-imposed measure where individuals stay at home so as to separate themselves from infected persons. This differs from voluntary quarantine in that it is not a formal recommendation from public officials.
Restricted access/ closure of specific buildings (gyms, swimming pools)	No	Yes	This is a focused intervention to target specific groups at risk.
Cancellation of public events	No	Consider	During the pandemic, public events may still take place with a broad recommendation not to attend; televised events may be used to encourage compliance of voluntary isolation & quarantine.
Closure of buildings to prevent unnecessary gatherings			To be effective, closure should occur early in pandemic Stage 5 (once virus is spreading throughout US) and be sustained until number of cases begins to decline.
<ul style="list-style-type: none"> Public buildings 	Consider short-term closure (≤ 4 weeks)	Consider prolonged closure (≤ 12 weeks)	In a State of Emergency, the Governor may close public (not privately owned) buildings. Otherwise, the decision to close will be made by Superintendents or appropriate state and local authority, as applicable to current law, with guidance from NH DHHS. Duration reflects current CDC recommendations for school closure; similar recommendations may be applicable to other public buildings.
<ul style="list-style-type: none"> Private buildings/ places of business 	No	Dependent on business	Closure of private businesses will be dependent on that entity's Continuity of Operations Planning; for example, some offices may be able to remain open by maintaining recommended social distance through telecommuting or staggered shift options.
Travel Restrictions	As recommended	As recommended	There are no current recommendations for inter- or intra-state travel restrictions. NH DHHS will follow CDC guidelines in recommending any restrictions.
<ul style="list-style-type: none"> Public transportation 	No	Consider modifications	There is no recommendation to halt public transportation during a pandemic. Modifications to decrease passenger density may be considered

2.6.a. Non-pharmaceutical Interventions

Non-pharmaceutical interventions are interventions that do not include vaccine or antiviral medication. They are designed to reduce the risk of influenza transmission by limiting the potential for social interactions and by implementing broad measures for the public to prevent inadvertent exposures. The non-pharmaceutical interventions to be considered in the response phases of an influenza pandemic are listed in Table 7.

2.6.a.i. Isolation and Quarantine

Isolation and quarantine are different forms of containment used to protect the public from possible exposure to an infectious disease. Isolation is a form of individual containment that is utilized when persons are confirmed to have contracted disease. Quarantine separates asymptomatic individuals who have been exposed to the disease and are not sick. Isolation and quarantine may either be voluntary or legally mandated, as outlined in the protocol described in the *PH EPRP*. Both forms of containment may take place in the home, in a prearranged location, or if clinically applicable, in the hospital setting. Isolation and quarantine may only be useful during the early stages of a pandemic. Neither is intended to be a police action (see section 2.11.a. “Role of Law Enforcement” below). The decision to recommend isolation or quarantine should be initiated by NH DHHS and will be based on the epidemiological characteristics of the virus. The *PH EPRP* describes the legal issues related to isolation & quarantine.

2.6.a.i.1. Isolation Guidelines

Individual Containment

Voluntary home isolation of the sick individual will be significant for influenza containment and reduction in spread of the virus. However, home isolation may not always be feasible. For example, if there is an immunosuppressed person also inhabiting the home, observation in an alternate, non-hospital facility may be necessary. An example of an alternate lodging facility may include a motel room, with a separate entrance to the outside/outdoors, a private bathroom, perhaps a small refrigerator and/or microwave, and communication capabilities to the outside (by telephone). The AHHRs or their individual town representatives should incorporate support for isolated individuals, with regard to adequate food, supplies and care, into their regional planning documents.

Recommendations for isolating cases, which includes influenza cases, in residential settings (homes) and alternate facilities (i.e., motels) are outlined in the *PH EPRP*.

Appropriate personal protective equipment (PPE) to be used when isolating an influenza case includes a surgical mask to be worn by the patient during close contact (less than 3 feet) with uninfected persons to prevent the spread of infectious droplets. If an influenza patient is unable to wear a surgical mask, then household members should wear a surgical mask when interacting with the patient.

Hospital Containment

Influenza cases should be admitted to a health care facility/hospital for the purpose of isolation, especially during early stages of the pandemic, only if their clinical condition warrants, or if isolation in the home or alternate facility cannot be achieved effectively.

If an isolation room is not available for a patient admitted to a health care facility/hospital, the patient should be placed in a room with a patient(s) with suspected or confirmed influenza (i.e., cohorting). When a private room is not available and cohorting is not possible, a spatial separation of at least 3 feet should be maintained between the infected patient and other patients or visitors.

Cohorting patients may be difficult to accomplish in many hospitals, and facilities need to develop plans based on their individual resources (personnel, facility design, etc.). The strain of influenza should be considered when cohorting, meaning when possible, individuals with the differing strains should be cohorted separately. The following is CDC’s suggested hierarchical approach:

- When possible, place patients with documented or suspected influenza in a private room

- When the number of patients with influenza exceeds the available private rooms, try to place influenza cases together in multi-bed rooms or wards
- When patients with and without influenza must be placed in a room together, try to avoid including uninfected patients most susceptible to influenza complications
- Minimize the number of staff having contact with infected patient(s) by assigning influenza patient(s) to a single or small group of health care personnel, who have been vaccinated and/or are taking antiviral medications for prophylaxis (if medications available and appropriate)
- When numerous cases are identified, consider placing all patients with documented or suspected influenza in one designated unit or ward and assign vaccinated health care personnel to work in the designated influenza cohort unit

2.6.a.i.2. Quarantine Guidelines

Instances in which an individual, small groups, or communities may be quarantined because of their exposure to a sick individual are outlined in the *PH EPRP*. Also outlined are the minimum criteria and guidelines for each type of quarantine, which may include home quarantine, quarantine in designated facilities, and work quarantine. Guidelines for these individuals regarding how to monitor themselves for signs of illness are included in Appendix 16.

There are no specific precautions needed for household members of contacts who are quarantined to their home, as long as the person under quarantine remains asymptomatic. Household members of quarantined individuals can go to school, work, etc., without restrictions. However, if the contact develops symptoms, then s/he should immediately notify medical/public health authorities to obtain a medical evaluation, then at that point, household members should remain at home. NH DHHS should be contacted for further instructions.

2.6.b. Pharmaceutical Interventions

Pharmaceutical based community containment measures for an influenza pandemic include vaccination, prophylaxis, and pharmaceutical stockpiles. The CDCS will follow the guidelines outlined in the *State of New Hampshire Antiviral Distribution Plan* for distributing antivirals on a case-by-case basis during the early stages of a pandemic (See Appendix 15, *New Hampshire Pandemic Influenza Antiviral Distribution Plan*).

2.6.b.i. Mass Immunization, Prophylaxis and Pharmaceutical Stockpiles

The CDCS will follow the guidelines outlined in the State's *Point of Dispensing Standard Operating Guide* for implementing a large-scale prophylaxis response to an influenza pandemic (see *Point of Dispensing Standard Operating Guide Annex* located on e-studio). Vaccine and prophylaxis can be requested through the Strategic National Stockpile (SNS). The CDCS will follow the requisition process defined in the *NH Strategic National Stockpile Deployment & Management* document located in the *NH EOP, ESF-8 (Health & Medical Services), Annex #1*. The following is a summary of activities involving immunization during the response phase of an influenza pandemic:

2.6.b.i.1. Activities for Health Care Providers and Facilities

- Continue activities initiated in previous phases

2.6.b.i.2. Activities for State Agencies

- The Director of the Division of Public Health Services (DPHS), working with the Department of Safety, Bureau of Homeland Security and Emergency Management, will ensure that human resources are in place to provide guidance and technical assistance to AHHR partners. Funds for costs incurred will be requested from the federal government in a declared emergency.
- HSEM will coordinate planned activities with bordering jurisdictions

- IP and HSEM will alert relevant agencies and partner groups to the emerging situation and ask them to review vaccine delivery protocols and procedures
- DHHS Commissioner will fully activate the immunization plan
- IP will obtain vaccine as it becomes available, using available federal or state funding
- IP and HSEM will coordinate receipt and distribution of clinic supplies AHHRs may need to procure supplies initially
- IP and CDCS will continue to provide technical assistance to AHHR partners, including local health departments
- CDECC will be convened on an emergency basis, as needed, to assist with recommendations and policy development
- DHHS Commissioner will recommend the activation of the State Emergency Operations Center (EOC). If the State EOC is not activated, the Commissioner will request the activation of ESF-13, Law Enforcement and Security, under the State EOP to assist in protecting and deploying the vaccine and those who administer it, if it is believed that the supply of vaccine is at risk.

2.6.b.i.3. Activities for Regional Planners

- Through the Regional Coordinating Committee (RCC) and upon DHHS or EOC request, activate regional public health emergency operations plans.
- Through the RCC and upon DHHS or EOC request, activate PODs based on recommendations from DPHS and in accordance with previously developed POD plans.
- Through the RCC and upon DHHS or EOC request, activate the AHHR communications plan to ensure the public is informed about POD operations and populations eligible for vaccination.
- Participate in briefings held by state agencies to ensure AHHR activities are consistent with state guidance and recommendations and state agencies have knowledge of AHHR operations and needs.

2.7. Security and Crowd Control

Due to the potential for mass immunization, quarantine, and/or isolation efforts in the event of an influenza pandemic, security and crowd control will play an integral part in the efficacy of response activities (See the New Hampshire Point of Dispensing (POD) Site Guide at <http://www.dhhs.state.nh.us/DHHS/CDCS/LIBRARY/Policy-Guideline/dphs-health-emergency-plan.htm>).

If the pandemic is not a declared state of emergency, the security and crowd control will be coordinated with HSEM, state police, sheriff departments and local police. If it is a declared state of emergency, the security and crowd control will be coordinated by ESF-13 and the National Guard (See State Emergency Operations Plan, ESF-13 at <http://www.nh.gov/safety/divisions/bem/stateemergplan/index.html>).

2.8. Mass Care

Mass care refers to those actions taken to protect evacuees and other victims from the effects of any emergency. In the case of influenza pandemic, these actions may include providing temporary shelter, food, clothing, and other needs to those displaced from their homes due to the pandemic (See *PH EPRP*).

The American Red Cross (ARC) independently provides mass care to all disaster victims as part of a broad program of disaster relief, as outlined in charter provisions enacted by the United States Congress, Act of January 5, 1905, and the Disaster Relief Act of 1974 (P.L. 93-288 as amended by the Stafford Act of 1988). ARC also assumes co-primary agency responsibility under the Federal Response Plan.

In concert with the Congressional Charter and in recognition of its Federal Response Plan role, and through the provisions of the current Statement of Understanding between ARC and the State of New

Hampshire, the State of New Hampshire has requested the American Red Cross to fulfill the responsibility of primary agency, managing the sheltering, feeding and emergency first aid activities of ESF-6 (Mass Care and Shelter) at the State level (See the State Emergency Operations Plan, ESF-6 at <http://www.nh.gov/safety/divisions/bem/stateemergplan/index.html>). State agencies have been designated to support the ESF-6 mission. Resources from the Voluntary Organization Active in Disaster (VOAD) and the private sector will also be applied to the response effort.

2.9. Medical Surge

The State of New Hampshire Medical Surge Guideline describes the medical surge capacity and capability and provides guidance for medical surge planning in New Hampshire. The intent of the plan is to be prepared for emergencies that generate victims requiring medical treatment that surpass the normal resource capacity and/or capabilities of NH communities. A widespread and prolonged emergency situation, such as a pandemic influenza will require planning for medical surge. Normal medical capacity and/or capability in New Hampshire would be overwhelmed, and the ability to transfer victims within and out of the State would be extremely limited. This situation requires communities to prepare locally and regionally for medical surge capacity and is therefore addressed in the guideline (See *NH Medical Surge Guideline Annex* in *PH EPRP*).

2.10. Behavioral Health Care

The provision of mental health care is of critical importance, especially in the case of pandemic influenza. The Disaster Behavioral Health Response Team (DBHRT) is a resource team comprised of 600 volunteer behavioral health professionals specializing in the area of mental health and crisis intervention (see *Behavioral Health Response During Public Health Emergencies Plan*, Annex D of *PH EPRP*). DBHRT can be accessed 24 hours a day via Homeland Security and Emergency Management (HSEM) at 271-2231. In mass response activities to influenza, DBHRT will be on-site at facilities such as ACCs and PODs, as capacity allows, managing mental health needs of victims, family members, first responders and volunteers.

2.11. Protection of Public Health Staff

In the event of an influenza pandemic, Public Health staff, and possibly their back-up team, will be required to perform disease control and containment activities. This may involve direct contact with confirmed or suspect pandemic influenza patients through activities such as case investigations or assistance at ACCs. When performing such activities, Public Health staff will follow the guidelines set forth by CDC for HCP. Therefore, all CDCS employees will be trained in precaution methods to limit the likelihood of exposure. Training will be the responsibility of the section, and DPHS will provide CDCS staff with or access to the following personal protective equipment (PPE):

- Fit-tested N-95 Masks
- Latex and/or nitrile gloves
- Gowns
- Protective eye shields

Fit-testing should occur for each individual as soon as possible after hire.

2.12. Role of Law Enforcement

In the event of an influenza pandemic, law enforcement will play a critical role in assisting and maintaining public safety and order. Law enforcement may provide support and assistance to NH DHHS by serving court orders and aiding in the implementation of isolation and quarantine orders. On September 20, 2005, the NH Attorney General sent a memorandum to law enforcement titled "Preparing For The Pandemic; Application of the Communicable Disease Laws (RSA 141-C)," which reviews the role of law enforcement in isolation and quarantine. This memorandum is included as Appendix L in the *PH EPRP*.

Law enforcement is often the first to arrive at a scene, and their safety during a pandemic is paramount. A specific infection control fact sheet is included as an appendix to this plan and can be used in stand-

alone training documents for law enforcement officers (see Appendix 12). The fact sheet addresses appropriate infection control measures to be used not only during a pandemic, but also in a variety of other circumstances.

The CDCS continues to provide training to: police chiefs and field supervisors, State police, correctional facility administrative and medical staff, Superior Court System staff, local emergency planners, fire departments and emergency medical service providers, hospital infection control and legal staff. Training will focus on issues revolving around isolation and quarantine, including not only infection control measures, but also personal protection. Trainings were held at various locations throughout the State during the month of October 2005 and will be held again as needed.

In the case of pandemic influenza, all of the above personnel and any other individual providing care for suspect or known cases should follow enhanced precautions. See Appendix 4 for precaution guidelines. First responders' training and equipment will be coordinated by their home agency (i.e., firefighters by the local Fire Department).

2.13. Mass Fatality Management

The Flu Surge 2.0 model located in the Community Profile of this plan (Introduction, section 7) gives a projection for the most likely scenario of 3,930 deaths in New Hampshire over an 8-week period. Due to the prolonged and widespread nature of an influenza pandemic, HSEM, the NH DHHS, and the Office of the Medical Director are currently developing a mass fatality management guideline. When completed, this guideline will be located in the *PH EPRP* as an annex. This guideline will be applicable to an influenza pandemic as well as any public health emergency.

In the event of an influenza pandemic the HSEM will activate the State of NH Emergency Operations Center and will coordinate the management of the mass fatality event.

2.14. Finance and Accounting

Throughout the State's response to an influenza pandemic, it will be critical for both local and state agencies to track any costs incurred. Finance and accounting is a multi-level action with tracking of expenses performed at the state and local level. Without careful accounting and recording of justified costs and expenses, reimbursement is often difficult. The tracking of these expenses should begin at the outset of the pandemic response. An example of a tracking tool for personnel is included in Appendix 11.

The finance team shall keep the Director of DPHS aware of the authorized budget, log and process transactions, track amounts and secure access to more funding as necessary and feasible. The finance team shall also ensure that all incidents related to personnel time records are accurately maintained for internal staff. The finance team is comprised of two finance administrators for DPHS and one finance administrator for CDCS.

3. RECOVERY PHASE

WHO Phase:	USG Stage:	ERI Alert Matrix Phase:
Post pandemic Period Return to interpandemic period.	<i>Stage 6:</i> Recovery and preparation for subsequent waves	Ready None or sporadic cases only anywhere in the world, but no cases at the local facility.

At this point in the pandemic, staff shortages due to disease, death, staff “burn-out,” and other factors will likely be an issue for health care facilities and offices, public health departments, emergency response organizations, and community service providers.

3.1. Continued Surveillance

With confirmation that the pandemic has ended, activities outlined in the Preparedness Phase (Interpandemic period, Phase 1) should be resumed. This plan should be reviewed by all appropriate parties and revised as necessary, taking into consideration the lessons learned during the previous phases of the pandemic as well as improvement and further developments of surveillance systems, operations and maintenance. Surveillance activities will return to preparedness phase with routine daily monitoring of systems in place aimed at detecting influenza and influenza-like illness. All pandemic systems will be maintained at optimal capability to ensure full functionality in the event of future need.

3.2. Re-entry Considerations and Environmental Surety

NH DPHS will coordinate with the AHHR this process. It can be expected that the local health department and/or NH DPHS will be consulted as re-entry criteria and environmental decontamination begin to be established. However, it is the responsibility of the Department of Environmental Services (DES) to address environmental decontamination.

An environmental contractor usually executes environmental decontamination. In the case of pandemic influenza, environmental surfaces may be decontaminated with ordinary household detergents. Clothing and linens may be laundered with a minimum of warm water and detergent. The CDCS will advise health care facilities, first responders, and others, including the general public, as to the specific decontamination guidelines at the time of the pandemic.

SECTION IV. PLAN MAINTENANCE

1. PLAN EVALUATION AND REVISION PROCEDURES

This plan is a fluid document that continues to grow to meet the needs of the community, and it adapts as those needs change. The ability to adapt to a constantly changing environment and circumstances is a direct function of how well this plan is maintained. Successful plan maintenance will be achieved through regular review, updating, training, and drills & exercises.

1.1. Plan Updating

As positions, assignments and the environment surrounding this plan change, it must be updated to reflect new information. This plan will be updated at such time as may be necessary, and at least annually. Updating of this plan will be preceded by an appraisal of its contents and/or a test or exercise and critique of the plan. Execution of this plan in response to an actual event will be considered a test and will require critique and after action report to be submitted to HSEM. Items related to this plan that are subject to frequent change shall be reviewed annually for possible updating. They include but are not limited to:

- Community and facility notification and alerting lists
- Identity and contact numbers for response personnel/organizations
- Inventories of critical equipment, supplies and other resources
- Memoranda of Understanding / Agreement (MOU / MOA)
- Applicable laws and statutes

It is the responsibility of the State Epidemiologist in coordination with HSEM to ensure this *Influenza Pandemic Public Health Preparedness and Response Plan* is reviewed, updated and approved every year.

1.2. Plan Revision

The following policies apply to the assessment and updating of the plan:

It is the responsibility of the State Epidemiologist and HSEM to coordinate the review and update of this plan. HSEM, whose responsibility it is to update the *PH EPRP* and all of its supporting documents, including this plan, will maintain and store this plan for the State of NH, and DPHS will submit any changes to HSEM.

In conducting the plan review and update, the following agencies that play a role in the execution of this plan will be asked for input and support:

Agency
American Red Cross
Communicable Disease Epidemic Control Committee
Department of Environmental Services (DES)
NH DHHS: <ul style="list-style-type: none">• Division of Public Health Services:<ul style="list-style-type: none">○ Communicable Disease Control Section○ Communicable Disease Surveillance Section○ Immunizations Program○ Community Public Health Development Section○ Public Health Laboratories• Legal Team• Public Information Office• ESF-8 Coordinator• Office of the Medical Director
Department of Safety (DOS): <ul style="list-style-type: none">• Law enforcement personnel• NH Homeland Security & Emergency Management• Division of Fire Standards & Training and EMS
Mass Prophylaxis Ethics Committee

HSEM shall serve as the office of record for the *PH EPRP* and its supporting materials, including this plan. This office shall maintain files relative to the planning effort and shall keep an inventory of emergency public information and other planning and training materials.

As changes are made, dated and approved, the relevant changed pages will be posted.

HSEM shall maintain a list of plan holders to ensure all parties receive appropriate changes.

2. DRILLS AND EXERCISES

The NH DPHS will participate in both internal and external emergency response drills and exercises used to test the effectiveness and readiness of the *PH EPRP* and this plan. The *PH EPRP* lists the different types of exercises that can be developed and executed to test emergency response plans, and in this case that which involves influenza pandemic. Both State and local officials have been attending orientations, discussions, and tabletop exercises regarding influenza pandemic. The first statewide pandemic influenza drill took place in November of 2005, and it tested a variety of issues relating to a pandemic. Examples of these issues include mass immunization, PHL specimen testing capacity, CDSS systems, and CDCS case investigation threshold. Following the drill, an after action review was performed and will be used in planning future exercises and drills. Another set of exercises will be held in early 2007 (January & February), and they will focus on community containment strategies such as school closures.

APPENDIX 1: DEFINITIONS

An **antiviral** medication destroys or inhibits the growth and reproduction of viruses.

A **confirmed case** of influenza disease is a person with influenza-like illness and with laboratory-confirmed influenza virus infection. However, a diagnosis of influenza is usually made on a clinical basis, particularly if influenza has been reported in the community.

A **contact** is a person who has been exposed to an influenza case during the infectious period. A **close contact** is a person who has cared for or lived with someone with influenza or had direct contact with respiratory secretions or body fluids of a patient with influenza. Examples of close contact include kissing or hugging, sharing eating or drinking utensils, talking to someone face to face within 3 feet for greater than 15 minutes, and touching someone directly. Close contact does not include activities such as walking by a person or sitting across a person in a waiting room or office for a brief time.

Health care personnel refers to any employee who has close contact within 3 feet of patients, patient-care areas (i.e., patient rooms, procedure areas), or patient-care items (i.e., linens and other waste).

The **incubation period** is the time from exposure to an infectious disease to symptom onset. The incubation period for influenza is usually two days, but can vary from one to five days.

Infection control measures decrease the risk for transmission of infectious agents through proper hand hygiene, scrupulous work practices, and use of PPE (masks, gloves, gowns, and eye protection). The types of infection control measures are based on how an infectious agent is transmitted and include standard, contact, droplet, and airborne precautions (http://www.cdc.gov/ncidod/dhqp/gl_isolation.html). The recommendations for seasonal influenza are standard, contact, and droplet precautions, while for pandemic influenza precautions may be enhanced.

- **Standard precautions** are work practices required for the basic level of infection control. They center on proper hand hygiene and include use of PPE to serve as protective barriers and appropriate handling of clinical waste.
- **Contact precautions** are work practices designed to reduce the risk of transmitting infectious agents by direct or indirect contact with an infectious person. Direct contact transmission involves a direct body surface-to-body surface contact and physical transfer of infectious agents between an infected person and a susceptible host. Indirect-contact transmission involves contact of a susceptible host with a contaminated intermediate object, such as contaminated instruments or dressings, or contaminated hands that are not washed or gloves that are not changed between patients. Contact precautions may also include the use of PPE (gloves, gown, surgical mask, goggles or face shield) to reduce the spread of infectious agents.
- **Droplet precautions** are designed to reduce the risk of droplet transmission of infectious agents. Droplet transmission occurs when droplets containing infectious agents generated by an infectious person are propelled a short distance through the air (i.e., by coughing, sneezing, or talking) and deposited on the conjunctivae or mucous membranes of the mouth or nose of a susceptible person. Droplet precautions include the use of PPE (gloves, gown, surgical or other mask, and goggles or face shield) to reduce the spread of infectious agents.
- **Airborne precautions** include the placement of the case in an airborne isolation room (AIR) with negative air pressure and the use of N-95 fit-tested [or other National Institute of Occupational Safety and Health (NIOSH) approved] respirator by individuals entering the room. Airborne transmission occurs when disease particles <5µm in size are released in the air by an infectious person and then persist in the environment long enough to transmit to other individuals in that environment.
- **Enhanced precautions** are enhanced work practices designed to reduce the transmission of infectious agents by any direct & indirect contact, droplet, and also by airborne transmission. They include standard precautions plus additional measures taken to prevent airborne transmission (see Airborne precautions).

Influenza-like illness (ILI) is defined as 1) a fever $\geq 100.4^{\circ}\text{F}$ and 2) cough and/or sore throat in the absence of a known cause.

An **influenza pandemic** is a worldwide outbreak of a novel influenza virus causing sudden, pervasive illness in all age groups, and can severely impact even otherwise healthy individuals. Influenza pandemics occur infrequently and at irregular intervals and have the potential for substantial impact resulting in increased morbidity and mortality, significant social disruption, and severe economic costs.

Isolation and quarantine are standard practices in public health, and both aim to control exposure to infected or potentially infected persons. Both may be used voluntarily or compelled by public health authorities and can be applied on an individual or population level.

- **Isolation** refers to the separation of persons with a specific contagious illness from contact with susceptible persons and the restriction of their movement to contain the spread of that illness. Isolation usually occurs in a hospital but can be in a home or dedicated isolation facility.
- **Quarantine** refers to the separation and restriction of movement of well persons who may have been exposed to an infectious agent and may be infected but are not yet ill. Quarantine usually occurs in the home but can be in a dedicated facility or hospital. The term “quarantine” can also be applied to restrictions of movement into or out of buildings, other structures, and public conveyances. States generally have authority to invoke and enforce quarantine within their jurisdictions, although quarantine laws vary among states. The CDC is also empowered to detain, medically examine, or conditionally release persons suspected of carrying certain communicable diseases at points of arrival in and departure from the United States or across state lines.
 - **Work quarantine** – In the event that quarantine is used as an occupational exposure management tool, some health care personnel (HCPs) may need to continue working to ensure sufficient staffing levels. Appropriate measures should be developed for HCPs to comply with quarantine orders and to continue working at the health care facility. Limitations on alternative employment will be needed.

Nosocomial refers to a health care setting, such as a hospital or clinic. Typically, nosocomial transmission refers to spread of an infectious disease from a patient in a health care setting or from a health care personnel to another patient, worker, or visitor in the same setting.

An **outbreak** is a sudden increase in the number of cases of a specific disease or clinical symptom.

Personal protective equipment (PPE) is barrier protection to be used by an individual to prevent disease transmission. PPE may include gowns, gloves, masks, goggles, or face shields. The type of mask (i.e., surgical, N95, or powered, air-purified respirator) is disease-specific and defined in the type of precautions.

Prophylaxis is the prevention of or protective treatment for a disease.

Respiratory hygiene and cough etiquette refers to the institution of public health measures to avert the transmission of influenza and/or other infectious diseases. The specific measures are listed in Appendix 2.

APPENDIX 2: GUIDELINES FOR RESPIRATORY HYGIENE AND COUGH ETIQUETTE

Institution of public health measures for universal respiratory hygiene and cough etiquette will avert influenza and other infectious disease transmission. Key features of this campaign include:

- Provide surgical masks to all patients with symptoms of a respiratory illness; provide instructions on the proper use and disposal of masks
- For patients who cannot wear a surgical mask, provide tissues and instructions on when to use them (i.e., when coughing, sneezing, or controlling nasal secretions), how and where to dispose of them, and the importance of hand hygiene after handling this material
- Provide hand hygiene materials in waiting room areas and encourage patients with respiratory symptoms to perform hand hygiene
- Designate an area in waiting rooms where patients with respiratory symptoms can be segregated (ideally by at least 3 feet) from other patients who do not have respiratory symptoms
- Place patients with respiratory symptoms in a private room or cubicle as soon as possible for further evaluation
- Implement use of surgical or procedure masks by health care personnel during the evaluation of patients with respiratory symptoms
- Consider the installation of Plexiglas barriers at the point of triage or registration to protect health care personnel from contact with respiratory droplets
- If no barriers are present, instruct registration and triage staff to remain at least 3 feet from unmasked patients and to consider wearing surgical masks during respiratory infection season
- Continue to use droplet precautions to manage patients with respiratory symptoms until it is determined that the cause of symptoms is not an infectious agent that requires precautions beyond standard precautions

Posters to promote hand hygiene, as well as respiratory hygiene and cough etiquette will be available on the NH DHHS website at <http://www.dhhs.nh.gov>. See Appendix 6 for a preview of these posters.

APPENDIX 3: COMMUNICABLE DISEASE INVESTIGATION REPORT FORM

COMMUNICABLE DISEASE INVESTIGATION REPORT v02/05
 New Hampshire Communicable Disease Control and Surveillance Section

YEAR _____
NETSS ID _____
QA checked by _____

DISEASE: _____ REPORT DATE _____

Patient's Name _____

Date of Birth _____ Age _____ Male Female

Address _____

City/Town _____ County _____ State _____ Zip _____

Home Phone _____ Work Phone _____

Occupation/Employment _____

Does patient know of diagnosis? NO YES

If reporting a Vaccine Preventable Disease, please indicate if patient was previously vaccinated for this infection:
 NO YES: Date(s) Administered _____

Date of onset _____ Treatment _____

Diagnosis date _____ Date _____

Date of test _____ Drug _____

Type of test _____ Dosage _____

TB (PPD) mm _____

Chest Xray? NO YES -> Date _____ Results: Normal Abnormal

Reporting source _____ Phone _____

Facility _____ City _____

Health Care Provider _____ Phone _____

Initial report taken by _____ Date _____

Assigned / Faxed to (PHN) _____ Date _____

Completed by (PHN) _____ Date _____

Race

- White
- Black
- Asian /Pacific Islander
- Native Am./Alaskan Native
- Other
- Unknown

Ethnicity

- Hispanic
- Not Hispanic

Miscellaneous Information

(check all that apply)

- Refugee
- Pregnant
- Health Care Worker
- Nursing Home Resident / Worker
- Day Care Child / Worker
- Food Service Worker
- Deceased
- Hospitalized (where?) _____

Outbreak Associated

- 1. Yes
- 2. No
- 3. Unknown

Imported

- 1. Acquired in NH
- 2. Acquired outside the US
- 3. Acquired in another state
- 4. Unknown

Case Status

- 1. Confirmed (meets CDC case definitions)
- 2. Probable (meets CDC case definitions)
- Not a case
- Carrier
- Unknown / Lost to follow up
- Out of State

NOTES:

APPENDIX 4: ENHANCED PRECAUTIONS & INFECTION CONTROL MEASURES

Standard Precautions
+
Contact Precautions
Droplet Precautions
Airborne Infection Isolation

Contact: For patients known or suspected to have illnesses transmitted by direct or indirect patient contact

- Private room preferred
- Gloves
- Gowns
- Hand washing with antimicrobial agent

Droplet: For prevention of transmission of disease in particles >5 microns in size, which may travel short distances (≤ 3 feet) from known or suspected patients with illness

- *Contact Precautions plus:*
- Mask within 3 feet of patient:
 - Should be worn once and then discarded; however, if patients are cohorted and multiple patients need to be seen within cohort, it may be practical to wear for the duration of the activity.
 - Change when becomes moist
 - Do not leave around neck
 - Perform hand hygiene after touching mask.
- Wear goggles/face shield when spray or splatter of infectious material can be anticipated

Airborne: For prevention of transmission from particles <5 microns, which may remain suspended in the air for long periods of time

- *Contact & Droplet Precautions plus:*
- Negative pressure ventilation
- Minimum of 6 air exchanges/hour
- Use a **fit-tested** respirator, NIOSH approved N-95 (or greater) filtering facepiece (i.e. disposable) respirator



Influenza

What is influenza (the flu)?

Influenza, commonly called “the flu,” is caused by the influenza virus, which infects the respiratory tract (nose, throat, lungs). The flu usually spreads from person to person when an infected person coughs, sneezes, or talks and the virus is sent into the air. The flu is more likely than other viral respiratory infections, such as the common cold, to cause severe illness and life-threatening complications.

What are the symptoms of the flu?

Symptoms of flu include fever, headache, extreme tiredness, dry cough, sore throat, runny nose, and muscle aches. Children can have additional gastrointestinal symptoms, such as nausea, vomiting, and diarrhea, but these symptoms are uncommon in adults. Although the term “stomach flu” is sometimes used to describe vomiting, nausea, or diarrhea, these illnesses are caused by certain other viruses, bacteria, or possibly parasites, and are rarely related to influenza.

Does the flu have complications?

Yes. Some of the complications caused by flu include predisposition to bacterial pneumonia, dehydration, and worsening of chronic medical conditions, such as congestive heart failure, asthma, or diabetes. Children may have sinus problems and ear infections as complications. Those aged 65 years and older and persons of any age with chronic medical conditions are at highest risk for serious complications of flu.

How do I find out if I have the flu?

It is very difficult to distinguish the flu from other viral or bacterial causes of respiratory illnesses on the basis of symptoms alone. A test can confirm that an illness is influenza if the patient is tested within the first two to three days after symptoms begin. In addition, a doctor’s examination may

be needed to determine whether someone has a complication from influenza.

How soon will I get sick if I am exposed to the flu?

The time from when a person is exposed to flu virus to when symptoms begin is about one to four days, with an average of about two days.

How long is someone who has the flu contagious?

Persons are infectious usually from one day prior to becoming sick to about 5 days after they first develop symptoms. Children may be contagious longer, and some are infectious for 6 days after they become ill.

What can I do to protect myself against the flu?

By far, the single best way to prevent the flu is for individuals, especially persons at high risk for serious complications from the flu, to get the flu vaccine each fall. In the absence of a flu shot, there are still many things people can and should be doing to avoid catching the flu:

- Wash your hands frequently with soap and water, especially before touching food, after using the bathroom, and after changing diapers
- Use an antibacterial hand gel for the times you cannot wash your hands with soap and water
- Use a tissue to cover your nose and mouth when you cough or sneeze, throw away the tissue, then wash your hands
- Stay home from work or school if you have flu-like symptoms until 48 hours after the symptoms stop
- As much as possible, stay away from people who have flu-like symptoms
- Eat right, exercise, and get plenty of sleep
- Wash frequently touched objects, such as door

handles, kitchen and bathroom surfaces, and phone receivers, with a household disinfectant

- Avoid sharing utensils, such as cups and spoons

Can the flu shot give you the flu?

No. The licensed injectable flu vaccine used in the United States, which is made from inactivated or killed flu viruses, cannot cause the flu and does not cause flu illness.

Can antiviral medications cure the flu?

When started within the first two days of illness, an antiviral medication can reduce the duration of the flu but cannot cure it outright. All antiviral medications must be prescribed by a doctor. These medications are effective against flu viruses, but they are not effective against other viruses or bacteria that can cause symptoms similar to influenza. They also are not effective for treating bacterial infections that can occur as complications of influenza. Antibiotics will not help against the flu because they only work against bacteria and the flu is caused by a virus.

When is the flu season in the United States?

In the United States, the peak of flu season generally occurs anywhere from late December through March. The health impact (infections and deaths) of a flu season varies from year to year. The Centers for Disease Control and Prevention monitors circulating flu viruses and their related disease activity and provides influenza reports each week

from October through May. Influenza is also monitored in New Hampshire by reports from health care providers, long-term care facilities, and schools, and by reports of flu culture test results from the Public Health Laboratories.

Do other respiratory viruses circulate during the flu season?

In addition to the flu virus, several other respiratory viruses also can circulate during the flu season and can cause symptoms and illness similar to those seen with flu infection. These non-flu viruses include rhinovirus (one cause of the “common cold”) and respiratory syncytial virus (RSV), which is the most common cause of severe respiratory illness in young children as well as a leading cause of death from respiratory illness in those aged 65 years and older.

For more information about this year’s flu season, call the New Hampshire Department of Health and Human Services flu information line at 1-866-273-6453. For further information about influenza and the flu season, refer to the Centers for Disease Control and Prevention website at www.cdc.gov or the New Hampshire Department of Health and Human Services website at www.dhhs.nh.gov.

Avian Influenza

What is avian influenza (bird flu)?

Avian influenza is caused by a virus that exists naturally in wild birds. Wild birds usually do not become sick, but they carry the virus and can pass it on to non-wild birds, such as chickens, turkeys, and ducks (fowl), which can become very sick and die.

How is the disease spread?

Certain water birds act as hosts to influenza viruses by carrying the virus in their intestines and shedding it in bodily fluids, such as saliva, nasal secretions, and feces. Other birds are infected when they come in contact with these fluids. Humans can become infected through contact with infected poultry or these contaminated fluids.

Do bird flu viruses infect people?

Bird flu viruses do not generally infect people, but there have been several instances of human infection from bird flu viruses since the first reported case in 1997. There are many different types, and only a few of them can make people sick, including the H5N1 strain recently seen in Asia.

What are the symptoms of avian influenza in people?

The reported symptoms of avian influenza in humans have ranged from typical influenza-like symptoms (e.g., fever, cough, sore throat, and muscle aches) to eye infections, pneumonia, acute respiratory distress, viral pneumonia, and other severe and life-threatening complications. The symptoms

may depend on which virus caused the infection.

Is there a test for avian influenza?

The Centers for Disease Control and Prevention (CDC) has the capability to test for many avian influenza viruses.

What is done to stop an infection among birds once it happens?

All infected birds and those in the same flocks with them should be killed. People who work with infected chickens, and other fowl should be vaccinated against human influenza. The transportation of chickens, turkeys, and ducks and their export should be stopped in the affected regions. Disinfectant also kills the virus and should be used in contaminated areas such as chicken pens.

Is it safe to eat chicken or turkey?

Yes. General precautions should always be taken when handling any raw meat, including fowl, to avoid possibly spreading germs. These measures include washing hands and surfaces before and after food preparation; avoiding using the same utensils on raw meat as on other foods, even cooked meat; and cooking raw meat thoroughly. The same steps should be taken when handling raw eggs too.

How is bird flu in humans treated?

An avian influenza vaccine is being developed and tested for use in humans. Some studies have shown that antiviral prescription medications approved for human influenza

strains may have some effect on avian influenza.

What is the bird flu that has recently been reported in Asia?

Outbreaks of avian influenza (type H5N1) occurred among poultry in eight countries in Asia during late 2003 and early 2004. At that time, millions of birds in the infected countries were killed to try to control the outbreak. The outbreak began again in late June 2004 and is still ongoing. There have also been reported human cases and some deaths in several countries in Asia.

What is the risk in the U.S. to people from the H5N1 virus in Asia?

The H5N1 virus does not usually infect humans. There have been some cases of people becoming sick in Asia, but because all influenza viruses have the ability to change, scientists are concerned that the H5N1 virus could one day be able to easily infect people and spread from person to person. If this happens and the influenza spreads around the world it would be called a pandemic.

What should I be doing?

There are several things people can do as precautionary measures, including:

- Practice good hygiene, especially frequent hand washing, covering your mouth when you cough or sneeze, and then washing your hands again
- The CDC advises that if you are planning to travel to countries in Asia with known outbreaks of H5N1 influenza, avoid poultry farms, contact with animals in live food markets, and any surfaces that appear to be contaminated with feces from poultry or other animals
- Listen to the news and stay informed if there is an outbreak

- If you are sick, stay home from work or school; consult your health care provider if symptoms persist or are severe.

For specific concerns or questions about avian influenza, call the New Hampshire Department of Health and Human Services, Communicable Disease Control Section at 603-271-4496 or 800-852-3345 x4496. For further information, refer to the Centers for Disease Control and Prevention website at www.cdc.gov, the World Health Organization website at www.who.int, or the New Hampshire Department of Health and Human Services website at www.dhhs.nh.gov.

Avian Influenza and Safe Poultry Cooking

H5N1 avian influenza is a disease found in poultry and wild birds. While there have been cases of human illness reported due to H5N1, according to the World Health Organization, no evidence indicates that anyone has become infected following the consumption of properly cooked poultry or poultry products, even when these foods were contaminated with the H5N1 virus.

Poultry (such as chicken, duck, turkey, and pheasant) and poultry products (such as eggs and foods made from eggs) will be safe to eat if good hygienic practices and proper cooking methods are used. The following safety steps should always be taken when handling and cooking fowl and egg products to protect consumers from avian influenza and other foodborne illnesses, such as salmonella.

- All parts of the chicken (or other fowl) need to be fully cooked to a temperature of 165°F (with no “pink” parts) – this temperature will kill the H5N1 virus as well as other illnesses.
- Make sure eggs are fully cooked so that the yolks are not runny or liquid.
- Keep raw meat separate from cooked or ready-to-eat foods, such as lettuce or fruit. Do not use the same knife, utensils, or cutting board for raw meat and ready-to-eat foods.
- Wash hands thoroughly with soap and warm water in between handling raw and ready-to-eat foods.
- Never place cooked meat back on the plate or surface it was on before cooking.
- Soft-boiled or raw eggs should not be used in food that will not be cooked.
- Clean and thoroughly wash hands with soap and warm water after handling frozen or raw poultry and eggs.
- Thoroughly clean all surfaces and utensils that have been in contact with raw meat and eggs before using them again. Wash cutting boards with hot, soapy water, then sanitize with a solution of 1 teaspoon of chlorine bleach mixed into 1 quart of water.

For specific concerns about avian flu and safe food handling, call the New Hampshire Department of Health and Human Services, Food Protection Section at 603-271-4589 or 800-852-3345 x4589. For further information, refer to the Centers for Disease Control and Prevention website at www.cdc.gov or the New Hampshire Department of Health and Human Services website at www.dhhs.nh.gov.

INACTIVATED INFLUENZA VACCINE

WHAT YOU NEED TO KNOW

1 Why get vaccinated?

Influenza (“flu”) is a very contagious disease.

It is caused by the influenza virus, which spreads from infected persons to the nose or throat of others.

Other illnesses can have the same symptoms and are often mistaken for influenza. But only an illness caused by the influenza virus is really influenza.

Anyone can get influenza. For most people, it lasts only a few days. It can cause:

- fever
- sore throat
- chills
- fatigue
- cough
- headache
- muscle aches

Some people get much sicker. Influenza can lead to pneumonia and can be dangerous for people with heart or breathing conditions. It can cause high fever and seizures in children. Influenza kills about 36,000 people each year in the United States, mostly among the elderly.

Influenza vaccine can prevent influenza.

2 Inactivated Influenza vaccine

There are two types of influenza vaccine:

An **inactivated** (killed) vaccine, given as a shot, has been used in the United States for many years.

A **live**, weakened vaccine was licensed in 2003. It is sprayed into the nostrils. *This vaccine is described in a separate Vaccine Information Statement.*

Influenza viruses are constantly changing. Therefore, influenza vaccines are updated every year, and an annual vaccination is recommended.

For most people influenza vaccine prevents serious illness caused by the influenza virus. It will *not* prevent “influenza-like” illnesses caused by other viruses.

It takes about 2 weeks for protection to develop after the shot, and protection can last up to a year.

Inactivated influenza vaccine may be given at the same time as other vaccines, including pneumococcal vaccine.

Some inactivated influenza vaccine contains thimerosal, a preservative that contains mercury. Some people believe thimerosal may be related to developmental problems in children. In 2004 the Institute of Medicine published a report concluding that, based on scientific studies, there is no evidence of such a relationship. If you are concerned about thimerosal, ask your doctor about thimerosal-free influenza vaccine.

3 Who should get inactivated influenza vaccine?

Influenza vaccine can be given to people 6 months of age and older. It is recommended for **people who are at risk of serious influenza or its complications**, and for **people who can spread influenza to those at high risk** (including all household members):

People at high risk for complications from influenza:

- **All children** 6-23 months of age.
- **People 65 years of age and older.**
- Residents of **long-term care facilities** housing persons with chronic medical conditions.
- People who have **long-term health problems** with:
 - heart disease
 - kidney disease
 - lung disease
 - metabolic disease, such as diabetes
 - asthma
 - anemia, and other blood disorders
- People with certain conditions (such as **neuromuscular disorders**) that can cause breathing problems.
- People with a **weakened immune system** due to:
 - HIV/AIDS or other diseases affecting the immune system
 - long-term treatment with drugs such as steroids
 - cancer treatment with x-rays or drugs
- People 6 months to 18 years of age on **long-term aspirin treatment** (these people could develop Reye Syndrome if they got influenza).
- Women who will be **pregnant** during influenza season.

People who can spread influenza to those at high risk:

- **Household contacts and out-of-home caretakers** of infants from 0-23 months of age.
- Physicians, nurses, family members, or anyone else in **close contact with people at risk** of serious influenza.

Influenza vaccine is also recommended for adults 50-64 years of age and anyone else who wants to **reduce their chance of catching influenza.**

An annual flu shot should be *considered* for:

- People who provide **essential community services.**
- People living in **dormitories** or under other crowded conditions, to prevent outbreaks.
- People at high risk of influenza complications who **travel** to the Southern hemisphere between April and September, or to the tropics or in organized tourist groups at any time.

4**When should I get influenza vaccine?**

The best time to get influenza vaccine is in **October** or **November**.

Influenza season usually peaks in February, but it can peak any time from November through May. So getting the vaccine in December, or even later, can be beneficial in most years.

Some people should get their flu shot in **October** or earlier:

- people **50 years of age and older**,
- younger people at **high risk** from influenza and its complications (including **children 6 through 23 months of age**),
- **household contacts** of people at high risk,
- **healthcare workers**, and
- **children younger than 9 years of age** getting influenza vaccine for the first time.

Most people need one flu shot each year. **Children younger than 9 years of age getting influenza vaccine for the first time** should get 2 doses, given at least one month apart.

5**Some people should talk with a doctor before getting influenza vaccine**

Some people should not get inactivated influenza vaccine or should wait before getting it.

- Tell your doctor if you have any **severe** (life-threatening) allergies. Allergic reactions to influenza vaccine are rare.
 - Influenza vaccine virus is grown in eggs. People with a severe egg allergy should not get the vaccine.
 - A severe allergy to any vaccine component is also a reason to not get the vaccine.
 - If you have had a severe reaction after a previous dose of influenza vaccine, tell your doctor.
- Tell your doctor if you ever had Guillain-Barré Syndrome (a severe paralytic illness, also called GBS). You may be able to get the vaccine, but your doctor should help you make the decision.
- People who are moderately or severely ill should usually wait until they recover before getting flu vaccine. If you are ill, talk to your doctor or nurse about whether to reschedule the vaccination. People with a **mild illness** can usually get the vaccine.

6**What are the risks from inactivated influenza vaccine?**

A vaccine, like any medicine, could possibly cause serious problems, such as severe allergic reactions. The risk of a vaccine causing serious harm, or death, is extremely small.

Serious problems from influenza vaccine are very rare. The viruses in inactivated influenza vaccine have been killed, so you cannot get influenza from the vaccine.

Mild problems:

- soreness, redness, or swelling where the shot was given
- fever • aches

Vaccine Information Statement - Interim
Inactivated Influenza Vaccine (7/18/05) 42 U.S.C. §300aa-26

If these problems occur, they usually begin soon after the shot and last 1-2 days.

Severe problems:

- Life-threatening allergic reactions from vaccines are very rare. If they do occur, it is within a few minutes to a few hours after the shot.
- In 1976, a certain type of influenza (swine flu) vaccine was associated with Guillain-Barré Syndrome (GBS). Since then, flu vaccines have not been clearly linked to GBS. However, if there is a risk of GBS from current flu vaccines, it would be no more than 1 or 2 cases per million people vaccinated. This is much lower than the risk of severe influenza, which can be prevented by vaccination.

7**What if there is a severe reaction?****What should I look for?**

- Any unusual condition, such as a high fever or behavior changes. Signs of a serious allergic reaction can include difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat or dizziness.

What should I do?

- **Call** a doctor, or get the person to a doctor right away.
- **Tell** your doctor what happened, the date and time it happened, and when the vaccination was given.
- **Ask** your doctor, nurse, or health department to report the reaction by filing a Vaccine Adverse Event Reporting System (VAERS) form.

Or you can file this report through the VAERS web site at www.vaers.hhs.gov, or by calling 1-800-822-7967.

VAERS does not provide medical advice.

8**The National Vaccine Injury Compensation Program**

In the event that you or your child has a serious reaction to a vaccine, a federal program has been created to help pay for the care of those who have been harmed.

For details about the National Vaccine Injury Compensation Program, call 1-800-338-2382 or visit their website at www.hrsa.gov/osp/vicp

9**How can I learn more?**

- Ask your immunization provider. They can give you the vaccine package insert or suggest other sources of information.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call 1-800-232-4636 (1-800-CDC-INFO)
 - Visit CDC's website at www.cdc.gov/flu



DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
NATIONAL IMMUNIZATION PROGRAM



HEALTH CARE WORKERS: WASH YOUR HANDS!

IT'S THE BEST WAY
TO PREVENT THE SPREAD OF INFECTIONS

WHY

- MOST (98%) INFECTIONS ARE SPREAD BY HANDS
- HAND HYGIENE IS THE MOST IMPORTANT WAY TO PREVENT THE SPREAD OF INFECTIONS

WHEN

- BEFORE AND AFTER DIRECT CONTACT WITH A PATIENT
- AFTER GLOVE REMOVAL
- AFTER CONTACT WITH ENVIRONMENTAL SURFACES IN THE VICINITY OF A PATIENT
- AFTER USING THE RESTROOM
- AFTER SNEEZING, BLOWING YOUR NOSE, OR TOUCHING YOUR FACE OR HAIR

HOW

- USE SOAP AND WARM WATER IF HANDS ARE VISIBLY SOILED
 - RUB HANDS TOGETHER VIGOROUSLY FOR AT LEAST 15 SECONDS
 - RINSE UNDER RUNNING WATER AND PAT DRY
 - TURN WATER OFF WITH TOWEL
- IF HANDS AREN'T VISIBLY SOILED, YOU CAN USE ALCOHOL-BASED HAND RUB
 - APPLY TO PALM OF ONE HAND AND RUB HANDS TOGETHER TO COVER ALL SURFACES
 - RUB UNTIL HANDS ARE DRY



New Hampshire Department of Health and Human Services
Division of Public Health Services
www.dhhs.nh.gov



**Are you coughing?
Do you have a fever?
If you answered YES to
both, please put on a
mask.**

**PROTECT YOUR HEALTH
AND THE
HEALTH OF OTHERS!**



**New Hampshire Department of Health and Human Services
Division of Public Health Services
www.dhhs.nh.gov**

Attach box of masks here.



John A. Stephen
Commissioner

Mary Ann Cooney
Director

STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH SERVICES



29 HAZEN DRIVE, CONCORD, NH 03301-6504
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Guidance for Educational Institutions Pandemic Influenza Response

I. Background

Influenza, commonly called “the flu,” is caused by the influenza virus, which infects the respiratory tract (nose, throat, lungs). The flu usually spreads from person to person when an infected person coughs, sneezes, or talks and the virus is sent into the air. The flu can cause illness in all ages, and it is more likely than other viral respiratory infections, such as the common cold, to cause severe illness and life-threatening complications

Avian influenza, also known as “avian flu” or “bird flu,” is caused by one of many viruses that exist naturally in wild birds. Wild birds usually do not become sick, but they can carry the virus and pass it on to non-wild birds, such as chickens, turkeys, and ducks (fowl), which can become very sick and die. Flu viruses can exist not only in birds, but also other animals. Bird flu viruses do not generally infect people. However, since 1997, there have been over 250 reported cases of human infection from avian influenza A H5N1 (the scientific name for a strain of bird flu currently circulating) in Asia, Africa and parts of Eastern Europe. Humans can become infected with bird flu through contact with infected poultry or contaminated fluids, such as the birds’ saliva, nasal secretions, and feces.

Because all influenza viruses have the ability to change, scientists are concerned that viruses including but not limited to the influenza A H5N1 virus could and easily spread from sick people to otherwise healthy people. If this happens, and influenza spreads around the world, it would be called a pandemic. Pandemic influenza is a unique public health emergency. Outbreaks are expected to occur simultaneously throughout much of the country and in the State, preventing shifts in human and material resources that normally occur in most other natural disasters. For this reason, the State of New Hampshire Department of Health and Human Services (NH DHHS) recommends that institutions, such as educational facilities, plan now for their response to pandemic influenza.

II. Purpose

The purpose of this document is to assist educational institutions in their development of institution-specific pandemic influenza (and other respiratory illness outbreak) preparedness and response plans. Because a pandemic would most likely occur in phases, the activities in this guidance are also separated out by phases (see below). However, the activities are cumulative, and should carry over from one phase to the next. For a checklist of both preparedness and response activities, see Appendix 2: Suggested Checklist. This guidance is a fluid document that may be updated and edited as new information becomes available.

The development of this document is based on the following assumptions:

- In the event of an influenza pandemic the State will have minimal resources available for on-site local assistance, and therefore local authorities and institutions will be responsible for community-specific pandemic response plans, including the modification of this document so that it is institution-specific.
- Local communities may have emergency preparedness plans and/or pandemic influenza plans in place. Local community leaders and institutions will communicate so that each is aware of the others' plans.
- The federal government has limited resources allocated for State and local plan implementation, and therefore the State will provide supplementary resources in the event of a pandemic, which may include the redirection of personnel and monetary resources from other programs.
- The federal government has assumed the responsibility for developing materials and guidelines, including basic communication materials for the general public on influenza, influenza vaccine, antiviral agents, and other relevant topics in various languages; information and guidelines for health care providers; and training modules. Until these materials are developed, the State has the responsibility to develop such materials for its citizens.
- A novel influenza virus strain will likely emerge in a country other than the United States, but could emerge first in the United States and possibly in New Hampshire.
- It is highly likely that moderate or severe shortages of vaccine will exist early in the course of the pandemic and also possible that no vaccine will be available.
- The supply of antiviral medications used for prevention and treatment of influenza will be limited.

World Health Organization (WHO) Phases

The pandemic phases described in this document are those that have been established by the World Health Organization (WHO) and the United States Government (USG). The most recent publication of the phases is summarized in Table 1 below. The State's response to a pandemic will be guided by the WHO/USG phase declaration (see *State of New Hampshire Influenza Pandemic Public Health Preparedness and Response Plan* [currently available at <http://www.dhhs.state.nh.us/DHHS/CDCS/ppcc.htm>]). This response will include specific considerations during each phase of the pandemic regarding surveillance, vaccine delivery, administration of antivirals, and communications. In addition, there must be actions taken on the local level in each phase, particularly with respect to community-based containment measures. This plan for educational institutions provides recommendations for activities in response to WHO/USG phases and also notes the corresponding alert matrix system being used in the hospital-developed *Epidemic Respiratory Infection (ERI) plan* (see Table 2 and process below for further explanation of the ERI plan). It should be noted that at the time of writing this document (January 2007), we are in WHO Phase 3.

Table 1. WHO/USG Pandemic Phases

WHO Phases		Federal Government (USG) Response Stages	
INTER-PANDEMIC PERIOD			
1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused a human infection may be present in animals. If present in animals, the risk of human disease is considered to be low.	0	New domestic animal outbreak in at-risk country
2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza subtype poses a substantial risk of human disease.		
PANDEMIC ALERT PERIOD			
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.	0	New domestic animal outbreak in at-risk country
		1	Suspected human outbreak overseas
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.	2	Confirmed human outbreak overseas
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).		
PANDEMIC PERIOD			
6	Pandemic phase: increased and sustained transmission in general population.	3	Widespread human outbreaks in multiple locations overseas
		4	First human case in North America
		5	Spread throughout United States
		6	Recovery and preparation for subsequent waves

Source: U.S. Department of Homeland Security, *PANDEMIC INFLUENZA PREPAREDNESS, RESPONSE, AND RECOVERY GUIDE FOR CRITICAL INFRASTRUCTURE AND KEY RESOURCES* Publication date: September 19, 2006

Table 2. Epidemic Respiratory Infection (ERI) Alert Matrix

Five levels of alert corresponding to the type of transmission and the location of the cases.

What type of transmission is confirmed?	Where are the cases?	Are there cases at the educational institution?	Alert Level
None or sporadic cases only	Anywhere in the world	No	Ready
Efficient person-to-person transmission	Anywhere outside the US and bordering countries (Canada, Mexico)	No	Green
Efficient person-to-person transmission	In the US, Canada, or Mexico	No	Yellow
Efficient person-to-person transmission	In NH or bordering states; at educational facility	Doesn't matter; efficient transmission from known sources	Orange
Efficient person-to-person transmission	At educational facility	Yes, with efficient transmission, sources not clear	Red

III. Process

The first New Hampshire Influenza Pandemic Preparedness Plan was completed in 2001 and was modeled on the CDC guidance, *Pandemic Influenza: Planning Guide for State and Local Officials*, Version 2.1, January 1999. As the State's plan changed and progressed, it became clear that educational institutions, including those that are residential, require specific attention to issues such as surveillance, infection control, and case management. Therefore, this guidance was adapted from both the current *State of New Hampshire Influenza Pandemic Public Health Preparedness and Response Plan* and the *Readiness Plan for Epidemic Respiratory Infection (ERI)*, the latter of which is now used by multiple hospitals throughout the State. The ERI plan was developed by the DHMC Emergency Preparedness team and was first disseminated in 2005. It establishes a user-friendly alert matrix distinctive to respiratory infection outbreaks, which may be applicable in the event of an influenza pandemic.

This document has been developed by the NH Department of Health and Human Services (NH DHHS), Division of Public Health Service's Communicable Disease Control Section (CDCS).

IV. Authority/Legal Preparedness

The State of NH has designated NH DHHS to oversee the influenza pandemic planning process in cooperation with local health agencies and other partners. During a pandemic, NH DHHS will have primary responsibility for:

- Making recommendations to local health departments, health care providers and facilities, and the general public to aid in controlling the spread of influenza
- Maintaining surveillance systems to monitor the spread of disease
- Keeping the public informed

While no provision of law addresses pandemic influenza specifically, numerous statutory provisions authorize relevant actions. For institutions to effectively plan and respond to an influenza pandemic, they should be knowledgeable of the following legal issues:

- NH's laws and procedures on quarantine, isolation, closing premises, and suspending public meetings, which can be implemented to help control an epidemic

- Statutes for mandatory vaccination during an infectious disease emergency
- Medical volunteer licensure, liability, and compensation laws for in-state, out-of-state, and returning retired and non-medical volunteers
- Workers' compensation laws as they apply to health care personnel and other essential workers who have taken antivirals for prophylaxis

The corresponding statute descriptions are summarized in the *State of NH Public Health Emergency Preparedness and Response Plan* (available at <http://www.dhhs.state.nh.us/DHHS/CDCS/ppcc.htm>).

V. School Closure

Current mathematical modeling suggests the most effective way to reduce the peak of a pandemic's epidemic curve, and thus allow for a more manageable response, is to combine a variety of both pharmaceutical and non-pharmaceutical interventions. Pharmaceutical interventions include use of vaccine and antivirals to help treat, prevent and reduce the severity of illness. Non-pharmaceutical interventions are based on the concept of "social distancing," and are usually targeted to either specific groups of individuals or to an entire community. Social distancing implies reducing contact with other people, keeping a social distance of greater than three feet from ill individuals. School closures are one example of non-pharmaceutical interventions.

There is some suggestion that because schools often have high rates of disease transmission, closing them early in a pandemic will slow the spread of illness. NH does not currently have a definitive threshold for implementing school closures. However, those triggers that will be considered include: number of cases, characteristics of disease transmission (i.e., incidence rate, number of generations), types of exposure categories (i.e., travel-related, close contact, health care personnel, unlinked transmission), morbidity and mortality rates, community compliance, and the availability of local health care and public health resources.

Once schools closure occurs, current CDC recommendations are that it be sustained until the number of cases begins to decline, which may take weeks if not a couple of months. During the preparedness phases, planners should consider and make contingencies for the societal impact of closing schools for a lengthy period of time. Impacts may be economical, legal, ethical, logistical, and/or psychological.

VI. Response Activities by Level of Alertness

Level Ready-Green (ERI alert matrix)/Interpandemic period (WHO/USG)

When cases of an Epidemic Respiratory Infection (ERI) are occurring in countries other than the U.S., but have yet to be reported domestically or in neighboring countries, your institution should maintain a level of preparedness in the event that the ERI begins to spread globally. This is the level your institution should be maintaining currently. During this level, we recommend your institution take the actions listed below.

A. Access Control

- The institution will develop a plan and a timeline for implementing a policy that enables them to control access to the institution. There should be a plan to lock down certain entrances and exits, and to monitor use of others, if necessary. If applicable, institutions should involve their security personnel to accomplish these tasks. Institutions should not depend on outdoor screening & triage stations when creating plans, as in winter months this option may not be feasible.
- The institution will also develop a plan to close down or curtail campus transportation, including school buses and campus shuttles if necessary.

B. Surveillance, Screening and Triage

- The institution's health services personnel will screen all individuals at the time of registration at health services or nurse's office. For younger children, personnel may observe for cough. With older children, they may ask the following question: "Do you have a new cough that has developed over the last 10 days?" and will
 - Provide patients who have a new cough with a surgical mask and/or tissues.
 - Document data at time of screening and review each week for analysis of trends.
 - Clinical staff/school nurse will
 - Evaluate individuals who have a new cough for fever (temperature ≥ 100.4).
 - Place all individuals who have fever and a new cough on droplet precautions, pending further evaluation.
 - If private rooms are available, and evaluation requires isolation, individuals with fever and cough will be placed in a private room with droplet precautions. Otherwise, such individuals should be referred to local community health providers or hospitals for evaluation, with health services personnel calling ahead to alert staff of patient symptoms.
- The institution's health services staff has the authority to restrict individuals (staff and students) who have fever and a new cough from work, class, or any other group gathering. They also have the authority to send any student or staff home that they suspect may have a communicable disease that puts others in the institution at risk. The legal authority for exclusion from school is under RSA 200:39. This RSA is under Title XV, Education; 200, Health & Sanitation; 39, Exclusion from School, and is accessible on-line at <http://gencourt.state.nh.us/rsa/html/XV/200/200-39.htm>.
- Health services clinicians will screen individuals who report pneumonia or respiratory infection to identify possible clusters, or groups of ill individuals who may be linked.
 - Possible clusters will be reported to the State's Communicable Disease Control Section by calling (603) 271-4496 M-F 8AM-4:30 PM. Clusters may be defined as two or more clinically compatible individuals with onset of symptoms ≤ 10 days apart (this may be altered as more information about the pandemic influenza strain becomes available; NH DHHS will follow CDC recommendations as they are released).
- Informative infection control signs will be placed at all campus building entrances and common areas to encourage all persons entering the campus to self-screen (rotating the

posters periodically to maintain impact). Posters are available for download on the NH DHHS website: <http://www.dhhs.nh.gov/DHHS/CDCS/flu-provider.htm>.

- Via posters, campus staff will ask persons who have a new cough to wear a surgical mask or use tissues to cover their mouth and nose when coughing, and to use good hand hygiene during the time they need to be on-campus.
- The institution will advise all persons, including staff, students, and visitors, who have fever and cough to defer attending school or visiting the institution until their illness has resolved.
- Monitoring surveillance data
 - The health services personnel will monitor national, regional, and local data related to ERI. Information will be posted on the NH DHHS website.

C. Infection control/Precautions

- All staff, students, and visitors will use ***Droplet Precautions (private room and surgical mask within 3 feet of patient)*** for all contact with any individual who has a new cough and fever, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made.
- If students, staff or visitors present with symptoms while at school, they should be provided a mask while awaiting transportation away from the facility.
- The institution's health services staff will use or provide for use a visible doorway "precautions sign" system to allow persons entering the room to know what type of protective equipment is needed.
- The institution will maintain adequate supplies at all times of surgical masks, waterless hand rub, surface cleaners & disinfectants, and tissues throughout public areas, classrooms, and meeting rooms, as well as within the Health Services facility. For cleaning and disinfecting surfaces from influenza viruses, the CDC recommends using an Environmental Protection Agency (EPA)-registered household disinfectant labeled for activity against bacteria and viruses, an EPA-registered hospital disinfectant, or EPA-registered chlorine bleach/hypochlorite solution. Label instructions should always be followed when using any of these disinfectants. If EPA-registered chlorine bleach is not available and a generic (i.e., store brand) chlorine bleach is used, mix ¼ cup chlorine bleach with 1 gallon of cool water.
- If possible, the institution will identify key areas throughout the campus which need to maintain core groups of N-95 respirator [or other National Institute of Occupational Safety & Health (NIOSH)-approved filtering facepiece respirator] fit-tested personnel
 - Each director is responsible for maintaining the appropriate number of trained and fit-tested staff
 - For a list of other NIOSH-approved respirators, see http://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/
- The institution will display hand-washing posters (can be downloaded from: <http://www.dhhs.nh.gov>) in high-traffic areas and classrooms.

D. Communication/Education

- The institution will develop a sustainable and effective plan for communication and promotion of messages relating to ERI to internal and external audiences. This should include identifying any needs for translation services and which languages are represented in the student population. If applicable, schools may wish to have translators review the information that will be provided to non-English speaking parents.

- A sustainable plan should be developed to orient and educate staff regarding basic readiness activities at the institution, and a strategy for activities to provide timely information to health services providers in the event of ERI.
- The institution should incorporate behavioral health providers in their communication plans to address the emotional needs of students, faculty and staff in the event of a pandemic threat or actual event that causes serious illness or death. For more information about the Disaster Behavioral Health Response teams in the State of NH, disaster behavioral health training, or would like to receive educational materials, please contact the Disaster Behavioral Health Coordinator at (603) 271-2231 or (800) 852-3792.

E. Additional Preparedness Activities

The following recommendations for vaccination campaigns apply to the regular influenza season. This is separate from vaccination campaigns that may take place during a pandemic. The purpose in the following recommendations for influenza vaccination during the regular influenza season is: to reduce morbidity from seasonal influenza transmission in vital workers if pandemic strain emerges, to reduce diagnostic confusion if a pandemic strain emerges (one may have a higher suspicion for pandemic strain if the patient is known to have been vaccinated against seasonal influenza), and to prepare communities for providing vaccination clinics in the event that vaccination for a pandemic strain is necessary.

- Offer all eligible staff, students, and visitors the opportunity to receive influenza vaccine on-site. Holding vaccination clinics on designated days may facilitate this.
- If your institution cannot hold clinics on-site, refer to local clinics or collaborate with community health organizations to hold clinics to provide influenza vaccine to all eligible institution members of any age.
- Develop educational and promotional materials to promote availability and desirability of influenza vaccine for all.
- The administering provider of flu vaccine will document administration of influenza vaccine, preferably in a computerized database.
- Administrative, educational, and clinical leaders will promote maximum participation of staff and students in influenza vaccine program.

In addition to the above vaccination recommendations, the following are other preparedness activities to take place during the Level Ready-Green phases of a pandemic:

- Many institutions already have an Emergency Preparedness team. If the institution does not have an existing Emergency Preparedness team, one should be formed following Incident Command Structure (ICS). If additional training and/or help are needed in creating this team with adherence to ICS, please contact the NH Bureau of Emergency Management at (800) 852-3792 or (603) 271-2231.
- The team will designate an Incident Command core including senior administration, health services, communications, safety, engineering, and security, as applicable, with 7-day a week availability to respond to a potential outbreak of an ERI.
- The Emergency Preparedness team will be in charge of regular updates to staff, students, and parents. The team should meet approximately once a month.
- The Emergency Preparedness team will monitor the Health Alert Network and other communications from public health officials to review changes in recommendations

about screening criteria and will communicate changes to clinicians via some combination of email, intranet, or radiographic or laboratory reporting.

- The Emergency Preparedness team will address in their institution's plan how to accommodate severe staffing shortages of 20-30%, which may occur in the event of a pandemic. Alternatives may include staggered school times and telecommunications.

Level Yellow-Orange (ERI plan)/Pandemic Alert Period (WHO/USG)

In the event that a case of Epidemic Respiratory Infection (ERI) affects a community member or a close contact of a community member of your institution, activities will be modified to reflect increased risk of exposure and disease spread within your community. The following are recommendations regarding activities of your institution that should be addressed in the event that a case of ERI is suspected or has been confirmed in your institution, but there is no documented community spread from this person to others. For example, this would include a student who returned to the institution with cough and fever after travel to an area known to have ERI, but has not spread the illness to anyone else.

Activities are cumulative through the phases, and therefore, those activities from the Level Ready-Green/Interpandemic Period should be carried over to this phase and supplement the recommendations below.

A. Access Control

- Review possible need to restrict vendors, visitors, and conferences/group activities.
- Implement applicable portions of the access control plan created in the "Ready-Green" phases.

B. Surveillance, Screening and Triage

- Infection control signs are posted at all entrances, and in all common areas (in dormitories, libraries, gymnasium, auditoriums, cafeterias, classrooms, restrooms). Posters should include specific risk factors for the targeted infection, to encourage all persons in the institution to self-screen for infection.
- Persons who self-identify as at-risk for the designated infection are instructed to don surgical mask and should go to campus health services or school nurse office for clinical evaluation.
- Health services personnel who suspect, after initial clinical evaluation, that a patient may have an ERI should immediately consult with NH DHHS.
- Staff or students traveling to designated high risk areas must register with campus health services or school nurse upon return and report any symptoms of fever or cough that occur during a specified time period. Health services will maintain a list of people under surveillance for this reason.
- Staff and students who have had contact with suspected patients must register with health services and be screened daily for fever or respiratory symptoms.
- Surveillance data will be electronically transmitted to NH DHHS daily using the form provided by NH DHHS. This form is currently under development.

C. Infection Control/Precautions

- Airborne, droplet, and contact precautions are required for all contact with any person who has screened as a possible ERI case, until an alternate diagnosis is made.

- Droplet precautions are required for any person who has a new cough and fever, but no risk factors for ERI, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made. Health services have the authority to exclude any individual with new cough and fever until diagnosis of non-contagious respiratory illness is made.

D. Communication/Education

- A knowledgeable staff member may need to be present at high-traffic areas on site to answer questions and direct persons to evaluation at campus health services as needed.
- The institution should use the mode of communication used most by students, staff, and parents (e-mail, flyers, phone messages) to keep the community informed and to provide education about prevention and symptom surveillance. The institution should also consider creating a designated phone line to campus health services (ERI hotline) for callers with specific questions about ERI.

E. Additional Preparedness Activities

- At Level Orange the Emergency Preparedness team should meet daily to review situation and strategies.

Level Red (ERI plan)/Pandemic period (WHO)

There is evidence of institutional transmission of ERI or there is widespread human-to-human transmission in the region of the institution.

Red indicates the highest level of alert, with restrictions on access to the institution, more active screening, and a shift away from normal operations of the institution. At this level, the institution will consider implementing each of the additional actions.

A. Access Control

- All entrances to the institution will be locked except for the main entrance. Security personnel will guard those that cannot be locked.
- Entry into facility will be restricted to the following:
 - Staff and students with a valid ID
 - Parents of students
- Activities of campus eateries (cafeteria, commercial) and other shops may be suspended.
 - A plan should exist for delivering meals to students if cafeteria or group-style dining is closed. This may take the form of delivery of boxed meals to dormitories.
- There may be some degree of suspension of activities, including sporting events, arts performances, and classes as determined by the Emergency Preparedness team in consultation with NH DHHS.
- Campus transportation, including buses transporting students on and off campus, may be suspended.
- The decision to close the institution may also be made as a means to prevent the further spread of an epidemic, either by the Emergency Preparedness team or BDCS. In the event of institution closure, a plan should be in place for residential institutions to provide meals to those who cannot leave the institution immediately. There also should be in place a tracking system so that those who leave the area can be tracked.

B. Surveillance, Screening and Triage

- Persons in residential institutions will be instructed to call campus health services if they require any medical appointment. This call is required to screen for new cough developing over the past 10 days. Persons who answer yes will be phone triaged to a health services clinician, who can do further screening for ERI risk factors and determine the need for the patient to be evaluated in person.
- Those allowed into the facility must be screened for fever or cough and have their temperature taken, and if cleared, given something to indicate that they have been cleared to enter the facility (e.g. a sticker, a card, a stamp on their hand).
- Those who are identified to have fever and/or cough will be instructed to don a surgical mask, use waterless hand rub, and go to campus health services or school nurse. Alternatively, in a non-residential institution, they may be excluded from entry into the institution and instructed to call their primary care provider for evaluation. NH DHHS may elect to gather contact information and follow-up plans made before the person is released into the community.
- In a residential institution, after clinical evaluation, a person who has fever or cough may be allowed to remain at a residential institution if they are a resident unless the person requires further medical evaluation.
- The name and phone number/address of all persons seen with suspected ERI by campus health services will be recorded and reported to NH DHHS within 24 hours.
- If the person warrants evaluation in a hospital setting, health services staff should alert the referral hospital that a suspect or confirmed case needs evaluation so that the referral center can make arrangements for infection control precautions.

C. Infection Control/Precautions

- An N-95 mask and contact precautions are required for all campus health services medical staff having contact with any person who has fever and/or a new cough, until an alternate diagnosis is made (this includes staff who conduct screening at institution entrances).
- A designated group will maintain adequate supplies of personal protective equipment, waterless hand rub, and tissues through the institution.
- Everyone providing patient care will be N-95 respirator fit-tested.
- If the suspect or confirmed case does not require hospitalization, he/she should be isolated from other community members, including exclusion from events such as sporting events, group meals, working out in the gym, and classes until he/she is proven to not be a case, or he/she has passed the time of infectivity (2 days before illness onset to five days after illness onset [*this may be modified when more is known about the pandemic strain*]). If the case shares a room with other students in a residential institution, arrangements should be made for the case to be given a private room (for example, to remain in health services in a private patient room or in an empty dorm room). Arrangements should be made to provide the students with necessary daily items, including meals, water, hygiene, and telephone.
- The institution, with guidance from NH DHHS, will identify close contacts in the institution to a suspect or confirmed case of ERI. Contacts are defined as those who spent >15 minutes within 3 feet of the case during his/her infectious period (2 days before illness onset to five days after illness onset). In a dormitory setting, where contact will be less clearly delineated, contacts are defined as those who meet the above definition or those who live on the same dormitory floor as the case.

- Staff and students who have had contact with suspected patients must register with campus health services and be screened daily for fever or respiratory symptoms
- With guidance from NH DHHS, recommendations will be made for quarantine of non-ill contacts. Guidance will be provided regarding details of quarantine in a residential institution, including cohorting of contacts, sites to use for quarantine, and legal authority. As with a case in isolation, arrangements should be made to provide those quarantined with necessary daily items, including meals, water, hygiene, and telephone.

D. Communication/Education

- Daily or more frequent updates to community members and parents will be provided as determined by the Emergency Preparedness team.

School Pandemic Influenza Preparedness & Response Plan

This policy has been reviewed and accepted by:

Superintendent of School _____

School Board Representative(s) _____

Principal _____

Vice Principal _____

Local Emergency Management Official(s) _____

School Nurse/Clinician _____

Parent-Teacher Organization Representatives (if applicable) _____

Custodial Services _____

Security (if applicable) _____

Transportation _____

Athletic Director (if applicable) _____

School Pandemic Influenza Preparedness & Response Checklist

Level Ready-Green (ERI alert matrix)/Interpandemic period (WHO/USG)

- _____ Form an Emergency Preparedness team, if one does not already exist.
- _____ Have Emergency Preparedness team members perform authority/legal preparedness activities

A. Access Control

- _____ Develop a plan and a timeline for implementing a policy that enables controlling access to the institution.
- _____ Develop a plan to close down or curtail campus transportation, including school buses and campus shuttles if necessary.

B. Surveillance, Screening and Triage

- _____ Have the institution's health services personnel screen all individuals at the time of registration at health services or nurse's office, following NH DHHS recommended precautions
- _____ Provide patients who have a new cough with a surgical mask and/or tissues
- _____ Document data at time of screening and review each week for analysis of trends
- _____ Restrict individuals (staff and students) who have fever and a new cough from work, class, or any other group gathering
- _____ Send any student or staff home that is suspected of having a communicable disease that puts others in the institution at risk
- _____ Report possible clusters to the State's Communicable Disease Control Section by calling (603) 271-4496 M-F 8AM-4:30 PM.
- _____ Post informative infection control signs at campus building entrances and common areas
- _____ Rotate the infection control signs periodically
- _____ Monitor national, regional, and local data related to pandemic influenza

C. Infection control/Precautions

- _____ Follow NH DHHS recommended precautions for contact with any individual who has a new cough and fever
- _____ Provide mask or tissues to any students, staff or visitors who present with symptoms while at school and awaiting transportation from the facility
- _____ Maintain adequate supplies of surgical masks, waterless hand rub, surface disinfectants, and tissues throughout public areas, classrooms, and meeting rooms
- _____ Identify who should be N-95 (or other NIOSH-approved) respirator fit-tested personnel

- _____ Maintain the appropriate number of trained and N-95 fit-tested staff
- _____ Display hand-washing posters (can be downloaded from: <http://www.dhhs.nh.gov>) in high-traffic areas and classrooms.

D. Communication/Education

- _____ Develop a plan for communication and promotion of messages relating to ERI to internal and external audiences
- _____ Develop a plan to orient and educate staff regarding basic readiness activities at the institution
- _____ Identify translation services needs within student population
- _____ Identify behavioral health providers to incorporate into communication plans

E. Additional Preparedness Activities

- _____ Implement vaccination campaign (offer vaccine on-site or provide references to area clinics)
- _____ Develop educational and promotional materials to promote availability and desirability of influenza vaccine for all
- _____ If administering flu vaccine on-site, document administration of vaccine, preferably in a computerized database
- _____ Have Emergency Preparedness Team designate an Incident Command core with 24/7 availability to respond to a potential outbreak
- _____ Provide regular updates to staff, students, and parents
- _____ Have Emergency Preparedness Team meet approximately once a month.
- _____ Monitor the Health Alert Network and other communications from public health officials and communicate changes to clinicians

Level Yellow-Orange (ERI plan)/Pandemic Alert Period (WHO/USG)

- _____ Continue applicable activities from Level Green/Interpandemic Period

A. Access Control

- _____ Review possible need to restrict vendors, visitors, and conferences/group activities

B. Surveillance, Screening and Triage

- _____ Consult with NH DHHS when suspect, after initial clinical evaluation, that a patient may have an ERI
- _____ Register staff or students traveling to designated high risk areas and report any symptoms of fever or cough that occur (monitor NH DHHS website for high risk areas, symptoms, and time period for surveillance)
- _____ Register staff and students who have had contact with suspected patients and screen daily for fever or respiratory symptoms.

_____ Submit surveillance data electronically to NH DHHS daily using the form provided by NH DHHS (currently under development)

C. Infection Control/Precautions

_____ Expand precautions for clinicians to include airborne, droplet, and contact precautions for suspect cases with risk factors

_____ *Follow droplet precautions for suspect cases with no risk factors*

D. Communication/Education

_____ Place staff at high-traffic areas to answer questions and direct persons to health services as needed

_____ Keep the community informed and provide education about prevention and symptom surveillance

_____ Consider creating a designated phone line to campus health services

E. Additional Preparedness Activities

_____ Emergency Preparedness team should meet daily to review situation and strategies

Level Red (ERI plan)/Pandemic period (WHO/USG)

_____ Continue applicable activities from Level Green/Interpandemic Period and Level Yellow-Orange/Pandemic Alert Period

A. Access Control

_____ Restrict access to the institution to staff, students, and parents of students

_____ Consider suspension of campus eateries (cafeteria, commercial), shops, and other group activities, including sporting events, arts performances, and classes as determined by the Emergency Preparedness team in consultation with NH DHHS.

Implement plan for delivering meals to students if cafeteria or group-style dining is closed

_____ Consider suspension of campus transportation (i.e., buses)

_____ Consider closure of the institution

_____ In the event of institution closure of a residential institution, implement plan for to provide meals to those who cannot leave immediately, and track/register those who leave the area

B. Surveillance, Screening and Triage

_____ For residential institutions, instruct symptomatic persons to call ahead to health services clinicians – implement phone triage system

- _____ Screen those allowed into the facility for fever or cough and have their temperature taken – implement signage (sticker, card, stamp) system to track status
- _____ Record the name and phone number/address of all persons seen with suspected ERI and reported to NH DHHS within 24 hours unless already alerted that need for notification to NH DHHS has ceased

C. Infection Control/Precautions

- _____ Continue practice of airborne precautions, including staff that conducts screening at institution entrances
- _____ Implement isolation & quarantine guidelines as they are made available by NH DHHS
- _____ Isolate suspect or confirmed cases if they do not require hospitalization until proven to not be a case, or until passed the time of infectivity
- _____ Assist NH DHHS with contact investigations

D. Communication/Education

- _____ Provide daily or more frequent updates to community members and parents

Readiness Plan for Epidemic Respiratory Infection A Guideline for Operations for Use by Long Term Care Facilities, 2005-6

Background: The Readiness Plan for Epidemic Respiratory Infection (ERI) evolved from initial response and planning for the prevention and control of Severe Acute Respiratory Syndrome (SARS), which began in the spring of 2003. During those planning activities it became clear that long term care facilities (LTCFs) need to maintain a level of readiness at all times for a variety of contagious respiratory infections with epidemic potential. Potential threats include SARS, a new strain of influenza that becomes pandemic, and other contagious respiratory infections such as pertussis, parainfluenza, and other pathogens.

Guidelines from state and federal health authorities recommend aggressive implementation of respiratory hygiene practices and universal administration of influenza vaccine to healthcare workers and high-risk patients for all healthcare facilities regardless of the presence of an epidemic.

This document outlines a plan for responding to various levels of threat posed by ERIs, and an approach to stepping up prevention and control activities as the threat increases. It is based on the premises that we should be vigilant at all times for syndromes that may represent contagious respiratory infection, and that we should maintain a group of people prepared to actively respond to changing situations by implementing appropriate parts of this plan, when indicated.

This document serves a guideline for LTCFs. Each facility should modify this guideline to address specific capabilities or factors that relate to the particular facility.

The document is divided into

- A matrix that defines parameters that will be the critical determinants of the level of risk at the LTCF, with the inclusion of the pandemic phases used by the World Health Organization (WHO) to describe worldwide pandemic activity to be used as a reference
- A summary of the elements of the baseline state of readiness that should be maintained at all times
- A summary of the ways in which surveillance, prevention and control activities may need to change as the level of risk to the LTCF increases
- An appendix that includes standard operating procedures for the management of residents who have suspected ERI.

This document is intended for use as a guideline for LTCFs. We recommend the establishment of an Incident Command team/Readiness Committee by the LTCF to determine actions that should be taken to prevent the spread of ERI among residents, staff, volunteers, and visitors. The intent is that this document will be used in the context of advisory documents and guidance provided by NH DHHS and the CDC.

Epidemic Respiratory Infection Alert Matrix and World Health Organization (WHO) Phases

This plan for LTCFs provides recommendations for activities according to the alert matrix system being used in the hospital-developed Epidemic Respiratory Infection (ERI) plan (see Table 2 and process below for further explanation of the ERI plan). Also included, as a reference, are the pandemic phases that have been established by the World Health Organization (WHO) and the United States Government (USG). The most recent publication of the phases is summarized in Table 1 below.

Table 1. WHO/USG Pandemic Phases

WHO Phases		Federal Government Response Stages	
INTER-PANDEMIC PERIOD			
1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused a human infection may be present in animals. If present in animals, the risk of human disease is considered to be low.	0	New domestic animal outbreak in at-risk country
2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza subtype poses a substantial risk of human disease.		
PANDEMIC ALERT PERIOD			
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.	0	New domestic animal outbreak in at-risk country
		1	Suspected human outbreak overseas
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.	2	Confirmed human outbreak overseas
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).		
PANDEMIC PERIOD			
6	Pandemic phase: increased and sustained transmission in general population.	3	Widespread human outbreaks in multiple locations overseas
		4	First human case in North America
		5	Spread throughout United States
		6	Recovery and preparation for subsequent waves

Source: U.S. Department of Homeland Security, PANDEMIC INFLUENZA PREPAREDNESS, RESPONSE, AND RECOVERY GUIDE FOR CRITICAL INFRASTRUCTURE AND KEY RESOURCES Publication date: September 19, 2006

Epidemic Respiratory Infection ALERT MATRIX

Five levels of alert corresponding to the type of transmission, the location of the cases, and the presence and type of cases at ABC Hospital.

What type of transmission is confirmed?	Where are the cases?	Are there cases at the LTCF?	Alert Level
None or sporadic cases only	Anywhere in the world	No	Ready
Person-to-person transmission	Anywhere outside the US and bordering countries (Canada, Mexico)	No	Green
Person-to-person transmission	In the US, Canada, or Mexico	No	Yellow
Person-to-person transmission	At the LTCF	Yes, with nosocomial transmission, from known sources only	Orange
Person-to-person transmission	At the LTCF	Yes, with nosocomial transmission, sources not clear	Red

The alert level will be determined by the Readiness Committee established by the LTCF, using this matrix and data collected through surveillance activities. It can be upgraded (or downgraded) by this Committee depending on the number of cases, or for other compelling circumstances.

At each level of alert, the Readiness Committee will consider implementing certain actions. As the level of alert becomes higher, additional actions are added to the actions initiated at the lower level.

Level: READY

Baseline activities to ensure preparedness in the absence of known active epidemic of ERI in the world

Goals:

- To prevent cases of vaccine-preventable contagious respiratory infection (e.g. influenza) at the LTCF and in the community
- To promote early detection of initial cases of contagious respiratory infection (including, but not limited to influenza, SARS)
- To prevent nosocomial spread of contagious respiratory infections
- To create systems for real time data collection flexible enough to be adapted for use in an epidemic setting

Influenza vaccination

- For patients and the public
 - Nursing will carry out standing orders for all eligible residents to be offered and receive influenza vaccine.
- See NH state requirement for offering vaccines (SB 0438, Laws of 2004)
<http://www.gencourt.state.nh.us/legislation/2004/SB0438.html>
- The administering provider of flu vaccine will document administration of influenza vaccine.
 - For staff and volunteers
 - Administrative and clinical leaders will promote maximum participation of staff and volunteers in an influenza vaccine program, either on site or in the community.
 - The facility will provide multiple opportunities for staff and volunteers to receive influenza vaccine conveniently and efficiently.

Access Control

- The Security Office or Administration of the LTCF will develop a plan and a timeline for implementing a policy that enables them to control access to the medical center through the use of mandatory ID badges for all staff, volunteers, visitors, and other people coming to the LTCF to work or visit, and a plan to lock down certain entrances and exits, and to monitor use of others, if necessary.

See NH state Requirement for nametag identification, Section 151:3-b

<http://www.gencourt.state.nh.us/rsa/html/XI/151/151-3-b.htm>

Surveillance, Screening and Triage

- For residents
 - Clinical staff will
 - Evaluate residents who have a new cough for fever.
 - Place all residents who have fever and a new cough on droplet precautions, pending further evaluation.
 - The admitting clinical staff will screen all residents at the time of admission for “fever and cough” and will
 - Admit residents with fever and cough to private room or shared room that can be separated by a curtain with droplet precautions.
 - Document data at time of screening and transmit resident admitting diagnoses to Infection Control Practitioner daily for review of appropriate use of precautions for patients.

- For staff and volunteers
 - Clinical and administrative leaders will advise staff and volunteers who have fever and a new cough not to come to work.
- For visitors
 - LTCF will maintain “Ask for a Mask” signs at all entrances to encourage all persons entering the LTCF to self-screen (rotating the posters periodically to maintain impact).
 - Via posters, persons who have new cough will be advised to wear a surgical mask or use tissues to cover their mouth and nose when coughing, and to use good hand hygiene during the time they need to be at the LTCF.
 - All staff will advise persons who have fever and cough to defer visiting the LTCF until their illness has resolved.
- Monitoring surveillance data
 - The Infection Control Practitioner will monitor national, regional, and local data related to ERI and report changing trends to the Readiness Committee on a regular basis.

Infection control/Precautions

- All staff, volunteers, and visitors will use *Droplet Precautions (private room or shared room separated by curtain and surgical mask within 3 feet of patient)* for all contact with any resident who has a new cough and fever, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made.
- All staff, volunteers, and visitors will use *Droplet Precautions (private room or shared room separated by curtain and surgical mask within 3 feet of patient)* for all contact with any resident being admitted to the LTCF who has a new cough and fever until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made.
- Staff will use a visible doorway “precautions sign” system to allow persons entering the room to know what type of protective equipment are needed.
- Administrative services and Housekeeping will maintain adequate supplies at all times of surgical masks, waterless hand rub, and tissues throughout public areas.
- Each director is responsible for maintaining the appropriate number of N-95 respirator-trained and fit-tested staff.

Communication/Education

- The LTCF will develop a sustainable and effective plan for communication and promotion of messages relating to ERI to internal and external audiences.
- The Readiness Committee will develop an internal communication plan to allow immediate access to predefined groups of people, including “on call” staff, via email, intranet, paging system, or telephone.

Additional Preparedness Activities

- The Readiness Committee will meet approximately once a month.
- The Readiness Committee will designate an Incident Command core team including senior administration, infection control, communications, nursing, safety, engineering, security, with 7-day a week availability to respond to a potential outbreak of contagious respiratory infection.
- The Infection Control Practitioner will monitor the Health Alert Network and other communications from public health officials to review changes in recommendations from NH DHHS and CDC about screening criteria and will communicate changes to clinicians via some combination of email, intranet, or radiographic or laboratory reporting.

Level: GREEN

Confirmed efficient human-to-human transmission of potentially epidemic contagious respiratory infection present outside the US and bordering countries (Canada and Mexico)

Summary: At the “GREEN” level, our basic activities remain similar to the “READY” level, except that there may be more focused surveillance and screening based on specific geographic and epidemiologic risk factors, and more aggressive forms of isolation may be required for suspected cases. Vigilance of all staff is required to identify potential cases of ERI remains critical. At the GREEN level, the Readiness Committee will consider the following additional actions for implementation.

Access Control

- The Readiness Committee will consider the need to activate the policy on requiring staff, volunteers, and visitors to wear identification while in the LTCF.

Surveillance, screening and triage

- “Ask for a Mask” signs will be placed at all entrances, which may be modified to include specific risk factors for a specific ERI, to encourage all persons entering the LTCF to self-screen.
- Persons who self-identify as at risk for the designated infection are instructed to don surgical mask and may be asked to leave the facility to seek evaluation from a health care provider.
- Clinicians will evaluate any resident with new cough and fever.
- Clinicians who suspect, after initial clinical evaluation, that a resident or non-resident (staff or volunteer) may have an ERI should immediately consult with the Infection Control Practitioner, who will involve the state health department as appropriate. **(IF A RESIDENT IS DETERMINED TO BE A SUSPECT CASE OF ERI, GO TO LEVEL: ORANGE)**
- No resident can be admitted to the LTCF with a suspected diagnosis of the ERI in question, without the approval of the Infection Control Practitioner.
- Staff and volunteers traveling to designated high risk areas must register with the Infection Control Practitioner upon return and report any symptoms of fever or cough that occur during a specified time period. The Infection Control Practitioner will maintain a list of people under surveillance for this reason.

Infection control/Precautions

- Airborne, droplet, and contact precautions are required for all contact with any resident who has screened as a possible ERI case, until an alternate diagnosis is made.
- A resident with possible ERI and risk factors for ERI should be placed in a private room or in a negative pressure room if the LTCF has this capability, until an alternate diagnosis is made.
- Droplet precautions are required for all contact with any resident who has a new cough and fever, but no risk factors for the ERI, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made.

Communication/Education

- At each committee meeting, the Readiness Committee will review the need for communication with, or educational programs for staff, volunteers, residents, and the public.

Preparedness

- The Readiness Committee meets once or twice a month, depending on the stability of the situation.

Level: YELLOW

Confirmed human-to-human transmission of potentially epidemic contagious respiratory infection documented in the US or bordering countries (Canada or Mexico)

Summary: At the “YELLOW” level, the ERI is closer to home, and may pose a more real threat. Vigilance of all to identify potential cases of ERI remains critical. At the YELLOW alert level, rapid changes in the epidemiology of disease, and increase in the level of threat to LTCF may be expected. The major change is that the Readiness Committee becomes more active so that a rapid change to a higher level of alert is possible. The following additional activities will be considered.

Access Control

- Review need to require staff, volunteers, and visitors to wear ID badges at all times.

Surveillance, screening and triage

- Continued use of posters to promote screening for staff, volunteers, and visitors.

Infection control/Precautions

- No changes

Communication/Education

- No changes

Preparedness

- The Readiness Committee meets at least once a week to review surveillance data and new recommendations from NH DHHS and CDC.

Level: ORANGE

There is evidence of nosocomial transmission of ERI from known infected residents to other residents, employees, or visitors at the LTCF, OR there is human-to-human transmission in the region.

Summary: “ORANGE” indicates a high level of alert, with restrictions on access to the LTCF, much more active screening, and a shift away from normal operations throughout the facility. At the ORANGE level, the Readiness Committee will consider implementing each of the following additional actions.

Access Control

- All entrances to the LTCF will be locked except the Main Entrance.
- Any open entrances should be monitored.
- Entry into facility will be restricted to the following:
 - Staff with valid ID
 - Family members of residents
- Those allowed into the facility must be screened for fever or cough (**see Surveillance, screening and triage** below) and have their temperature taken and if cleared, given something to indicate that they have been cleared to enter the facility (e.g., a sticker, a card, a stamp on their hand). Any staff determined to be capable of performing screening, and taking temperatures can perform monitoring.
- Activities in common areas, such as group meals and social events, will be suspended.
- Volunteer activities and education programs, except those related to the epidemic disease will be suspended.
- There will be some degree of suspension of admissions as determined by the Readiness Committee.
- There will be some level of suspension of non-urgent construction and other non-essential activities as determined by the Readiness Committee.

Surveillance, screening and triage

- All people entering the LTCF will be actively screened by trained staff for cough or fever at open entrances
 - Visitors who are identified to have fever and/or cough will be instructed to don surgical mask, leave the facility, and seek evaluation from their health care provider (NB: risk factors at this alert level may be simply living in an affected region)
 - Employees who have fever and/or cough will be considered possible cases
 - If at home, they should call their health care provider for evaluation prior to coming to work.
 - If at work, they should contact the Infection Control Practitioner and be instructed regarding the need for evaluation.
 - The Infection Control Practitioner screen employees regarding need for evaluation, need for home isolation, etc.
 - After evaluation, no employee who has fever or cough will be allowed to remain at the LTCF.
 - The name and phone number/address of all employees sent home with suspected epidemic infection should be recorded and reported to NH DHHS.
- The Infection Control Practitioner will continue to maintain a log of which employees have contact with epidemic residents, whether there are unprotected exposures, and the employee’s health and work status daily.

Infection control/Precautions

- An N-95 mask and contact precautions are required for all HCPs having contact with any resident who has fever and/or a new cough, until an alternate diagnosis is made. (This includes staff that conducts screening at the LTCF entrances.)
- A resident with suspected ERI should be placed in a private room, or in a negative-pressure room if the LTCF has this capability, until an alternate diagnosis is made.
- Adequate supplies of personal protective equipment, waterless hand rub, and tissues will be maintained throughout the LTCF.
- Everyone providing resident care will be N-95 respirator fit-tested.

Communication/Education

- Daily or more frequent updates to staff and the public/press will be provided as determined by the Readiness Committee.

Preparedness

- The Readiness Committee will meet twice daily to review infection control surveillance data, LTCF operations (i.e. number of screening evaluations being done) and adequacy of new controls and revise alert level as needed.
- Staff may be redeployed from areas where clinical activities have been suspended or limited to screening, infection control, epidemic resident care and other areas of need, as determined by Readiness Committee.

Level: RED

There is evidence of untraceable or uncontrolled nosocomial transmission of ERI in the facility OR there is widespread human-to-human transmission in the region

Summary: “RED” indicates the highest level of alert, with extreme restrictions on access to the LTCF and a major shift away from normal operations throughout the facility. The following additional actions will be considered.

Access Control

- All entrances to the LTCF will be locked except one entrance designated for employees.
- All open entrances will be monitored.
- Entry into facility will be restricted to the following:
 - Employee with valid ID
- Those allowed into the facility must be screened for cough and other criteria (as outlined in ORANGE) and have their temperature taken and if cleared, given something to indicate that they have been cleared to enter the facility.
- Suspension of admissions as determined by the Readiness Committee.
- Suspension of on-site volunteer, construction activities.

Surveillance, screening and triage

- Required daily for all persons entering facility (see ORANGE).

Infection control/Precautions

- All staff will wear surgical masks and use frequent hand hygiene at all times while in the facility.

Communication/Education

- There will be daily or more frequent updates to staff as determined by the Readiness Committee.

Preparedness

- The Readiness Committee will meet twice daily to review situation.
- Staff may be redeployed from areas where clinical activities have been suspended or limited to screening, infection control, epidemic resident care and other areas of need, as determined by Readiness Committee.

APPENDIX 1 LONG TERM CARE FACILITY GUIDANCE

SUSPECTED OR CONFIRMED EPIDEMIC RESPIRATORY INFECTIONS

(ERI) RESIDENT MANAGEMENT PROTOCOL

This plan will be put into effect when a resident is believed to meet the criteria for an epidemic respiratory infection but does not require hospitalization.

Principles to follow in care of ERI patient.

- Minimize Health Care Personnel (HCP) contact with the resident.
- Protect HCPs during contact with resident.
- Minimize opportunities for exposure to other residents or visitors.

CRITERIA FOR HOSPITAL TRANSFER

- Resident will be transferred to a hospital only when medically necessary.
- Residents will not be admitted solely for the purpose of isolation.

If the number of ERI residents exceeds the number of available private rooms in the LTCF, residents with known ERI can be cohorted together. The following residents will be given priority for the rooms; these decisions will be made in collaboration with the Readiness Committee.

- ERI residents who are known to have transmitted ERI to others
- Residents who are being assessed for ERI (do not want to put someone who does not ultimately have ERI in with known ERI residents)

RESIDENT TRANSPORT

Guidelines for moving ERI residents in the LTCF

- The nurse caring for the resident will transport the resident with the assistance of transportation personnel as needed.
- If an elevator is needed, use a service elevator and be sure there are no other people in it.
- The resident must wear a surgical mask over their nose and mouth during transport through the facility
- Security can help with providing an empty elevator available and other logistics if needed.
- Employees who are transporting the resident should wear gloves, N-95 mask (or PAPR hood and motor unit), goggles, and gown.

PROTECTIVE EQUIPMENT

Anyone entering the ERI resident's room must wear respiratory protection appropriate to the disease. If the disease is transmitted via the airborne route then the following is required

- N95 mask (employee must have been fitted and trained by LTCF) and goggles (face shields are not felt to provide adequate protection).
- If the employee cannot be fitted for an N95 mask they must wear a PAPR unit when entering the room. (People wearing a PAPR hood do not need goggles; the hood provides protection for the eyes)
- Everyone must wear gloves and a gown.

When leaving the room the PPE will be removed in the anteroom, if there is one, or just outside the door if the room does not have an anteroom. Remove PPE in the following order.

- Untie the gown's waist tie
- Remove gloves and dispose of them in trash
- Remove goggles handling them by the side pieces and place in sink
- Remove mask handling it by the head straps and dispose of in trash

- Untie neck ties of gown and carefully remove gown turning sleeves inside out as arms are pulled out, place gown in linen bag
- Put new gloves on and disinfect goggles with alcohol or Dimension III
- Remove gloves and dispose
- WASH HANDS before doing anything else

People who have used a PAPR unit should remove PPE in the following order

- Remove hood and motor unit and place on chux pad
- Remove gloves, dispose of in trash and put new gloves on, clean hood, hose and motor with Dimension III, place unit in clean area and dispose of chux pad
- Untie the gown's waist tie
- Remove gloves and dispose of then in trash
- Untie neckties of gown and carefully remove gown, turning sleeves inside out as arms are pulled out, place gown in linen bag.
- WASH HANDS before doing anything else.

All of the PPE, except for the PAPR units, are either disposable or single use and should not be re-used.

N95 masks will not be reused. They will be disposed in the trash of as soon as they are removed.

PAPR units must be disinfected as soon as they are removed. The person who used the equipment is responsible for cleaning it and plugging in the motor unit to recharge while it is not in use. The hood and hose must be wiped with a disinfectant before being handled and used again. The motor unit should be wiped with a disinfectant if it has been in contact with respiratory secretions.

ROOM SETUP

The door to the room must be kept closed.

Only essential equipment should be in the room. Equipment brought into the room should be left in the room for use only by that patient. Thermometer, stethoscope glucometer, pulse ox, should remain in the room. Equipment that cannot be left in the room must be disinfected before it is used for any other resident.

Linen requires no special precautions. Used linen should be handled as little as possible. It should be carefully rolled together in a manner that avoids shaking, and placed in the yellow linen bags.

Trash requires no special precautions. Routine waste should be placed in the regular trash bags. Any waste that is saturated with blood or body fluids should be disposed of in biohazard bags.

Regular dishes will be used. The dietary aide will give the tray to the nurse who will bring it into the room. The nurse will also bring the tray out of the room when the meal is finished.

Blood and other specimens may be sent to the lab via normal mechanisms. Be sure the out side of the biohazard bag does not become contaminated.

The ERI resident room should be cleaned daily and as needed by housekeeping. While the resident is in the room the housekeeping staff must wear N95 mask and goggles or a PAPR unit and gloves and gowns while in the room. Routine cleaning with a disinfectant is adequate. If the resident permanently vacates the room, it should be left closed for an hour, then people may enter without masks to clean.

STAFFING

The nurse taking care of an ERI resident will not care for any other residents or will care for other residents with confirmed ERI of the same strain. Other staff members such as LNAs who may be needed to assist with care may care for other patients.

The goal is to limit the number of employees who enter the room while providing appropriate safe care for the resident.

All employees will be expected to participate in the care of ERI residents as needed.

Pregnant employees will not be excused from caring for ERI residents.

A resident shower may be designated for use by staff that has cared for a ERI resident to shower before leaving work.

EMPLOYEE SURVEILLANCE

The Infection Control Practitioner will start a list of all employees who enter the room or have had close contact with the ERI resident as soon as the ERI plan is activated and maintained by the nurse who is assigned to the patient. All employees entering the room or who have contact with the ERI resident must add their name and contact information to the list. The unit secretary or charge nurse will FAX the prior day's list to Infection Control Practitioner at a designated time each day. Infection Control Practitioner will follow these employees for symptoms of the disease. Infection Control Practitioner/Readiness Committee will develop a disease specific protocol for close monitoring of all employees who have had contact with the ERI resident.

VISITORS

No visitors. People can talk to the resident via telephone.

SPECIAL SITUATIONS

Cough inducing or aerosol producing procedures (intubation, sputum induction, nebulizer treatment, CPAP, BiPAP, suctioning) should not be done unless absolutely necessary. If they must be done the resident should be medicated if possible to limit aerosol production (sedate, paralyze). The absolute minimum number of employees should be in the room. Employees who are in the room during such a procedure must wear PAPR units.

In the event of cardiopulmonary arrest all participants in the resuscitation efforts must all be wearing appropriate PPE; PAPR unit, gloves and gown. Equipment and supplies must go in only one direction (equipment and supplies that are taken off the code cart are not put back on the cart).

COHORTING OF PATIENTS AND STAFF

If there is significant ERI transmission in the facility or frequent unprotected exposures then residents and staff may need to be cohorted in separate areas of the facility according to their exposure status;

- No exposure
- Unprotected exposure but no symptoms
- Unprotected exposure with symptoms but do not meet the ERI case definition
- Symptoms meet the ERI case definition

This policy has been reviewed and accepted by

Infection Control Practitioner _____

Administration _____

Readiness Committee _____

Nursing Director _____

Housekeeping Department _____

Engineering _____

Respiratory Therapy _____

Security _____

Risk Management _____

APPENDIX 9: GUIDANCE FOR CORRECTIONAL FACILITIES



STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH SERVICES



John A. Stephen
Commissioner

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Mary Ann Cooney
Director

Guidance for Correctional Facilities: Pandemic Influenza Preparedness & Response

I. Background

Influenza, commonly called “the flu,” is caused by the influenza virus, which infects the respiratory tract (nose, throat, lungs). The flu usually spreads from person to person when an infected person coughs, sneezes, or talks and the virus is sent into the air. The flu can cause illness in all ages, and it is more likely than other viral respiratory infections, such as the common cold, to cause severe illness and life-threatening complications

Avian influenza, also known as “avian flu” or “bird flu,” is caused by one of many viruses that exist naturally in wild birds. Wild birds usually do not become sick, but they can carry the virus and pass it on to non-wild birds, such as chickens, turkeys, and ducks (fowl), which can become very sick and die. Flu viruses can exist not only in birds, but also other animals. Bird flu viruses do not generally infect people. However, since 1997, there have been over 250 reported cases of human infection from avian influenza A H5N1 (the scientific name for a strain of bird flu currently circulating) in Asia and parts of Eastern Europe. Humans can become infected with bird flu through contact with infected poultry or contaminated fluids, such as the birds’ saliva, nasal secretions, and feces.

Because all influenza viruses have the ability to change, scientists are concerned that viruses including but not limited to the influenza A H5N1 virus could change so that it can easily spread from sick people to otherwise healthy people. If this happens, and the influenza spreads around the world, it would be called a pandemic. Pandemic influenza is a unique public health emergency. Outbreaks are expected to occur simultaneously throughout much of the country and in the State, preventing shifts in human and material resources that normally occur in most other natural disasters. For this reason, the State of New Hampshire Department of Health and Human Services (NH DHHS) recommends that institutions, such as correctional facilities, plan now for their response to pandemic influenza.

II. Purpose

The purpose of this document is to assist correctional facilities in their development of institution-specific pandemic influenza preparedness and response plans. This document outlines a plan for responding to various levels of threat that may be posed by pandemic influenza, and an approach to stepping up prevention and control activities as the threat increases. The intent is that this document will be used in the context of advisory documents and guidance provided by New Hampshire (NH) Department of Health and Human Services (NH DHHS) and the Centers for Disease Control and Prevention (CDC). This guidance is a fluid document subject to change as new information becomes available.

Assumptions

The development of this document is based on the following assumptions:

- In the event of an influenza pandemic the State will have minimal resources available for on-site local assistance, and therefore local authorities and institutions will be responsible for community-specific pandemic response plans, including the modification of this document so that it is institution-specific.
- Local communities may have emergency preparedness plans or influenza pandemic plans in place. Local community leaders and institutions will communicate so that each is aware of the others' plans.
- The federal government has limited resources allocated for State and local plan implementation, and therefore the State will provide supplementary resources in the event of a pandemic, which may include the redirection of personnel and monetary resources from other programs.
- The federal government has assumed the responsibility for developing materials and guidelines, including basic communication materials for the general public on influenza, influenza vaccine, antiviral agents, and other relevant topics in various languages; information and guidelines for health care providers; and training modules. Until these materials are developed, the State has the responsibility to develop such materials for its citizens.
- A novel influenza virus strain will likely emerge in a country other than the United States, but could emerge first in the United States and possibly in New Hampshire.
- It is highly likely that moderate or severe shortages of vaccine will exist early in the course of the pandemic and also possible that no vaccine will be available.
- The supply of antiviral medications used for prevention and treatment of influenza will be limited.

World Health Organization (WHO) Phases

The pandemic phases described in this document are those that have been established by the World Health Organization (WHO) and the United States Government (USG). The most recent publication of the phases is summarized in Table 1 below. The State's response to a pandemic will be guided by the WHO phase declaration [see *State of New Hampshire Influenza Pandemic Public Health Preparedness & Response Plan* (available at <http://www.dhhs.state.nh.us/DHHS/CDCS/ppcc.htm>)]; current phase status can be found at http://www.who.int/csr/disease/avian_influenza/phase/en/index.html. This response will include specific considerations during each phase of the pandemic regarding surveillance, vaccine delivery, administration of antivirals, and communications. In addition, there must be actions taken on the local level in each phase, particularly with respect to community-based containment measures. This plan for correctional facilities provides recommendations for activities in response to WHO phases and also notes the corresponding alert matrix system being used in the hospital-developed *Epidemic Respiratory Infection (ERI) plan* (see Table 2 and process below for further explanation of the ERI plan). It should be noted that at the time of writing this document (February 2006), we are in WHO Phase 3.

Table 1. WHO Pandemic Phases

WHO Phases		Federal Government Response Stages	
INTER-PANDEMIC PERIOD			
1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused a human infection may be present in animals. If present in animals, the risk of human disease is considered to be low.	0	New domestic animal outbreak in at-risk country
2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza subtype poses a substantial risk of human disease.		
PANDEMIC ALERT PERIOD			
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.	0	New domestic animal outbreak in at-risk country
		1	Suspected human outbreak overseas
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.	2	Confirmed human outbreak overseas
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).		
PANDEMIC PERIOD			
6	Pandemic phase: increased and sustained transmission in general population.	3	Widespread human outbreaks in multiple locations overseas
		4	First human case in North America
		5	Spread throughout United States
		6	Recovery and preparation for subsequent waves

Source: U.S. Department of Homeland Security, *PANDEMIC INFLUENZA PREPAREDNESS, RESPONSE, AND RECOVERY GUIDE FOR CRITICAL INFRASTRUCTURE AND KEY RESOURCES* Publication date: September 19, 2006

Table 2. Epidemic Respiratory Infection (ERI) Alert Matrix

Five levels of alert corresponding to the type of transmission and the location of the cases.

What type of transmission is confirmed?	Where are the cases?	Are there cases at the facility?	Alert Level
None or sporadic cases only	Anywhere in the world	No	Ready
Efficient person-to-person transmission	Anywhere outside the US and bordering countries (Canada, Mexico)	No	Green
Efficient person-to-person transmission	In the US, Canada, or Mexico	No	Yellow
Efficient person-to-person transmission	In NH or bordering states; at correctional facility	Doesn't matter; efficient transmission from known sources	Orange
Efficient person-to-person transmission	At correctional facility	Yes, with efficient transmission, sources not clear	Red

III. Process

The first New Hampshire Influenza Pandemic Preparedness Plan was completed in 2001 and was modeled on the CDC guidance, *Pandemic Influenza: Planning Guide for State and Local Officials*, Version 2.1, January 1999. As the State's plan changed and progressed, it became clear that correctional facilities require specific attention to issues such as surveillance, infection control, and case management. Therefore, this guidance was adapted from both the current *State of NH Influenza Pandemic Public Health Preparedness & Response Plan* (currently in draft form) and the *Readiness Plan for Epidemic Respiratory Infection (ERI)*, the latter of which is now used by multiple hospitals throughout the State. The ERI plan was developed by the DHMC Emergency Preparedness team and was disseminated in 2005. It establishes a user-friendly alert matrix distinctive to respiratory infection outbreaks, which may be applicable in the event of an influenza pandemic.

This guidance has been developed by the Division of Public Health Service's Communicable Disease Control Section (CDCS).

IV. Authority/Legal Preparedness

The State of NH has designated NH DHHS to oversee the influenza pandemic planning process in cooperation with local health agencies and other partners. During a pandemic, NH DHHS will have primary responsibility for:

- Making recommendations to local health departments, health care providers and facilities, and the general public to aid in controlling the spread of influenza
- Maintaining surveillance systems to monitor the spread of disease
- Keeping the public informed

While no provision of law addresses pandemic influenza specifically, numerous statutory provisions authorize relevant actions. For institutions to effectively plan and respond to an influenza pandemic, they should be knowledgeable of the following legal issues:

- NH's laws and procedures on quarantine, isolation, closing premises, and suspending public meetings, which can be implemented to help control an epidemic
- Statutes for mandatory vaccination during an infectious disease emergency
- Medical volunteer licensure, liability, and compensation laws for in-state, out-of-state, and returning retired and non-medical volunteers
- Workers' compensation laws as they apply to health care personnel and other essential workers who have taken antivirals for prophylaxis

The corresponding statute descriptions are summarized in the *State of NH Public Health Emergency Preparedness Plan* (currently in draft form).

V. Response Activities by Level of Alertness

Level Ready-Green (ERI alert matrix)/Interpandemic period (WHO/USG)

When cases of an Epidemic Respiratory Infection (ERI) are occurring in countries other than the U.S., but have yet to be reported domestically or in neighboring countries, your facility should maintain a level of preparedness in the event that the ERI begins to spread globally. This is the level your facility should be maintaining currently. During this level, we recommend your facility take the actions listed below.

We recommend the establishment of an Incident Command (IC) Team/Readiness Committee by the correctional facility to determine actions that should be taken to prevent the spread of pandemic influenza among staff, inmates, volunteers, and visitors.

A. Access Control

- The facility's IC Team/Readiness Committee will develop a plan and a timeline for implementing a policy that enables them to maintain control of access to the facility. If possible, consideration should be made to use mandatory ID badges for all staff, inmates, vendors, and other people coming to the facility. There should be a plan to lock down certain entrances and exits, and to monitor use of others, as applicable.

B. Surveillance, Screening and Triage

- The facility's health services personnel will screen all individuals at the time of registration at health services or nurse's office. Personnel may ask the following question: "Do you have a new cough that has developed over the last 10 days?" and will
 - Provide individuals who have a new cough with a surgical mask and/or tissues.
 - Document data at time of screening and review each week for analysis of trends.
 - Clinical staff will
 - Evaluate individuals who have a new cough for fever (temperature $\geq 100.4^{\circ}\text{F}$).
 - Place all individuals who have fever and a new cough on droplet precautions, pending further evaluation.

- If private rooms are available, and evaluation requires isolation, individuals with fever and cough will be placed in a private room with droplet precautions. Otherwise, such individuals should be referred to local community health providers or hospitals for evaluation, with health services personnel calling ahead to alert staff of patient symptoms.
- The facility's health services staff has the authority to restrict individuals (staff and inmates) who have fever and a new cough from work or any other group gathering. They also have the authority to send any staff member home that they suspect may have a communicable disease that puts others in the institution at risk.
- Health services clinicians will screen individuals who report pneumonia or respiratory infection to identify possible clusters, or groups of ill individuals who may be linked.
 - Possible clusters will be reported to the State's Communicable Disease Control Section by calling (603) 271-4496 M-F 8AM-4:30 PM. Clusters may be defined as two or more clinically compatible individuals with onset of symptoms ≤ 10 days apart (this may be altered as more information about the pandemic influenza strain becomes available; NH DHHS will follow CDC recommendations as they are released).
- "Ask for a Mask" signs will be placed at all building entrances and common areas to encourage all persons entering to self-screen (rotating the posters periodically to maintain impact).
 - Via posters, staff will ask persons who have a new cough to wear a surgical mask or use tissues to cover their mouth and nose when coughing, and to use good hand hygiene.
 - The facility will advise all persons, including staff and visitors, who have fever and cough to defer visiting the institution until their illness has resolved.
- Monitoring surveillance data
 - The health services personnel will monitor national, regional, and local data related to the ERI. Information will be posted on the NH DHHS website.

C. Infection control/Precautions

- All staff, inmates, and visitors will use ***Droplet Precautions (private room and surgical mask within 3 feet of ill individual)*** for all contact with any individual who has a new cough and fever, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made.
- The facility's health services staff will use or provide for use a visible doorway "precautions sign" system to allow persons entering the room to know what type of protective equipment is needed.
- The facility will maintain adequate supplies at all times of surgical masks, waterless hand rub, and tissues throughout public areas as well as within Health Services.
- If possible, the institution will identify key areas throughout the campus which need to maintain core groups of N-95 respirator [or other National Institute of Occupational Safety & Health (NIOSH)-approved filtering facepiece respirator] fit-tested personnel
 - Each director is responsible for maintaining the appropriate number of trained and fit-tested staff

- For a list of other NIOSH-approved respirators, see http://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/
- The facility will display hand-washing posters (can be downloaded from: <http://www.dhhs.nh.gov>) in high-traffic areas.

D. Communication/Education

- The facility will develop a sustainable and effective plan for communication and promotion of messages relating to the ERI to internal and external audiences.
- A sustainable plan should be developed to orient and educate staff regarding basic readiness activities at the facility, and a strategy for activities to provide timely information to health services providers in the event of an ERI.
- The institution should incorporate behavioral health providers in their communication plans to address the emotional needs of staff and inmates in the event of a pandemic threat or actual event that causes serious illness or death. For more information about the Disaster Behavioral Health Response teams in the State of NH, disaster behavioral health training, or would like to receive educational materials, please contact the Disaster Behavioral Health Coordinator at (603) 271-2231 or (800) 852-3792.

E. Additional Preparedness Activities

- If the facility does not have an existing Emergency Preparedness team (IC Team/Readiness Committee), one should be formed following Incident Command Structure (ICS). If additional training and/or help are needed in creating this team with adherence to ICS, please contact the NH Bureau of Emergency Management at (800)852-3792 or (603)271-2231.
- The team will designate an Incident Command core including senior administration, health services, communications, safety, engineering, and security with 7-day a week availability to respond to a potential outbreak of an ERI.
- The team will be in charge of regular updates to staff and inmates. The team should meet approximately once a month.
- The Emergency Preparedness team will monitor the Health Alert Network and other communications from public health officials to review changes in recommendations about screening criteria and will communicate changes to clinicians via some combination of email, intranet, or radiographic or laboratory reporting.

The following recommendations for vaccination campaigns apply to the regular influenza season. This is separate from vaccination campaigns that may take place during a pandemic. The purpose in the following recommendations for influenza vaccination during the regular influenza season is: to reduce morbidity from seasonal influenza transmission in vital workers if pandemic strain emerges; to reduce diagnostic confusion if a pandemic strain emerges (one may have a higher suspicion for pandemic strain if the patient is known to have been vaccinated against seasonal influenza); and to prepare communities for providing vaccination clinics in the event that vaccination for a pandemic strain is necessary.

- Offer all eligible staff, inmates, and visitors the opportunity to receive influenza vaccine on-site. Holding vaccination clinics on designated days may facilitate this.

- If your facility cannot hold clinics on-site, refer to local clinics or collaborate with community health organizations to hold clinics to provide influenza vaccine to all eligible institution members of any age.
- Develop educational and promotional materials to promote availability and desirability of influenza vaccine for all.
- The administering provider of flu vaccine will document administration of influenza vaccine, preferably in a computerized database.
- Administrative, educational, and clinical leaders will promote maximum participation of staff and inmates in influenza vaccine program.
- Facility health services personnel will provide multiple opportunities for staff and inmates to receive influenza vaccine conveniently and efficiently.

Level Yellow-Orange (ERI plan)/Pandemic Alert Period (WHO/USG)

In the event that a case of Epidemic Respiratory Infection (ERI) affects a community member or a close contact of a community member of your institution, activities will be modified to reflect increased risk of exposure and disease spread within your community. The following are recommendations regarding activities of your facility that should be addressed in the event that a case of ERI is suspected or has been confirmed in your facility, but there is no documented community spread from this person to others. For example, this would include an inmate who was admitted to the facility with cough and fever after travel to an area known to have the ERI, but has not spread the illness to anyone else.

A. Access Control

- If possible in your institution, require staff, inmates, and visitors to wear ID badges/visitors passes at all times.
- Review possible need to restrict vendors, visitors, and conferences/group activities.

B. Surveillance, Screening and Triage

- “Ask for a mask” signs are posted at all entrances, and in all common areas. Posters should include specific risk factors for the targeted infection, to encourage all persons in the facility to self-screen for infection.
- Persons who self-identify as at-risk for the designated infection are instructed to don surgical mask and should go to the facility’s health services office for clinical evaluation.
- Health services personnel who suspect, after initial clinical evaluation, that an individual may have an ERI should immediately consult with NH DHHS.
- Staff traveling to designated high risk areas, or inmates who recently (time to be defined for corresponding incubation period of disease) traveled to a high risk area must register with the facility’s health services and report any symptoms of fever or cough that occur during a specified time period. Health services will maintain a list of people under surveillance for this reason.
- Staff and inmates who have had contact with suspected patients must register with health services and be screened daily for fever or respiratory symptoms.
- Surveillance data will be transmitted to NH DHHS daily using the electronic surveillance form provided by NH DHHS. This form is currently under development.

C. Infection Control/Precautions

- Airborne, droplet, and contact precautions are required for all contact with any person who has screened as a possible ERI case, until an alternate diagnosis is made.
- Droplet precautions are required for any person who has a new cough and fever, but no risk factors for the ERI, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made. Health services have the authority to exclude any individual with new cough and fever until diagnosis of non-contagious respiratory illness is made.

D. Communication/Education

- A knowledgeable staff member may need to be present at high-traffic areas on site to answer questions and direct persons to evaluation at health services as needed.
- The facility should use the mode of communication used most by staff and inmates to keep the facility's community informed and to provide education about prevention and symptom surveillance.

E. Preparedness

- At level "Orange" the Emergency Preparedness team should meet daily to review situation and strategies.

Level Red (ERI plan)/Pandemic period (WHO/USG)

There is evidence of institutional transmission of the ERI or there is widespread human-to-human transmission in the region of the facility.

Red indicates the highest level of alert, with restrictions on access to the institution, more active screening, and a shift away from normal operations of the institution. At this level, the facility will consider implementing each of the additional actions.

A. Access Control

- All entrances to the institution will be locked except for the main entrance. Security personnel will guard those that cannot be locked.
- Entry into facility will be restricted to the following:
 - Staff with a valid ID
 - Family members of inmates
- Activities of facility eateries may be suspended.
 - A plan should exist for delivering meals to inmates if cafeteria or group-style dining is closed.
- There may be some degree of suspension of group activities as determined by the Emergency Preparedness team in consultation with NH DHHS.
- The decision to close the institution to further admissions may also be made as a means to prevent the further spread of an epidemic, either by the Emergency Preparedness team or NH DHHS.

B. Surveillance, Screening and Triage

- Inmates and staff will be instructed to inform health services if they require any medical appointment. This is required to screen for new cough developing over the past 10 days. Persons who answer yes will be triaged to a clinician who can do further screening for ERI risk factors and determine the need for the individual to be evaluated further.
- Those allowed into the facility must be screened for fever or cough and have their temperature taken, and if cleared, given something to indicate that they have been cleared to enter the facility (e.g. a sticker, a card, a stamp on their hand).
- Those who are identified to have fever and/or cough will be instructed to don a surgical mask, use waterless hand rub, and go to health services. Contact information will be gathered and NH DHHS will be alerted with any follow-up plans.
- The name and contact information of all persons seen with the suspected ERI by health services will be recorded and reported to NH DHHS within 24 hours.
- If the person warrants evaluation in a hospital setting, health services staff should alert the referral hospital that a suspect or confirmed case needs evaluation so that the referral center can make arrangements for infection control precautions.

C. Infection Control/Precautions

- An N-95 mask and contact precautions are required for all health services medical staff having contact with any person who has fever and/or a new cough, until an alternate diagnosis is made (this includes staff who conduct screening at facility entrances).
- A designated group will maintain adequate supplies of personal protective equipment, waterless hand rub, and tissues through the facility.
- Everyone providing patient care will be N-95 respirator fit-tested.
- If the suspect or confirmed case does not require hospitalization, s/he should be isolated from other inmates or staff members, including exclusion from events such as group meals, working out, etc. until s/he is proven to not be a case, or s/he has passed the time of infectivity [2 days before illness onset to 5 days after illness onset (*this may be modified when more is known about the pandemic strain*)]. If the case shares a room with other inmates, arrangements should be made for the case to be given a private room (for example, to remain in health services in a private patient room). Arrangements should be made to provide the inmates with necessary daily items, including meals, water, and hygiene.
- The facility, with guidance from NH DHHS, will identify close contacts in the facility to a suspect or confirmed case of the ERI. Contacts are defined as those who spent >15 minutes within 3 feet of the case during his/her infectious period (2 days before illness onset to 5 days after illness onset). In the correctional facility setting, where contacts will be less clearly delineated, contacts are defined as those who meet the above definition or those who live in the same cellblock as the case.
- Staff and inmates who have had contact with suspected patients must register with health services and be screened daily for fever or respiratory symptoms
- With guidance from NH DHHS, recommendations will be made for quarantine of non-ill contacts. Guidance will be provided regarding details of quarantine, including cohorting of contacts, sites to use for quarantine, and legal authority. As with a case in isolation,

arrangements should be made to provide those quarantined with necessary daily items, including meals, water, and hygiene.

D. Communication/Education

- Daily or more frequent updates to community members will be provided as determined by the Emergency Preparedness team.

Correctional Facility Guidance Appendix 1: Suggested Checklist

Correctional Facility Pandemic Influenza Preparedness & Response Checklist

Level Ready-Green (ERI alert matrix)/Interpandemic period (WHO/USG)

- _____ Form an Emergency Preparedness team, if one does not already exist.
- _____ Have Emergency Preparedness team members perform authority/legal preparedness activities

A. Access Control

- _____ Develop a plan and a timeline for implementing a policy that enables controlling access to the institution.
- _____ Develop a plan to close down or curtail campus transportation, including facility buses and shuttles if necessary.

B. Surveillance, Screening and Triage

- _____ Have the institution's health services personnel screen all individuals at the time of registration at health services or nurse's office, following NH DHHS recommended precautions
- _____ Provide patients who have a new cough with a surgical mask and/or tissues
- _____ Document data at time of screening and review each week for analysis of trends
- _____ Restrict individuals (staff and inmates) who have fever and a new cough from work, class, or any other group gathering
- _____ Send any staff member home that is suspected of having a communicable disease that puts others in the institution at risk. Consult with NH DHHS re. appropriate isolation of inmates with suspected communicable disease.
- _____ Report possible clusters to the State's Communicable Disease Control Section by calling (603) 271-4496 M-F 8AM-4:30 PM.
- _____ Post informative infection control signs at building entrances and common areas
- _____ Rotate the infection control signs periodically
- _____ Monitor national, regional, and local data related to pandemic influenza

C. Infection control/Precautions

- _____ Follow NH DHHS recommended precautions for contact with any individual who has a new cough and fever
- _____ Provide mask or tissues to any inmates, staff or visitors who present with symptoms while at the facility
- _____ Maintain adequate supplies of surgical masks, waterless hand rub, surface disinfectants, and tissues throughout public areas and meeting rooms
- _____ Identify who should be N-95 (or other NIOSH-approved) respirator fit-tested personnel
- _____ Maintain the appropriate number of trained and N-95 fit-tested staff

_____ Display hand-washing posters (can be downloaded from:
<http://www.dhhs.nh.gov>) in high-traffic areas.

D. Communication/Education

- _____ Develop a plan for communication and promotion of messages relating to ERI to internal and external audiences
- _____ Develop a plan to orient and educate staff regarding basic readiness activities at the institution
- _____ Identify translation services needs within facility population
- _____ Identify behavioral health providers to incorporate into communication plans

E. Additional Preparedness Activities

- _____ Implement vaccination campaign (offer vaccine on-site or provide references to area clinics, as applicable)
- _____ Develop educational and promotional materials to promote availability and desirability of influenza vaccine for all
- _____ If administering flu vaccine on-site, document administration of vaccine, preferably in a computerized database
- _____ Have Emergency Preparedness Team designate an Incident Command core with 24/7 availability to respond to a potential outbreak
- _____ Provide regular updates to staff and inmates
- _____ Have Emergency Preparedness Team meet approximately once a month
- _____ Monitor the Health Alert Network and other communications from public health officials and communicate changes to clinicians

Level Yellow-Orange (ERI plan)/Pandemic Alert Period (WHO/USG)

- _____ Continue applicable activities from Level Green/Interpandemic Period

A. Access Control

- _____ Review possible need to restrict vendors, visitors, and group activities

B. Surveillance, Screening and Triage

- _____ Consult with NH DHHS when suspect, after initial clinical evaluation, that a patient may have an ERI
- _____ Register staff traveling to, or inmates who recently traveled to, designated high risk areas and report any symptoms of fever or cough that occur (monitor NH DHHS website for high risk areas, symptoms, and time period for surveillance)
- _____ Register staff and inmates who have had contact with suspected patients and screen daily for fever or respiratory symptoms.
- _____ Submit surveillance data electronically to NH DHHS daily using the form provided by NH DHHS (currently under development)

C. Infection Control/Precautions

- _____ Expand precautions for clinicians to include airborne, droplet, and contact precautions for suspect cases with risk factors
- _____ Follow droplet precautions for suspect cases with no risk factors

D. Communication/Education

- _____ Place staff at high-traffic areas to answer questions and direct persons to health services as needed
- _____ Keep the community informed and provide education about prevention and symptom surveillance
- _____ Consider creating a designated phone line to campus health services

E. Additional Preparedness Activities

- _____ Emergency Preparedness team should meet daily to review situation and strategies

Level Red (ERI plan)/Pandemic period (WHO/USG)

- _____ Continue applicable activities from Level Green/Interpandemic Period and Level Yellow-Orange/Pandemic Alert Period

A. Access Control

- _____ Restrict access to the institution to staff and inmates
- _____ Consider suspension of facility eateries, shops, and other group activities, including sporting events and classes, as determined by the Emergency Preparedness team in consultation with NH DHHS.
- _____ Implement plan for delivering meals to inmates if cafeteria or group-style dining is closed
- _____ Consider suspension of campus group transportation

B. Surveillance, Screening and Triage

- _____ Screen those allowed into the facility for fever or cough and have their temperature taken – implement signage (sticker, card, stamp) system to track status
- _____ Record the name and phone number/address of all persons seen with suspected ERI and reported to NH DHHS within 24 hours unless already alerted that need for notification to NH DHHS has ceased

C. Infection Control/Precautions

- _____ Continue practice of airborne precautions, including staff that conducts screening at institution entrances

_____ Implement isolation & quarantine guidelines as they are made available by NH DHHS

_____ Isolate suspect or confirmed cases if they do not require hospitalization until proven to not be a case, or until passed the time of infectivity

_____ Assist NH DHHS with contact investigations

D. Communication/Education

_____ Provide daily or more frequent updates to community members and inmates



John A. Stephen
Commissioner

Mary Ann Cooney
Director

**STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH SERVICES**



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**Guidance for Child-Care Settings:
Pandemic Influenza Preparedness & Response**

I. Background

Influenza, commonly called “the flu,” is caused by the influenza virus, which infects the respiratory tract (nose, throat, lungs). The flu usually spreads from person to person when an infected person coughs, sneezes, or talks and the virus is sent into the air. The flu can cause illness in all ages, and it is more likely than other viral respiratory infections, such as the common cold, to cause severe illness and life-threatening complications

Avian influenza, also known as “avian flu” or “bird flu,” is caused by one of many viruses that exist naturally in wild birds. Wild birds usually do not become sick, but they can carry the virus and pass it on to non-wild birds, such as chickens, turkeys, and ducks (fowl), which can become very sick and die. Flu viruses can exist not only in birds, but also other animals. Bird flu viruses do not generally infect people. However, since 1997, there have been over 250 reported cases of human infection from avian influenza A H5N1 (the scientific name for a strain of bird flu currently circulating) in Asia, Africa and parts of Eastern Europe. Humans can become infected with bird flu through contact with infected poultry or contaminated fluids, such as the birds’ saliva, nasal secretions, and feces.

Because all influenza viruses have the ability to change, scientists are concerned that viruses including but not limited to the influenza A H5N1 virus could change so that it can easily spread from sick people to otherwise healthy people. If this happens, and the virus spreads around the world, it would be called a pandemic. In previous pandemics, there was disproportionate illness and death in young, previously healthy adults. However, in a typical flu season, rates of infection are highest among children, and rates of serious illness and death from influenza are often highest among children aged <2 years. Though there is not yet confirmed efficient person-to-person transmission of a pandemic strain of influenza, and though it is not yet known which age group(s) will be most affected by the next pandemic influenza, the State of New Hampshire Department of Health and Human Services (NH DHHS) recommends that institutions, such as child care programs, plan now for their response to pandemic influenza. The following recommendations address those infection control measures that may be useful in preventing further spread of the pandemic strain in a child-care setting.

II. Purpose

The purpose of this document is to assist child-care programs in their development of facility-specific pandemic influenza preparedness and response plans. This guidance is a fluid document that may be updated and edited as new information becomes available.

III. Recommendations for controlling pandemic influenza in the child-care setting:

Current mathematical modeling suggests that social distancing measures that include the closure of institutions where individuals congregate in close settings, such as child-care programs, may assist in slowing the spread of pandemic influenza. However, closure of such institutions has a major societal impact and will need thorough consideration in both the preparedness and response phases to a pandemic. The State of New Hampshire (NH), Department of Health and Human Services (NH DHHS), currently has no definitive threshold for implementing school closures. However, those triggers that will be considered include: number of ill individuals, characteristics of disease transmission, types of exposure occurring, morbidity and mortality rates, community compliance, and the availability of local health care and public health resources.

Much of the following will depend on the specific characteristics of the pandemic strain of influenza, such as mode of transmission and length of infectiousness. There are various phases to any pandemic, which include preparedness, response, and then recovery phases. The following activities are recommended for the preparedness phase of a pandemic. Since the appropriate treatment of patients with any respiratory illness depends on accurate and prompt diagnosis, encourage parents and staff to discuss symptoms with their health care providers as soon as possible after symptoms begin.

Facility recommendations:

- Recommend all eligible staff and children of the appropriate age receive seasonal influenza vaccine.
 - The purpose in this recommendation is: to reduce illness from seasonal influenza transmission in vital workers if pandemic strain emerges; and to reduce diagnostic confusion if a pandemic strain emerges (one may have a higher suspicion for pandemic strain if the patient is known to have been vaccinated against seasonal influenza).
 - If your facility is not capable of offering the influenza vaccine on-site, refer staff and parents to local clinics or collaborate with community health organizations to hold clinics.
- Implement strict hand washing for all children and staff with soap and hot water; alternatively, alcohol-based hand gel may be used if hands aren't visibly soiled.
- Implement routine cleaning of toys and other objects that may become soiled by mouth and nasal secretions.
- Display NH DHHS hand washing posters. The posters can be downloaded from the Department's website at: <http://www.dhhs.nh.gov> .
- Maximize facility ventilation by opening windows and doors, if appropriate.
- Improve availability of tissues for management of nasal secretions.
- Consider sending educational materials, such as the Avian Influenza Fact Sheet, home with your students. This fact sheet can be found on the Department's website at: <http://www.dhhs.nh.gov> . Information for schools, child-care providers and parents can be found at CDC's website at: <http://www.cdc.gov/flu/school/>.

Staff-specific recommendations

- Ill staff should be sent home and should remain home until the end of communicable period of their illness. The particular time a staff member should stay home will be determined based on the characteristics of the circulating infectious agent.
- Staff sent home should not “moonlight” at other jobs during their illness.
- Because pandemic influenza is certain to cause administrative challenges due to staff illness and absenteeism, it may be useful to make plans ahead of time for accommodating staffing shortages.

As the pandemic elevates to an alert phase (current pandemic phase can be found at http://www.who.int/csr/disease/avian_influenza/pandemic/en/index.html; click on “Current WHO phase of pandemic alert”), staff should monitor any children who have traveled to high-risk areas for cough & fever until 10 days after their return. Staff should maintain a list of those children being monitored, and may consult with NH DHHS if illness is suspected.

Child-specific recommendations

- Children with cough and a fever greater than 100.4°F should be restricted from the facility.
- Children who have symptoms that are clinically compatible with influenza (cough & fever; sore throat; headache; muscle aches) should be restricted from group activity and placed in a private room, if available, until s/he vacates the child-care setting. Any staff member caring for this patient should wear a surgical mask when within three feet of the child.
- As age appropriate, children should be educated regarding hand washing, covering the nose and mouth when coughing or sneezing, and the use and proper disposal of tissues.
- When a child reports feeling ill, the institution’s staff (health services personnel, if applicable) will screen the child by asking the following question of the child or the child’s guardian: “Do you have a new cough that has developed over the last 10 days?” For younger children, personnel may observe for cough.

The NH Communicable Disease Control Section staff is always available for consultation and assistance in controlling influenza and other respiratory illness outbreaks. Please report any increase in cases of respiratory or influenza-like illness; our staff will help provide recommendations for control measures for your facility. During regular business hours, we can be reached at 603-271-4496, or at 1-800-852-3345, extension 4496. After hours or on weekends, please call the State switchboard at 1-800-852-3345 and request the Public Health Nurse on call.

APPENDIX 12: INFECTION CONTROL FACT SHEET FOR LAW ENFORCEMENT

Due to their repeated and sometimes close contact with the public, law enforcement officials are often at risk of exposure to an infectious disease. This fact sheet will offer the law enforcement officer education regarding personal protection from infectious diseases, and in particular from pandemic influenza.

Good personal health is the first measure to prevent illness in any individual, including law enforcement officials. Some ways to maintain personal health are: good nutrition, updated immunizations, annual flu shots, and attention to personal protective measures.

Disease risk for law enforcement

Types of exposures that place officers at risk for illness include, but may not be limited to the following:

Casual contact

These are illnesses that can be spread through casual contact between individuals. Officers will be at increased risk for illness when in close physical contact or when in a confined space (i.e., when transporting a suspect) with suspects who may have an infectious disease. Risk may also be increased in other situations that require close contact with the public, such as large events. Diseases can be transmitted when there is a direct body surface-to-body surface contact, when there is contact with a contaminated intermediate object, such as contaminated dressings or hands, or when pathogens are inhaled into the body by the simple act of talking or laughing with someone.

Food and Water-borne Disease Exposure

Contamination of food or drinking water with bacteria will result in illness. The law enforcement community is at the same risk as the general public for this type of infection. Public health will make special recommendations for an ill health care, child-care or food service worker to remain out of work in an effort to control the spread of illness to the general public.

Blood-borne Disease Exposure

Illnesses, such as Hepatitis B & C and HIV that are spread through certain exposures to the blood of infected individuals are classified as blood-borne diseases. Law enforcement officials who have frequent contact with individuals who engage in high-risk activity, such as intravenous drug use are at a high risk of exposure.

Personal Protective Measures

- *Immunizations:* Confirm that immunizations are up to date. This offers protection against many infectious diseases. For adult immunization recommendations, call the NH DHHS, Immunizations Program at (603) 271-4482.
- *Stay home when you are sick*
- *Personal protective equipment (PPE):* All officers should utilize standard precautions, which are work practices required for basic infection control. Standard precautions focus on proper hand hygiene and include use of PPE to serve as protective barriers and appropriate handling of clinical waste. Below is a list of PPE.
 - **Gloves:** Reduce the risk of transmitting infectious agents by direct or indirect contact with an infectious person (see casual contact above).
 - **Hand washing:** Every officer should have either the ability to wash their hands with soap and warm water or given a supply of alcohol-based hand sanitizer. If using a hand sanitizer, hands should be rubbed together until the sanitizer has dried on the skin.

- **Respiratory protection:** Surgical masks can offer protection for the officer against some infectious agents. Surgical masks can also be used on the suspect to limit the spread of infectious agents that may be transmitted in the suspect's saliva when he or she coughs, sneezes, or spits at the officer. There are certain diseases that are spread by smaller particles whose transmission is not prevented by a surgical mask. Respiratory protection from such small viruses and bacteria can be achieved by wearing an individually fitted N-95 respirator. To protect against a virus like influenza, N-95s are only appropriate when the virus may be aerosolized, which can occur in certain medical procedures. Otherwise, a surgical mask may be worn. For pandemic influenza, the current recommendation is that the use of N-95 respirators be reserved for healthcare providers, given this rationale.
- **Enhanced precautions:** Includes using gloves, gowns, goggles, masks and respirators to protect against infectious agents that may be transmitted by direct and/or indirect contact, by droplets, and also by airborne transmission (e.g., tuberculosis). These measures include all of the above (gloves, hand washing, respiratory protection) plus additional precautions to prevent airborne transmission, where an infectious agent is small enough to remain suspended in the air and can then be inhaled.

Frequently Asked Questions [pandemic influenza (“pandemic flu”) specific]

1. How do I know that a suspect might have pandemic flu?

There may be no way to know early on if a suspect has influenza. Law enforcement officials should use droplet (surgical mask) in addition to standard precautions when encountering an ill person.

2. How can I limit my exposure to pandemic flu?

- Place a surgical mask on the ill suspect to contain droplets expelled from coughing, sneezing or spitting. If that's not possible, have him or her cover the nose/mouth with a tissue or other means to contain cough.
- Adequate ventilation will help limit exposure. When transporting a suspect, keep vehicle windows open, if possible.
- Continue using good hand hygiene: wash hands with soap and warm water or an alcohol-based hand sanitizer. Hands also must be cleaned immediately after glove removal.

3. If I come into contact with someone with pandemic flu, is my family at risk?

As a contact to disease you cannot spread it to others, unless you develop the illness. However, if you have been exposed to pandemic flu then public health will request to speak to you.

4. Does the cruiser need special cleaning after transporting someone with pandemic flu?

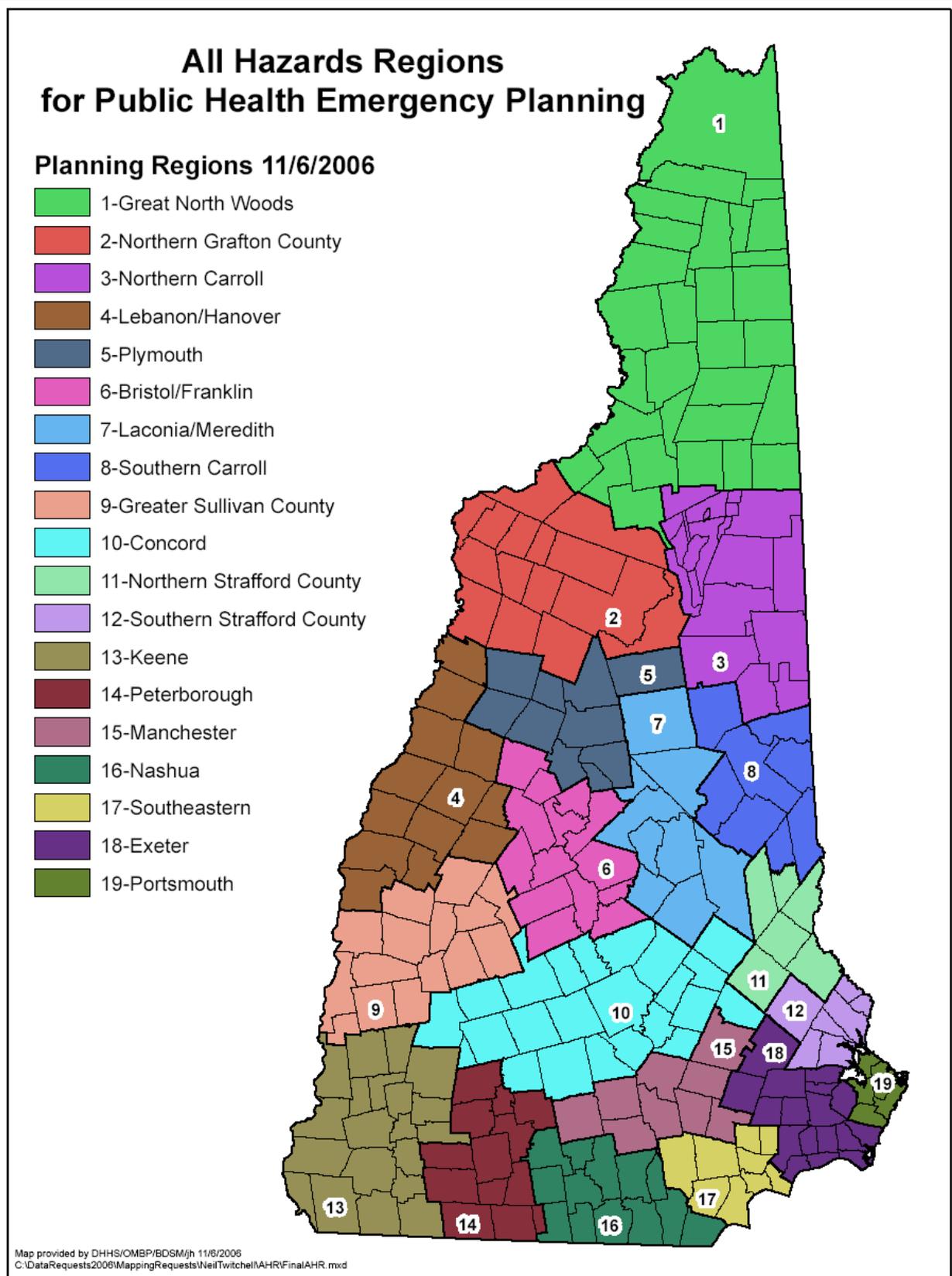
- Clean and disinfect vehicles as usual. All materials that may have come into contact with the infected individual should be cleaned with an approved disinfectant
- Wear appropriate attire when cleaning the vehicle (gown and gloves)

5. What should I be doing to prepare?

- Get immunized for the seasonal flu, it will help to identify cases of pandemic flu by ruling out seasonal flu
- Practice good hygiene, especially frequent hand washing, covering your mouth when you cough or sneeze, and then washing your hands again
- If you are planning to travel to countries in Asia with known outbreaks of H5N1 influenza, avoid poultry farms, contact with animals in live food markets, and any surfaces that appear to be contaminated with feces from poultry or other animals
- Stay informed if there is an outbreak, and follow public health recommendations
- If you are sick, stay home from work; consult your health care provider if symptoms persist or are severe

For specific concerns or questions about avian, pandemic, or seasonal influenza, call the New Hampshire Department of Health and Human Services, Communicable Disease Control Section at 603-271-4496 or 800-852-3345 x4496 or visit the website at www.dhhs.nh.gov.

APPENDIX 13A: ALL HEALTH HAZARDS REGIONS, MAP



APPENDIX 13B: ALL HEALTH HAZARDS REGIONS, TOWN LIST

Great North Woods (1)	Lisbon Region (2)	Lebanon/Hanover Region (4)	Bristol/Franklin Region (6)
Berlin	Bath	Canaan	Alexandria
Cambridge	Benton	Cornish	Andover
Clarksville	Bethlehem	Dorchester	Bridgewater
Colebrook	Carroll	Enfield	Bristol
Columbia	Dalton	Grafton	Danbury
Dixville	Easton	Grantham	Franklin
Dummer	Franconia	Hanover	Groton
Errol	Haverhill	Lebanon	Hebron
Gorham	Landaff	Lyme	Hill
Jefferson	Lincoln	Orange	New Hampton
Kilkenny	Lisbon	Orford	Northfield
Lancaster	Littleton	Piermont	Salisbury
Milan	Livermore	Plainfield	Sanbornton
Millsfield	Lyman		Tilton
Northumberland	Monroe		
Odell	Sugar Hill		
Pittsburg	Whitefield	Plymouth Region (5)	Laconia/Meredith Region (7)
Randolph	Woodstock	Ashland	Alton
Shelburne		Campton	Belmont
Stark		Ellsworth	Center Harbor
Stewartstown	Northern Carroll Region (3)	Holderness	Gilford
Stratford	Albany	Plymouth	Gilmanton
Success	Bartlett	Rumney	Laconia
Wentworth's Location	Chatham	Thornton	Meredith
	Conway	Warren	Moultonborough
Southern Carroll (8)	Cutts Grant	Waterville Valley	Sandwich
Brookfield	Eaton	Wentworth	
Effingham	Hart's Location		
Freedom	Jackson		
Ossipee	Madison		
Tamworth			
Tuftonboro			
Wakefield			
Wolfeboro			
Claremont/New London Region (9)	Rochester Region (11)	Peterborough Region (14)	Southeastern Region (17)
Acworth	Farmington	Antrim	Atkinson
Charlestown	Middleton	Bennington	Danville
Claremont	Milton	Dublin	Derry
Croydon	New Durham	Francestown	Hampstead
Goshen	Rochester	Greenfield	Londonderry
Langdon	Strafford	Greenville	Plaistow
Lempster		Hancock	Salem
New London		Jaffrey	Sandown
Newbury	Dover Region (12)	New Ipswich	Windham
Newport	Barrington	Peterborough	
Springfield	Dover	Rindge	
Sunapee	Durham	Sharon	Exeter Region (18)
Sutton	Lee	Temple	Brentwood
Unity	Madbury		East Kingston
Wilmot	Rollinsford		Epping
	Somersworth	Manchester Region (15)	Exeter
		Auburn	Fremont
Concord Region (10)	Keene Region (13)	Bedford	Hampton
Allenstown	Alstead	Candia	Hampton Falls
Barnstead	Chesterfield	Chester	Kensington
Boscawen	Fitzwilliam	Deerfield	Kingston
Bow	Gilsum	Goffstown	Newfields
Bradford	Harrisville	Hooksett	Newmarket
Canterbury	Hinsdale	Manchester	Newton
Chichester	Keene	New Boston	Nottingham
Concord	Marlborough		Raymond
Deering	Marlow	Nashua Region (16)	Seabrook
Dunbarton	Nelson	Amherst	South Hampton
Epsom	Richmond	Brookline	Stratham
Henniker	Roxbury	Hollis	
Hillsborough	Stoddard	Hudson	Portsmouth Region (19)
Hopkinton	Sullivan	Litchfield	Greenland
Loudon	Surry	Lyndeborough	New Castle
Northwood	Swanzy	Mason	Newington
Pembroke	Troy	Merrimack	North Hampton
Pittsfield	Walpole	Milford	Portsmouth
Warner	Westmoreland	Mont Vernon	Rye
Washington	Winchester	Nashua	
Weare		Pelham	
Webster		Wilton	
Windsor			



Home Care for Pandemic Flu

What is Pandemic Flu?

A "pandemic" is a disease that spreads all over the world and affects a large number of people. If you are caring for a loved one during a pandemic, it's important to take steps to protect yourself and others. Always follow the most current advice of the U.S. Department of Health and Human Services and your local health department.

Prevent the Spread of Pandemic Flu

These healthy habits will help keep you and others from getting and passing on the virus.

- > Clean your hands often with soap and water or alcohol-based hand sanitizer.
- > Cover your mouth and nose with a tissue when you cough or sneeze and clean your hands afterward. Put used tissues in a wastebasket.
- > Cough or sneeze into your upper sleeve if you don't have a tissue.
- > Keep your hands away from your eyes, nose and mouth to prevent germs from entering your body.

Also, a person with signs of the flu should:

- > Stay home from work, school and errands and avoid contact with others.
- > Consider wearing a surgical mask when around others. There may be benefits.

When a Household Member Is Sick

The flu virus is spread when contaminated droplets exit the mouth and nose of an infected person and the virus comes in contact with others. So, follow these tips to protect yourself and others in your home:

- > Keep everyone's personal items separate. All household members should avoid sharing computers, pens, papers, clothes, towels, sheets, blankets, food or eating utensils.
- > Disinfect door knobs, switches, handles, toys and other surfaces that are commonly touched around the home or workplace.

Disinfectant:

1 gallon water
¼ cup bleach
Mix up a fresh batch every time you use it.

- > It is okay to wash everyone's dishes and clothes together. Use detergent and very hot water. Wash your hands after handling dirty laundry.
- > Wear disposable gloves when in contact with or cleaning up body fluids.
- > One person should be the caregiver. He or she may benefit by wearing a mask when giving care.

Practice Hand Hygiene

Caregivers should always wash their hands before providing care. Afterward, wash again and apply alcohol-based hand sanitizer as well. Follow these steps for proper hand hygiene:

1. Wet hands with warm, running water and apply liquid soap.
2. Rub hands vigorously for at least 15 seconds, covering all surfaces and fingers.
3. Scrub nails by rubbing them against the palms of your hands.
4. Rinse your hands with water.
5. Dry your hands thoroughly with a paper towel and use it to turn off the faucet. A shared towel will spread germs.

Recognize Pandemic Flu Symptoms

Watch for these symptoms:

- > Fever
- > Cough
- > Runny nose
- > Muscle pain

Call your health-care professional at the first sign of the flu. Many symptoms can be treated by the health-care professional over the telephone.

Care for a Loved One with the Flu

A person recovering from flu should have:

- > Rest and plenty of liquids
- > No alcohol or tobacco
- > Medications to relieve flu symptoms

In some cases, a health-care professional may prescribe antiviral drugs to treat the flu. Antibiotics (like penicillin) don't cure it.



Monitor Pandemic Flu Symptoms

Keep a care log. Write down the date, time, fever, symptoms, medicines given and dosage. Make a new entry at least every 4 hours or when the symptoms change. Call your healthcare professional again if your loved one has:

- > A high fever
 - Children and Adults:
Greater than 105°F (40.5°C)
 - Babies 3- to 24-months-old:
103°F (39.4°C) or higher.
 - Babies up to 3 months:
Rectal temperature of 100.4°F (38°C) or higher.
- > Shaking chills
- > Coughing that produces thick mucus
- > Dehydration (feeling of dry mouth or excessive thirst)
- > Worsening of an existing serious medical condition (for example: heart or lung disease, diabetes, HIV, cancer)

If you cannot reach your health-care professional, **call 9-1-1** or local emergency number for any of the signs below:

- > Irritability and/or confusion
- > Difficult breathing or chest pain with each breath
- > Bluish skin
- > Stiff neck
- > Inability to move an arm or leg
- > First-time seizure

Prevent Dehydration

Dehydration occurs when the body loses too much water and it's not replaced quickly enough. It can be serious. Begin giving soothing drinks at the first signs of the flu and follow these tips:

- > In addition to plenty of liquids, give ice and light, easily digested foods, such as soup and broth.

- > If your loved one has diarrhea or vomiting, give fluids that contain electrolytes. These are available at your pharmacy or grocery store. Or you can make your own rehydration electrolyte drink for someone over the age of 12.

Electrolyte Drink:

1 quart water
½ tsp. baking soda
½ tsp. table salt
3 to 4 tbsp. sugar
¼ tsp. salt substitute
Mix well and flavor with lemon juice or sugar-free Kool-Aid®.

- > If drinking liquids makes nausea worse, give one sip at a time until your loved one can drink again.

Reduce Fever

To help reduce a fever, do the following:

- > Give plenty of fluids.
- > Give fever-reducing medication, such as acetaminophen, aspirin or ibuprofen, as directed on the container's label. Do not give aspirin to anyone younger than 20.
- > Keep a record of your loved one's temperature in your care log.
- > To relieve discomfort, give a sponge bath with lukewarm water.

After you have called your doctor or emergency number for a fever, continue to follow the home treatment recommendations above. If there is a delay in getting help, ask a health-care professional if you should start an additional dose of an alternate fever-reducing medication (acetaminophen, ibuprofen or aspirin) between the doses described on the label. Always continue to give plenty of fluids.

Prepare for a Flu Pandemic

Make a plan now for a flu pandemic. Figure out what you will do if members of your household have to stay home from work or school or stay separated from others for a period of time. Keep extra supplies of food, water, medications and your disaster supply kit on hand.

Pandemic Flu Caregiving Supplies:

- > Thermometer
- > Soap
- > Box of disposable gloves
- > Acetaminophen
- > Ibuprophen
- > Bleach
- > Alcohol-based hand sanitizer
- > Paper towels
- > Tissues
- > Surgical masks (one for each person)
- > Sugar, baking soda, salt, salt substitute

For more information, contact your local American Red Cross chapter, visit www.redcross.org or call 1-800-RED-CROSS.

Many of the recommendations in this brochure are from the U.S. Department of Health and Human Services. This information is not intended as a substitute for professional medical care or current public health advice. Seek advice from your health-care provider, the CDC and your local health department. Visit www.pandemicflu.gov.

As with all medications and treatments, there are side effects and potential complications. Seek professional advice from your health-care professional to make sure any medication or vaccination is appropriate to your health.

I. Purpose:

In the beginning stages of a pandemic the following plan will be instituted to ensure New Hampshire residents have reasonable access to the state supply of antiviral medication. This plan, as written, is presumed to be in effect from the initial identification of a suspect influenza case in the State until the Neighborhood Emergency Help Centers (NEHCs) are opened in New Hampshire. This plan is for antiviral distribution purposes only, and it does not address priority groups. One goal of this proposal is to prevent sick people from entering the community and potentially infecting other individuals. This plan will also serve to provide a method of antiviral administration with established criteria and a process to confirm necessity.

II. Assumptions:

This proposal does not address priority groups or provide guidance on vaccine distribution. It is not a proposal for mass distribution of antivirals. Antiviral distribution requires a multi-tiered effort and a hotline alone will not be sufficient.

III. Concept of Operations**A. Receipt of Antiviral Stockpile**

- State of NH Stockpile
 - There are three possible logistical routes for receipt of the state purchased antiviral stockpile.
 - Antivirals may be received and repackaged at the DHHS Immunization Program for storage at the state storage facilities (see section C below).
 - The Federal Department of Health and Human Services (HHS) may ship directly to the state storage facilities (see section C below).
 - The antivirals may ship to a receipt, staging, and storage (RSS) site. A refrigerated truck would be requested by HSEM to store and utilize while DHHS repackages antivirals for distribution to the state storage facilities (see section C below).
- NH Allocation of SNS Stockpile
 - See details outlined in the *NH Strategic National Stockpile Deployment & Management* document located in the *NH EOP, ESF-8 (Health & Medical Services), Annex #1*

B. Distribution of Antiviral Stockpile

- State of NH Stockpile
 - A set amount of antivirals will be shipped from the state storage facilities (see section C below) to a network of participating pharmacies (to be defined) on a weekly basis. The pharmacy shipments will continue until the antivirals have all been delivered.
 - The National Guard will deliver antivirals from the state storage facilities to the pharmacy networks.
- NH Allocation of SNS Stockpile
 - Antivirals will not be deployed from the RSS site to mass dispensing sites in an influenza pandemic. A set amount of antivirals will be shipped to a network of participating pharmacies (to be defined) on a weekly basis. The pharmacy shipments will continue until the antivirals have all been delivered.
 - The National Guard will deliver antivirals from the RSS site to the network of pharmacies.
 - The National Guard will also deliver SNS antivirals to state storage facilities as space becomes available from shipments of state supply to the pharmacy network. The state storage facilities are centrally located and will aid delivery resources.

C. Storage of Antiviral Stockpile

- State of NH Stockpile
 - For security, catastrophic lost control and logistical reasons, the site requirements for the State's antiviral inventory storage (AVIS) facilities required that there be multiple storage sites located throughout the state. Three sites were selected as primary AVIS depots and one additional site was defined as redundancy AVIS depot. [REDACTED]
 - [REDACTED] (Redacted for security).
 - HSEM estimates needing 2,325 square feet for the proposed State purchase of antivirals.
- NH Allocation of SNS Stockpile
 - See details outlined in the *NH Strategic National Stockpile Deployment & Management* document located in the *NH EOP, ESF-8 (Health & Medical Services), Annex #1*

D. Security of Antiviral Stockpile

- State of NH Stockpile
 - Two of the three primary sites are located on DHHS institutional campuses. Both campuses provide 24X7 staffing, which provides enhanced control and security for the inventories. [REDACTED]
 - [REDACTED] (Redacted for security). While there is not 24X7 staffing at the facility for the third primary site, the construction of this site provides the ultimate environment for the secure storage of the antivirals.
 - Each of the proposed AVIS storage sites have been determined to be able to meet the minimum primary site criteria, but they will require funding to enhance and improve their security and environment. Each site was evaluated and a facility and security improvement budget was developed. The Department of Safety is currently reviewing the facility and security improvement budgets, and the improvements will commence when funding becomes available.
- NH Allocation of SNS Stockpile
 - See details outlined in the *NH Strategic National Stockpile Deployment & Management* document located in the *NH EOP, ESF-8 (Health & Medical Services), Annex #1*

E. Allocation and Administration of State of NH and SNS Antiviral Stockpile

- NH Division of Public Health Services (DPHS) will establish a toll-free statewide hotline. The hotline will serve 2 purposes:
 - Patients will call the hotline after they have been evaluated by a physician, have a positive lab result from a rapid influenza test, and have been prescribed antiviral medication. Personal, contact, and clinical history information will be taken from the patients over the phone. The call screener will call the physician and confirm legitimacy of antiviral prescription. Once confirmed, hotline staff will call the patients back and arrange antiviral distribution:
 - The patient will be informed of the nearest participating pharmacy from the network of pharmacies
 - There will be at least one participating pharmacy per county
 - Every week each pharmacy in the network will be given one code per dose of antiviral that is scheduled to be shipped that week
 - The patients will be given one of the unique codes that corresponds to the codes assigned to their nearest participating pharmacy that week to obtain the antivirals

- If the patient cannot transport themselves to one of the participating pharmacies or they do not have a family member/friend to go to the participating pharmacy for them, then a Strike Team will be called to deliver antivirals to the patient
 - Patients will call the hotline if they do not have a medical care provider
 - Patients will be referred to their nearest community health center which will be equipped with rapid flu tests and antiviral medication
 - A weekly allotment of doses will be delivered to the community health centers on a weekly basis
 - The Strike Team will be sent to patients unable to transport themselves to their nearest community health center
 - If applicable, DPHS staff will provide a similar code to contacts requiring antivirals who will then be instructed to consult their Primary Care Physician (PCP), give their PCP this code, and then follow the same steps as above for antiviral pick-up. Hotline staff will call the PCP prior to the contact consulting with them to give them the code in order to legitimize the code with the PCP.

F. Necessary Resources to Implement Plan:

- Strike Teams
 - Staffed by school nurses (if schools are closed), public health nurses, and EMTs
 - Security escort (police or National Guard) to be arranged for the Strike Team
- Participating Pharmacies
 - Pharmacies will enter into a memorandum of understanding with NH DHHS when agreeing to participate in antiviral distribution
 - Pharmacies would be responsible for staffing and payment of staff; antivirals will be provided by NH DHHS
 - Security (police or National Guard) will be arranged for the participating pharmacies
- Community Health Centers
 - Security (police or National Guard) will be arranged for the community health centers
 - Community Health Centers will maintain normal operations until they have reached capacity and can no longer manage suspect influenza patients in addition to their usual patient flow. At this point they will only see suspect influenza patients. At this time, Community Health Centers will institute their continuity of operations plans.

APPENDIX 16: RECOMMENDATIONS FOR INDIVIDUALS IN QUARANTINE

Quarantine separates asymptomatic individuals who have been exposed to the disease and are not sick. Once in quarantine, individuals should monitor themselves for signs of illness. The following may be used as a general guide, however the details of this monitoring may change based on the pandemic virus:

Since your exposure to a pandemic influenza case have you experienced any of the following symptoms?

WEEK ONE: (Record Date & check yes or no for each symptom)														
Date:														
Symptom	YES	NO												
Daily temperature (°F)														
Cough														
Sore throat														
Runny nose														
Diarrhea														
Vomiting														
Headache														
Drowsiness														
Other: _____														
WEEK TWO: (Record Date & check yes or no for each symptom)														
Date:														
Symptom	YES	NO												
Daily temperature (°F)														
Cough														
Sore throat														
Runny nose														
Diarrhea														
Vomiting														
Headache														
Drowsiness														
Other: _____														

Family members or other close contacts that have also had the above symptoms:

Name	Age (yrs)	Relationship	Contact #

Primary Care Provider (name, practice, and contact number): _____

If the quarantined individual answers “yes” to any of the above, he/she should contact his/her PCP immediately. If the quarantined individual does not have a PCP, he/she may go to a Community Health Center (CHC), but should call before arrival so that providers may ensure proper infection control precautions are followed. A list of CHC’s can be found in the Resource Directory Appendix of the *PH EPRP*. During a pandemic, DPHS may request individuals to follow-up directly with the health department before notifying their PCP.

SECTION I: INTRODUCTION

1. BACKGROUND

Avian influenza (AI) type A viruses have been identified in over 40 species of wild and domestic birds throughout the world. Cases of low pathogenic (LP) and highly pathogenic (HP) AI, based on in vivo mortality assay and sequencing of the hemagglutinin cleavage site, occur periodically in the U.S. including New Hampshire. The virus is shed in the fecal droppings, saliva and nasal discharges of some infected avian wildlife species and domestic poultry.

Some subtypes of AI are able to infect and cause illness and death in humans. The H5N1 virus is a HPAI subtype circulating in Southeast Asia since 1997, and has caused human illness and death. Most human cases are thought to have resulted from direct contact with infected poultry or virus-contaminated surfaces, or consumption of raw or incompletely cooked poultry or poultry products. In rare cases, person-to-person spread has been documented, however has not been sustained. Since influenza A viruses have the potential to change and gain the ability to spread easily between people, monitoring for infection in humans, birds, and person-to-person transmission is important. Early detection of avian influenza in birds or people prior to efficient human-to-human spread (pandemic), may allow for early intervention and a reduced risk of a pandemic. Should HP H5N1 (or any novel influenza strain) gain the ability to efficiently spread from person to person there is the possibility of a pandemic.

Highly Pathogenic Avian Influenza (HPAI) is considered to be a disease primarily of domestic poultry, and as such, the United States Department of Agriculture (USDA), in conjunction with the New Hampshire State Department of Agriculture, Markets, and Foods (NH DAMF), will serve as the lead for non-human disease surveillance, response, and control of HPAI in New Hampshire.

2. PURPOSE

The purpose of this plan is to describe the specific action to be taken by the New Hampshire Department of Health and Human Services (NH DHHS) in the event a subtype of avian influenza is identified in New Hampshire that has the potential for causing human illness and is not yet efficiently spread from person-to-person (pandemic). The NH DAMF plan, Response to an Animal Influenza Emergency discusses the response for non-human disease surveillance, response, and control and will not be duplicated here. The NH DAMF plan is in draft form and inquires should be directed to the NH State Veterinarian's office at 603-271-2404.

3. AUTHORITY

Federal, State, and local authority are similar to those described in the State of NH Influenza Pandemic Public Health Preparedness and Response Plan.

SECTION II. SITUATIONS AND ASSUMPTIONS

1. SITUATIONS

An avian influenza event may pose a risk to human health. Containing and monitoring such events are important in reducing human illness and critical to early detection of alterations in the virus that may allow it to spread efficiently from person-to-person.

2. ASSUMPTIONS

The development of the current plan is based on the following assumptions:

- A novel avian influenza virus strain could emerge in a country other than the United States, in the United States, and possibly in New Hampshire.

- The supply of antiviral medications used for prevention and treatment of influenza may be limited due to the development of pandemic stockpiles.
- In the event of an influenza pandemic, the State will have minimal resources available for avian influenza surveillance and response. Priorities, including antiviral distribution, will be determined based on the current epidemiology of the disease.

SECTION III: OPERATIONS PLAN

1. SURVEILLANCE

1.1. Animal

Surveillance for avian influenza requires global and national monitoring for both virus and disease activity. Nationally, the United States Department of Agriculture (USDA) and Department of the Interior are responsible for influenza surveillance in animals. Subtypes H5 and H7 are reportable nationally. In NH, the NH DAMF and USDA are responsible for surveillance in domestic and wild animals, respectively. Agencies may use a combination of live animal testing, dead animal testing, morbidity/mortality event reporting, and environmental testing to determine presence of the virus.

Poultry and owned animal surveillance: Avian influenza is a reportable disease (regardless of strain) to the NH DAMF. Agency roles pertaining to non-human surveillance are delineated in the NH DAMF Plan, Response to an Animal Influenza Emergency. Following notification of a confirmed result or preliminary confirmation of any strain of avian influenza with probable direct human risk (e.g., H5N1), the NH DAMF will report the finding to the NH DHHS. Such reports will occur within 24 hours after NH DAMF is made aware of the result and occur via direct phone conversation with the State Epidemiologist or his/her designee.

Wild bird surveillance: USDA, Wildlife Services and NH Department of Fish and Game may implement surveillance for early detection of influenza in wild birds or other wildlife. Following a confirmed result or preliminary confirmation of any strain of avian influenza with probable direct human risk (e.g., H5N1), the NH USDA, NH Department of Fish and Game, and NH DAMF will report the finding to the NH DHHS. Such reports will occur within 24 hours after the respective agency is made aware of the result and occur via direct phone conversation with the State Epidemiologist or his/her designee.

An avian influenza strain is assumed to pose a probable direct human risk based on its subtype (i.e., H5, H7) and current and historical epidemiologic evidence. Both low and highly pathogenic strains should be reported to NH DHHS as the influenza virus has the ability to change pathogenicity.

1.2. Human

In NH, influenza in humans is not a reportable disease. Existing and enhanced surveillance systems are described in the State of NH Influenza Pandemic Public Health Preparedness and Response Plan and will be utilized to identify influenza activity in the NH human population and track human cases and contacts.

2. Seasonal Vaccination

Groups at increased risk of being exposed to an avian influenza subtype with documented risk for human illness should receive the yearly seasonal human influenza vaccine. These groups are targeted in order to decrease the probability that an individual will be co-infected with the current human and avian influenza viruses. Co-infection with these two viruses may allow for viral reassortment and possibly the production of a strain able to efficient spread from person-to-person. In NH, poultry workers and those working on HPAI control and eradication are identified as groups needing adequate coverage by the current seasonal influenza vaccine. Working with the NH DAMF and local poultry organizations, the NH DHHS will assist in promoting vaccine coverage to these groups.

2. RESPONSE

2.1. Command and Control

Depending on the nature of the incident, the Incident Command System (ICS) as described in the State of NH Influenza Pandemic Public Health Preparedness and Response Plan will be utilized.

2.2. Communication

The Communicable Disease Control (CDCS) and Surveillance Sections (CDSS) will utilize the Health Alert Network (HAN) and other public health information dissemination mechanisms to communicate current information with health care providers, public health partners, and others as deemed appropriate. The CDCS and CDSS will work with the NH DAMF, USDA, and NH Fish and Game to ensure appropriate messages are distributed to the public.

2.3. Protocols and Standard Operating Procedures

2.3.a. Activities for Health Care Providers and Facilities

- Isolate and/or cohort patients with avian influenza as appropriate (see State of NH Influenza Pandemic Public Health Preparedness and Response Plan). Refer to current Centers for Disease Control and Prevention (CDC) and NH DHHS guidelines.

2.3.b. Activities for State Agencies

- CDSS will focus on epidemiological and laboratory data collection to characterize changing trends.
- NH DHHS, Food Protection Section will work with NH DAMF, NH DES and USDA to identify and destroy processed and unprocessed poultry products known, or suspected to be, infected with the avian influenza subtype. Methods for safe and effective destruction of infected poultry and poultry products are described in the NH DAMF Plan, Response to an Animal Influenza Emergency.
- CDCS will collaborate with NH Public Health Laboratories to triage human diagnostic testing and send isolates to the CDC as appropriate.
- As the epidemiology changes, resources may need to be diverted as described in the State of NH Influenza Pandemic Public Health Preparedness and Response Plan.

2.4. Case Investigation

Following the report of a human or animal case (if probable risk to human health) of AI in NH, the CDCS will perform a case investigation in which active human case and contact finding will occur. CDCS investigations will be coordinated with any ongoing animal health investigations.

Case investigation will follow procedures outlined in the State of NH Influenza Pandemic Public Health Preparedness and Response Plan. Recommendations to health care providers regarding patient care and employee protection will be based on current knowledge of the virus as provided by CDC.

The response provided by CDSS will vary with resources available. Resources will be prioritized to best contain and limit spread of the virus and most efficiently address public health needs.

2.5. Contact Investigation

Contacts will be defined based on the known epidemiology of the virus at the time and follow procedures outlined in the State of NH Influenza Pandemic Public Health Preparedness and Response Plan. Exposure will be assessed by the Public Health Professional (PHP) performing the investigation. The contact investigation should be conducted promptly. Only those contacts having been deemed “exposed” may be eligible for post-exposure prophylaxis (PEP).

If person-to-person contact has been implicated as a potential source of human infection, contacts will be defined as individuals who have had close contact with a case at some point during the duration of illness (see State of NH Influenza Pandemic Public Health Preparedness and Response Plan for further information). Exposure should be assessed by the PHP performing the investigation.

If animal-to-person contact has been implicated as a potential source of human infection, contacts will be defined as individuals who have been exposed to avian influenza through direct contact with infected birds, bird manure, contaminated surfaces; consumption of raw or undercooked infected poultry or poultry products; has a history of being in the same confined air space (e.g. in the same chicken house) with avian influenza–infected birds or manure; or who has been involved in activities that could result in exposure to avian influenza virus, including euthanasia, carcass disposal, and cleaning and disinfection of premises affected by avian influenza. Measures should be employed to protect at-risk workers, such as those involved in AI control and eradication (see 2.6. Infection Control Precautions). Current knowledge of the epidemiology of the virus will be used to better define exposure status.

2.5.a. Recommendations for Post-Exposure Prophylaxis

Contacts to both suspect and known human or animal cases should be advised by the PHP performing the investigation about the signs and symptoms of influenza. Contacts of cases may be managed through either active or passive monitoring and without any restriction of movement unless they develop symptoms of disease. Guidelines for quarantine and isolation will follow those described in State of NH Influenza Pandemic Public Health Preparedness and Response Plan.

Contacts to animal or human cases may be eligible for PEP. Antivirals will be administered in coordination with CDC’s recommendations and the State of NH Influenza Pandemic Public Health Preparedness and Response Plan.

2.6. Infection Control Precautions

Strict adherence to infection control precautions will be essential to contain and prevent possible human infection when confronted with human and non-human avian influenza cases. Precautions for public health staff and other first responders are described in the State of NH Influenza Pandemic Public Health Preparedness and Response Plan.

Workers involved in on-farm/site AI control and eradication activities or who are otherwise expected to be exposed to known or potential sources of avian influenza virus, should wear personal protective equipment and take other protective measures as indicated in the NH DAMF Plan, Response to an Animal Influenza Emergency, described by the Occupational Safety and Health Administration (<http://www.osha.gov/dsg/guidance/avian-flu.html>), and referenced by the CDC (<http://www.cdc.gov/flu/avian/professional/protect-guid.htm>). The decision to administer antiviral drugs for prophylaxis during at-risk activities will depend on the current knowledge of the efficacy of protection and availability of antiviral medications.

Farm workers, owners, and other individuals residing on infected premises should be advised not to visit other farms or unaffected locations in order to avoid serving as a vehicle for the spread of contaminated materials from the affected site to uninfected premises.

2.7. Behavioral Health Care

It is anticipated that behavioral health care may be necessary as individuals undergo immunization, isolation and/or quarantine, and as poultry producers suffer financial losses. The Disaster Behavioral Health Response Team (DBHRT) is a resource team specializing in the area of behavioral health and crisis intervention (see Behavioral Health Response During Public Health Emergencies Plan, Annex D of PH EPRP). DBHRT may be accessed 24 hours a day via the Bureau of Emergency Management at 603-271-2231.

2.8. Re-entry Considerations and Environmental Surety

It can be expected that the local health department and/or NH DPHS will be consulted as re-entry criteria and environmental decontamination begin to be established. However, it is the responsibility of the Department of Environmental Services (DES) to address environmental decontamination (see the State of NH Influenza Pandemic Public Health Preparedness and Response Plan and NH DAMF Plan, Response to an Animal Influenza Emergency for further information).