

Pandemic Influenza Response Plan

Chatham Health District

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Pandemic Influenza Response Plan

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I. INTRODUCTION

The Connecticut Department of Public Health (DPH) is the lead administrative and planning agency for public health initiatives, including public health emergency preparedness. DPH works with federal, state, regional, and local partners to improve the state's ability to respond to public health emergencies.

The Chatham Health District is DPH's local partner for the towns of East Haddam, East Hampton, Hebron, Marlborough, and Portland. Chatham Health District's Public Health Emergency Response Plan (PHERP) identifies necessary response activities during a public health emergency. The plan supports the public health and medical care component, known as emergency support function 8 (ESF 8), in existing state disaster and emergency plans.

The Connecticut Pandemic Influenza Response Plan (PIRP) is an annex, or supplement, to the Connecticut PHERP. Chatham's Pandemic Influenza Response Plan is an annex to its PHERP. The objective of the Pandemic Influenza Response Plan is to provide a framework for government agencies and private organizations to work together to mitigate the consequences of pandemic influenza.

This is a working plan document and, as such, is subject to revision. The plan will be reviewed periodically to ensure that its provisions are up to date with current public health knowledge, legislation, and policies.

A. Purpose

The purpose of the Chatham Pandemic Influenza Response Plan is to support the following four functions of the Connecticut and regional emergency response effort:

1. Maximize the protection of lives and health care properties while minimizing preventable morbidity and mortality;
2. Document procedures to implement when responding to a pandemic influenza that threatens the public health of Connecticut;
3. Contribute to emergency support functions, as appropriate, particularly ESF #8 (Public Health and Medical Services) to

define policies and procedures for preparation and response to an influenza pandemic; and

4. Enable the Chatham Health District towns and the State of Connecticut to continue to operate and provide services as normally and effectively as possible in the event of an influenza pandemic.

B. Scope of the Plan

The Pandemic Influenza Response Plan presents emergency situations, planning assumptions, and detailed descriptions of the roles and responsibilities of Chatham H.D. in an influenza pandemic, including the direction of local and regional public health and health care providers.

C. Ethical Framework for Decision Making

During an influenza pandemic, governments and public health authorities will have to make difficult decisions (e.g., access to vaccines and antivirals, reallocation of people and resources). Stakeholders (e.g., members of the public, patients, health care workers, other organizations) are more likely to accept the difficult decisions if the decision-making processes are:

Open and transparent – The process by which decisions are made must be open to scrutiny and the basis for decisions should be explained.

Reasonable – Decisions should be based on a clearly stated rationale (i.e., evidence, principles, and values) and be made by people who are credible and accountable.

Inclusive – Decisions should be made explicitly with stakeholder views in mind, and stakeholders should have ample opportunity to be engaged in the decision-making process.

Responsive – Decisions should be revisited and revised as new information emerges, and stakeholders should have opportunities to voice concerns about decisions (i.e., dispute and complaint mechanisms).

Accountable – There should be mechanisms to ensure that ethical decision-making is sustained throughout the pandemic.

Chatham's response to an influenza pandemic will be based on the following core ethical values (not listed in priority). More than one value

may be relevant in any given situation, and some values will be in tension with others. This tension is the cause of the ethical dilemmas that may emerge during a pandemic, and reinforces the importance of shared ethical language as well as decision-making processes that can assign a moral weight to each value when values are in conflict.

Individual Liberty. Individual liberty (i.e., respect for autonomy) is a value enshrined in our laws and in health care practice. During a pandemic, it may be necessary to restrict individual liberty in order to protect the public from serious harm. Individual liberty can be preserved to the extent that the imposed limits and the reasons for them are transparent. Restrictions to individual liberty will:

Be proportional to the risk of public harm;

Be necessary and relevant to protecting the public good;

Employ the least restrictive means necessary to achieve public health goals;

Be applied without discrimination.

Protection of the Public from Harm. Public health authorities have an obligation to protect the public from serious harm. For public health to fulfill this obligation and minimize serious illness, death, and social disruption, public health may isolate people or use other containment strategies, require health care facilities to restrict public access to some areas or limit some services (e.g., elective surgeries). For these protective measures to be effective, citizens must comply with them. The ethical value of individual liberty is often in tension with the obligation to protect the public from harm; however, it is also in individuals' interests to serve the public good and minimize harm to others. When making decisions designed to protect the public from harm, public health authorities will:

Weigh the benefits of protecting the public from harm against the loss of liberty of some individuals (e.g., isolation);

Ensure all stakeholders are aware of the medical and moral reasons for the measures, the benefits of complying, and the consequences of not complying;

Establish mechanisms to review decisions as the situation changes and to address stakeholder concerns or complaints.

Proportionality. Restrictions on individual liberty and measures to protect the public from harm should not exceed the minimum required to address the actual level of risk or need in the community. Chatham H.D. will:

Use the least restrictive or coercive measure possible when limiting or restricting liberties or entitlements.

Use more coercive measures only in circumstances where less restrictive means have failed to achieve appropriate [public health] ends.

Privacy. Individuals have a right to privacy, including the privacy of their health information. During a pandemic, it may be necessary to override this right to protect the public from serious harm; however, to be consistent with the ethical principle of proportionality, Chatham H.D. will:

Determine whether the good intended is significant enough to justify the potential harm of suspending privacy rights (e.g., potential stigmatization of individuals and communities);

Require private information only if there are no less intrusive means to protect public health;

Limit any disclosure to only that information required to achieve legitimate public health goals;

Take steps to prevent stigmatization (e.g., public education to correct misperceptions about disease transmission).

Note: Where the plan contains any reference to the collection, use or disclosure of information or data, it is referring to non-identifiable information or data whenever possible. Any collection, use or disclosure of personal information will be done in compliance with governing legislation.

Equity. All patients have an equal claim to receive the health care they need, and health care institutions are obligated to ensure sufficient supply of health services and materials. During a pandemic, tough decisions may have to be made about who will receive antiviral medication and vaccinations, and which health services will be temporarily suspended. Depending on the extent of the pandemic, measures taken to contain the spread of disease may limit access to emergency or essential services.

In these circumstances, decision makers will:

Strive to preserve as much equity as possible between the needs of influenza patients and patients who need urgent treatment for other diseases; and establish fair decision-making processes and criteria.

Duty to Provide Care. Health care workers have an ethical duty to provide care and respond to suffering. During a pandemic, demands for care may overwhelm health care workers and their institutions, and create challenges related to resources, practice, liability and workplace safety. Health care workers may have to weigh their duty to provide care against competing obligations (i.e., to their own health, family and friends).

When providers cannot provide appropriate care because of constraints caused by the pandemic, they may be faced with moral dilemmas. To support providers in their efforts to discharge their duty to provide care, Chatham H.D. will:

Work collaboratively with stakeholders, regulatory colleges and labor associations to establish practice guidelines;

Work collaboratively with stakeholders, including labor associations, to establish fair dispute resolution processes;

Strive to ensure the appropriate supports are in place (e.g., resources, supplies, equipment);

Develop a mechanism for provider complaints and claims for work exemptions.

Reciprocity. Society has an ethical responsibility to support those who face a disproportionate burden in protecting the public good.

During a pandemic, the greatest burden will fall on public health practitioners, other health care workers, patients, and their families. Health care workers will be asked to take on expanded duties. They may be exposed to greater risk in the workplace, suffer physical and emotional stress, and be isolated from peers and family. Individuals who are isolated may experience significant social, economic, and emotional burdens. Decision-makers will:

Take steps to ease the burdens of health care workers, patients, and patient's families.

Trust. Trust is an essential part of the relationship between government and citizens, between health care workers and patients, between organizations and their staff, between the public and health care workers, and among organizations within a health system. During a pandemic, some people may perceive measures to protect the public from harm (e.g., limiting access to certain health services) as a betrayal of trust. In order to maintain trust during a pandemic, decision-makers will:

Take steps to build trust with stakeholders before the pandemic occurs (i.e., engage stakeholders early);

Ensure decision making processes are ethical and transparent.

Solidarity. Stemming an influenza pandemic will require solidarity among community, health care institutions, public health units, and government. Solidarity requires good, straightforward communication and open collaboration within and between these stakeholders to share information and coordinate health care delivery. By identifying that the health of the general public (and service providers) is a good worth promoting during an influenza pandemic, government decision-makers, public health workers and other health care professionals could model values of solidarity while encouraging others to broaden traditional ethical values focused on rights or interests of individuals.

Stewardship. In our society, both institutions and individuals will be entrusted with governance over scarce resources, such as vaccines, antivirals, ventilators, hospital beds and even health care workers. Those entrusted with governance should be guided by the notion of stewardship, which includes protecting and developing one's resources, and being accountable for public well-being. To ensure good stewardship of scarce resources, decision makers will:
Consider both the benefit to the public good and equity (i.e., fair distribution of both benefits and burdens).

Chatham will use this ethical framework to guide decision-making in pandemic planning and management.

II. SITUATION AND ASSUMPTIONS

A. Situation

Pandemic Influenza Planning in Connecticut

Connecticut has been involved in pandemic influenza planning for a number of years. In January 2001, the DPH received a grant from CSTE to support the development of a Connecticut Influenza Pandemic Preparedness Plan. In April 2002, the draft plan was distributed to members of Connecticut's National Pharmaceutical Stockpile (NPS) Planning Group for review and comment. The February 2004 draft of the Connecticut Pandemic Influenza Preparedness Plan was presented to the DPH Smallpox/Infectious Diseases Preparedness Workgroup for review and the responsibilities of this group were expanded to include pandemic influenza planning.

Smallpox vaccination planning activities dominated the last quarter of 2002 and the first quarter of 2003. Severe acute respiratory syndrome (SARS) planning activities dominated the spring and early summer of 2003. These activities led to the testing of public health and acute care hospital response infrastructures that were created or enhanced through the CDC and Health Resources and Services Administration (HRSA) cooperative agreements for public health preparedness. Planning for mass smallpox vaccination and responding to the threat of SARS transformed the landscape for planning the public health response to pandemic influenza in Connecticut. For example, the state's 41 mass dispensing areas will serve as the foundation for a vaccination campaign in the event of pandemic influenza.

In 2004, two national pandemic influenza preparedness plans became available: the Canadian Pandemic Influenza Plan and the draft United States Pandemic Influenza Preparedness Plan. In November 2005, President George W. Bush released the first comprehensive National Strategy for Pandemic Influenza, and the federal Department of Health and Human Services (HHS) released the HHS Pandemic Influenza Plan—the medical and public health component of the National Strategy that provides guidance to national, state, and local policy makers and health departments.

WHO Pandemic Phases

In 1999, the World Health Organization (WHO) Secretariat published guidance for pandemic influenza and defined the phases of a pandemic.

This standardized outline is designed to provide guidance to the international community and to national governments on preparedness and response for pandemic threats and pandemic disease. Updated guidance was published in 2005 to redefine these phases. Compared with the 1999 phases, the new definitions place more emphasis on pre-pandemic phases when pandemic threats may exist in animals or when new influenza virus subtypes infect people but do not spread efficiently. The classification is based on assessment of risk using a range of scientific and epidemiological data.

Summary of WHO Global Pandemic Phases (WHO Global Influenza Preparedness Plan, 2005):

Interpandemic Period

Phase 1. No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.

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

Pandemic Alert Period

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

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

Phase 5. Larger cluster(s) but human-to-human spread is 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

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

Postpandemic Period

Return to the Interpandemic Period (Phase 1). Although not part of the WHO Phases for tracking the emergence of a pandemic, mitigation and recovery should be a part of every emergency response plan.

Mitigation and recovery actions should be focused on continuing public health actions including communication with the public on issues such as when public gatherings can resume, and continued monitoring of possible outbreaks of infection.

Recognizing that at any pandemic phase, national situations will differ based on whether a country is affected or not affected by the novel influenza subtype, the WHO Secretariat recommends “national subdivisions” of phases based on whether a country is experiencing disease or has extensive trade and travel links with an affected country. National authorities will designate national subdivisions of phases. In the United States, pandemic phases will be defined based on the global phase and determined by the Secretary of Health and Human Services. During the pandemic phase, additional subdivisions may be defined based on the extent of disease. In actual practice, the distinction between the various phases of pandemic influenza may be blurred or occur in a matter of hours, again underscoring the need for flexibility.

Connecticut and the Chatham Health District will follow the WHO guidance for national pandemic planning, as used in the HHS Pandemic Influenza Plan.

Each pandemic phase is associated with a range of preparedness and response activities directed by the Commissioner of the Department of Public Health, in consultation with national, state and local authorities and others, as necessary.

B. Assumptions

Pandemic preparedness planning is based on assumptions regarding the evolution and impacts of a pandemic. Defining the potential magnitude of a pandemic is difficult because of the large differences in severity for the three 20th-century pandemics. While the 1918 pandemic resulted in an estimated 500,000 deaths in the U.S., the 1968 pandemic caused an estimated 34,000 U.S. deaths. This difference is largely related to the severity of infections and the virulence of the influenza viruses that caused the pandemics. The 20th century pandemics have also shared similar characteristics. In each pandemic, about 30% of the U.S. population developed illness, with about half

seeking medical care. Children have tended to have the highest rates of illness, though not of severe disease and death. Geographical spread in each pandemic was rapid and virtually all communities experienced outbreaks.

The following table provides estimates of the “most likely” impact of an influenza pandemic in Connecticut. These estimates are for one season only and provide estimates for 15%, 25%, and 35% attack rates (percentage of clinical influenza illness cases per population) and are derived from calculations using the CDC software, FluAid 2.0 (<http://www2.cdc.gov/od/fluaid/default.htm>).

Table 1. Range of Estimates of Potential Impact of an Influenza Pandemic in Connecticut

Adapted from the Ontario Health Plan for an Influenza Pandemic (http://www.health.gov.on.ca/english/providers/program/emu/pan_flu/pan_flu_plan.html), which is adapted from Ethics in a Pandemic Influenza Crisis. Framework for Decision Making, by Dr. Jennifer Gibson, of the Joint Centre for Bioethics, University of Toronto.

	Attack Rates		
	15%	25%	35%
Outpatient Visits	261,672	436,120	610,567
Hospitalizations	5,987	9,978	13,969
Deaths	1,410	2,844	3,292

The following pandemic planning assumptions are from the HHS Pandemic Influenza Plan:

Susceptibility to the pandemic influenza subtype will be universal. The clinical disease attack rate will be 30% in the overall population. Illness rates will be highest among school-aged children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak.

Of those who become ill with influenza, 50% will seek outpatient medical care.

The number of hospitalizations and deaths will depend on the virulence of the pandemic virus. Estimates differ about 10-fold between more and less severe scenarios.

Risk groups for severe and fatal infections cannot be predicted with certainty. During the annual fall and winter influenza season, infants and the elderly, persons with chronic illness and pregnant women are usually at higher risk of complications from influenza infections. In contrast, in the 1918 pandemic, most deaths occurred among young, previously healthy adults.

The incubation period (the time between acquiring the infection until becoming ill), for influenza averages is usually 1-3 days. We assume this period would be the same for a novel strain that is transmitted between people by respiratory secretions.

Persons who become ill may shed virus and can transmit infection for one-half to one day before the onset of illness. Viral shedding and the risk for transmission will be greatest during the first 2 days of illness. Children will shed the greatest amount of virus and, therefore are likely to pose the greatest risk for transmission.

On average about 2 secondary infections will occur as a result of transmission from someone who is ill. Some estimates from past pandemics have been higher, with up to about 3 secondary infections per primary case.

In an affected community, a pandemic outbreak will last about 6 to 8 weeks. At least two pandemic disease waves are likely. Following the pandemic, the new viral subtype is likely to continue circulating and to contribute to seasonal influenza.

The seasonality of a pandemic cannot be predicted with certainty. The largest waves in the U.S. during 20th century pandemics occurred in the fall and winter. Experience from the 1957 pandemic may be instructive in that the first U.S. cases occurred in June but no community outbreaks occurred until August and the first wave of illness peaked in October.

III. CONCEPT OF OPERATIONS

In the event of a statewide or regional public health emergency, the Governor may order the Commissioner of Public Health to implement all or a portion of the public health emergency response plan. The Commissioner would then order Local Health Directors to implement their public health emergency response plans.

Please refer to the Connecticut Public Health Emergency Response Plan, and the Chatham Health District Public Health Emergency Response Plan.

IV. ORGANIZATIONAL RESPONSIBILITIES

Department of Health and Human Services (HHS)

1. Provide overall guidance on pandemic influenza planning within the United States.
2. Coordinate the national response to an influenza pandemic.
3. Provide guidance and tools to promote pandemic preparedness planning and coordination for States and local jurisdictions.
4. Provide guidance to state and local health departments regarding prioritization of limited supplies of antiviral medications and vaccines.
5. Determine and communicate the pandemic phase for the U.S. based on the global pandemic phase (established by WHO) and the extent of disease spread throughout the country.

Centers for Disease Control and Prevention (CDC)

1. Conduct national and international disease surveillance.
2. Serve as a liaison to the WHO.
3. Develop reference strains for vaccines and conduct research to understand transmission and pathogenicity of viruses with pandemic potential.
4. Develop, evaluate, and modify disease control and prevention strategies.
5. Support vaccination programs; monitor vaccine safety.
6. Investigate pandemic outbreaks; define the epidemiology of the disease. Monitor the nation-wide impact of a pandemic.
7. Coordinate the stockpiling of antiviral drugs and other essential materials within the Strategic National Stockpile.
8. Activate the SNS when the WHO raises the Global Pandemic Alert Level to Phase 4 and deploy antiviral supplies to each state.
9. Coordinate the implementation of international – U.S. travel restrictions.
10. Under federal authority, implement isolation, quarantine and social distancing measures on tribal lands, as needed.

World Health Organization

1. Monitor global pandemic conditions and provide information updates.
2. Facilitate enhanced global pandemic preparedness, surveillance, vaccine development, and health response.
3. Declare global pandemic phase and adjust phases based on current outbreak conditions.

Connecticut State Government

The Governor has overall authority for protecting the health, safety, and welfare of residents, as directed in the Connecticut General Statutes (C.G.S.) §28-9. However, DPH and Local Public Health Directors are responsible for providing the essential public health services related to statewide and local epidemics.

Please refer to the Connecticut Public Health Emergency Response Plan and the Chatham Health District Public Health Emergency Response Plan for additional details.

A. Department of Public Health (DPH)

Interpandemic Period

The Governor designates the Commissioner of the DPH responsible for the overall direction and control of health care personnel and resources related to pandemic influenza control at the state level.

The Commissioner designates the State Epidemiologist to monitor influenza activity at the state, national, and international levels and provide pandemic influenza updates as needed.

The Commissioner will designate a Core Team Leader in charge of the Pandemic Influenza Planning and Response Team.

The Core Team Leader will assemble a group of public health care personnel to prepare a pandemic influenza plan with input from selected public and private health care agencies and governmental organizations.

The Connecticut Pandemic Influenza Response Plan will be submitted as an annex to the PHERP, ESF #8 to State Emergency Plans.

Officials at the DPH will keep the Governor, local health departments, hospitals and other key response partners updated as necessary.

Pandemic Alert Period

Officials at the DPH will keep the Governor, local health departments, hospitals and other key response partners updated as necessary.

Pandemic Period (no cases in the U.S.)

Officials at the DPH will keep the Governor, local health departments, hospitals and other key response partners updated as necessary.

Pandemic Period (cases in the U.S.)

The Governor will declare a “Public Health Emergency.”

The Governor will work with the DPH, Office of Public Affairs, and Department of Emergency Management and Homeland Security (DEMHS) to oversee the state’s response to the influenza pandemic, including opening, as needed, the state Emergency Operations Center (EOC).

The Commissioner of Public Health will open the DPH Emergency Command Center (ECC) and the DPH Incident Command System will be activated.

The State Epidemiologist will manage the epidemiologic and immunization aspects of the state’s pandemic influenza response in collaboration with local health departments, hospitals and other key response partners.

Other units of the DPH will provide assistance to the pandemic response as needed including, but not limited to, the following: Epidemiology Program, Immunizations Program, Environmental Health Section, Health Care Systems Regulation Branch, Laboratory Branch, Local Health Administration Branch, Regulatory Services Branch, Office of Communications, Office of Emergency Medical Services, and Office of Public Health Preparedness (OPHP).

Postpandemic Period

DPH will participate in the evaluation of the pandemic response.

B. Incident Command System

Within the Chatham Health District, the Incident Command System will serve as the operating protocol for the District and its member town

responses. Please refer to the Chatham Public Health Emergency Response Plan for additional details.

C. Chatham Health District

Interpandemic Period

Each local health department should develop or update its own pandemic response plan to be consistent with the Connecticut Pandemic Influenza Response Plan.

Each local health department should participate in development of a regional pandemic influenza response plan that is consistent with the Connecticut Pandemic Influenza Response Plan.

Pandemic Alert Period

Each local health department will maintain awareness of the evolving situation and provide information to constituents as needed.

Pandemic Period (no cases in the U.S.)

Each local health department will maintain awareness of the evolving situation and provide information to constituents as needed.

Pandemic Period (cases in the U.S.)

Each local health department will establish its own emergency operations center and be prepared to participate collaboratively with DPH as needed to provide information and respond to public inquiry, quarantine and isolate individuals and groups as needed, vaccinate constituents and/or provide vaccine and antiviral agents to health care providers in their jurisdiction, and conduct and enforce other activities as may be declared necessary by the Governor and Commissioner of Public Health.

Postpandemic Period

Local health departments will participate in the evaluation of the pandemic response.

D. All Tasked Organizations

All tasked organizations are responsible for participation in the State of Connecticut's emergency response system under the incident command format. All tasked organizations are responsible for the activities outlined in the Natural Disaster Plan, Public Health Emergency Response Plan, and the appropriate Pandemic Influenza Plan / Annex. Specific to pandemic influenza, all tasked organizations are additionally

responsible to develop continuity of business plans to address the expected staff absences and resource limitations for 3-6 months.

V. RESPONSE ACTIONS

A. Communications Technology

Please refer to the Public Health Emergency Response Plan for details.

B. Public and Crisis Information (Risk Communication)

Interpandemic Period

Assess readiness to meet communications needs in preparation for an influenza pandemic, including regular review, exercise, and update of communications plans.

Plan and coordinate emergency communication activities with private industry, education, and non-profit partners (e.g., local Red Cross chapters).

Identify and train lead subject-specific spokespersons.

Provide public health communications staff with training on risk communications for use during an influenza pandemic.

Engage business leaders in pandemic influenza continuity planning.

Work with other non-public health sectors to help provide communications tools for their communities.

Develop and maintain up-to-date communications contacts of key stakeholders and exercise the plan to provide regular updates as the influenza pandemic unfolds.

Pandemic Alert Period

Coordinate pandemic influenza media messages to ensure consistency.

Provide regular updates about situations that pose potential pandemic influenza threats (e.g., through Health Alert Network [HAN] notices and Web site postings).

Distribute educational messages about pandemic influenza and ways that people can protect themselves and their families.

Distribute practical information, such as travel advisories, infection control, availability and use of antiviral medications and vaccines, and specific public health actions that may be needed.

Address rumors and false reports regarding pandemic influenza threats.

Pandemic Period (no cases in the U.S.)

All actions in the Pandemic Alert Period response will be initiated or continued.

Pandemic Period (cases in the U.S.)

Coordinate pandemic influenza media messages to ensure consistency.

Coordinate communications activities with state and local communications staff, including regional or local communications centers as appropriate.

Promptly respond to rumors and inaccurate information to minimize concern, social disruption, and stigmatization.

In coordination with epidemiologic and medical personnel, obtain and track information daily on the numbers and location of newly hospitalized cases, newly quarantined persons, and hospitals with pandemic influenza cases. Use these reports to determine priorities among community outreach and education efforts, and to prepare for updates to media organizations in coordination with state and local partners.

Postpandemic Period

DPH will participate in the evaluation of the pandemic response.

C. Response Training

Please refer to the Public Health Emergency Response Plan for details.

D. Public Health Investigation

Influenza is a mandated notifiable disease under Sections 19a-36-A1 through 19a-36-A24 of the State Health Code.

Interpandemic Period

CDC US Influenza Sentinel Surveillance Network

This network is one of the earliest indicators of influenza activity nationally. The data it gathers can also reflect the intensity of activity, if not its actual severity.

This disease-based surveillance network provides epidemiologic data specific for flu and flu-like illnesses and monitors antigenic changes in influenza viruses during the interpandemic period.

Health care providers count the number of cases of influenza and influenza-like illness (ILI) seen weekly year round.

Connecticut has 33 sites in this surveillance network. The sites are comprised of the following medical specialties: college health service (11), family practice (8), internal medicine (5), other (4), pediatrics (3), emergency medicine (1), and urgent care (1).

The network's health care providers report their weekly patient statistics via phone, fax, or the Internet to CDC. The Connecticut data are available online to the DPH. The CDC collates the data on a regular basis and publishes on its website the statistics for the nation as a whole and broken down into different regions of the country.

Pneumonia and Influenza Death Reporting

The national 122-city reporting network for pneumonia and influenza deaths monitors the severity of widespread influenza activity by comparing it to expected levels of death from pneumonia and influenza in previous years. It is not sensitive to initial changes in influenza activity, reflecting the severity of such activity several weeks later.

Four Connecticut cities (Bridgeport, Hartford, New Haven and Waterbury) are part of this nationwide reporting system. They report deaths weekly to the CDC, which publishes the data in the MMWR (Morbidity and Mortality Weekly Report) the week following reporting.

Hospital Admissions Syndromic Surveillance System (HASS)

This Connecticut-specific system reflects the intensity of moderately severe influenza activity within days to weeks of a sharp increase. Electronic reports are sent daily by hospitals to the DPH via a secure Health Alert Network [HAN]-based website. The Epidemiology Program monitors this system to watch for clusters of disease or newly emerging illnesses. Several of these diagnoses (pneumonia, hemoptysis, acute respiratory distress syndrome) represent respiratory illness. HASS

pneumonia admissions, in particular, have been shown to closely correlate with statewide influenza cases.

Outbreaks of Upper Respiratory Illness in Long-Term Care Facilities

Connecticut's Long-Term Care Facilities (LTCF's) are required year round to report upper respiratory illness (URI) outbreaks to the DPH Licensing and Epidemiology Programs. Long-term care facilities in Connecticut are also required by state statute to vaccinate their residents in accordance with CDC guidelines for influenza and pneumococcal disease. Nursing homes are encouraged to conduct influenza testing through the state laboratory when a URI outbreak is reported during the influenza season. The Epidemiology Program maintains an outbreak database and all URI outbreaks in LTCF's reported to the Program are included in the database. Individual flu cases in LTCF's are also tracked.

DPH Laboratory Influenza Virus Identification

This system is useful for determining which strains of influenza virus are circulating in Connecticut and are causing outbreaks in institutions, and it reflects initial levels of influenza activity.

The DPH Laboratory provides free influenza testing for medical offices and nursing homes in Connecticut as well as to the sentinel surveillance sites. Testing is done year round on throat swab specimens collected with viral reference culture (VRC) kits. All positive test results are reported to the Epidemiology Program where the results are entered into a database.

Hospital and Private Clinical Laboratory Confirmed Test (LCT) Influenza Reporting

This system combined with the DPH Laboratory system described above, has become especially useful as rapid diagnostic tests for influenza have become available. Together, they document the introduction of influenza each year and provide an initial and sustained index of how rapidly influenza builds up and lasts.

Both hospital and private clinical laboratories in Connecticut report viral test results to the Epidemiology Program. These are mostly rapid test kit results. Results are confirmed by typing at the DPH Laboratory. The

Epidemiology Program enters all positive laboratory results into a database, which is available for analysis on a daily basis.

Influenza Medication Tracking

It will be critical during a pandemic influenza outbreak to monitor and help manage public and private sector supplies of vaccines and relevant antiviral agents. A system to measure and monitor hospital supplies of critical medications is being established with public health preparedness funding.

Pandemic Alert Period

During these pandemic alert phases, the Epidemiology Program will intensify and, if needed, expand disease-based and laboratory-based influenza surveillance. Expanded surveillance will include rapid reporting from sources noted above and added collaboration with local departments of health, hospitals and emergency departments. Surveillance criteria will be reviewed to take into account the season-specific and novel virus-specific information about the current circulating respiratory pathogens. CDC updates and guidance will be monitored regarding virologic, epidemiologic, and clinical findings associated with novel influenza virus strains.

The Epidemiology Program will also monitor influenza activity using CDC's BioSense. BioSense is a national, state-of-the-art, multi-jurisdictional, data-sharing program to facilitate surveillance of unusual patterns or clusters of disease activity around the country (<http://www.cdc.gov/phn/component-initiatives/biosense/>). BioSense uses timely existing data from hospital systems (including the Department of Defense, the Veterans Administration, and large private networks), national labs, claims clearinghouses and other existing sources of data to provide a near real-time detailed national picture.

Pandemic Period (no cases in the U.S.)

All actions in the Pandemic Alert Period response will be initiated or continued.

Pandemic Period (cases in the U.S.)

The response to a pandemic influenza outbreak initially requires efforts directed at investigation of individual suspected cases and at control

around them. This is also a key time to determine who is at risk for severe illness, thus guiding vaccination recommendations. These efforts mostly take place simultaneously. The following outlines the objectives, methods for achieving them, and groups that are involved in each step of the investigation and control response.

Enhanced Active Surveillance

Specific investigational objectives and activities include:

Examination of populations particularly susceptible to influenza. Special efforts will be undertaken to determine the groups most at risk from influenza morbidity and mortality so that limited vaccine supplies can be used most effectively.

Determination of age-specific attack rates for disease resulting in severe morbidity (hospitalization) and mortality.

Determination of the efficacy of influenza vaccine and of chemoprophylaxis.

Monitoring of the ability of hospitals and outpatient clinics to manage increased patient loads. If resources become overwhelmed, then assistance from the State Emergency Response Plan through other state agencies becomes imperative.

Use of systematic phone surveys to provide estimates of the number of local cases and affected households and vaccination rates.

Assessment of the effectiveness of influenza control methods. This includes the implementation of novel influenza control methods and communication with the public about viable and ineffective disease prevention methods.

The Pandemic Influenza Response Team will develop an investigation and control work plan.

Overall Response Team: CDC, Governor's Office, DEMHS, DPH, State Police, all local health departments, all hospitals, Attorney General's Office, transport staff.

Partners for investigation: DPH, CDC, local health departments (particularly those with suspect cases), hospitals (particularly those with suspect cases).

The team will meet as quickly as possible (within 1 to 2 hours), once CDC confirms a pandemic. An overall work plan will be developed, the State and DPH Emergency Operations Centers will be opened or on call to open, and interacting Incident Command Systems will be set up by the State and DPH.

Four DPH investigative teams will be established: Statewide Surveillance Team, Field Interview Team; Case Surveillance Team; and Case Investigation Team. The Statewide Surveillance Team will be composed of DPH epidemiologists. The Field Interview Team will be composed of CDC and DPH epidemiologists. The Case Surveillance and Case Investigation Teams will be composed of CDC and DPH epidemiologists. All four teams will work under the joint supervision of the DPH ID Section Chief and a CDC-appointed field leader.

The Statewide Surveillance Team will monitor and track the large increase in activity expected from hospital and private clinical laboratory influenza reporting, the Hospital Admissions Syndromic Surveillance System (HASS) and other existing influenza surveillance systems.

The Field Interview Team, with support from local health, will begin interviews of the cases, family, friends, co-workers to establish full detail of movements of cases and persons with whom they had contact in the 10 days prior to the onset of symptoms and following onset of symptoms. Partners for Field Response: DPH, CDC, local health, State Police as needed.

The Case Investigation Team will review medical history of each patient to determine when the case likely began to be infectious to others. Partners for Case Investigation: DPH, CDC.

The Case Surveillance Team will do active surveillance. Partners for Active Surveillance: DPH, local health, CDC, hospitals. Medical Examiner's records and hospital discharge records may be examined retrospectively to determine if influenza cases may have been missed. If the number of cases permits, the Case Surveillance Team will make a list of all contacts and communicate with them daily. If not, the media may be used to inform the public regarding who is most at risk for influenza and what to do if they begin to develop symptoms.

The HAN will be utilized to notify all health departments, hospitals, emergency departments and physicians to report immediately by telephone any cases of influenza-like illness meeting certain exposure criteria to be determined. The Case Surveillance Team will receive

reports. The team will assure that appropriate diagnostic testing is done on all potential cases of influenza.

Mortality Surveillance

During an influenza pandemic, it will be crucial to monitor deaths in an accurate and timely manner. In addition to monitoring the CDC weekly pneumonia and influenza mortality reports from the four Connecticut cities that participate in the 122 Cities Mortality Reporting System (Bridgeport, Hartford, New Haven, and Waterbury), a more active and direct system will need to be established.

Death certificates are recorded in town clerk offices within 5 days of death and are public record. Surveillance for 75% of the statewide population in Connecticut would require monitoring 60 town clerk offices and/or surveillance for 75% of all deaths in Connecticut would require monitoring 29 town clerk offices. As an initial response, DPH would provide a standard form for town clerks to collect aggregate information on all pneumonia/influenza deaths that occur within their respective city or town. Information includes: the name of the submitting town, and decedents' age group, sex, and cause of death (pneumonia or influenza). Town clerks will fax or email these forms to DPH on a daily, bi-weekly, or weekly basis. DPH staff will follow up with the town clerks who have not submitted their information within 24 hours of the target due date. DPH staff may need to conduct onsite visits to collect the necessary information.

Postpandemic Period

DPH will participate in the evaluation of the pandemic response.

E. Public Health Intervention

For Vaccine and Antiviral Drug Distribution & Use, refer to district mass dispensing plan and to State of Connecticut Pandemic Influenza Plan for details.

The following intervention strategies are based on two scenarios: an early scenario when there are a limited number of identifiable cases occurring as part of recognized chains of transmission, and a later scenario when community transmission is well-established and chains of transmission are not always apparent. In both scenarios, it is assumed that there is insufficient vaccine to vaccinate the population in general.

Initial Suspect Case Reported in Connecticut

The objective is to limit transmission from each identified case to no more than a single generation of contacts.

Identify and isolate all cases of influenza as they occur to limit spread to others.

Identify, quarantine, and monitor all contacts to documented or strongly suspected cases of influenza.

Inform partners on the control arm of the Influenza Response Team and develop a control work plan that includes the following special investigation and control teams: Case Surveillance, Case Investigation, and Field Interview Teams, SNS Vaccine Team, Field Vaccination Oversight Team; Hospital Vaccination Oversight Team; and Communication Team.

Establish that all hospitals will need to take care of their own influenza cases (i.e., there will be no special influenza hospital).

Each identified case needing hospitalization will be isolated in the hospital until no longer deemed infectious (2 weeks from date of symptom onset).

Each identified case not needing hospitalization will be isolated at home, following the SARS Quarantine Guidelines (February 2004). This includes providing guidance to household members re: use of masks, hand-washing, avoiding face-face contact. The DPH Field Response Team in collaboration with the relevant local health department(s) will do monitoring of cases at home.

The DPH Field Interview Team, in collaboration with the relevant local health department(s), will interview each case to identify contacts.

The same team will contact each identified contact and establish voluntary quarantine at home for the duration of the incubation period following the last contact with the case (5-7 days). Daily contact with all persons on quarantine will be maintained in collaboration with the relevant local health department. Contacts who cannot be monitored at home may need to be placed in an alternative setting (follow SARS Quarantine Guidelines).

The Health Alert Network and State Emergency Operations Center will be used to communicate the state of affairs to all acute care hospitals. As needed, special security may be arranged through the state EOC.

The Hospital Vaccination Oversight Team will be the main ongoing liaison with hospitals for control purposes, the Case Investigation and Surveillance Teams will remain in contact for case-finding purposes, and the Field Interview team will remain in contact for community case-contact control activities.

The Governor's Office, in collaboration with DPH and DEMHS, will request vaccine from CDC, Strategic National Stockpile for statewide vaccination purposes.

The SNS distribution and storage plan will need to be activated to assure secure and appropriate distribution of vaccine to all acute care hospitals and community mass vaccination clinics. The SNS Vaccine Team will handle distribution, storage, and monitoring of vaccine, in collaboration with the Field Vaccination Oversight and Hospital Vaccination Oversight teams.

Begin vaccinations in each hospital. Each hospital is in charge of vaccinating its staff and inpatients. Each hospital has staff identified to serve as vaccinators. Hospitals will similarly be notified through the Health Alert Network. The Hospital Vaccination Oversight Team will do monitoring of hospital-based efforts.

Community Transmission Established in Connecticut

The objective is to slow the rate of transmission of influenza in the community to enable production of additional vaccine and/or vaccination to be completed.

Minimize non-essential contact between persons who may be infectious to others.

Provide information on how each person, particularly non-vaccinated persons, can minimize their potential to contract influenza.

Begin/continue efforts to provide mass vaccination to all persons in the state without strong medical contraindications per CDC.

Inform partners on the control arm of the Influenza Response Team and develop a control work plan that includes the following special control: Field Investigation Team, SNS Vaccine Team, Field Vaccination Oversight Team; Hospital Vaccination Oversight Team; and Communication Team.

Assure universal respiratory etiquette strategy is implemented in all hospital emergency departments and in acute primary care settings statewide.

Consider screening for respiratory symptoms and fever of persons coming to congregate settings where spread of influenza could occur. Examples of such settings include hospitals, school, daycare, large indoor shopping malls, and large workplace settings with a dense person-space ratio, movie theaters. Persons with symptoms would be required to wear masks if they entered the settings.

Consider closing non-essential congregate settings where influenza spread would likely be promoted for several weeks to a month, particularly if there is a shortage of masks or spread continues to occur at a rapid rate despite use of masks. Examples of such settings are hospitals (close to visitors), schools, daycare, and public events in closed places.

Provide information on how each person, particularly non-vaccinated persons, can minimize their potential to contract or spread influenza.

Issue press releases to general public re: symptoms of influenza, self-isolation and cough etiquette immediately on having symptoms, use of a mask if one must face others to acquire essential services (e.g., shop for food).

Issue press releases providing guidance to the general public on use of personal respiratory protection if one does not have symptoms, for example, when going to congregate settings where there may be others who do have symptoms (e.g., when going to school, to the hospital, working in a crowded setting).

Postpandemic Period

DPH will participate in the evaluation of the pandemic response.

F. Clean-up/Recovery

Please refer to the Connecticut and Chatham Public Health Emergency Response Plans for details.

VI. ADMINISTRATION AND LOGISTICS

Please refer to the Connecticut and Chatham Public Health Emergency Response Plans for details. In addition, the DPH will:

Develop a continuity of operations plan for essential health department services, including contingency planning for increasing the public health workforce in response to absenteeism among health department staff and stakeholder groups that have key responsibilities under a community's response plan.

Ensure availability of psychosocial support services (including educational and training materials) for employees who participate in or provide support for the response to public health emergencies such as influenza pandemics.

VII. PLAN DEVELOPMENT AND MAINTENANCE

Please refer to the Connecticut and Chatham Public Health Emergency Response Plans for details.

VIII. AUTHORITY AND REFERENCES

Please refer to the Connecticut and Chatham Public Health Emergency Response Plans for details.