

York County's
Public Health Annex for
PANDEMIC INFLUENZA
ESF 8

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York County Emergency Management Agency
With assistance from Aroostook County EMA, MECDC, WHO

The material contained herein is not offered as medical advice – it is for informational use only and as guidelines for the York County's Emergency Operations Plan – Public Health Annex on Pandemic Influenza

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This annex shall be titled **York County Pandemic Influenza Preparedness and Response Public Health Annex** and shall be used in conjunction with other annexes and the Emergency Operations Plan of York County.

The York County Pandemic Influenza Leadership Planning Team is comprised of many key representatives from within York County and Southern Maine. The team is an on-going team committed to providing up-to-date planning information on pandemic influenza, but they are not intended to replace key responder personnel in an actual emergency. The preparation for and response to an influenza pandemic requires a coordinated response by public health authorities, emergency management authorities, and other emergency response entities at the local, county, state and federal levels of government.

The three main purposes of this annex are:

1. Serve as a guide for emergency management, public health and other county departments and agencies.
2. Provide guidance and tools to many partners in York County Communities involved in preparedness and response, as well as adjoining Counties.
3. Guide activities to educate and prepare the public regarding the public health threat.

The three main goals are:

1. Limit the number of illnesses and deaths
2. Preserve continuity of essential local and county government
3. Minimize social and economic disruption

York County can prepare for Pandemic by planning:

Backfilling positions – retirees, part-timers –these employees must be refresh or trained prior to outbreak

Cross –training positions- train personnel in other duties in the office –share the knowledge

Borrow from other agencies – have mutual aid in place

Identify critical functions and missions – who is capable of carrying out the responsibilities

Have a call down list - Line of Succession -

Identify major suppliers –contracts in place, stockpile necessity items.

***H1N1 outbreak....In November 2009, we started our county wide partnership with MECDC –York Liaison, schools, EMA, EMS, LE, CERT and York County EMA for vaccinating students. All York County Students that wanted the (H1N1) vaccine received it. All clinics were orderly and well attended. No one was turned away; it was a great partnership that worked. The Leadership team spoke weekly and procedures were followed.**

A. Authorities

Federal Authority

The Department of Health and Human Services (DHHS) is the US Government's lead agency for preparation, planning, and response to pandemic influenza. As a component of DHHS responsible for disease prevention and control, the CDC will have primary responsibility for tracking pandemic influenza and managing the operational aspects of the public health response.

State Authority

Maine CDC is the lead authority for the State of Maine.

County & Local Authority

The County will develop a public health annex to their Emergency Operations Plan. Each jurisdiction should consider developing a continuity of operations plan in the case of widespread outbreak. Jurisdictions may request community assistance with response and recovery efforts as needed and coordinated with the county. This may include:

Assist with public education efforts, distributing fact sheets and other educational information to the public

Assist in identifying community resources

Assist in closure of public buildings and other areas as identified

Assist in help of establishing temporary morgues or mortuaries

FLU Terms Defined

Seasonal (or common) flu is a respiratory illness that can be transmitted person to person. Most people have some immunity, and a vaccine is available.

Avian (or bird) flu is caused by influenza viruses that occur naturally among wild birds. The HN51 variant is deadly to domestic fowl and can be transmitted from birds to humans. There is no human immunity and no vaccine is available.

Pandemic flu is virulent human flu that causes a global outbreak, or pandemic, of serious illness. Because there is little natural immunity, the disease can spread easily from person to person. Currently, there is no pandemic flu.

A. INTRODUCTION TO INFLUENZA

Experts agree an influenza pandemic is inevitable. To prepare for the next pandemic, the York County Emergency Management Agency, in cooperation with many state and local organizations and partners have developed this York County Pandemic Influenza Preparedness and Response Annex which provides an overview of strategies to reduce pandemic influenza-related morbidity, mortality, and social disruption in the state.

Influenza viruses are unique in their ability to cause sudden illness among humans in all age groups on a global scale. The importance of influenza viruses as biologic threats is due to a number of factors including the high degree of transmissibility, the presence of a vast reservoir of novel variants (primarily aquatic birds), and the unusual properties of the viral genome. The infamous "Spanish flu" of 1918-19 was responsible for more than 20 million deaths worldwide, primarily among young adults. Mortality rates associated with recent pandemics of 1957 and 1968 were reduced in part by the use of antibiotic therapy for secondary bacterial infections and aggressive supportive care of infected patients. However, these later pandemics were associated with high rates of morbidity and social disruption. The Centers for Disease Control and Prevention (CDC) estimates the economic loss associated with the next pandemic will be in the billions of dollars.

Pandemic influenza is a unique public health emergency. No one knows when the next influenza pandemic will occur. However, when it does occur it will be with little warning. Since the novel virus may be identified in any region of the world, experts believe that we will have between one to six months from the identification of a novel influenza virus to the time that widespread outbreaks begin to occur in the United States. Outbreaks are expected to occur simultaneously throughout much of the nation, preventing reallocation of human and material resources.

An influenza pandemic will occur in multiple waves. The effect of the initial wave on individual communities will be relatively prolonged (as long as six to eight weeks) when compared to the minutes-to-hours observed in most natural disasters. Due to the prolonged nature of a pandemic influenza event, the World Health Organization (WHO) and the CDC defined phases of a pandemic in order to facilitate coordinated plans. Phase determination in the United States will be the responsibility of the WHO and the CDC.

Influenza is an illness caused by viruses that infect the respiratory tract of humans. Signs and symptoms of influenza infection include rapid onset of high fever, chills, sore throat, runny nose, severe headache, nonproductive cough, and intense body aches followed by extreme fatigue. Influenza is a highly contagious illness and can be spread easily from one person to another. It is spread through contact with droplets from the nose and throat of an infected person during coughing and sneezing. The period between exposure to the virus and the onset of illness is usually one to five days. Influenza is not an endemic disease, but in the Northern Hemisphere annual epidemics usually occur from December to April.

There are two types of influenza viruses which cause significant disease in humans: type A and type B. Influenza A viruses are composed of two major antigenic structures essential to the production of influenza vaccines and the induction of immunity: hemagglutinin (H) and neuraminidase (N). These two components define the virus subtype. Influenza A viruses are unique because they can infect both humans and animals and are usually associated with more severe illness than type B influenza viruses. Most influenza A viruses are considered to be avian in origin. Worldwide avian influenza control efforts are coordinated by the World Organization for Animal Health (OIE) and it is unknown what role county and local public health agencies would play in these efforts.

Influenza viruses mutate frequently resulting in an antigenic drift or a shift. Antigenic drift is a minor change caused by mutation that results in the emergence of a new strain within a subtype. Drifts can occur in both type A and B influenza viruses. Antigenic shift is a major change caused

by genetic recombination that results in the emergence of a novel virus strain that has not previously infected humans. Antigenic shifts occur only in influenza type A viruses; these changes can lead to an influenza pandemic.

The following are *assumptions* that provide a basis for preparedness activities pertaining to pandemic influenza:

- Influenza pandemics are expected, but unpredictable and arrive with very little warning.
- Outbreaks can be expected to occur simultaneously throughout much of the U.S., preventing shifts in human and material resources that usually occur in the response to other disasters.
- Localities should be prepared to rely on their own resources to respond. As with many public health emergencies the effect of influenza on individual communities will be relatively prolonged (weeks to months) in comparison with other types of disasters.
- Because of the high degree of infectiousness of pandemic influenza, the number of persons affected in the US will be high, it is estimated that:
Up to 200 million persons will become infected
Between 38 million and 89 million will be clinically ill
Between 18 million and 42 million will require outpatient care
Between 314,000 and 733,000 will require hospitalization
Between 89,000 and 207,000 will die
- Health care workers and other first responders may be at higher risk of exposure and illness than the general population, further straining the health care system.
- Effective prevention and therapeutic measures, including vaccine and antiviral agents, will be delayed and in short supply.
- Widespread illness in the community could increase the likelihood of sudden and potentially significant shortages of personnel in other sectors that provide critical public safety services.

B. WORLD HEALTH ORGANIZATION'S PANDEMIC INFLUENZA PHASES

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.

Interpandemic Period - 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.

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

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.

Pandemic Alert Period - 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.

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

Pandemic Alert Period – 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

Pandemic phase: increased and sustained transmission in general population.

Post pandemic Period

Return to PRE-pandemic period activities.

C. PUBLIC HEALTH EMERGENCY ACTIVATION LEVELS

<p>Level 1 – Passive and Sentinel Surveillance</p> <p>This level likely to be activated during: Interpandemic Period - Phase 1 Interpandemic Period - Phase 2 Pandemic Alert Period– Phase 3</p> <p>ACTIVITIES Day-to-day operations County Epidemiologist monitors surveillance system countywide Local Health Departments are notified of reportable diseases or unusual events</p>
<p>Level 2 – Active Surveillance</p> <p>This level likely to be activated during: Pandemic Alert Period – Phase 4 Pandemic Alert Period - Phase 5</p> <p>ACTIVITIES Passive and sentinel surveillance indicates that an unusual event or outbreak has occurred and further case ascertainment is needed Active and enhanced surveillance initiated at the County and/or Local levels Decision makers are able to mobilize internal resources to identify and contain diseases HANS notifications sent to appropriate health departments, physicians, hospitals, and sentinel sites Epidemiological Investigation is conducted by County and Local Health Department staff Law enforcement may be notified if the event has potential law enforcement implications</p>
<p>Level 3 – Health Response</p> <p>This level likely to be activated during: Pandemic Alert Period – Phase 5</p> <p>ACTIVITIES Emergency Public Health Response is necessary MEMA considers activating Emergency Operations Center York County EOC- Level 2 Limited outside resources needed/Northern Regional Resource Center may be activated Decision makers are able to mobilize internal resources to identify, contain, or mitigate the disease Public Information is coordinated through the SMRRC</p>
<p>Level 4 – Full Scale Activation</p> <p>This level likely to be activated during: Pandemic Period – Phase 6</p> <p>ACTIVITIES Resources outside of Public Health and Medical agencies are needed York County Emergency Operations Center is activated Public Health Annex and Integrated Outbreak & Bioterrorism Preparedness and Response Plan are activated County or Municipal Governments may issue a proclamation declaring a state of disaster emergency State resources may be requested Joint Information Center is staffed and operational</p>

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D. Response Phases	I Day-to-Day Operations	II Active Surveillance	III Health Response	IV Full-Scale Activation	V Recovery
WHO Pandemic Phases	Inter-pandemic Period Phase 1, 2, 3	Pandemic Alert Period Phase 4, 5	Pandemic Alert Period Phase 5	Pandemic Period Phase 6	Post-pandemic Period
Surveillance	Normal operations	Enhanced surveillance	Enhanced surveillance	Enhanced surveillance	Epidemiological studies
Disease Investigation	Normal operation	Broad dissemination of case definition for active case finding of novel virus in York County resident.	Case finding of pandemic strain in York County Resident	Case investigation limited to determining age-specific attack rates, morbidity and mortality	Return to normal case investigation
Vaccination/ Prophylaxis	Review and update SNS and POD plans as needed	Initiate Vaccine and Antiviral acquisition	Continue to identify high-risk groups for possible treatment with anti-virals and prepare for mass vaccination	Conduct mass immunizations when vaccine is available. Continue treatment with anti-virals if available	Assess the effectiveness of vaccine and anti-virals
Quarantine/ Isolation	Prepare and distribute Isolation and Quarantine Order Template to LHO.	Advise hospitals and clinicians of control measures, including quarantine and isolation orders for novel virus	Review community control measures. Consider group isolation measures.	Implement community control measures including group isolation.	Review effectiveness of control.
Mass Care	Planning with Hospitals, LHO and MEMA	Alert MEMA	Hospitals activate emergency plans to address surge	Assist hospitals Coordinate EMS	Continue to coordinate with hospitals until patient load normalizes and disease transmission is interrupted
Mass Fatality	Planning with MEMA and Medical Examiner	Alert MEMA and Medical Examiner	Activate Mass Fatality Plan	Activate EOC and request State assistance.	Stand down as fatalities return to normal levels.
Public Information	Review and update Public Information and communication plans as needed	MCDC will review Public Info plan with ME DHSS and York County PIO	MCDC and York County PIO conducts communication activities outlined in plan	MCDC and York County PIO conducts communication activities outlined in plan	MCDC and York County PIO reviews communication strategies used during the pandemic
Command/ Control	Readiness Training Exercise	No or Minimal Response Epi and LHD resources. Alert MEMA	Minimal or extended response. LHD resources. EOC may be activated.	Maximal Response. Advise SMRRC and other reserve Public Health resources. EOC activated.	Stand down as event closes.

E. PANDEMIC INFLUENZA RESPONSE CHECKLIST –To be used as Necessary

ACTION	
Interpandemic Period – Phase 1	
Goal: Strengthen influenza pandemic preparedness	
MCDC establishes a local health care task force as a focus for planning, preparedness, and coordinated response. The task force should include representatives from hospitals, physician and nursing organizations, home health care, long-term care facilities, pharmacists, EMA, EMS and local public health officials.	
MCDC, EMA and LHO develop strategies to increase the demand for influenza vaccine among the county's residents and especially healthcare workers.	
Continue to develop and refine the Local Strategic National Stockpile (SNS) Plans.	
Stockpile surgical masks and medications.	
Work with the local chamber of commerce and large employers to increase awareness in the community.	
Interpandemic Period – Phase 2	
Goal: Minimize the risk of transmission to humans; detect and report such transmission rapidly if it occurs	
Conduct training and exercises to ensure the County and Local SNS Plans are operational.	
Educate Health Officers & staff and health care providers about Pandemic Influenza.	
Estimate target populations (priority groups) of essential personnel, including health care workers, first responders and public safety workers.	
Pandemic Alert Period – Phase 3 (Where we are now)	
Goal: Ensure rapid characterization of the new virus subtype and early detection, notification and response to additional cases.	
Review Local Response Plan – Public Health Annex.	
Review SNS Plan, ensure contacts are updated and potential vaccination clinic facilities are available.	
Review Municipal and County Point of Dispensing sites and update, if necessary.	
Convene local health task force and brief on the status of the Pandemic alert and local preparedness efforts.	
Review message maps relating to Pandemic Influenza and make sure they are current.	
Review priority group estimates.	
Ensure SNS Plan addresses vaccine distribution to military installations, and correctional facilities, if applicable.	

Pandemic Alert Period – Phase 4	
Goal: Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development	
Repeat actions undertaken in Phase 3	
Ensure municipal police departments and the county sheriff's offices are aware of the potential for civil unrest to occur in the event of a pandemic.	
Pandemic Alert Period – Phase 5	
Goal: Maximize efforts to contain or delay spread, to possibly avert a pandemic, and to gain time to implement pandemic response measures	
Repeat actions undertaken in previous phases.	
Meet with adjoining jurisdictions to ensure actions will be coordinated in Phase 6. Special considerations include: priority group recommendations, vaccination clinic operations (hours of operation, locations, policies, and forms).	
Local health task force reviews the priority group recommendation of the State Health Officer and provides guidance to local health officers on any changes.	
Once priority groups are identified, estimate the number of local citizens in each group.	
EMA and Health Department ensures that all agencies and volunteers tasked in the plan are aware of the Pandemic Alert Phase and the potential for escalation.	
Ensure all personnel who may have contact with the media are trained on the message maps.	
Ensure all media contacts are up to date.	
Log into WebEOC and familiarize staff with the system	
Review security component of the SNS Plan and ensure security assets are available and briefed.	
Special Populations?	
Pandemic Alert Period – Phase 6	
Goal: Minimize the impact of the pandemic	
Activate Local Response Plans, Public Health Annex	
Administer influenza vaccine as it becomes available. Ensure a second dose of vaccine is administered if necessary	
Activate Local Emergency Operations Center and the local Joint Information Center.	
Assist ME DHSS with obtaining data to determine age-specific attack rates, morbidity and mortality	

F. RECOMMENDATIONS FOR NONPHARMACEUTICAL PUBLIC HEALTH INTERVENTIONS

Source: WHO consultation on priority public health interventions before and during an influenza pandemic. Geneva, World Health Organization, 2004. (Document WHO/CDS/CSR/RMD/2004.9.)

**Measures at the County Level
(For persons living or traveling within an affected county)**

Measures	Pandemic Period			Comments
	Phase 3	Phases 4 & 5	Phase 6	
Public health information, communication				
Information for public on risks and risk avoidance (tailored to target population).	Y	Y	Y	
Information for professionals.	Y	Y	Y	
Advice on universal hygiene behavior.	Y	Y	Y	
Preparatory information on next phase.	Y	Y	Y	
Measures to reduce risk of transmit infection				
Confinement: — Confine cases (mild and severe) as appropriate to local situation; provide medical and social care.	Y	Y	Y	Need to plan for large numbers of severe cases.
Face masks: Symptomatic persons.	Y	Y	Y	Logistics need to be considered.
Exposed persons: undertake risk assessment considering: evidence of human-to-human transmission; closeness of contact; frequency of exposure	C	C	C	Consider recommending masks based on risk assessment
Persons seeking care (respiratory illness) in risk area (waiting room).	Y	Y	Y	
Measures to reduce risk that contacts transmit infection				
Tracing and follow-up of contacts.	Y	Y	N	Not feasible once pandemic starts
Voluntary quarantine (such as home confinement) of healthy contacts with health monitoring; provide medical and social care.	N	Y	N	Voluntary quarantine should also apply to contacts of known cases undergoing antiviral prophylaxis, as efficacy not known.
Self-health monitoring and reporting if ill but no restrictions on movement.	Y	C	N	Not relevant for contacts in quarantine.
Advise contacts to reduce social interaction.	N	NR	N	see also measures to increase social distance.
Advise contacts to defer travel to	N	NR	Y	Precautionary principle

unaffected areas.				when unclear whether human-to-human transmission is occurring; see also travel measures.
Provide contacts with antiviral prophylaxis. c	Y	Y	N	Principle of early aggressive measures to avert pandemic.

Y = yes, should be done at this phase; N = no, not at this phase; C = should be considered; NR = not relevant.

Pandemic Period

Measures	Phase 3	Phases 4 & 5	Phase 6	Comments
Measures to increase social distance				
Voluntary home confinement of symptomatic persons.	Y	Y	Y	Measures needed to reduce risk of transmission to other household members.
Closure of schools (including preschool, higher education) in conjunction with other measures (limiting after-school activities) to reduce mixing of children.	N	C	C	Depends on epidemiological context –extent to which these settings contribute to transmission.
Population-wide measures to reduce mixing of adults (furlough non-essential workers, close workplaces, discourage mass gatherings).d	N	C	C	Consider in certain circumstances –extent to which unlinked community transmission and transmission in workplaces occurs.
Masks in public places.	N	N	N	Not known to be effective; permitted but not encouraged.

Measures to decrease interval between symptom onset and patient isolation

Public campaign to encourage prompt self-diagnosis.	Y	Y	Y	
Urge entire population (affected area) to check for fever at least once daily.	N	N	N	
Set up fever telephone hotlines with ambulance response.	N	C	N	
Set up fever clinics with appropriate infection control.	N	C	N	
Introduce thermal scanning in public places.	N	N	N	Not effective based on experience; also requires individual and public health action for identified febrile persons.

Disinfection measures

Hand-washing.	Y	Y	Y	
Household disinfection of potentially contaminated surfaces.	Y	Y	Y	

Widespread environmental disinfection.	N	N	N	
Air disinfection.	N	N	N	
Measures for persons entering or exiting an infected area within the county				
Advise to avoid contact with high-risk environments (such as infected poultry farms, live-poultry markets).	Y	Y	Y	
Recommended deferral of non-essential travel to affected areas.	N	Y	Y	If significant areas of country remain unaffected.
Restrict travel to and from affected areas.	N	N	N	Enforcement of travel restrictions considered impractical in most countries but likely to occur voluntarily when risk appreciated by the public.
Cordon sanitaire.	N	N	N	Enforcement considered impractical.
Disinfection of clothing, shoes or other objects of persons exiting affected areas.	N	N	N	Not recommended for public health purposes, but may be required by veterinary authorities to prevent spread of infection in animals.

Y = yes, should be done at this phase; N = no, not at this phase; C = should be considered; NR = not relevant.

G. PRIORITY PROPHYLACTIC TREATMENT RECOMMENDATIONS

MCDC Priority Prophylactic Treatment Recommendations		
Current Guidance to Hospitals and Health Departments for Federally Funded Caches		
<ul style="list-style-type: none"> • Hospital, health department staff and household members • Hospital and health department clinic volunteers (would include all personnel assisting with clinic operations). • Emergency Medical Service personnel and household members. • Law Enforcement. • Fire Departments. • Public Works. • Identified contacts. • General public. 		
The groups listed below have been identified as possible priority recipients by various entities.		
<p>Persons necessary to provide legal authority to initiate activities not governed by current state laws including:</p> <p>Mayors and other individuals identified by statute to take charge of municipal functions in the event of the loss or incapacitation of the Mayor.</p> <p>Persons essential to maintain basic community infrastructure contingent on the epidemiology of the pandemic and the quantity of influenza vaccine available. (See options below)</p>		
Medical laboratory workers	Emergency management personnel	National Guard members that have been called into state service

		by the governor
Long term care facility staff	Utility field workers (gas, electric, water, sewer, etc.)	Communications personnel
Fuel suppliers	Food suppliers	Waste management workers (general and medical)
Public transportation drivers	Air travel personnel (pilots, air traffic controllers, etc.)	Corrections workers
Morticians/Coroners/Medical Examiners	Pharmacists	Red Cross field workers
U.S. Postal Service workers	Contracted persons involved in the transportation of vaccine	York County CERT members

H. COMMUNITY CONTAINMENT MEASURES INCLUDING NON-HOSPITAL ISOLATION AND QUARANTINE AND HOME CARE

Pandemic influenza has the potential of affecting all elements of society. A large number of cases will add burden to hospitals and other health care systems already stressed with the normal day to day crises. Mortality is usually markedly increased. Health and medical personnel as well as other infrastructure workers, i.e. law enforcement, fire, public works, will not be immune. The effects on our communities could be staggering.

Immunization and respiratory hygiene are the best control measures available for influenza. Because no vaccine against a novel influenza strain will be available initially, and, it is likely that when vaccine becomes available, it will be in short supply, there are few community control measures available in a pandemic influenza event.

Non Hospital Isolation and Quarantine

Major Points:

Influenza is now included in the federal list of communicable diseases for which federal isolation and quarantine are authorized (Amendment to EO 13295).

Quarantine is medically very effective in protecting the public from disease.

People in isolation may be cared for in their homes, in hospitals, or in designated healthcare facilities.

Non-hospital isolation and quarantine is a non-issue in pandemic influenza due to a novel virus.

CDC Fact Sheet on Isolation and Quarantine January 20, 2004:

To contain the spread of a contagious illness, public health authorities rely on many strategies. Two of these strategies are isolation and quarantine. Both are common practices in public health, and both aim to control exposure to infected or potentially infected persons. Both may be undertaken voluntarily or compelled by public health authorities. The two strategies differ in that isolation applies to persons who are known to have an illness, and quarantine applies to those who have been exposed to an illness but who may or may not become ill.

ISOLATION: FOR PEOPLE WHO ARE ILL

Isolation refers to the separation of persons who have a specific infectious illness from those who are healthy and the restriction of their movement to stop the spread of that illness. Isolation allows for the focused delivery of specialized health care to people who are ill, and it protects healthy people from getting sick. People in isolation may be cared for in their homes, in hospitals, or in designated healthcare facilities. Isolation is a standard procedure used in hospitals today for patients with tuberculosis (TB) and certain other infectious diseases. In most cases, isolation is voluntary; however, many levels of government (federal, state, and local) have basic authority to compel isolation of sick people to protect the public.

QUARANTINE: FOR PEOPLE WHO HAVE BEEN EXPOSED BUT ARE NOT ILL

Quarantine refers to the separation and restriction of movement of persons who, while not yet ill, have been exposed to an infectious agent and therefore may become infectious. Quarantine of exposed persons is a public health strategy, like isolation, that is intended to stop the spread of infectious disease. Quarantine is medically very effective in protecting the public from disease.

States generally have authority to declare and enforce quarantine within their borders. This authority varies widely from state to state, depending on state laws. The Centers for Disease Control and Prevention (CDC), through its Division of Global Migration and Quarantine, also is empowered to detain, medically examine, or conditionally release persons suspected of carrying certain communicable diseases. This authority derives from section 361 of the Public Health Service Act (42 U.S.C. 264), as amended.

Whereas isolation and contact management strategies such as active monitoring are directed to individuals, broader community containment measures may be applied to groups of persons or to communities during outbreaks characterized by extensive transmission. These interventions range from measures to increase social distance among community members (e.g., cancellation of public gatherings, use of masks, and implementation of community-wide "snow days") to community-wide quarantine.

Although all of these interventions are designed to prevent transmission by limiting social interactions and preventing inadvertent exposures, the less stringent actions may be easier to implement on a large scale. For example, in the "snow day" approach, community members are asked to stay home as they would during a major snowstorm. Schools are closed, work sites are closed or restricted, large public gatherings are cancelled, and public transportation is halted or scaled back. Implementation requires fewer resources than are needed to activate and maintain community-level quarantine. In addition, as snow days are a familiar concept in most communities, implementation can occur quickly. Implementation of quarantine, on the other hand, can be resource intensive, requiring mechanisms for enforcement and provision of necessities. Snow days and other measures to increase social distance are therefore the preferred community-level responses, with quarantine reserved for situations in which less drastic measures have not been successful in containing an outbreak.

Home Care

Home care will be the predominant mode of care for most people infected with influenza. During the Pandemic Alert Period, individuals should discuss with their health care provider specific recommendations for both vaccination and chemoprophylaxis.

The single best way to prevent influenza is to get vaccinated each fall. In the absence of vaccine, however, there are other ways to protect against influenza. Four antiviral drugs (amantidine, rimantidine, oseltamivir and zanamivir) are approved and commercially available for use in treating influenza. Three of them (amantidine, rimantidine, and oseltamivir) are approved for

prevention (chemoprophylaxis) against influenza. All of these drugs are prescription drugs, and a doctor should be consulted before their use.

The public should receive frequent and repetitive health communications that emphasize the simple steps that individuals and families may take to prevent the spread of respiratory illnesses like influenza:

Avoid close contact with people who are sick.
Wash hands often (hourly). If sick, stay at home and keep at least 3 feet away from others.
Cover mouth and nose with a tissue when coughing or sneezing.

Individuals who are cared for at home should:

Get plenty of rest.
Drink a lot of fluids.
Avoid using alcohol and tobacco.
Consider taking over-the-counter medications to relieve the symptoms of influenza (but never give aspirin to children or teenagers who have influenza-like symptoms).
Stay home and avoid contact with other people.
Cover nose and mouth with a tissue when you coughing or sneezing.
In a pandemic influenza event, some individuals who are cared for at home may develop complications. Should complications develop, these individuals should seek medical care immediately, either by calling the doctor or going to an emergency room. Upon arrival, the receptionist or nurse should be told about the symptoms so that precautions can be taken (providing a mask and or separate area for triage and evaluation).

Warning Signs to seek urgent medical care:

In children, these include:

High or prolonged fever
Fast breathing or trouble breathing
Bluish skin color
Not drinking enough fluids
Changes in mental status, somnolence, irritability
Seizures
Influenza-like symptoms improve but then return with fever and worse cough
Worsening of underlying chronic medical conditions (for example, heart or lung disease, diabetes)

In adults, these include:

High or prolonged fever
Difficulty breathing or shortness
Pain or pressure in the chest
Near-fainting or fainting
Confusion
Severe or persistent vomiting

PANDEMIC INFLUENZA AND SCHOOLS

The Centers for Disease Control and Prevention (CDC) recognizes that school administrators, teachers, staff, and parents are concerned about the flu, particularly its effects on children. Schools are instrumental in keeping their communities healthy by taking actions such as posting information about hand hygiene in restrooms, providing flu prevention messages in daily announcements, and being vigilant about cleaning and disinfecting classroom materials.

(INFORMATIONAL HANDOUT FOR SCHOOLS and the COMMUNITY)

What is influenza (flu)?

- Influenza, commonly called "the flu," is caused by the influenza virus, which infects the respiratory tract (nose, throat, lungs). It can cause mild to severe illness, and at times can lead to death.

How does the flu spread?

- The main way that influenza viruses are spread is from person to person in respiratory droplets of coughs and sneezes. (This is called "droplet spread.") This can happen when droplets from a cough or sneeze of an infected person are propelled (generally up to 3 feet) through the air and deposited on the mouth or nose of people nearby. Though much less frequent, the viruses also can be spread when a person touches respiratory droplets on another person or an object and then touches their own mouth or nose (or someone else's mouth or nose) before washing their hands.

What are the symptoms of the flu?

- Influenza is a respiratory illness. Symptoms of flu include fever, headache, extreme tiredness, dry cough, sore throat, runny or stuffy 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.

How long is a person with flu virus contagious?

- The period when an infected person is contagious depends on the age and health of the person. Studies show that most healthy adults may be able to infect others from 1 day prior to becoming sick and for 5 days after they first develop symptoms. Some young children people with weakened immune systems may be contagious for longer than a week.

What is the difference between a cold and the flu?

- The flu and the common cold are both respiratory illnesses but they are caused by different viruses. Because these two types of illnesses have similar flu-like symptoms, it can be difficult to tell the difference between them based on symptoms alone. In general, the flu is worse than the common cold, and symptoms such as fever, body aches, extreme tiredness, and dry cough are more common and intense. Colds are usually milder than the flu. People with colds are more likely to have a runny or stuffy nose. Colds generally do not result in serious health problems, such as pneumonia, bacterial infections, or hospitalizations.

How can you tell the difference between a cold and the flu?

- Because colds and flu share many symptoms, it can be difficult (or even impossible) to tell the difference between them based on symptoms alone. Special tests that usually must be done within the first few days of illness can be carried out, when needed to tell if a person has the flu.

What are the symptoms of the flu versus the symptoms of a cold?

- In general, the flu is worse than the common cold, and symptoms such as fever, body aches, extreme tiredness, and dry cough are more common and intense. Colds are usually milder than the flu. People with colds are more likely to have a runny or stuffy nose. Colds generally do not result in serious health problems, such as pneumonia, bacterial infections, or hospitalizations.

What are influenza antiviral medications?

- Influenza antiviral medications are drugs that suppress the ability of influenza viruses to reproduce. When used correctly, they can reduce the duration of symptoms and some complications from influenza virus infection.

How are antiviral medications used for flu?

- Antiviral medications are used along with vaccines to prevent and treat influenza. They most often are used to control flu outbreaks in institutions, such as nursing homes or hospitals, where people at high risk for complications from flu are in close contact with each other.

At what age should a child be vaccinated?

- To protect their health, all children 6 months to 23 months old should be vaccinated against the flu. Children 2 years old or older who have an underlying, long-term illness (such as heart or lung disease [like asthma], metabolic disease [like diabetes], kidney disease, a blood disorder, or a weakened immune system) should get a flu shot. The flu shot is not approved for use in children less than 6 months old.

Where can I get more information about the flu?

- You can call the CDC Flu Information Hotline (English and Spanish) at: 800-CDC-INFO (800-232-4636); 888-232-6348 (TTY) (hand washing chart –page 30 & 31)

.....
Remind students and staff to clean their hands, and make sure they have the supplies to do so.

Frequent hand washing with soap and water will help protect students and staff from viruses. Wash hands for 15- 20 seconds (long enough to sing the "Happy Birthday" song twice.) Alcohol-based hand rubs may be used as an alternative. Students and staff should be advised to rub their hands thoroughly until dry. Work with your school's janitorial staff to ensure that restrooms are stocked with soap and paper towels or working hand dryers. Work with teachers to have a supply of alcohol-based hand-rub in each classroom.

Remind students and staff to cover noses and mouths when coughing or sneezing, and have tissues readily available. Remember to advise them to dispose of used tissues in appropriate waste receptacles.

Make sure that tissues are available in all classrooms and common areas, such as libraries or lunchrooms. If hands become contaminated with respiratory secretions while coughing or sneezing, perform hand hygiene as soon as possible.

Encourage sick students and staff to stay at home.

Sick students and staff should stay home from school until they have been without fever for 24 hours to help prevent spreading illness to others.

Work closely with your local health department if making plans regarding school closure.

Any decisions about closing a school due to increased influenza activity should be made in consultation with local and state health and education departments. It is unknown whether school closings are beneficial in controlling the spread of influenza.

In a pandemic influenza event, it may be necessary to close schools for administrative reasons (insufficient staff to meet the instructional and safety needs of students).

York County School Superintendent Association will handle the closing of schools as 1 voice.

For more information contact your local Superintendent.

CDC Guidance: Preventing the Spread of Influenza (the Flu) in Schools: Interim Guidance for School Administrators, Teachers and Staff, January 12, 2004. Available at <http://www.cdc.gov/flu/school/>

Surge Capacity Guidance for York County Hospitals as cited by: The Yale New Haven Health System

(EACH YORK COUNTY HOSPITAL HAS ITS OWN PANDEMIC INFLUENZA PLAN)**

The Yale New Haven Health System (YNHHS) defines surge capacity as...”the maximum healthcare-related service that the healthcare system can provide during a public health emergency, domestic attack, major disaster or high consequence event. Surge capacity depends on the provision of an adequate quantity and quality of healthcare facilities, equipment, supplies, pharmaceuticals and personnel.”

The following are some of the key recommendations that have been identified by the Surge Subcommittee:

1. Each system hospital should develop a graded staffing plan to staff their facility with 10, 20 and 40% reductions in staff.
2. Identify potential patient care locations and implement activities that increase patient care space, which may include the cancellation of elective surgeries and admissions.
3. Due to the unknown nature of the emergency, it is difficult to identify specific treatment algorithms and protocols, however, the mechanism to be used to rapidly develop and implement these procedures must be in place. These procedures are to be based upon the latest information on the emergency and any recommendations being offered by local, state and federal health officials.
4. Developing a thorough risk communication plan to decrease the amount of fear and misinformation in order to maximize attendance of the work force.
5. Develop a plan in conjunction with local agencies in order to provide for increased inter-facility transfers to any alternative care sites
6. Each hospital's Protective Services needs to develop and implement policies that provide adequate security to crucial areas of operation including the ED, Pharmacy and any mass vaccination site.
7. Each member of the hospital incident command system should take Mental Health Aspects of Emergencies and Disasters for Non-Mental Health Professionals (EM 230).
8. Develop a program that identifies the content and scope of just-in-time (JIT) training that would be required for volunteers to be effectively utilized within the hospital.

Each hospital has developed a plan that results in the stockpiling of PPE.

The capacity to increase bed space during a disaster is a critical element of a hospital's emergency management plan. The term known as “surge capacity” is used to describe this capacity.

Each York County hospital has reviewed its clinical facility, evaluate supplies on site, and begin discussions regarding the following nine areas of need to support any type of surge. For all three hospitals, emphasis has been on the evaluation of individual facility needs, personnel, equipment and supplies.

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Table 1

Hospital	Projected Flu Patients/Day1	Projected Incubated Patients/Day2
So Me Medical Ctr.		
H.D. Goodall Hospital		
York Hospital		

1These patients are the average number of flu patients in each facility on any given day during the eight week time period. There will be fewer patients in the beginning and at the end of the outbreak and may be more in the middle.

2The latest evidence indicates that approximately one third of patients will require ventilator support.

The CDC has made recommendations that airborne precautions be taken without the need for negative pressure rooms. Compliance with this recommendation requires the purchase of 50% more N-95 masks.

This annex has identified the nine major areas that each hospital should consider in developing institution-specific surge plans. Guidance and potential solutions for the challenges that will be faced are provided.

Principle Areas of Need			
1. Staffing	2. Facilities	3. Clinical requirements	4. Communications
5. Transportation	6. Security	7. Mental Health	8. Volunteers
9. Supplies and equipment			

1. Staffing

The potential for up to 40% of the staff becoming ill will have to be incorporated into any staffing requirements.

Staffing concerns would include:

- Mitigating fear and anxiety among staff through effective communications
- Avoiding misinformation which disrupts staff confidence
- Recognizing and addressing staff concerns for their own families (e.g. daycare)

Each hospital should develop a graded staffing plan to staff their facility with 10, 20 and 40% reductions in staff.

Decreases in ambulatory services should be discussed with the physicians who may be impacted prior to initiating any policy changes in order to prepare them for interruption in their practice. It is recommended that these policy issues be discussed at the highest level of the organization and promulgated through the Medical Staff Office via the Chief of Staff.

2. Facilities

Facilities considerations when developing the surge capacity response include:

- Identification of potential patient care locations and implementing standard activities to increase internal space capacity whenever feasible, which may include the cancellation of elective surgeries and admissions
- Predetermination of triage locations (on- or off-site), including primary and secondary triage locations
- Establishment of isolation wards
- Consideration of alternate treatment sites and transportation, access, and security activities

2. Facilities

Identify patient care spaces in 25 patient allotments. To complete this we recommend using a surge capacity template to assist in the determination of appropriate spaces for patient care.

Identify spaces that can readily be converted into isolation wards and develop a list of requirements to make these spaces useable. Have MOU'S in place with alternative facilities.

3. Clinical Requirements

The principle clinical considerations include:

- Ensuring the availability of adequate personal protective equipment (PPE) and decontamination capacity
- Maintaining flexibility in clinical operations (flex down other services so assets may be used elsewhere)
- Patient care protocols would be needed regarding diagnosis, discharge planning, and treatment decisions that may include making ethical decisions
- Traditional clinical staffing policies and procedures during disaster events would need reevaluation (e.g., nursing-to-patient ratio, staff certification versus patient acuity, etc.)
- Due to the unknown nature of the emergency, it is difficult to identify specific treatment algorithms and protocols; however, the mechanism to be used to rapidly develop and implement these procedures, based on the latest information of the emergency and any recommendations being offered by local, state and federal health officials, must be in place.

4. Communications

Communication plans should place a priority on internal communication with the staff.

5. Transportation

Transportation considerations when developing the surge capacity response includes the need to:

- Manage additional patient inter-facility transfers that include both traditional methods (ambulances, chair cars) and non-traditional methods (buses, trucks, etc.)
- Increase parking requirements for staff and patients
- Provide alternate delivery and supply routes for personnel, supplies and equipment

6. Security

The principle security considerations include the need to:

- Establish perimeter control
- Establish emergency (temporary) identification protocols (extra credentials)

- Enforce visitor restrictions
- Coordinate actions with local law enforcement authorities
- Enhance protection of critical infrastructure, e.g., emergency department, communications department, information technology, pharmacy, operating room, laboratory, etc.

7. Mental Health

Develop psychiatric and mental health guidelines and work into formal guidelines or protocol.

8. Volunteers

- Plans for the use of volunteers in an emergency will need to be developed by all three hospitals. The activation of the emergency volunteer network through the YCCERT or hospitals Auxiliary's should be considered, however, due to the widespread nature of the event, their capabilities may be severely constrained.

9. Supplies and Equipment

- Each hospital should begin accumulating needed supplies. Other factors that need consideration are the storage supplies and distribution of supplies, including off-site storage. PPE which has no expiration date is ideal for long term storage. Drills including the retrieval of off-site stored supplies can also be used as an opportunity to rotate stock.

Guidance for this Surge Capacity Guidance came from YALE NEW HAVEN HEALTH SYSTEM

K. Communicating to the Public on Pandemic Influenza

The Basics

- A pandemic influenza could be a devastating event.
- Precautions can be taken to lessen the effects of the pandemic influenza such as social distancing, good hygiene, use of anti-viral drugs and vaccines (if available)
- Anti-viral medications will be in short supply and dedicated to essential workers
- Vaccines may not be available readily until well after the pandemic begins
- Individuals may be asked to stay home for extended periods of time
- Places where the public gather, may be closed due to staffing shortages and as a method to lessen the spread of the influenza

What the Public can do now

- Get a flu shot –won't prevent the "pandemic Influenza" but will lessen the burden on health care system
- Begin stockpiling non-perishable food and supplies (See red cross "How to build a disaster kit" or go to www.ready.gov)
- Compile essential names of phone numbers

What the Public can do during a Pandemic

- Listen to media for advisories
- Reduce public contact
- Stay informed by checking www. websites
- [www. Who.gov](http://www.Who.gov) ;www.naccho.org; www.redcross.org/pandemic; [www. Pandemicflu.gov](http://www.Pandemicflu.gov)
www.bcpa.org
- Stay home when sick, keep family members home when sick (home quarantine)

- Practice good hygiene, avoid social gatherings, cover your cough

Environmental Cleanliness

- Influenza virus can live up to 2 days on hard surfaces.
- Washing hard surfaces (sinks, counters, etc..) with a disinfectant such as a ten percent bleach solution (one part bleach and nine parts water) will kill the influenza virus.
- Surfaces that are frequently touched with hands should be cleaned often. Careful, thorough cleaning of surfaces is effective in removing the influenza virus and many other germs.
- If a member of your family is ill with influenza, keep their personal items, such as towels, separate from the rest of the family. (Do NOT share towels.)
- Ensure that your home always has an adequate supply have supplies for hand washing and cleaning.
- Special handling of laundry or linen from a person who may have influenza is not necessary. Wash clothing and linen in a warm wash cycle with a commercial laundry detergent and dry as usual.
- Garbage generated by a person with influenza does not require special handling.
- Individuals who die at home should be wrapped in a sheet and kept in a cool dry location until pick up by funeral services. Bodies of persons who die from influenza are not considered contagious to others.

Food supplies to have on Hand

- Have a supply of food and drinks to last for several weeks (Non-perishable).

General considerations

- You don't need to go out and buy unfamiliar foods to prepare an emergency food supply.
- You can use the canned foods, dry mixes and other staples on your cupboard shelves. In fact, familiar foods are important. They can lift morale and give a feeling of security in time of stress. Also, canned foods won't require cooking, water or special preparation.

Special considerations

- As you stock food, take into account your families unique needs and tastes. Try to include foods that they will enjoy and that are also high in calories and nutrition. Foods that require no refrigeration, preparation or cooking are best.
- Individuals with special diets and allergies will need particular attention, as will babies, toddlers and elderly people.
- Nursing mothers may need liquid formula, in case they are unable to nurse.
- Canned dietetic foods, juices and soups may be helpful for ill or elderly people.
- Make sure you have a manual can opener and may be disposable utensils.
- Don't forget non-perishable foods and water for your pets.

Recommended foods include:

- Ready-to-eat canned meats, fruits and vegetables. (Be sure to have a manual can opener)
- Canned juices, milk and soup (if powdered, store extra water).
- High energy foods, such as peanut butter, jelly, crackers, granola bars and trail mix.
- Comfort foods, such as hard candy, sweetened cereals, candy bars and cookies.
- Instant coffee, tea bags.
- Foods for infants, elderly persons or persons on special diets, if necessary.
- Compressed food bars. They store well, are lightweight, taste good and are nutritious.
- Trail mix. It is available as a pre-packaged product or you can assemble it on your own.

- Dried foods. They can be nutritious and satisfying, but have some have a lot of salt..
- Freeze-dried foods. They are tasty and lightweight, but will need water for reconstitution.
- Instant Meals. Cups of noodles or cups of soup are a good addition, although they need water for reconstitution.
- Snack-sized canned goods. Good because they generally have pull-top lids or twist-open keys.
- Pre-packaged beverages. Those in foil packets and foil-lined boxes are suitable because they are tightly sealed and will keep for a long time.

Storage tips

- Keep food in a dry, cool spot - a dark area if possible.
- Keep food covered at all times.
- Open food boxes or cans carefully so that you can close them tightly after each use.
- Wrap cookies and crackers in plastic bags, and keep them in tight containers.
- Empty opened packages of sugar, dried fruits and nuts into screw-top jars or air-tight cans to protect them from pests.
- Inspect all food for signs of spoilage before use.
- Use foods before they go bad, and replace them with fresh supplies, dated with ink or marker. Place new items at the back of the storage area and older ones in front.

How long can food supplies be stored?

To judge how long you can store food supplies, look for an “expiration date” or “best if used by” date on the product. If you can not find a date on the product, then the general recommendation is to store food products for six months and then replace them.

Some households find it helpful to pull food products for their regular meals from their emergency supplies kit and replace them immediately on an ongoing basis, so the food supplies are always fresh.

Shelf-life of foods for storage; here are some general guidelines for rotating common emergency foods.

Use within six months:

- Powdered milk (boxed)
- Dried fruit (in metal container)
- Dry, crisp crackers (in metal container)
- Potatoes

Use within one year:

- Canned condensed meat and vegetable soups
- Canned fruits, fruit juices and vegetables
- Ready-to-eat cereals and uncooked instant cereals (in metal containers)
- Peanut butter
- Jelly
- Hard candy and canned nuts
- Vitamin C

May be stored indefinitely (in proper containers and conditions):

- Wheat
- Vegetable oils
 - Water supplies (Remember 1 gallon per person per day)

During a pandemic there might be a shortage or disruption of supply safe drinking water. Store water now as you might need it during pandemic. Everyone requires about 3 liters of drinking water per day. You will also need water for cooking and washing and drinking water for pets. Bracing your hot water cylinder and header tank will not only guard against damage but may also ensure you have a significant store of clean, usable water.

Storage tips

- Save plastic soft drink bottles for storing emergency water.
- Wash the containers and lids thoroughly with hot tap water and dish detergent. Rinse thoroughly with hot tap water.
- Store water in a cool, dark place.
- Because hydrocarbon vapors can penetrate polyethylene plastics, store water in plastic containers away from gasoline, kerosene, pesticides, or similar substances.
- Before use check the water by holding it to the light, treat if concerned about quality.
- Treat by adding 3 drops of unscented bleach per liter - leave for 20 minutes.
- To improve the taste of water stored for a long time, pour it from one clean container to another clean container several times, to put air back into it.

How long can water supplies be stored?

- For best quality, replace water stored from a public or vended water supply every six months or more frequently (mark the end date).
 - To extend storage life, store water bottles in the freezer.
 - For commercially bottled distilled or drinking water, check the label for an expiration date. If none is given, bottled water should have a shelf-life of at least one year.
- Should water be treated before storing it?

If your local water is treated commercially by a water treatment utility, you do not have to treat the water before storing it. It is important to change and replace stored water every six months or more frequently.

If your local water is not treated commercially by a water treatment facility, that is, if your water comes from a public well or other public, non-treated system, follow instructions about water storage provided by your public health agency or water provider. They may recommend treating it with a small amount of liquid household bleach.

If your local water comes from a private well or other private source, consult with your local public health agency about recommendations regarding storage of water. Some water sources have contaminants (minerals or parasites) that can not be neutralized by treatment with liquid household chlorine bleach.

Water treatment

Be sure that the water you are treating is drinking-quality water to begin with. To treat water for storage, use liquid household chlorine bleach that contains 5.25 percent sodium hypochlorite. Do not use bleach with soaps or scents added. Add the bleach according to the table below, using a clean, and uncontaminated medicine dropper.

Drops household bleach	per liter	per gallon
4 drops	per liter	per quart (¼ gallon)
8 drops	per 2-liter	per 2-quart (½ gallon)
16 drops (= 1/4 teaspoon)	per 4-liter	per gallon

When treating larger quantities of water, use the following table to convert drops to standard measuring units.

8 drops = $\frac{1}{8}$ teaspoon
16 drops = $\frac{1}{4}$ teaspoon
32 drops = $\frac{1}{2}$ teaspoon
64 drops = 1 teaspoon
192 drops = 1 Tablespoon
384 drops = $\frac{1}{8}$ cup which is equal to 2 Tablespoons

Stir the water and allow it to stand for 30 minutes. Chlorine should be detectable by odor after the 30 minute waiting period. If the water does not smell like chlorine at that point, repeat the dose and let it stand another 15 minutes. Place caps on containers and attach labels describing the contents and when each was prepared.

First aid kit / medication

- Check your medical supplies and first aid kit. Make sure you have a thermometer and extra Paracetamol for all family.
- Consider including surgical masks. Masks worn by sick people can help stop the spread of germs. Notice that a mask can be worn only for a short time, and needs changing when wet from sneezing and coughing.

Other supplies to store

- Toilet paper, paper towels
- Tissues
- Soap, liquid detergent
- Washing powder
- Feminine supplies
- Personal hygiene items
- Plastic garbage bags, ties (for personal sanitation uses)
- Disinfectant
- Household chlorine bleach

Basic supply for 14 days for one person (based on a calculated need of 2000 kcal per day)

Food and Beverages	Amount	To be used before	exist	needed
Canned condensed meat, fish and sausages	2 kg	2 years or expiration date	kg	kg
ready-to-eat canned meals and soups dry soups, powdered eggs	4 kg	2 years or expiration date	kg	kg
Canned fruits and vegetables	2 kg	1 to 2 years	kg	Kg
Jelly, honey	0,5 kg	1 year	kg	kg
Canned milk	5 cans a 170g	6 to 12 month	cans	cans
Powdered milk	0,5 kg	6 to 12 month	kg	kg
Cheese	0,25 kg	6 month	kg	kg
Vegetable oil, butter, peanut butter, margarine	0,5 kg	6 to 12 month	kg	kg
Canned or sealed bread, biscuits, crackers, cookies	2 kg	1 year	kg	kg
Nutriments (cereals, dry pasta, rice, etc.)	0,5 kg	1 year	kg	kg
Sugar	0,5 kg	indefinitely	kg	kg
Salt, spices	0,25 kg	indefinitely	kg	kg
Coffee or instant coffee, black tea or herbal tea, cacao	0,5 kg	1 year 3 years 6 month	kg	kg
Mineral water Stored water from a public or vended water supply vegetable or fruit juice, vitamin tablets	30:l 5 l	Expiration date, at least a year 6 month 1 to 2 years	l l l	l l l
Baby food	If appropriate	expiration date	kg	kg

Hand hygiene with soap and water

<h2 style="text-align: center;">Hand Hygiene with Soap and Water</h2>		
<p>1. Remove jewelry. Wet hands with warm water</p> 	<p>2. Add soap to palms</p> 	<p>3. Rub hands together to create a lather</p> 
<p>4. Cover all surfaces of the hands and fingers</p> 	<p>5. Clean knuckles, back of hands and fingers</p> 	<p>6. Clean the space between the thumb and index finger</p> 
<p>7. Work the fingertips into the palms to clean under the nails</p> 	<p>8. Rinse well under warm running water</p> 	<p>9. Dry with a single-use towel and then use towel to turn off the tap</p> 
<p>Minimum wash time 10-20 seconds.</p>		

Hand Hygiene with Alcohol-based Hand Sanitizer

1. Remove jewelry. Apply enough product to open palms.**



2. Rub hands together palms to palms



3. Rub in between and around fingers



4. Cover all surfaces of the hands and fingers



5. Rub backs of hands and fingers. Rub each thumb.



6. Rub fingertips of each hand in opposite palm



7. Keep rubbing until hands are dry.

**The volume required to be effective varies from product to product. Enough product to keep hands moist for 15 seconds should be applied.

Do not use these products with water. Do not use paper towels to dry hands.

Note: Wash hands with soap and water if hands are visibly dirty or contaminated with blood or other body fluids. Certain manufacturers recommend washing hands with soap and water after 5-10 applications of gel.

Mortuary

**See the - Maine Emergency Operations Plan
(Public Safety/Medical Examiners Appendix to Mortuary Plan)**

Purpose – To identify the appropriate scene response resources and protocols for deaths due to a pandemic influenza (PI) event.

A PI event will result in an increased number of deaths both in and out of medical treatment facilities. Existing fatality management systems in all communities will require an increased surge capacity and capability to manage the event.

P. Mental Health Intervention*

Make sure efforts to increase health protective behaviors and response behaviors. Individuals under stress will need reminders to take care of their own health and limit potentially harmful behaviors. This will include taking medications, anti-virals and vaccinations.

Communicate frequently -clear, simple, concise

Educate the public – address the fears

Utilize Psychological First-aid (Have a Mental Health Worker on Stand-by)

**Establish safety, identify safe areas and behaviors
Maximize individual's ability to care for self and family
Teach calming skills and maintenance of natural body rhythms (nutrition, sleep, rest, exercise)
Maximize connectedness to family (visit, phone, email)
Maintain support and care for 1st responders
Monitor mental health
Address PTSD
Depression
Altered state of mind
Altered substance use
Maintain psychosocial needs**

***Center for the Study of Traumatic Stress, Uniformed Services University of the Health Sciences**

Q. Infection Control in Health- Care Facilities

Recommendations for Infection Control in Health- Care Facilities Caring for Patients with known or suspected Avian Influenza.

Human influenza is thought to transmit primarily via large respiratory droplets. Standard precautions plus droplet precautions are recommended for the care of patients infected with human influenza.

All patients who present to a health-care setting with fever and respiratory symptoms should be managed according to recommendations for respiratory hygiene and cough etiquette.

Patients with a history of travel within 10 days

R. Death Certificates (Follow guidelines established by Me State Legislature) see below –not inclusive

**An Act To Allow Physician Assistants To Sign Death Certificates
LR 1486, item 1, SIGNED on 2007-04-17 - First Regular Session - 123rd Legislature, page 1.**

**An Act To Allow Physician Assistants To Sign Death Certificates
Be it enacted by the People of the State of Maine as follows:
Sec. 1. 22 MRSA §2842, sub-§2, as amended by PL 2005, c. 359, §1, is further amended to read:**

2. Medical certificate by physician, nurse practitioner or physician assistant. The medical certification of the cause of death must be completed in typewritten or legibly hand-printed style and signed in a timely fashion by a physician or, nurse practitioner or physician assistant authorized to practice in the State who has knowledge of the patient's recent medical condition, in accordance with department regulations and other laws detailing who can certify and in what time frame, except when the death falls under the jurisdiction of the medical examiner as provided in section 3025.

If the patient was a resident of a nursing home licensed under section 1817 at the time of death and if the health care provider in charge of the patient's care or another health care provider designated by the health care provider in charge had not examined the patient within 48 hours prior to death, or within 2 weeks prior to death in the case of a terminally ill patient, the health care provider in charge or another health care provider designated by the health care provider in charge shall examine the body prior to completing the certification of death process.

Any health care provider who fails to complete the medical certification of the cause of death fully, in typewritten or legibly hand-printed style and in a timely manner, or who fails to examine the body of a nursing home resident prior to certifying cause of death as required by this section must be reported to the Board of Licensure in Medicine, the Board of Osteopathic Licensure or the State Board of Nursing, whichever is appropriate, by the State Registrar of Vital Statistics of the Department of Health and Human Services.

For the purposes of this subsection, the following terms have the following meanings.

A. "Life-sustaining procedure" means any medical procedure or intervention that, when administered to a qualified patient, will serve only to prolong the dying process and does not include nutrition and hydration.

B. "Terminally ill patient" means a patient who has been diagnosed as having an incurable or irreversible condition that, without the administration of life-sustaining procedures, will, in the opinion of the attending health care provider, result in death within a short time.

C. "Health care provider" means a physician authorized to practice in this State or, nurse practitioner or physician assistant.

D. "Nurse practitioner" means an advanced practice registered nurse who is a certified nurse practitioner authorized to practice without the supervision of a physician pursuant to Title 32, chapter 31.

E. "Physician assistant" means a person who has graduated from a physician assistant or surgeon assistant program accredited by the American Medical Association Committee on Allied Health Education and Accreditation or the Commission on Accreditation of Allied Health Education Programs or its successor and who has passed the certifying examination administered by the National Commission on Certification of Physician Assistants or its successor.

Sec. 2. 22 MRSA §2842, sub-§2-A, as amended by PL 2005, c. 359, §2, is further amended to read:

2-A. Medical certification. Notwithstanding subsection 2, with respect to a person who dies within the State naturally and for whom the physician or, nurse practitioner or physician assistant was the attending health care provider, the medical certification of the cause of death may be completed and signed by a physician or, nurse practitioner or physician assistant authorized to practice at the Veterans Administration Hospital at Togus or at another federal medical facility within the State or by a physician or, an advanced practice registered nurse or physician assistant licensed to practice in New Hampshire, Vermont or Massachusetts, who, at the request of the Chief Medical Examiner, is willing to do so.

Sec. 3. 22 MRSA §2843, first ¶, as amended by PL 2005, c. 359, §3, is further amended to read: Except as authorized by the department, no dead human body may not be buried, cremated or otherwise disposed of or removed from the State until a funeral director or other authorized person in charge of the disposition of the dead human body or its removal from the

State has obtained a permit from the clerk of the municipality where death occurred or where the establishment of a funeral director having custody of the dead human body is located. The permit is sufficient authority for final disposition in any place where dead human bodies are disposed of in this State, provided that as long as the requirements of Title 32, section 1405 are met in appropriate cases. The permit may not be issued to anyone other than a funeral director until the clerk of the municipality receives a medical certificate that has been signed by a physician or a medical examiner that indicates that the physician or medical examiner has personally examined the body after death.

A permit must also be issued if a nurse practitioner or physician assistant has signed the medical certificate indicating that the nurse practitioner or physician assistant has knowledge of the deceased's recent medical condition or was in charge of the deceased's care and that the nurse practitioner or physician assistant has personally examined the body after death. The authorized person may transport a dead human body only upon receipt of this permit.

Sec. 4. 22 MRSA §2843, 3rd ¶, as amended by PL 2005, c. 359, §4, is further amended to read:

A municipal clerk may issue a disposition of human remains permit to a funeral director who presents a report of death and states that the funeral director has been unable to obtain a medical certification of the cause of death. The funeral director shall name the attending physician, attending nurse practitioner, attending physician assistant or medical examiner who will certify to the cause of death and present assurances that he or she, the attending physician, attending nurse practitioner, attending physician assistant or medical examiner has agreed to do so. The funeral director shall exercise due diligence to secure the medical certification and file the death certificate as soon as possible.

Sec. 8. 22 MRSA §2907, sub-§2, as amended by PL 2005, c. 359, §7, is further amended to read:

2. Time of death. The time of death must be determined by a physician or, nurse practitioner or physician assistant who attends the donor at the donor's death, or, if none, the physician or, nurse practitioner or physician assistant who certifies the death. This physician or, nurse practitioner or physician assistant may not participate in the procedures for removing or transplanting a part.

York County –Pandemic Influenza –
Daily Situation Report

Report # _____

Priority _____

Date:	Time Reported:	___ Initial ; ___ Supplemental; ___ Final
Reporting: Jurisdiction / Hospital		Phone # Fax #
Status -If hospital – New admissions (Flu/ Pneumonia)___	Flu/ Pneumonia Patients since last report _____	Total Flu/ Pneumonia Patients in Hospital _____ Total Patients _____
Critical Beds available _____	Flu/ Pneumonia Patients in Critical Care _____	Total patients in Critical care _____
Surge Capacity _____	Patients in Isolation _____	
Ventilator Availability	Adult Required _____ ; On hand _____	Pediatric Required _____ ; On hand _____
	Neonate Required _____ ; On hand _____	Emergency Portables Required _____ ; On hand _____
Available Staff	PA; DR; RN; LPN; PT; RT	Other:
On hand Shortage	___ ___ ___ ___ ___ ___	
Anti-viral Medication:		
Vaccine Doses on-hand	Type _____ ; Amount _____	Type _____ ; Shortage _____
Number of Deaths (since last report)	Morgue backlog _____	Corpse/ Burial Backlog _____
Available Volunteers:		

Prepared by _____

York County Pandemic Influenza Provider Agency Plan Date _____

Provider Agency Information:

Agency Name: _____ Site Name: _____

Type of Facility Operated:

_____ Children's Residential	_____ Adult Mental Health
_____ Adult Mental Retardation Services -ICF MR's	_____ Adult Residential Care
_____ Emergency Shelter	_____ Nursing Home
_____ Crisis Residential	_____ Other _____

Facility Site Location- Street: _____

City: _____

State: _____ Zip: _____

E-mail _____

Phone _____ Alternate _____

Number of Beds: _____

Number occupied: _____

Chain of Command for Agency

Name _____ Position _____

Business # _____ emergency # _____

E-mail _____

.....
Name _____ Position _____

Business # _____ emergency # _____

E-mail _____

.....
Name _____ Position _____

Business # _____ emergency # _____

E-mail _____

Facility Chain of Command (if different) (use back if necessary)

Name _____ Position _____

Business # _____ emergency # _____

E-mail _____

Does your agency/facility have an up-date disaster plan ?

Yes _____ No _____

When was this completed?

Yes _____ No _____

Has it been accommodated to address the specific issues of Pandemic?

Yes _____ No _____

Staffing: If a large number of employees are out iff, how would the facility be staffed?

Is there a location in the facility where residents could be quarantined?

Could residents be moved to another facility? How?

Emergency information on each

Is there adequate supplies available for a 3-4 week isolation period? Ie. Food, water, meds

Profile completed by: _____

Date: _____

Glossary

Adjuvant: A substance added to a vaccine to improve the immune response so that less vaccine is needed to provide protection.

Antibiotic: A substance produced by bacteria or fungi that destroys or prevents the growth of other bacteria and fungi.

Antibody: A protein produced by the body's immune system in response to a foreign substance (antigen). Our bodies fight off an infection by producing antibodies. An antibody reacts specifically with the antigen that triggered its formation and its function is to inactivate the antigen.

Antigen: Any foreign substance, usually a protein, that stimulates the body's immune system to produce antibodies. (The name antigen reflects its role in stimulating an immune response - antibody generating.)

antiviral: Drug that is used to prevent or cure a disease caused by a virus, by interfering with the ability of the virus to multiply in number or spread from cell to cell.

APHIS: Animal and Plant Health Inspection Service, a part of the U.S. Department of Agriculture that provides leadership in ensuring the health and care of animals and plants.

Asymptomatic: Presenting no symptoms of disease.

Avian flu: A highly contagious viral disease with up to 100% mortality in domestic fowl caused by influenza A virus subtypes H5 and H7. All types of birds are susceptible to the virus but outbreaks occur most often in chickens and turkeys. The infection may be carried by migratory wild birds, which can carry the virus but show no signs of disease. Humans are only rarely affected.

Carrier: A bearer and transmitter of a agent capable of causing infectious disease. An asymptomatic carrier shows no symptoms of carrying an infectious agent.

CDC: Centers for Disease Control and Prevention, the U.S. government agency at the forefront of public health efforts to prevent and control infectious and chronic diseases, injuries, workplace hazards, disabilities, and environmental health threats. CDC is one of 13 major operating components of the Department of Health and Human Services.

Clade: A group of organisms, such as a species, whose members share homologous features derived from a common ancestor. The avian virus H5N1 clade 1 includes human and bird isolates from Vietnam, Thailand, Cambodia, Laos, and Malaysia. Clade 2 viruses have been identified in bird isolates from China, Indonesia, Japan, and South Korea.

Contagious: A contagious disease is easily spread from one person to another by contact with the infectious agent that causes the disease. The agent may be in droplets of liquid particles made by coughing or sneezing, contaminated food utensils, water or food.

DOI: U.S. Department of Interior, the government agency that protects and provides access to our Nation's natural resources.

Drift: One process in which influenza virus undergoes mutation. The amount of change can be subtle or dramatic, but eventually as drift occurs, a new variant strain will become dominant. This process allows influenza viruses to change and re-infect people repeatedly through their lifetime and is the reason influenza virus strains in vaccine must be updated each year. See shift.

Enzyme: A substance that speeds up chemical reaction. Every chemical reaction in living organisms is facilitated by an enzyme.

EPA: U.S. Environmental Protection Agency, the government agency that leads the nation's environmental science, research, education and assessment efforts.

Epidemic: A disease occurring suddenly in a community, region or country in numbers clearly in excess of normal. See pandemic.

FAO: Food and Agriculture Organization of the United Nations leads international efforts to defeat hunger. FAO serves both developed and developing countries and acts as a neutral forum where all nations meet as equals to negotiate agreements and debate policy.

FDA: U.S. Food and Drug Administration, the government agency responsible for protecting the public health by assuring the safety, efficacy, and security of human and veterinary drugs, biological products, medical devices, our nation's food supply, cosmetics, and products that emit radiation. FDA is one of 13 major operating components of the Department of Health and Human Services.

H5N1: A variant of avian influenza, which is a type of influenza virulent in birds. It was first identified in Italy in the early 1900s and is now known to exist worldwide.

HPAI: Highly Pathogenic form of Avian Influenza. Avian flu viruses are classified based upon the severity of the illness and HPAI is extremely infectious among humans. The rapid spread of HPAI, with outbreaks occurring at the same time, is of growing concern for human health as well as for animal health. See LPAI.

Homologous: Similar in position, structure, function, or characteristics.

Host: An organism on or in which a parasite lives.

Hemagglutinin: An important surface structure protein of the influenza virus that is an essential gene for the spread of the virus throughout the respiratory tract. This enables the virus to attach itself to a cell in the respiratory system and penetrate it. Referred to as the “H” in influenza viruses. See neuraminidase.

Immune system: The cells, tissues and organs that help the body to resist infection and disease by producing antibodies and/or altered cells that inhibit the multiplication of the infectious agent.

Infectious agent: Any organism, such as a pathogenic virus, parasite, or bacterium, that is capable of invading body tissues, multiplying, and causing disease.

Influenza: A serious disease caused by viruses that infect the respiratory tract.

Isolate: A pure strain that has been isolated as from diseased tissue, contaminated water, or the air.

LPAI: Low Pathogenic form of Avian Influenza. Most avian flu strains are classified as LPAI and typically cause little or no clinical signs in infected birds. However, some LPAI virus strains are capable of mutating under field conditions into HPAI viruses. See HPAI.

MRC: The Medical Reserve Corps establishes teams of local volunteer medical and public health professionals who can contribute their skills and expertise throughout the year and during times of community need.

Mutation: Any alteration in a gene from its natural state. This change may be disease causing or a benign, normal variant. Specific mutations and evolution in influenza viruses cannot be predicted, making it difficult if not impossible to know if or when a virus such as H5N1 might acquire the properties needed to spread easily among humans.

Neuraminidase: An important surface structure protein of the influenza virus that is an essential enzyme for the spread of the virus throughout the respiratory tract. It enables the virus to escape the host cell and infect new cells. Referred to as the “N” in influenza viruses. See hemagglutinin.

NIAID: National Institute of Allergy and Infectious Diseases conducts and supports basic and applied research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases. NIAID research has led to new therapies, vaccines, diagnostic tests, and other

technologies that have improved the health of millions. NIAID is one of 13 major operating components of the Department of Health and Human Services.

NVPO: National Vaccine Program Office is responsible for coordinating and ensuring collaboration among the many federal agencies involved in vaccine and immunization activities. It is part of the Department of Health and Human Services.

OIE (Office International des Epizooties): World Organisation for Animal Health, an international organization including 167 member countries that collects, analyses, and reports information on global animal disease situations.

Pandemic: The worldwide outbreak of a disease in numbers clearly in excess of normal. See epidemic.

Parasite: An organism living in, with, or on another organism.

Pathogenic: Causing disease or capable of doing so.

Pre-pandemic vaccine: A vaccine created to protect against currently circulating H5N1 avian influenza virus strains with the expectation that it would provide at least some protection against new virus strains that might evolve. It would likely be the best vaccine defense available until a vaccine specific to the new strain could be developed.

Prophylactic: A medical procedure or practice that prevents or protects against a disease or condition (eg, vaccines, antibiotics, drugs).

Reassortment: The rearrangement of genes from two distinct influenza strains to produce a novel viral strain.

Seasonal flu: A respiratory illness that can be transmitted person to person. Most people have some immunity, and a vaccine is available. This is also known as the common flu or winter flu.

Shift: The process in which the existing H (hemagglutinin) and N (neuraminidase) are replaced by significantly different H and Ns. These new H or H/N combinations are perceived by human immune systems as new, so most people do not have pre-existing antibody protection to these novel viruses. This is one of the reasons that pandemic viruses can have such a severe impact on the health of populations. See drift.

Species: A class of plants or animals having common attributes and designated by a common name. Theoretically, plants or animals of different species cannot interbreed. However, occasionally this does not hold true.

Strain: A group of organisms within a species or variety.

USAID: United States Agency for International Development provides foreign assistance to developing countries in order to further America's foreign policy interests in expanding democracy and free markets while improving the lives of the citizens of the developing world.

USDA: U.S. Department of Agriculture, the government agency responsible for regulating the safety and development of food, agriculture, and natural resources.

Vaccine: A preparation consisting of antigens of a disease-causing organism which, when introduced into the body, stimulates the production of specific antibodies or altered cells. This produces an immunity to the disease-causing organism. The antigen in the preparation can be whole disease-causing organisms (killed or weakened) or parts of these organisms.

Virulent: Highly lethal; causing severe illness or death.

Virus: Any of various simple submicroscopic parasites of plants, animals, and bacteria that often cause disease and that consist essentially of a core of RNA or DNA surrounded by a protein coat. Unable to replicate without a host cell, viruses are typically not considered living organisms.

Waterfowl: Birds that swim and live near water, including ducks, geese, and swans.

WHO: World Health Organization, an agency of the United Nations established in 1948 to further international cooperation in improving health conditions.

Zoonoses: Diseases that are transferable from animals to humans.

Letter of Promulgation

This Plan annex addresses the challenges and responsibilities in the event of a Pandemic Influenza. It conforms to the tenets of York County’s Emergency Operation Plan and NIMS.

The purpose of this Annex is to provide the framework for preparedness, coordination and response to a pandemic influenza. It clarifies strategies, purpose and goals by:

- **Identifies authorities and assigns responsibilities for planning and response**

- **Establishes structure that will manage the response with specific responsibility for carrying out the operations**
- **Identifies other jurisdictions and organizations with whom planning and emergency response activities should be coordinated, and**
- **Outlines the process of disseminating emergency information**
-

Personnel assigned specific responsibilities must have a working knowledge of functions and actions described herein. The enclosed checklists will provide guidance for each function to be performed.

This Annex is a working document. An annual assessment process, accompanied by review will ensure an up to date annex.

Approved by:

RECORD OF CHANGES

#	Date	Description
1	9/9/10	Update Promulgation statement
2	9/8/10	Forward -add H1N1 update
3	9/8/10	Pg 7 – remove current phase
4	9/8/10	Pg 8-11 add EMA to language
5		

Submitted by: Pam L'Heureux, CEM CEMME
 York County EMA
 Pandemic Influenza Coordinator
 9/8/2010