



GLOUCESTER  
COUNTY  
DEPARTMENT  
OF HEALTH  
AND HUMAN  
SERVICES

## PANDEMIC INFLUENZA PLAN

# TABLE OF CONTENTS

<b>DEFINITIONS .....</b>	<b>1</b>
<b>INTRODUCTION .....</b>	<b>2</b>
PURPOSE.....	3
BACKGROUND .....	6
ASSUMPTIONS .....	6
<b>CONCEPT OF OPERATIONS.....</b>	<b>6</b>
COMMAND, CONTROL & MANAGEMENT POLICIES.....	6
TRAINING .....	6
PUBLIC HEALTH RESPONSE COMPONENTS .....	6
PLAN ACTIVATION.....	7
WHO FEDERAL GOVERNMENT RESPONSE TABLE .....	8
<b>RESPONSE ACTIVITIES BY PANDEMIC PERIOD .....</b>	<b>9</b>
INTERPANDEMIC PERIOD .....	9
PANDEMIC ALERT PERIOD .....	10
PANDEMIC PERIOD .....	11
RECOVERY .....	13
<b>PLAN DEVELOPMENT &amp; MAINTENANCE .....</b>	<b>13</b>
<b>AUTHORITIES &amp; REFERENCES.....</b>	<b>13</b>
<b>ATTACHMENTS .....</b>	<b>13</b>
A - WHO PANDEMIC PHASES .....	14
B - POTENTIAL IMPACT ON GLOUCESTER COUNTY.....	15
C - PANDEMIC SURVEILANCE FORMS.....	16
D - COMMUNITY CONTAINMENT MEASURES.....	17
E – PANDEMIC FLU RISK COMMUNICATION SUMMARY.....	25
F - PROBABLE PRIOROTY GROUPS FOR H1N1 .....	30
G - VACCINATION OPERATIONS.....	33
H – INFLUENZA CLINIC RESOURCE TEMPLATE .....	35

## DEFINITIONS

ACIP	Advisory Committee on Immunization Practices
BT	Bioterrorism
CDC	Centers for Disease Control and Prevention
ED	Emergency Department
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EMS	Emergency Medical Services
EPA	Environmental Protection Agency
FAQ	Frequently Asked Questions
FRD	First Responder Distribution
GCDHHS	Gloucester County Department of Health and Human Services
HCW	Health Care Worker
HD	Health Department
ICU	Intensive Care Unit
ILI	Influenza-like Illness
LINCS	Local Information Network Communication System
LTCF	Long Term Care Facility
MOU	Memorandum of Understanding
MRC	Medical Reserve Corps
NJDOH	New Jersey Department of Health & Senior Services
NJIIS	New Jersey Immunization Information System
NPI	Non-Pharmaceutical Interventions
NVAC	National Vaccine Advisory Committee
OEM	Office of Emergency Management
OTC	Over-the-Counter
PEP	Post Exposure Prophylaxis
PHEL	Public Health Environmental Laboratory
PIO	Public Information Officer
PPE	Personal Protective Equipment
RSS	Receipt, Stage, Store
URP	Universal Respiratory Precautions
USHHS	United States Department of Health and Human Services
VAERS	Vaccine Adverse Event Reporting System
WHO	World Health Organization

## A. INTRODUCTION

### 1. PURPOSE

The purpose of this pandemic influenza plan is to provide a protocol for the Gloucester County Department of Health and Human Services (GCDHHS) / Local Information Network and Communications System (LINCS) agency for detection and response to an influenza pandemic. It is understood that the impact of an influenza pandemic will reach far beyond the confines of the health sector. This plan will provide information to other emergency response agencies and community partners with regard to preparedness and capabilities of the GCDHHS.

### 2. BACKGROUND

Influenza is a respiratory illness that makes hundreds of thousands of people sick each year. It lasts about a week and is characterized by abrupt onset of fever, muscle aches, sore throat, and nonproductive cough. Influenza infection not only causes primary illness but also can lead to severe secondary medical complications.

The typical incubation period for influenza is two days, with a range of one to four days. Patients are most infectious during the 24 hours before the onset of symptoms and during the most symptomatic period, which generally lasts 3-5 days after onset of illness. Influenza is highly contagious and persons who are sub-clinically infected (approximately 50 percent of infected persons) can transmit the virus.

Influenza viruses are known to survive on non-porous surfaces, such as steel and plastic, for 24 – 48 hours and on cloth, paper, and tissues for 8 – 12 hours.

During an Influenza Pandemic person-to-person transmission occurs efficiently with each case infecting an average of three to four susceptible persons; secondary household illness rates greater than 20 percent have been reported.

Influenza viruses are unique in their ability to cause sudden, pervasive illness in all age groups on a global scale. Global influenza epidemics, which involve strains of Influenza A virus to which large proportions of the population are susceptible, are referred to as “influenza pandemics.”

Pandemics occur because of the ability of the influenza virus to change into new types or strains as a result of antigenic “shift.” Three such pandemics have occurred in this century, one of which—the infamous “Spanish flu” of 1918-1919 was responsible for more than 20 million deaths worldwide, primarily young adults. That virus appears to have swept the world three times in two years, gaining renewed virulence with each successive wave. There is no way to predict the target population of the next pandemic. The three characteristics of a pandemic are:

- the development of a novel strain of virus (a strain to which a large proportion of the society is susceptible to because of lack of prior exposure);
- transmissibility of the strain from person to person; and
- the virulence of the viral infection (the capacity to cause severe morbidity and mortality).

Influenza pandemics on a lesser scale were experienced in 1947, 1957, 1968, and 1977. Humans have been infected in recent avian influenza outbreaks in Asia (1997, 1999, 2003 – present) and in Europe (2003). Finally, Severe Acute Respiratory Syndrome corona virus (SARS Co-V), first noted in Hong Kong and Southern China in 2002-2003, erupted on the world's public health radar with a suddenness and virulence initially feared to be a new influenza pandemic. Such occurrences are a reminder that a novel strain could occur at any time.

In recent years the threat of Pandemic Influenza related to the isolated cases of H5N1 or avian flu, has led to increased surveillance and planning. However, the emergence of a novel strain of Influenza is unpredictable and may arrive with very little warning. The H1N1 Influenza currently circling the globe has caused the World Health Organization to elevate the pandemic level to Phase 6 (See Attachment A). This strain of Influenza at this time has caused mild illness and few deaths. It is unknown whether or not this strain will re-emerge as a more virulent disease in this or subsequent Influenza seasons. Should the H1N1 Influenza behave as the 1918 strain, even taking into account the advances in medicine since then, unparalleled tolls of illness and death would be expected.

The increased use of air travel may have an impact on the transmissibility of Influenza. Air travel could hasten the spread of a new virus and decrease the time available for implementing interventions. The effect of influenza on individual communities will be relatively prolonged (weeks to months) in comparison to other types of disasters. Health care systems could be rapidly overburdened, economies strained, and social order disrupted.

Influenza pandemics historically occur in waves. During the first wave, illness can present in large clusters of human infection and the strain of influenza is identified. This period is typically followed by a decrease in incidence and again a resurgence of illness occurs. These waves may cause more serious illnesses and deaths than the first. Historically speaking, it is expected that in any locality the length of each wave is approximately four to eight weeks. Vaccine will not likely be available in time for the first wave of illness, but may be available in time to mitigate the impact of the second wave, provided the virus strain has not "shifted" between waves.

Although it is not considered feasible to halt the spread of a pandemic virus, it should be possible to minimize the consequences by having prepared for the challenge in advance. The national response to a pandemic will largely reflect the ability of states and local areas to respond. Because of the potential impact of a pandemic and the need to coordinate a number of partners to effectively respond, planning for such an event needs to occur well in advance.

### **3. ASSUMPTIONS**

Gloucester County DHHS participates in the Centers for Disease Control and Prevention's (CDC) Bioterrorism Preparedness and Response Cooperative Agreement which has created new infrastructure and key linkages between agencies. Many aspects of planning for pandemic influenza use much the same infrastructure as that needed for response to bioterrorism events. The planning assumptions are:

- Public, private and non-profit sector partners have been brought into the planning process for bioterrorism preparedness.
- Pandemic influenza planning will be integrated into other preparedness activities.
- Influenza-Like Illness (ILI) surveillance is already in place.
- Mass prophylaxis clinic protocols are developed.
- Systems for communication among GCDHHS, hospitals and other partners are in place.

## **B. CONCEPT OF OPERATION**

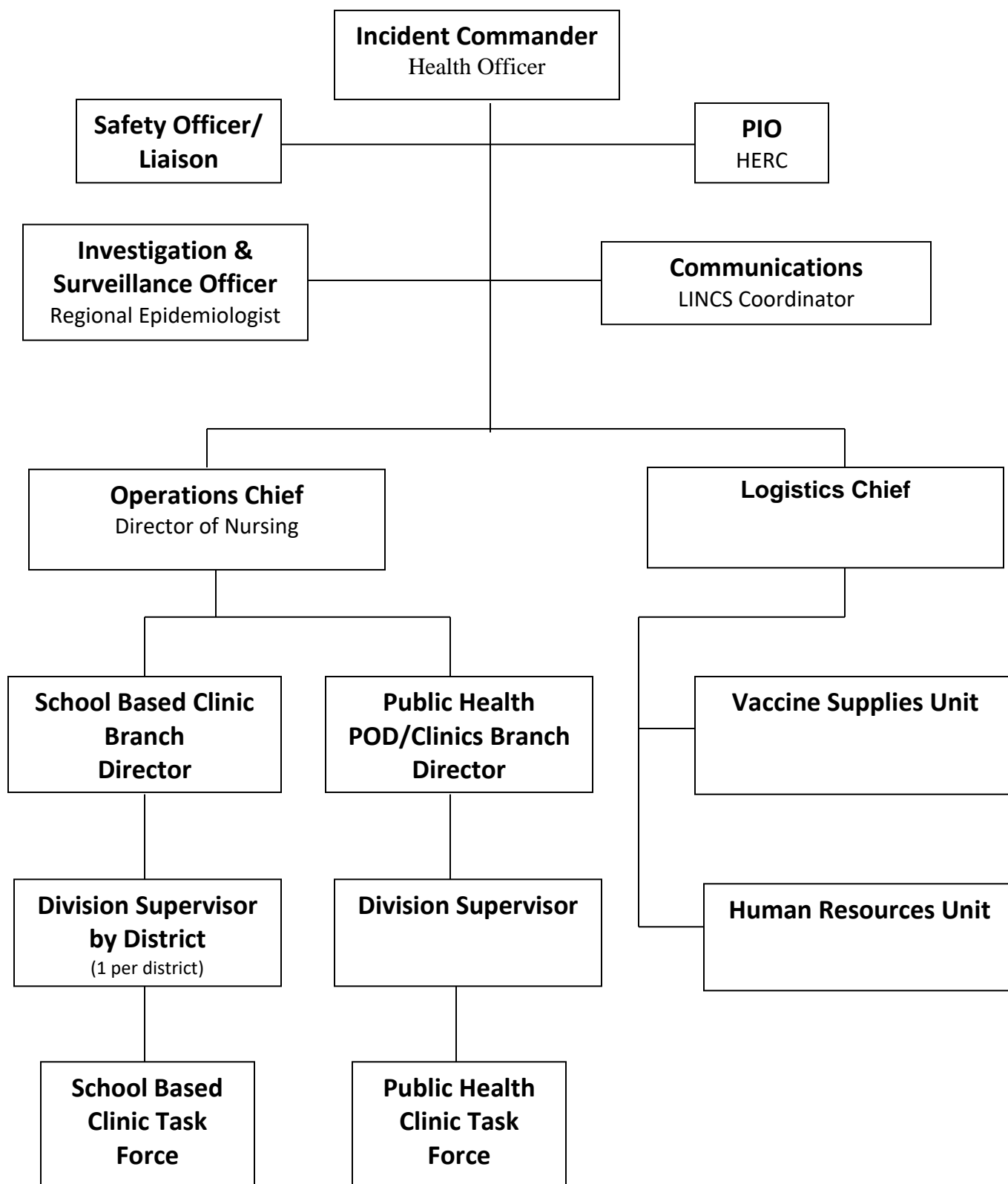
This plan is meant to supplement both the GCDHHS Public Health Emergency Response Plan (PHERP), and the New Jersey Pandemic Influenza Plan Draft, dated 2008.

It is important to note that the agencies responsible for implementing the above plans will be as affected by absenteeism due to illness as the communities requesting assistance. Each county agency, local municipality and private corporation is encouraged to develop plans that will ensure as much self-sufficiency as possible.

### **1. COMMAND, CONTROL AND MANAGEMENT POLICIES**

Gloucester County has adopted both the Incident Command System (ICS) and the National Incident Management System (NIMS) for the management of all emergency incidents. In an effort to improve the county's ability to recognize and respond to any and all public health emergencies, the GCDHHS continuously participates in various federal, state and county training programs, exercises, meetings and initiatives. The GCDHHS provides education programs to county residents and emergency responders that reinforce the need for good hygiene practices to avoid infections. Additionally, the GCDHHS notifies its public health partners through the NJ Local Information Network and Communication System (LINCS) of any and all public health emergencies and/or concerns.

## PUBLIC HEALTH INCIDENT COMMAND STRUCTURE FOR PANDEMIC RESPONSE



## **2. TRAINING**

Exercises are an instrument to train for and practice prevention, vulnerability reduction, response, and recovery capabilities in a risk-free environment. They also can be used to assess and improve performance. Exercises are also an excellent way to demonstrate community resolve to prepare for disastrous events.

1. The GCDHHS continuously participates in various federal, state and county training programs.
2. The GCDHHS exercises comply with the Homeland Security Exercise and Evaluation Program (HSEEP)

## **3. PUBLIC HEALTH RESPONSE COMPONENTS**

### **Surveillance**

Influenza virus surveillance is essential to recognizing a new viral strain at its source, determining its potential for transmission, and tracking its spread. The CDC and the World Health Organization coordinate US and international surveillance, respectively. Clinicians are required to report outbreaks of influenza, suspected infection with a novel influenza virus strain, and cases of severe pediatric influenza illness to the GCDHHS. Additionally, the NJDOH collects influenza-like illness surveillance data from nursing homes, schools, private physicians, and the hospital. Should an influenza pandemic occur, reporting requirements, particularly for influenza associated severe disease and death may change.

### **Vaccine and Antiviral Medication**

Historically, inactivated influenza vaccine has been the cornerstone of influenza prevention and control and will likely remain so in a pandemic, if a targeted vaccine is available. Although antiviral agents are available for the therapy and prophylaxis of influenza infections, limited supply/production capacity and antiviral resistance may dampen the value of this potential intervention. Antiviral medications do not prevent disease from influenza, but if administered quickly they can help to lessen the severity of illness. The GCDHHS will target the administration of vaccines and/or antivirals to persons at high-risk, as classified by NJDOH and CDC.

### **Isolation, Quarantine and Community Strategies**

The GCDHHS will work with NJDOH and area Hospitals to ensure that symptomatic persons are appropriately isolated, either at the hospital, at home, or in a non-traditional care center. At the outset of a pandemic, exposed individuals may be placed under quarantine, as recommended by NJDOH. Persons with an ill household member may be placed under voluntary quarantine. Community strategies, or non-pharmaceutical strategies, will be developed in concert with local organizations and schools based on epidemiological evidence and disease severity.



### **Laboratory Testing**

The GCDHHS will work with area hospitals and the Public Health and Environmental Laboratory to ensure appropriate testing for influenza is performed, as warranted.

### **Communications**

The GCDHHS will work with the County's Public Information Officer to ensure that timely, accurate, and consistent communications are provided for the public and members of the healthcare community. Communications will also be coordinated with the Office of Emergency Management to their partners using mobile operative communications.

## **4. PLAN ACTIVATION**

This plan will only be activated by the GC Health Officer or his/her designee in consultation with the NJDOH and the Gloucester County Office of Emergency Management (GCOEM).

**Table 1. WHO Global Pandemic Phases and the Stages for Federal Government Response**

WHO Phases		Federal Government Response Stages	
INTER-PANDEMIC PERIOD			
1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human disease is considered to be low.	0	New domestic animal outbreak in at-risk country
2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.		
PANDEMIC ALERT PERIOD			
3	Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.	0	New domestic animal outbreak in at-risk country
		1	Suspected human outbreak overseas
4	Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.	2	Confirmed human outbreak overseas
5	Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).		
PANDEMIC PERIOD			
6	Pandemic phase: increased and sustained transmission in general population.	3	Widespread human outbreaks in multiple locations overseas
		4	First human case in North America
		5	Spread throughout United States
		6	Recovery and preparation for subsequent waves

## **C. RESPONSE ACTIVITIES BY PANDEMIC PERIOD**

### **1. INTER PANDEMIC PERIOD**

#### **Planning**

- Annually update Pandemic Influenza Response plan.
- Recruit volunteers for the Gloucester County Medical Reserve Corps to assist in an emergency.
- Draft MOUs with temporary nursing staffing agencies to provide emergency staff.
- Maintain supply of health/medical equipment, including personal protective equipment and clinic supplies.
- Exercise parts of pandemic flu plan, either specifically related to flu, or more generally pertaining to emergency response.
- Develop/review business continuity plan for Department of Health assuming 30% absenteeism and emergency response roles.

#### **Surveillance**

- Conduct weekly influenza surveillance with hospitals, laboratories, schools, long-term care facilities, and individual health-care providers.
- Investigate influenza outbreaks.
- Conduct daily emergency department surveillance with area hospitals, looking at heightened disease activity using Hippocrates.

#### **Vaccine and Antiviral Medication**

- Coordinate annual public flu vaccination campaign, using mass immunization drive through clinic strategy and targeting high-risk groups.
- Monitor usage recommendations for antiviral medications.
- Maintain current lists of first responders, to target vaccination and/or antivirals in a pandemic.
- Maintain list of groups/organizations that could distribute vaccinations to their staff/patients/family members.
- Monitor adverse events using New Jersey Poison Information and Education System (NJPIES).
- Track flu vaccine inventory.

#### **Isolation, Quarantine and Community Strategies**

- Review and strengthen plans for community isolation.
- Ensure protocols are in place to coordinate home-based isolation and/or quarantine with hospital, healthcare partners, and law enforcement.

- Review plans to coordinate surge within County, looking at hospital, clinic, long-term care, and community isolation options.

### **Laboratory Testing**

- Ensure that in an outbreak setting, specimens are submitted for testing at the New Jersey Public Health and Environmental Laboratory (PHEL).

### **Communications**

- Provide regular communications about seasonal flu, flu surveillance, and vaccination opportunities through LINCS, the website, and press releases.
- Develop and/or revise educational materials about influenza, use of antivirals, universal respiratory precautions.

## **2. PANDEMIC ALERT PERIOD**

### **Planning**

- Update pandemic flu plan with information pertaining to a new threat, as applicable.
- Increase recruitment efforts for MRC volunteers.

### **Surveillance**

- Monitor domestic and international surveillance reports pertaining to the clinical spectrum, secondary attack rates, treatment, and risk factors for infection, severe disease, and death.
- Disseminate NJDOH and CDC enhanced surveillance guidelines to hospital and healthcare community.
- If the alert occurs outside of the normal October-May influenza surveillance season, ask influenza surveillance partners to continue year-round surveillance.
- Review surveillance data to aid prioritization decision for vaccines and antivirals.
- Conduct case investigations, as needed.

### **Vaccine and Antiviral Medication**

- Review major elements of the vaccine and antiviral prioritization plan; modify plan as needed based on epidemiological and clinical features of the new strain, availability of vaccine and antivirals, and CDC/NJDOH guidance.
- Ensure staff participates in NJDOH training on NJIS to track vaccine inventory; designate person(s) responsible for maintaining current inventory.
- Coordinate notification of partner organizations to identify priority populations, and estimate amount of antiviral medications and vaccine they will need.
- Distribute training materials to relevant agencies and partner organizations about vaccine and antiviral delivery protocols and procedures.

- Ensure that human resources, equipment and plans for mass immunization clinics are in place.
- Ensure plans and strategies are in place to reach “hard-to-reach” populations (homebound, disabled) and Spanish speaking population.

### **Isolation, Quarantine and Community Strategies**

- Ensure that human resources, equipment and plans to open a community isolation site are in place.
- Inform healthcare partners about possible surge capacity response.
- Review community isolation plans with local partners and continue with surveillance as indicated.

### **Laboratory Testing**

- Ensure that patients fitting an enhanced surveillance protocol are appropriately tested for influenza at PHEL.
- Reinforce procedures for submitting specimens to the PHEL with healthcare community.
- Ensure staff is available to coordinate specimen gathering and transport to PHEL.

### **Communications**

- Assemble and/or disseminate fact sheets for health care professionals about the novel virus, diagnosis and treatment.
- Notify/update OEM and County government about the novel virus alert.
- Maintain current information on website for travelers to endemic areas about heightened disease surveillance and disease containment measures.
- Provide and review infection control guidelines with healthcare community. Reinforce use of universal respiratory precautions by staff and patients in the healthcare setting.
- Provide regular updates to public health response team members, including MRC volunteers.
- Provide updated information for the public on the Department of Health’s hotline and website; and through press releases.
- Implement communications plan.

## **3. PANDEMIC PERIOD**

### **Planning**

- If Gloucester County is directly affected, the Office of Emergency Management may activate the Emergency Operations Center to coordinate the County’s response.
- As warranted, recommendations will be made to cancel public events/travel.
- Assign/enlist pre-designated workers to staff immunization clinics and nontraditional care sites.

- Work with the Office of Emergency Management to coordinate supply/equipment needs.

### **Surveillance**

- Implement enhanced surveillance, with guidelines provided by CDC and NJDOH.
- If Gloucester County is directly affected, surveillance emphasis may be shifted from detecting cases caused by the influenza virus to monitoring demographic characteristics associated with severe disease that may affect priority groups for vaccine, antiviral medications and additional health care resources.
- Monitor critical cases/deaths related to influenza.
- NJDOH will provide surveillance data. GCDHHS will share data with the healthcare community, and other partners, as necessary.

### **Vaccine and Antiviral Medication**

- Contact partners to update amounts of vaccine and/or antiviral medication needed by priority groups.
- If a vaccine and/or antiviral medications are available, implement plans to deliver the vaccine and/or antivirals to the designated priority groups as quickly as possible (see RDS, Mass Vaccination Clinic Operations, First Responder Plan, and Closed POD Plan).
- Coordinate delivery with private sector, if allowed by CDC and NJDOH.
- Monitor adverse events and report necessary information to NJPIES at 1-800-222-1222 as well as vaccine related adverse event to VAERS.

### **Isolation, Quarantine and Community Strategies**

- Review CDC and NJDOH guidelines for isolation and/or quarantine with healthcare community and law enforcement.
- Work with area hospitals to determine if in-patient medical care in nontraditional settings is needed. If so, work with the Office of Emergency Management to equip and staff other settings to provide hospital surge capacity.
- Coordinate with long-term care facilities to increase their level of in-house care.
- Coordinate the use of collaborative emergency services and volunteers to provide emergency home care and monitoring for vulnerable populations.
- Provide guidance on Personal Protective Equipment (PPE) for healthcare workers and high risk populations.
- Work with local organization, law enforcement, emergency management and schools in determining appropriate closures and cancelations of schools, camps, social gatherings.

### **Communications**

- Ensure county administration and appointed leaders receive information in a timely manner regarding ongoing pandemic.
- Coordinate communications from NJDOH to public, through Public Information Officer.
- Provide training for hotline operators to answer questions and make necessary referrals.

- Log questions to be used in updating FAQs.
- Instruct exposed persons to practice proper respiratory hygiene.

### **Post Pandemic Period**

- Based on past experience, a second wave of outbreaks may occur within 3-9 months of the initial epidemic, but may be less severe because some people will have already had disease or have been vaccinated during the previous season. Vaccine supply is also likely to be greater leading to different strategies for vaccination.
- The GCDHHS in coordination with NJDOH Regional Epidemiologist will continue to collect and monitor surveillance data in anticipation of a potential second wave.
- Notify public health partners if a secondary increase in flu incidence rates occurs.
- Continue coordination of public health and County assets with the Office of Emergency Management.
- Continue vaccination plan until all priority groups are vaccinated; expand vaccination as supply allows to general population.
- Monitor for adverse events related to vaccine use and report necessary information to NJPIES at 1-800-222-1222 as well as vaccine related adverse event to VAERS.
- Continue information dissemination via hotline, website, and press.

## **4. Recovery**

Recovery and remediation, usually associated with natural and man-made disasters, are not typically needed for pandemic influenza. However, many people recovering from severe influenza-related illnesses may need care and convalescence for several months after the pandemic has ended. Costs for such care are not included in the estimates of economic impact.

Service disruptions could be severe, depending upon the pattern of which persons become ill, when they become ill, and for how long they are ill. It is probably “safe” to assume that, even if health care workers are among the first to receive vaccinations and/or treatment, the health care system will be severely stressed, if not overwhelmed.

## **D. PLAN DEVELOPMENT AND MAINTENANCE**

This Pandemic Influenza Plan is entered as an appendix to the Gloucester County Department of Health and Human Services Public Health Emergency Response Plan (PHERP). This plan shall be reviewed annually.

<b>Revision Level</b>	<b>Revision Date:</b>	<b>Revised by:</b>	<b>Brief Description of Change</b>
Original	08/15/09	S. Woodside	Original Issue
#2	10/19/19	D.Jankauskas A.Ruiz	Updated:

			<ul style="list-style-type: none"> <li>• organization title for our agency and state.</li> <li>• Plan date</li> <li>• Added Regional Epi Program info</li> <li>• Updated WHO Global Pandemic Phases and Stages for Federal Gov't Response table</li> <li>• Clarified acronyms</li> <li>• Updated attachments</li> </ul>
--	--	--	---

## **E. AUTHORITIES AND REFERENCES**

- **NJSA Title 26 – Health and Vital Statistics**
- **NJ Emergency Health Powers Act**
- **HHS Pandemic Influenza Plan**
- **NJDOH Pandemic Flu Plan Draft (dated 2008)**
- **GCDHHS Public Health Emergency Response Plan (PHERP) Draft (dated August 2004)**
- **GC Emergency Operations Plan (EOP)**
- **GCDHHS First Responder Antibiotic Distribution Plan for Municipalities Draft (dated 2009)**
- **Gloucester County Emergency Operations Plan and Annexes**
- **World Health Organization Pandemic Influenza Plan**



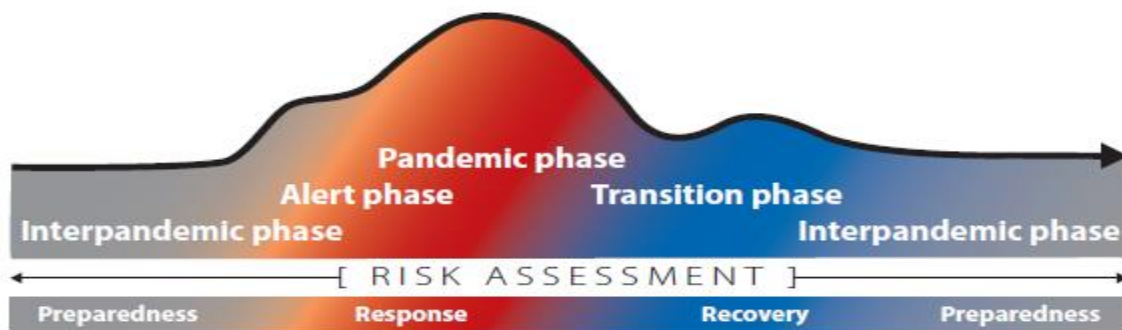
## Attachment A

### WHO classification of each pandemic phase

# WHO Pandemic Influenza Phases

Phase	Description
Phase 1	No animal influenza virus circulating among animals have been reported to cause infection in humans.
Phase 2	An animal influenza virus circulating in domesticated or wild animals is known to have caused infection in humans and is therefore considered a specific potential pandemic threat.
Phase 3	An animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks.
Phase 4	Human to human transmission of an animal or human-animal influenza reassortant virus able to sustain community-level outbreaks has been verified.
Phase 5	Human-to-human spread of the virus in two or more countries in one WHO region.
Phase 6	In addition to the criteria defined in Phase 5, the same virus spreads from human-to-human in at least one other country in another WHO region.
Post peak period	Levels of pandemic influenza in most countries with adequate surveillance have dropped below peak levels.
Post pandemic period	Levels of influenza activity have returned to the levels seen for seasonal influenza in most countries with adequate surveillance

Figure 1. The continuum of pandemic phases<sup>a</sup>

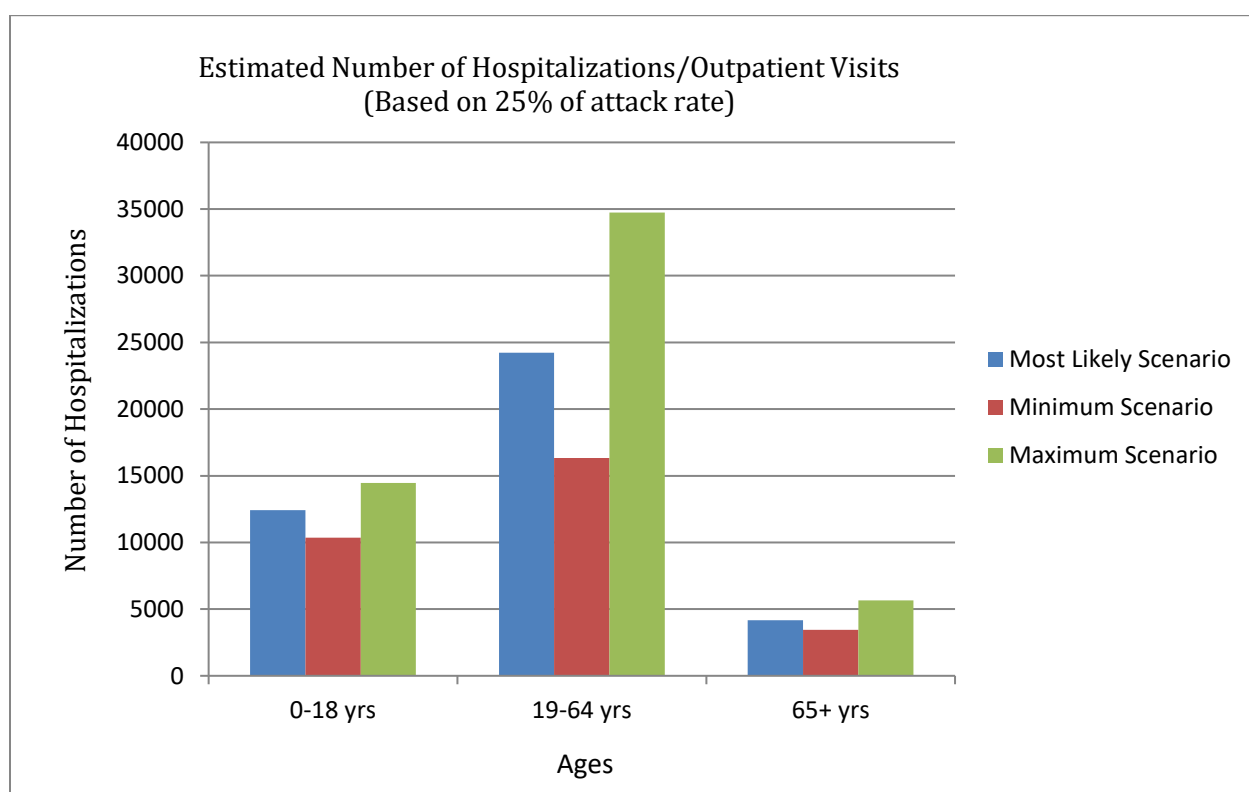


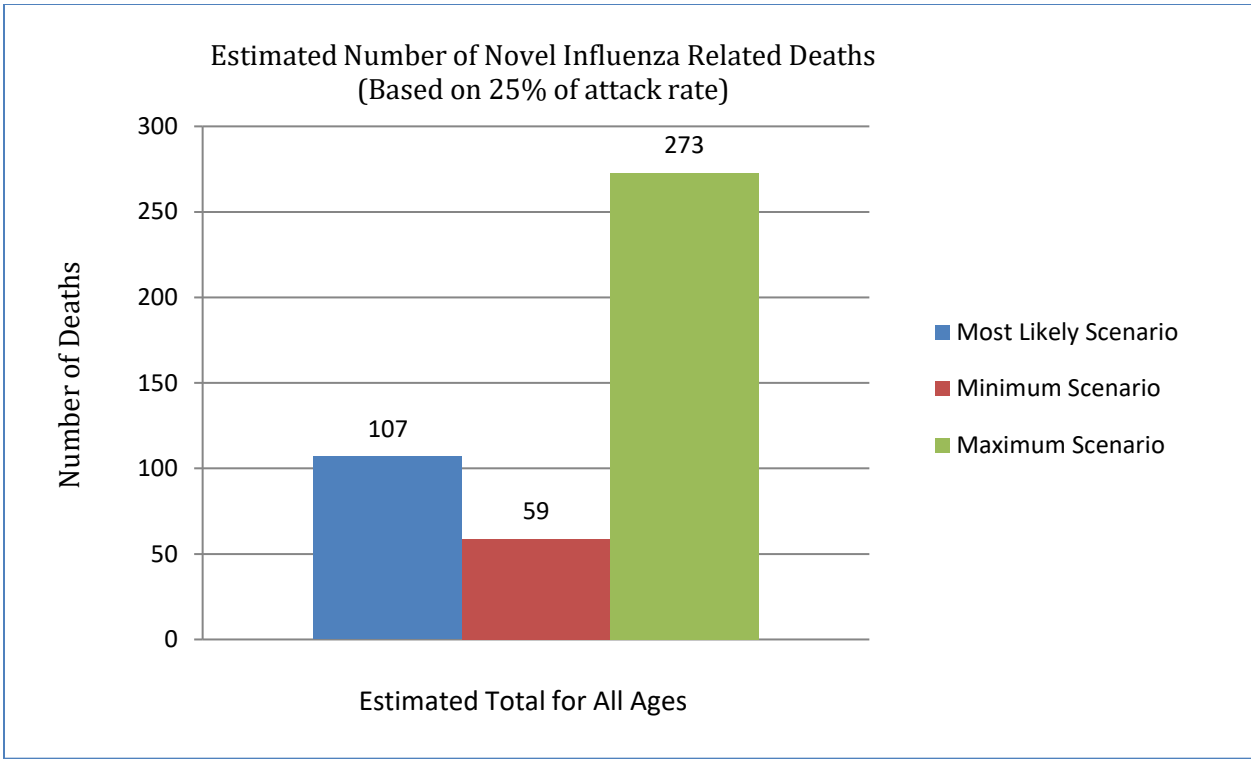
<sup>a</sup> This continuum is according to a "global average" of cases, over time, based on continued risk assessment and consistent with the broader emergency risk management continuum.

## Attachment B

### Potential Impact of Pandemic Influenza on Gloucester County

Novel influenza strains have the potential to spread more rapidly than seasonal influenza. The secondary attack rate of seasonal influenza ranges from an estimated at 5 – 10% in adults and 20 – 30% in children. Current estimates of the secondary attack rate of novel influenza strains range from 22 to 33 percent according to the World Health Organization (WHO). For planning assumption purposes this Pandemic Influenza Plan utilizes a 25% attack rate based on CDC and WHO projections.





Note: based on H1N1 data

## Impact of H1N1 on Hospitals in Gloucester County

The following projections represent hospital admissions and hospital capacity for both Inspira Medical Center and Jefferson Health - Washington Township combined.

Hospital Admissions per Week	1	2	3	4	5	6	7	8
Most Likely Scenario	50	83	125	158	158	125	83	50
Minimum Scenario	16	26	39	49	49	39	26	16
Maximum Scenario	60	100	150	190	190	150	100	60

Pandemic Influenza Impact by Week		1	2	3	4	5	6	7	8	9	10
Hospital Admissions	Weekly admissions	50	83	125	158	158	125	83	50		
	Peak admissions/day				25	25					
Hospital Capacity	# of influenza patients in hospital	37	61	92	116	120	106	81	53		
	% of hospital capacity needed	13%	22%	33%	41%	43%	38%	29%	19%		
ICU Capacity	# of influenza patients in ICU	7	16	24	32	35	34	27	19		
	% of influenza patients in ICU	10%	21%	32%	42%	45%	44%	35%	24%		
Ventilator Capacity	# of influenza patients on ventilators	4	8	12	16	17	17	13	9		
	% of total ventilators used on influenza patients	8%	18%	27%	36%	39%	37%	30%	21%		
Deaths	# of deaths from influenza			6	11	16	20	20	16	11	6
	# of influenza deaths in hospitals			4	7	11	14	14	11	7	4

## **Attachment C**

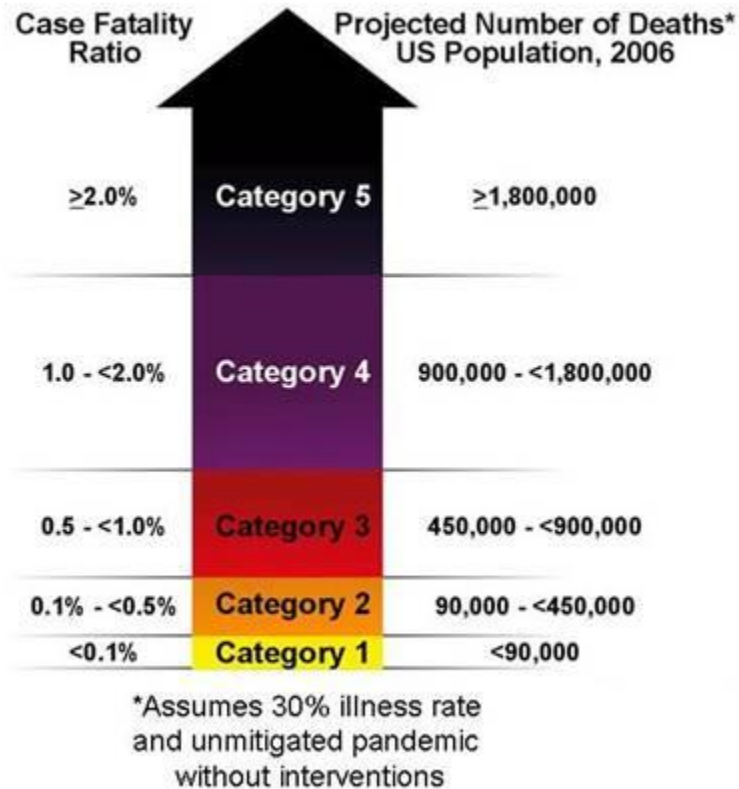
**Pandemic Surveillance Forms to be provided by NJDOH or developed  
Possibly use EpiCenter data and NJDOH CDRSS Influenza like Illness surveillance.**

## Attachment D

### Community Containment Measures

In addition to the use of vaccination and antiviral drugs, several non-pharmaceutical interventions (NPI) may be used to mitigate the effects of an influenza pandemic. The CDC has established a Pandemic Severity Index, which will categorize future pandemics by severity based on the case fatality ratio (Figure E-1).

Figure E-1 Pandemic Severity Index



Community containment measures will be applied based on the Pandemic Severity Index, and include:

1. Isolating and treating ill persons, either at home or in a healthcare setting.
2. Voluntary home isolation for persons with a household member ill with influenza possibly combined with use of antiviral medications.
3. Child social distancing measures including dismissal of schools and closure of childcare programs, and community distancing.
4. Adult social distancing measures to reduce contact in the community and workplace.

These measures will be combined with individual infection control measures, such as handwashing and cough etiquette. The community mitigation measures will have an impact on people's daily lives. Some individuals will need to stay home to care for children or an ill family member, and for children there will be an interruption in their education.

Different community measures will vary by the severity of the pandemic (Figure E-2). For Category 4 or Category 5 pandemics, a planning recommendation is made to use all NPIs, with a planning period of up to 12 weeks. For Category 2 and Category 3 pandemics, planning for voluntary isolation of ill persons is recommended; other mitigation measures should be implemented only if local decision-makers determine they are warranted based on the characteristics of the pandemic in their community. Interventions in these categories should focus on a duration of 4 weeks. For Category 1 pandemics, voluntary isolation of ill persons is the only community-wide recommendation.

**Figure E-2 Summary of Community Mitigation Strategy by Pandemic Severity**

Interventions* by Setting	Pandemic Severity Index		
	1	2 and 3	4 and 5
<b>Home</b>			
<b>Voluntary isolation</b> of ill at home (adults and children); combine with use of antiviral treatment as available and indicated	Recommend†§	Recommend†§	Recommend †§
<b>Voluntary quarantine</b> of household members in homes with ill persons¶ (adults and children); consider combining with antiviral prophylaxis if effective, feasible, and quantities sufficient	Generally not recommended	Consider **	Recommend **
<b>School</b>			
<b>Child social distancing</b>			
-dismissal of students from schools and school based activities, and closure of child care programs	Generally not recommended	Consider: ≤4 weeks††	Recommend: ≤12 weeks§§
-reduce out-of school social contacts and community mixing	Generally not recommended	Consider: ≤4 weeks ††	Recommend: ≤12 weeks§§
<b>Workplace / Community</b>			
<b>Adult social distancing</b>			
-decrease number of social contacts (e.g., encourage teleconferences, alternatives to face-to-face meetings)	Generally not recommended	Consider	Recommend
-increase distance between persons (e.g., reduce density in public transit, workplace)	Generally not recommended	Consider	Recommend
-modify, postpone, or cancel selected public gatherings to promote social distance (e.g., stadium events, theater performances)	Generally not recommended	Consider	Recommend
-modify work place schedules and practices (e.g., telework, staggered shifts)	Generally not recommended	Consider	Recommend

Implementation of these measures needs to be early enough to preclude the high case numbers and long enough to cover peak transmission, but needs to also avoid intervention fatigue. **The CDC guidance suggests that the trigger for activating these interventions is the arrival and transmission of pandemic virus, best defined by a laboratory-confirmed cluster of infection with a novel influenza virus and evidence of community transmission.**

### Voluntary Isolation of Ill Persons

The goal of voluntary isolation of ill persons is to reduce the transmission between persons who are ill and those who are not. Ill persons not requiring hospitalization would be requested to remain at home voluntarily for the infectious period, approximately 5-10 days after symptom onset. Antiviral medications may be used. Gloucester County hospitals have plans in place for isolating patients within their facilities.

## **Child Social Distancing**

Social distancing interventions for children aim to protect children and to decrease transmission among children in dense classrooms and non-school settings. These measures include dismissal of students from classrooms and closure of childcare programs, coupled with protecting children and teenagers through social distancing in the community, keeping group contact few and small.

## **Adult Social Distancing**

Social distancing measures for adults include provisions for both workplaces and the community. Employers should encourage working from home, using teleconferences instead of in-person meetings, and alternate work schedules. Community measures may include cancellation of public events (concerts, sports events, movies, plays); closure of recreational activities (community pools, gymnasiums); closure of shopping malls, public transportation; promotion of communitywide infection control measures; and extended home isolation (people asked to stay home for a 10-day period).

## **Flu Hotlines and Websites**

Current information on the flu pandemic will be maintained on the Gloucester County website, [www.gloucestercountynj.gov](http://www.gloucestercountynj.gov). Information on signs and symptoms requiring immediate attention will be listed, as well as recommendations and a list of frequently asked questions. Residents can also call the Department of Health for more information at (856) 218-4101 or if activated the Health Department Hotline is 856-218-4141.



# Attachment E

## Pandemic Flu Risk Communication Summary

During any public health emergency, disseminating timely information to the public and to targeted groups is critical in ensuring an efficient public health response. Communications related to an influenza pandemic follow the procedures described in the Gloucester County Department of Health and Human Services All Hazards Response Plan.

Current information would be maintained on the county website; [www.gloucestercountynj.gov](http://www.gloucestercountynj.gov), and released through media outlets and through the LINC system.

In addition to information posted on the Department of Health's website, internal communication resources include:

- H1N1 Influenza Message Maps
- Pandemic Influenza Message Maps
- Vaccine Message Maps
- School Message Maps
- Talking Points
- FAQ sheets
- Influenza: Facing New Global Challenges – PowerPoint presentation for community groups
- Brochures regarding pandemic influenza and H1N1

### **Communications messages for the public will focus on:**

1. Signs and symptoms: messages to guide healthcare seeking behaviors towards personal physicians and home care, when appropriate, and towards hospitals for severe illness.
2. Infection control: Steps residents can take to protect themselves from the spread of germs (universal respiratory precautions, social distancing, disinfecting).
3. Information on vaccination strategies, if vaccine is available, and following NJDOH prioritization guidance.
4. Information on use of antivirals, if medications are available, and following NJDOH prioritization strategies.
5. Information for schools and parents to utilize.
6. Social distancing measures that are undertaken, if any.
7. Situation updates: The current status of the outbreak in Gloucester County and in surrounding areas.

*\*This plan is an excerpt from the Emergency Risk Communication Plan*

# Pandemic Flu Message Maps

## What is influenza pandemic?

- An influenza pandemic is a global outbreak of influenza.
- Pandemics are different than seasonal outbreaks of influenza because they are new and our bodies may not have immunity.
- The timing and nature of pandemics are unpredictable.

## Are pandemics different than seasonal outbreaks of influenza?

- Seasonal outbreaks or “epidemics” of flu are caused by influenza viruses that have already circulated among people.
- Influenza pandemics are caused by a new influenza virus that has not circulated among people.
- Past influenza pandemics have led to high levels of illness, death, social disruption and economic loss.

## What has been done to prepare for an influenza pandemic?

- The CDC along with local health departments are working on developing vaccines and antiviral medicine is available if needed.
- The NJDOH and GCDHHS are increasing our flu surveillance with area schools and hospitals to increase our ability to respond to outbreaks.
- New Jersey health officials continue to develop plans and strengthen our preparedness for pandemic flu on the local, county and state levels.

## Is Gloucester County prepared for an influenza pandemic?

- We have completed a number of steps to prepare for an influenza pandemic.
- *Task Forces with the schools were formed during H1N1 and could be a viable option for future pandemic influenza response.*
- We have exercised our plans and tested our ability to provide medication in a specific amount of time.
- Because the public will need to play an important role in responding to an influenza pandemic we are providing education to schools, businesses and the public about respiratory hygiene and proper hand washing.

## The public will need to play an important role in responding to an influenza pandemic.

- The public will be asked to take steps to protect themselves and others during an influenza pandemic.
- At certain stages during a pandemic, the public may be asked to comply with isolation, social distancing and vaccination recommendations.
- It's important to remember that despite our best efforts, the effects of an influenza pandemic could be severe.

## Additional planning is ongoing.

- Planning and preparedness activities around an influenza pandemic at the national, state and local levels must continue.

- There are ongoing domestic and international efforts to improve surveillance and strengthen the public health sector's ability to respond to a pandemic.
- There is work ongoing to expand the federal stockpile of influenza antiviral medicines as well as the production of vaccines.

### **People in certain age groups are likely to be at higher risk for severe illness and death.**

- These include people with underlying health conditions, such as heart disease and HIV/AIDS and those with cancer.
- People with compromised immune systems, now make up a larger portion of the U.S. population than during previous pandemics.
- In many cases it is difficult to predict who is going to be affected the most by a pandemic.

### **Can a vaccine be made to protect against pandemic influenza?**

- Potential vaccines are already being made and tested against likely viruses.
- We will need a vaccine for the specific pandemic influenza virus.
- Vaccine may be limited. This is why it is so important that everyone understands that there are things they can and should do to protect themselves such as practice proper hand and respiratory hygiene and stay home if you are sick!

### **Who is going to receive the vaccine first?**

- Vaccine might be in limited supply in the early stages of the influenza pandemic.
- First responders, healthcare workers and those at highest risk.
- Other groups will be identified for vaccination based on the spread of the pandemic and level of risk.

### **Who decides how vaccine will be distributed?**

- Public Health and medical experts will use their knowledge and experience to make recommendations about who is at highest risk and who will receive the vaccine first during a pandemic.
- It is important to remind citizens to also get their seasonal flu vaccine.
- Fairness in vaccine distribution during a pandemic is important.
- People can help protect themselves and others during influenza pandemic by practice proper hand and respiratory hygiene and stay home if you are sick!

### **Fairness in vaccine use during a pandemic is important.**

- Protecting people at high risk is an important consideration.
- Protecting essential day-to-day services, such as electricity and water, is an important consideration.
- Decisions regarding use of vaccine should be discussed by the public health and medical experts.

### **People can help protect themselves and others during influenza pandemic.**

- Frequent hand-washing can limit the spread of germs.
- Covering coughs and sneezes with a tissue can limit the spread of germs.
- Staying home when you are sick helps protect others.

## **How long would it take to make enough pandemic influenza vaccine for everyone after a pandemic begins?**

- Right now, it is unclear how long it would take to produce enough vaccine for everyone in the United States after a pandemic begins.
- We need to prepare to deal with an initially limited supply of vaccine.
- We are working to have enough vaccine for everyone in the United States.

## **We need to prepare to deal with an initially limited supply of vaccine.**

- As a vaccine for an influenza pandemic becomes available, it will be given to people in specific target groups first.
- Vaccine will first be used where it can most effectively prevent illness and death, and lessen social disruption and economic loss.

## **Are there available medicines to prevent or treat influenza if a pandemic occurs? How effective are they?**

- There are medicines approved for use in the United States to prevent and treat influenza, called antivirals.
- The federal government has established a national stockpile of antiviral medications.
- Treatment is most effective when antivirals are taken soon after symptoms start.

## **There are medicines approved for use in the United States to prevent and treat influenza, called antiviral.**

- Antiviral are medications that fight the influenza virus infection.
- Studies show that antivirals can reduce the number of days a person is sick with seasonal influenza and lessen the severity of the symptoms.
- Health experts believe that antivirals can provide some protection from influenza during a pandemic. Please do not take unless prescribed by a physician.

## **The federal government has established a national stockpile of antiviral medications.**

- Because there will probably not be enough vaccine at the start of a pandemic, antivirals will most likely be our first defense.
- The federal government has several million doses of antivirals stockpiled for national use and there are contracts in place to increase the stockpile.
- Despite these efforts, there will be fewer antivirals available than will be needed.

## **Treatment is most effective when begun soon after symptoms start.**

- If taken within two days of getting sick, these prescription medicines may reduce influenza symptoms and shorten the time you are sick by about one day.
- It is not known how effective antivirals will be during an influenza pandemic.

## **What can people do in the event of an influenza pandemic?**

- Stay informed by listening to trusted sources and following the advice of public health officials.

- Monitor your health and the health of your loved ones.
- Take common sense precautions that may help prevent the spread of influenza.
- Offer them available resources on CDC for taking care of sick individuals in the home.

### **Stay informed by listening to trusted sources and following public health advice.**

- New Jersey’s public health officials will share information and instructions with the public on an ongoing basis.
- Public cooperation will be important in managing an outbreak.
- You can refer to credible information sources such as [nj.gov/health/cd/topics/flu](http://nj.gov/health/cd/topics/flu) or [www.pandemicflu.gov](http://www.pandemicflu.gov) or [www.gloucestercountynj.gov](http://www.gloucestercountynj.gov)

### **Monitor your health and the health of your loved ones.**

- Look for signs and symptoms of influenza such as fever, cough and body aches.
- Maintain healthy habits, and if you become sick, follow your healthcare provider’s advice.
- If you have concerns about your health, contact your healthcare provider.

### **Take common sense precautions that may help prevent the spread of influenza.**

- Cover coughs and sneezes with a tissue to help prevent others from becoming sick.
- Wash your hands often to prevent the spread of germs.
- Stay away from sick people, and if you are sick, stay home from school or work. Avoid crowds.

### **How do I care for sick individuals at home?**

- Keep them home for at least 24 hours after fever is gone, except to seek medical care or for other necessities. (Fever should be gone without the use of a fever-reducing medicine)
- Be sure they get plenty of rest and have them drink clear fluids (such as water, broth, sports drinks, electrolyte beverages) to keep from being dehydrated.
- Be sure they cover coughs and sneezes. Have them clean hands with soap and water or an alcohol-based hand rub often and especially after using tissues and after coughing or sneezing into hands.
- Wear a facemask – if available and tolerable – when sharing common spaces with other household members to help prevent spreading the virus to others. This is especially important if other household members are at high risk for complications from influenza.

### **How can I lesson the spread of the Flu in the Home?**

- Keep the sick person away from other people as much as possible
- Have everyone in the household clean their hands often, using soap and water or an alcohol-based hand rub. Children may need reminders or help keeping their hands clean
- Ask your health care provider if household contacts of the sick person—particularly those contacts who may be pregnant or have chronic health conditions—should take antiviral medications such as oseltamivir (Tamiflu®) or zanamivir (Relenza®) to prevent the flu.
- If you are in a high risk group for complications from influenza, you should attempt to avoid close contact (within 6 feet) with household members who are sick with influenza. If close contact with a sick individual is unavoidable, consider wearing a facemask or respirator, if available and tolerable. Infants

should not be cared for by sick family members. For more information, see the ([add a link to CDC facemask and respirator use if available](#))

***For more information***

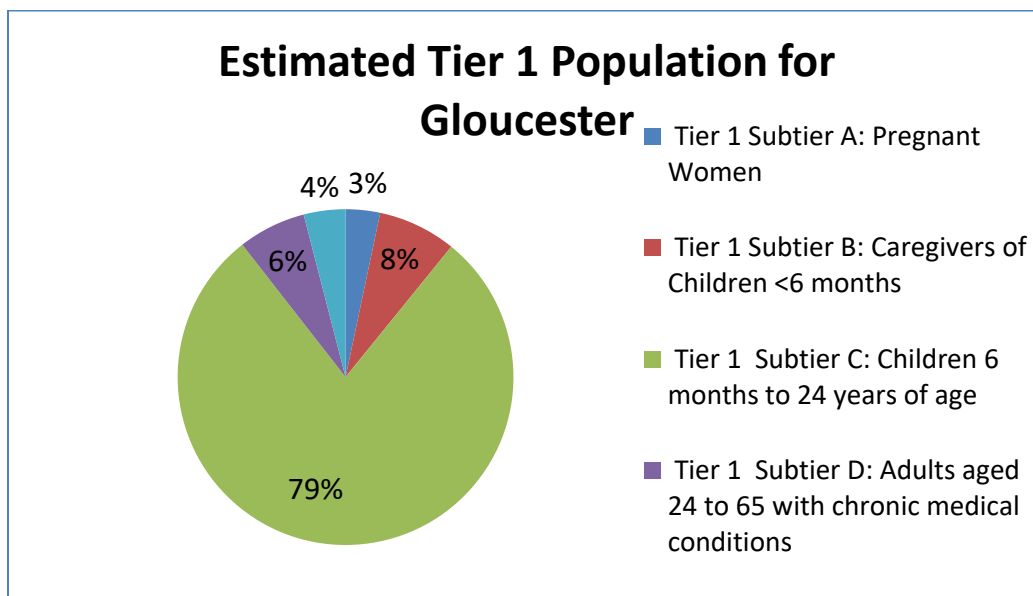
- Visit the NJDOH website at [nj.gov/health/cd/topics/flu](http://nj.gov/health/cd/topics/flu).
- Visit the CDC website [www.pandemicflu.gov](http://www.pandemicflu.gov).
- Call the CDC hotline at 1-800-CDC-INFO

## Attachment F

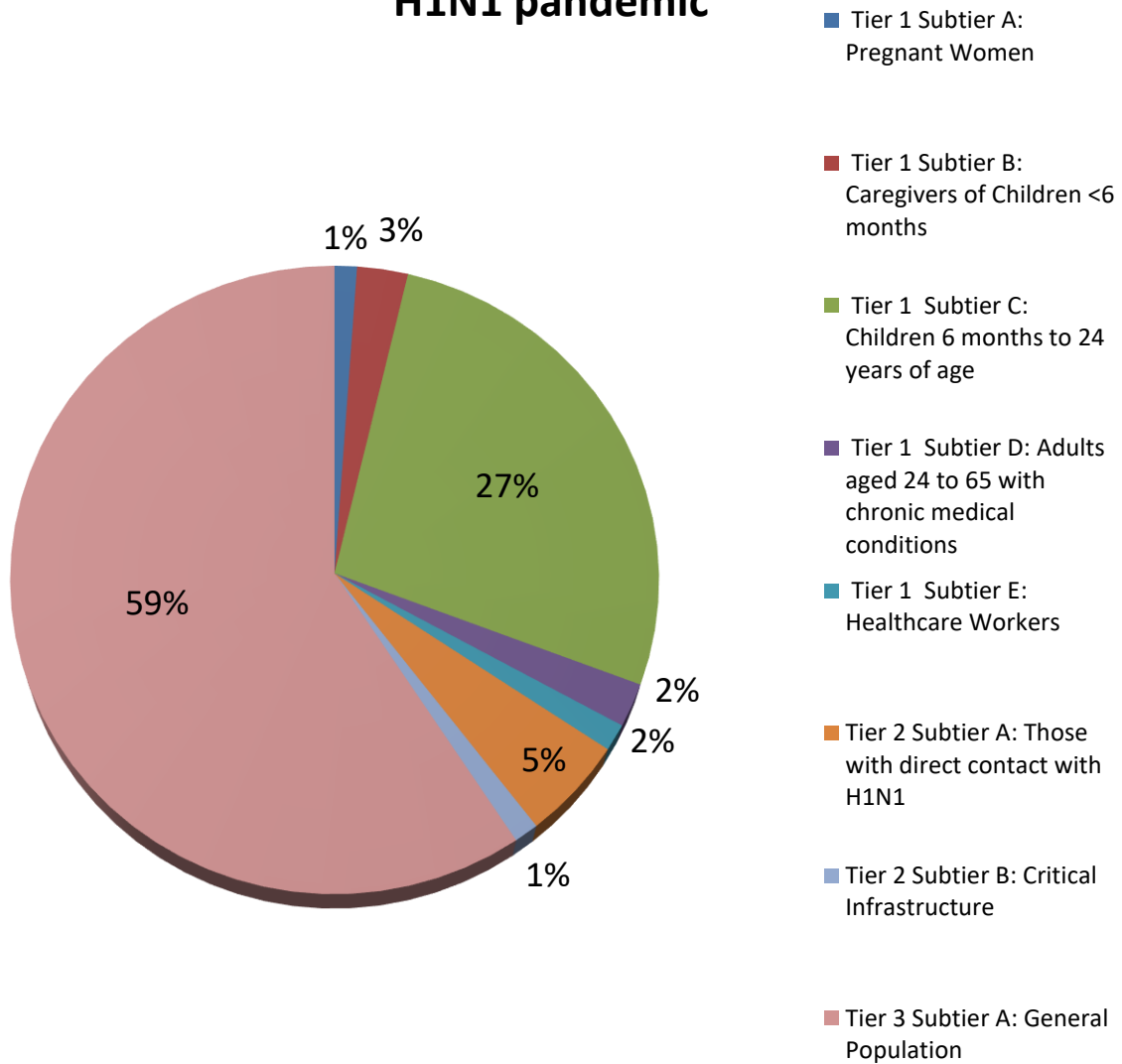
### Priority Groups for H1N1 Vaccinations

Tier	Subtier	Target Population	Rationale	Estimated Gloucester County Population*
1	A	Pregnant Women	In past pandemics and for annual influenza, pregnant women have been at high risk; vaccination will also protect the infant who cannot receive vaccine.	3,300
	B	Caregivers of Children <6 month	Vaccination will also protect the infant who cannot receive vaccine.	7,500
	C	Children 6 months to 24 years of age	The Influenza H1N1 virus has disproportionately affected children and young adults causing more illness and hospitalizations than those over the age of 25	78,300
	D	Adults aged 24 to 65 with chronic medical conditions	Individuals with Asthma, Diabetes, Chronic respiratory conditions, immune compromised disorders and obesity are at greater risk of developing severe illness compared to the rest of the population.	6,500
	E	Healthcare Workers	Health care workers including Emergency Medical personnel with direct patient care	4,000
2	A	Those with direct contact with H1N1	School staff, day care workers, vaccinators are more likely to contract Influenza than the general public	15,000
	B	Critical Infrastructure	Other healthcare workers, governmental employees, non-EMS first responders, national guard, elected officials, other individuals that support critical and essential services	3,500
3	A	General Population	The remainder of the estimated Gloucester County population	171,900
Total Population				290,000

\*Data based on the US Census Bureau estimates for 2008



## Estimated Gloucester County Population by Tier - H1N1 pandemic





## Attachment G

### H1N1 Vaccination Distribution Opportunities in Gloucester County

In order to effectively administer H1N1 vaccine to Gloucester County residents a variety of methods of distribution will be instituted. The following methods of delivery identified below should be utilized to provide optimal coverage to the priority groups identified in Attachment F.

#### *School Based Clinics with physician directed services*

Total Facilities	Total Population	Target Population	Comments
105	53,343	School aged children	All public and private elementary, grade and high school facilities in Gloucester County

#### *Higher Educational Facility with physician directed services*

Total Facilities	Total Population	Target Population	Comments
2	17,000	Students and faculty	Rowan University & Rowan College of South Jersey

#### *Health Department Based Clinics/Municipal Clinics*

Total Facilities	Total Population	Target Population	Comments
36	21,000	Gloucester County Residents	All persons from 6 months of ages and older

#### *Private Practitioners*

Total Facilities	Total Population	Target Population	Comments
74		Primary care clients from children to seniors	Total number of Pediatrician, Family Practice and Internist offices in Gloucester County

### ***Federally Qualified Health Centers***

<b>Total Facilities</b>	<b>Total Population</b>	<b>Target Population</b>	<b>Comments</b>
2		Low income, medically underserved and vulnerable populations	

### ***Hospitals***

<b>Total Facilities</b>	<b>Total Population</b>	<b>Target Population</b>	<b>Comments</b>
2		Hospital based healthcare workers & ill persons requiring hospitalization	Inspira Medical Center Jefferson Health Washington Twp

### ***Healthcare Facilities (Non-Hospital Based)***

<b>Total Facilities</b>	<b>Total Population</b>	<b>Target Population</b>	<b>Comments</b>
33	1,756	Residents of the long term care facility	18 Long term care facilities, 15 assisted living facilities

### ***Visiting Nurses Organizations***

<b>Total Facilities</b>	<b>Total Population</b>	<b>Target Population</b>	<b>Comments</b>
0			Home Health services covered by VNA of Runnemede, Virtua and South Jersey Home Care

### ***Local Pharmacies/Retailers***

<b>Total Facilities</b>	<b>Total Population</b>	<b>Target Population</b>	<b>Comments</b>
48	Gloucester County	Gloucester County	5 CVS, 5 Walgreens, 5 Rite Aid, 3 Acme, 5 Shoprite, 4 Walmart, 3 Target

***Businesses with physician directed employee health services***

<b>Total Facilities</b>	<b>Total Population</b>	<b>Target Population</b>	<b>Comments</b>
33	75,000	Healthcare providers and critical Infrastructure	

## Attachment H

### Required Resources for Influenza Clinic by Clinic Population Size

Estimated Population	Up to 500	Up to 1000	Up to 1500	Up to 2000	Up to* 10000
<b>Manager</b>	1	1	1	1	2
<b>Vaccinator*</b>	3	5	8	8	20
<b>Vaccinator Assistant</b>	3	5	8	8	20
<b>Registration/Triage</b>	2	3	4	4	12
<b>Flow</b>	1	1	2	2	6
<b>Security</b>	2	2	2	2	8
<b>Health Educator</b>	1	1	1	1	4
<b>Totals</b>	13	18	16	16	72

\* Based on 80 clients per hour for 12 hours per vaccinator

<b>General Supplies and Equipment</b>	Up to 500	Up to 1000	Up to 1500	Up to 2000	Up to 10000
Tables (1 per vaccinator, Health Ed; 1 per 2 registration/triage staff)	5	8	11	11	30
Chairs (4 per table)	20	32	44	44	120
Pen, pencils (dozen)	11	11	21	31	221
Telephone/Cell phones					
Kleenex tissue	5	5	5	5	10
Trash containers/bags	1	1	2	2	10
ID badges for staff					
List of emergency phone numbers	1	1	1	1	1
Emergency Kit	2	2	2	2	5
Consent Forms					
VIS Forms					
Instructional FAQ					

<b><i>Vaccine Administration Supplies</i></b>	<b>Up to 500</b>	<b>Up to 1000</b>	<b>Up to 1500</b>	<b>Up to 2000</b>	<b>Up to 10000</b>
Cooler/refrigerator for vaccine	1	1	1	1	1
Syringes/Needles (5/8 and 1 inch; total plus 20%)	600	1200	1800	2400	12000
“Sharps” containers	3	5	8	8	20
gloves (Box)	3	5	5	5	20
Hand sanitizer (Bottles)	6	10	16	16	40
Alcohol wipes	600	1000	1600	2200	15000
Rectangle band-aids	300	500	800	1100	5000
Gauze (Pack of 200)	3	5	8	10	50
Table covers (chux)	6	10	16	16	40
Ice Packs	12	20	32	32	80
Germacidal wipes	1	1	1	1	5
	<b>Up to 500</b>	<b>Up to 1000</b>	<b>Up to 1500</b>	<b>Up to 2000</b>	<b>Up to 10000</b>
<b><i>Emergency Supplies</i></b>					
Standing orders (child, adult, child and adult adverse events)	4	4	4	4	20
Epipen	2	2	2	2	5
Epipen Jr	2	2	2	2	5
Stethoscope	1	1	1	1	3
Blood Pressure Monitor	1	1	1	1	3
Instant Cold Packs	6	6	6	6	20
	<b>Up to 500</b>	<b>Up to 1000</b>	<b>Up to 1500</b>	<b>Up to 2000</b>	<b>Up to 10000</b>
<b><i>Crowd Management Supplies</i></b>					
Signs for clinic stations and health education					
Stantions (to keep people in lines), roping					