

Pandemic Flu Emergency Response Plan

Summary Report to Governor Donald L. Carcieri



Submitted by the Pandemic Flu Working Group

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To: Governor Donald L. Carcieri

From: Dr. David R. Gifford, Director, RI Dept. of Health, on behalf of the Pandemic Flu Working Group

Date: December 20, 2005

On November 1, 2005, you convened the Pandemic Flu Working Group to develop and submit the state's comprehensive plan for responding to an outbreak of pandemic influenza in Rhode Island. Attached is a summary report describing the major strategies for a statewide response to a pandemic flu event.

Emergency planning is an iterative process. Today's report is based on the most current information we have, and addresses the key steps that public and private sector organizations will implement to achieve four major goals of statewide response to an outbreak of pandemic flu:

Goal #1: Educate, inform, and empower the public before and during a pandemic.

Goal #2: Slow and prevent disease transmission.

Goal #3: Provide needed medical care.

Goal #4: Continue operations of essential services in government and the private sector.

These goals focus our planning our efforts, whether the pandemic flu arrives next year or in ten years. It is the strategies and key components of this comprehensive plan that will evolve as we learn more about effective ways to prevent and treat the pandemic flu virus. We will issue new versions of the plan as we receive updated guidance from the federal government, as we coordinate our plan with neighboring states, and as we learn from testing the plan in local exercises.

In addition to this report, more information for Rhode Islanders about pandemic flu is available on a new page of the Department of Health website (www.health.ri.gov) that is dedicated to pandemic flu preparedness. This website also includes two additional documents: 1) Version 1 of the Pandemic Flu Annex to the State Emergency Operations Plan, and 2) the current version of the Department of Health's Pandemic Influenza Plan, which describes in greater detail the plans for the health and medical response to a pandemic flu event.

An upcoming milestone in the statewide pandemic flu planning effort will be U.S. Department of Health and Human Services Secretary Michael Leavitt's visit to Rhode Island. Secretary Leavitt and his federal team have offered to meet with Rhode Island's Statewide Pandemic Flu Working Group at a half-day summit and advise local preparedness efforts. This summit will take place in early 2006.

As part of Secretary Leavitt's summit, the state officials on the Pandemic Flu Working Group recommend that other key partners join this group. These partners could include city and town officials, private citizens, and representatives from businesses, community organizations, and colleges and universities. The public and private sector members of this expansion of the Statewide Pandemic Flu Working Group should meet quarterly to oversee coordination and consistency across public and private sector preparedness efforts. This public-private partnership should also lead joint

exercises of the plans developed and apply lessons learned from those exercises to updated versions of the statewide plan for pandemic flu response. This group should also provide an annual report to the Governor on these activities.

The expanded group will build on activities completed by the current Pandemic Flu Working Group since November 1:

- Staff from the Pandemic Flu Working Group briefed all State agencies that maintain a section of the State Emergency Operations Plan (SEOP) on assumptions for emergency conditions during a pandemic flu event.
- On the basis of that briefing, those State agencies have begun to modify or expand the SEOP as necessary to ensure that existing emergency response plans address the specific requirements of pandemic flu conditions.
- Directors Gifford and Warren briefed emergency management officials from the cities and towns on pandemic flu.
- RIEMA disseminated guidance for preparing plans for continuity of operations and continuity of government during a pandemic flu event to cities and towns; drafts of those plans will be submitted by February 1, 2006.
- Director Gifford briefed the Governor's Cabinet on the need for continuity of operations and continuity of government plans to be in place in every State agency.
- RIEMA trained State agency officials on December 15, 2005, on preparing plans for continuity of operations and continuity of government during a pandemic flu event; drafts of those plans will be submitted by February 1, 2006.
- The Pandemic Flu Working Group's Communications team trained local media outlets in developing continuity of business plans on December 14, 2005.
- The Department of Health, working with infectious disease experts and local health care providers, updated its most current version of the Pandemic Influenza Plan (for health and medical services) according to new guidance from the federal government.
- The Department of Health met with local acute care hospitals and together devised health care service regions in Rhode Island for joint use in planning the organization of public health and health care services during a pandemic flu event.
- The Department of Health worked with infectious disease experts in Rhode Island to estimate the need for and cost of medical care equipment and supplies during a pandemic.
- Directors Gifford and Warren met with Rhode Island's federal delegation, DHHS Secretary Michael Leavitt, and pandemic flu experts from the Institute of Medicine, the Centers for Disease Control and Prevention, and the National Institutes of Health, to incorporate new information on pandemic flu into Rhode Island's response plan.

Members of the Pandemic Flu Working Group are:

Brigadier General John Enright, National Guard
Managing Director Jane Hayward, OHHS
Director Dr. David Gifford, DOH
Representative Peter Ginaitt

Director Beverly Najarian, DOA
Colonel Steven Pare, RISP
Director Michael Sullivan, DEM
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Pandemic Flu Emergency Response Plan

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Executive Summary

What is pandemic influenza?

An influenza pandemic is a global outbreak of disease that occurs when three conditions are met: a new type of influenza A virus appears or “emerges” in the human population (usually due to mutation of an animal version of influenza, e.g. bird flu), it causes serious illness in people, and it spreads easily from person to person worldwide. There is no pandemic flu in the world today, but recent reports of a new influenza virus infection transmitted from birds to humans in Asia have drawn attention to the possibility that pandemic flu could develop, affecting all countries worldwide. Because people do not have pre-existing immunity to a new virus, a pandemic flu virus will result in more serious disease in humans than seasonal flu. Given frequent international movement of goods and people, a pandemic flu virus could spread worldwide within three months. A flu vaccine, which usually takes over six months to develop, produce, and distribute, may not be available in a pandemic.

How will pandemic influenza impact Rhode Island?

When a pandemic influenza virus arrives in Rhode Island, people will be contagious two to four days before they show symptoms. In the early weeks of a pandemic, every person infected with the virus will infect two or three additional people, until about 30% of the population becomes ill (about 300,000 Rhode Islanders.) Depending on the virulence of the virus strain, as many as 30,000 Rhode Islanders may be sick enough to require hospitalization and even intensive care.

A “wave” of a pandemic may last six to eight weeks, with the greatest number of people ill in the third week. Rhode Island may experience two or more pandemic waves that arrive three to nine months apart. Every time a pandemic wave arrives, rates of absenteeism at workplaces may be as high as 50% during some weeks, because people will be providing care for sick family members or be sick themselves. This reduction in the workforce could cause temporary delays and shortages in essential services and supplies.

What will the state do in a pandemic?

The State of Rhode Island has four goals for responding to pandemic flu:

Goal #1: Educate, inform, and empower the public before and during a pandemic.

Goal #2: Slow and prevent disease transmission.

Goal #3: Provide needed medical care.

Goal #4: Continue operations of essential services in government and the private sector.

What is the state doing to prepare for a pandemic?

On November 1, 2005, Governor Donald L. Carcieri asked Director David Gifford, Department of Health, and Director Robert Warren, Rhode Island Emergency Management Agency, to lead a Pandemic Flu Working Group made up of agency directors and other state officials. This group began working with cities and towns, media outlets, hospitals, physicians, other health care providers, and other state agencies to develop coordinated plans to meet the goals of pandemic flu response. This broad-based partnership will be expanded to

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include colleges and universities, business leaders, faith-based and community organizations, and others to continue this planning in 2006 and beyond.

Four strategies form the foundation of responding to a pandemic flu emergency:

Ongoing review and revision of statewide plans as we receive updated guidance from the federal government, as we coordinate our plan with neighboring states, and as we learn from testing the plan with local communities and partners.

Coordination with the federal government to track rates of animal and human infection with different types of influenza virus internationally and nationally, to disseminate public information about the status of the flu virus and its impact during a pandemic, and to set policies that are consistent with the policies of neighboring states and countries before and during a flu pandemic.

Regionalization within Rhode Island to organize health care service regions led by all 10 of Rhode Island's acute-care hospitals, and to establish regional Emergency Operations Centers that coordinate other aspects of pandemic flu response.

Public-private partnership to mobilize resources to meet the extraordinary demand posed by a pandemic flu emergency for ongoing planning activities, and health care supplies, equipment, and personnel during a pandemic flu event.

What are the major emergency response activities during a pandemic?

The State will activate its Emergency Operations Center to coordinate emergency response activities across state agencies, private sector and volunteer organizations, and cities and towns. All parts of the State's Emergency Operations Plan are currently being updated to address pandemic flu conditions (e.g., reduced workforce over several weeks across the entire state.)

Surveillance of flu activity and service disruptions will help state officials at the Emergency Operations Center make sound public health recommendations based on facts.

The health care system will organize to meet the increased demand for health care services. All ten of Rhode Island's acute-care hospitals will lead health care providers in a region of Rhode Island. Hospitals will work with the Department of Health, the Emergency Management Agency, and volunteer organizations to coordinate the organization of health care personnel, non-medical personnel, equipment, and supplies to provide care in health care facilities, such as nursing homes and physician offices, as well as in alternate care sites, such as municipal buildings or schools. The goal of this effort is to manage the flow of patients into and out of health care facilities, and to deliver care fairly and efficiently.

Information from the State and public health officials will be delivered to the public frequently. Specific efforts will be made to reach populations that do not access mainstream

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media sources. The State will make information lines available to individuals and businesses to consult with public health professionals on matters relating to pandemic flu.

Public and private sector organizations will continue operations to provide essential services in a fair and efficient way. Businesses like grocery stores, banks, pharmacies, fuel companies, and media outlets; cities and towns; and state agencies will implement plans that assign cross-trained employees to conduct activities that meet the public's needs.

How can the public learn more about pandemic flu?

This report, frequently asked questions, and more detailed plans are available on the pandemic flu page on the Department of Health's website: www.health.ri.gov.

Section I. Pandemic flu

This section describes what a pandemic is and the status of pandemic influenza in the world today. It also provides the World Health Organization's definition of the six phases of a pandemic.

A. Definition

An influenza pandemic is a global outbreak of disease that occurs when three conditions are met: a new type of influenza A virus appears or "emerges" in the human population (usually due to mutation of an animal version of influenza, e.g. bird flu), it causes serious illness in people, and it spreads easily from person to person worldwide. There is no pandemic flu in the world today, but recent reports of a new influenza virus infection transmitted from birds to humans in Asia have drawn attention to the possibility that pandemic flu could develop, affecting all countries worldwide. Pandemic flu is different from seasonal outbreaks or "epidemics" of influenza, which are caused by subtypes of influenza viruses that are already in existence among people.¹ The 20th century witnessed three influenza pandemics of note, the "Spanish flu" of 1918-1919, the "Asian flu" of 1957-1958, and the "Hong Kong flu" of 1968-69. Each pandemic led to higher than usual rates of infection, illness, and death in the population worldwide.

The subtype of avian influenza that is currently receiving the most attention is Influenza A H5N1, which has caused severe outbreaks of illness among birds in Southeast Asia. This strain has caused illness in 130 humans in five countries (Cambodia, China, Indonesia, Thailand, and Viet Nam), and resulted in 67 human deaths.² In all these cases, persons infected with H5N1 influenza virus were in close contact with sick birds and therefore experienced symptoms and complications more severe than what would be caused by a strain of the virus that has mutated so that it can spread easily from person to person. The H5N1 influenza virus has not yet mutated to a form in which it is transmitted human to human.

There have been no reported cases of Influenza A H5N1 in birds in North America. Even if there were an outbreak of this subtype of influenza among birds here, it would not necessarily lead to pandemic flu among humans. If the disease is contagious from birds to humans, only humans that have close contact with bird droppings or sick birds themselves are at risk of contracting the disease. Pandemic flu will only emerge if the virus changes in such a way that it can spread from human to human.

Just like seasonal flu, a pandemic flu virus will be spread by coughing and sneezing. People infected with a pandemic flu virus will be contagious 24 to 48 hours before they display symptoms of infection. Public health officials estimate that early in the pandemic, every one person infected with the disease will transmit the disease to two or three additional people, until the disease infects about 30% of the population. Because people do not have pre-existing immunity to a new virus, a pandemic flu virus will result in more serious disease in

¹ www. <http://www.cdc.gov/flu/pandemic/>

² Pandemic Influenza Update, www.cdc.gov, November 23, 2005.

Section I. Pandemic Flu

humans than seasonal flu. The World Health Organization estimates that international air travel may cause the influenza virus to infect all countries within three months of its emergence, no matter where it originates.³

The ability of a new influenza virus to spread so quickly among humans reduces the possibility that a vaccine to prevent infection will be available. Influenza vaccines generally take six to eight months to develop, mass-produce and distribute. The U.S. government is currently investing money in new methods to develop and produce flu vaccine more quickly.

B. Current Status

The World Health Organization (WHO) has defined six phases of a pandemic to assist with planning and response activities (see Table 1.) The federal government will identify and declare each phase for the purposes of coordinating national, state and local response.

The world is currently in Phase 3, a Pandemic Alert period, because humans in Southeast Asia have been infected with a new subtype of the influenza virus but human-to-human transmission of the disease is rare.

³ <http://www.who.int/csr/disease/influenza/pandemic10things/en/index.html>

Section I. Pandemic Flu

Table 1: WHO Pandemic Phases

WHO Pandemic Phase	Definition
Inter-Pandemic 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.
Inter-Pandemic 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.
Pandemic Alert 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 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.
Pandemic Alert 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 the general population.
Post-Pandemic	Return to the Inter-Pandemic Period (Phase 1).

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Section II. Assumptions for Rhode Island

This section presents the assumptions about a pandemic flu event in Rhode Island that the Pandemic Flu Working Group has used in its planning efforts. These assumptions address the health, economic, and social impact of pandemic flu in Rhode Island.

A. Health impact of pandemic flu in Rhode Island

The Department of Health has estimated the impact of moderate (similar to the 1957-58 or 1968-69 pandemics) or severe (similar to 1918 pandemic) pandemic flu on Rhode Island’s population (see Table 2). These estimates assume that an effective vaccine or antiviral will not be widely available to prevent spread of the disease or significantly reduce its symptoms. A pandemic may occur in two or more waves of influenza activity, each wave lasting about two months. The second wave may occur three to twelve months after the end of the first wave, and could have a similar impact on the health of Rhode Islanders as the first wave. Health care workers and first responders will become infected at about the same rate as the rest of the population.

Table 2: Estimated cases of illness during pandemic flu in Rhode Island

	<i>Average Flu Season Estimate</i>	<i>Moderate Severity Flu Pandemic Estimate</i>	<i>Severe Flu Pandemic Estimate</i>
Time period	4 months	2 months	2 months
Illnesses:	125,000	250,000	300,000
Outpatient visits:	25,000	100,000	150,000
Hospitalizations:	670	3,027	34,650
ICU Care:	50	425	5197
Mechanical ventilation:	25	227	2,599
Deaths:	120	731	6,661

During a flu pandemic, more Rhode Islanders will experience flu symptoms and complications that will require hospitalization or even intensive care. The average number of patients seeking treatment for flu on each day of a pandemic is estimated to be 2,252. This number far exceeds the number of unfilled beds in Rhode Island’s hospitals normally. Thus, persons sick with the flu as well as those with emergency and chronic health needs will quickly exceed the capacity of hospitals and other health care facilities to provide care using customary staffing patterns and bed capacity, especially because the health care workforce will also be reduced due to illness (see Table 3.)

Section II. Assumptions for Rhode Island

Table 3: Estimated impact of pandemic flu on health care workforce

Health care worker	Currently in RI	Estimated number available during a pandemic
Physicians	3,021	1,500
Nurses (RN, NP, LPN, CNA)	21,225	10,750
Physician Assistants	164	82
Pharmacists (and aides)	2,000	1,000
EMTs	4,279	2,140

Depending on the virulence of the strain of the influenza virus that appears in a pandemic, many more deaths can be expected than during a normal flu season. These deaths may affect children, young adults, and generally healthy adults, as well as populations that are traditionally susceptible to complications of the flu.

If any influenza vaccine is available at the time of the pandemic, it will be used because it may have some protective effect against infection or severe complications of the flu. Anti-viral medications such as Tamiflu may be available to reduce the severity of the disease. Although Tamiflu has had limited effectiveness against the H5N1 virus that has infected humans in Asia, it represents the best medication currently available.

Health care providers who are in contact with persons with suspected or confirmed influenza will use personal protective equipment (PPE) such as masks, gloves, and gowns when providing care. Masks must be fitted to maximize their effectiveness and safe use; thus, it is recommended that only health care workers use masks with high filtration levels during a pandemic flu event.

B. Social and economic impact of pandemic flu in Rhode Island

Widespread illness due to pandemic flu will affect activity in all sectors of society. An estimated 50 percent of the workforce may be unable to report to work, either because they are caring for an ill family member, caring for a child who is not attending school, or are sick themselves. Without people stocking shelves or delivering goods, fewer supplies will be available at the stores. Waiting times for essential services will increase. Because pandemic flu will likely be affecting other states and other countries at the same time, Rhode Island may not be able to rely on mutual aid with other states or large-scale federal government support during an outbreak.

In order to slow and prevent the spread of disease in a pandemic, the State will ask sick people to stay home from work to prevent further transmission of the disease to co-workers or customers. The State will also recommend that residents avoid activities that bring them into close contact with large numbers of people. Some elementary and secondary schools will likely close, as will some businesses. Places where people congregate, such as movie theaters, stadiums, and shopping places will probably not be open – some will close

Section II. Assumptions for Rhode Island

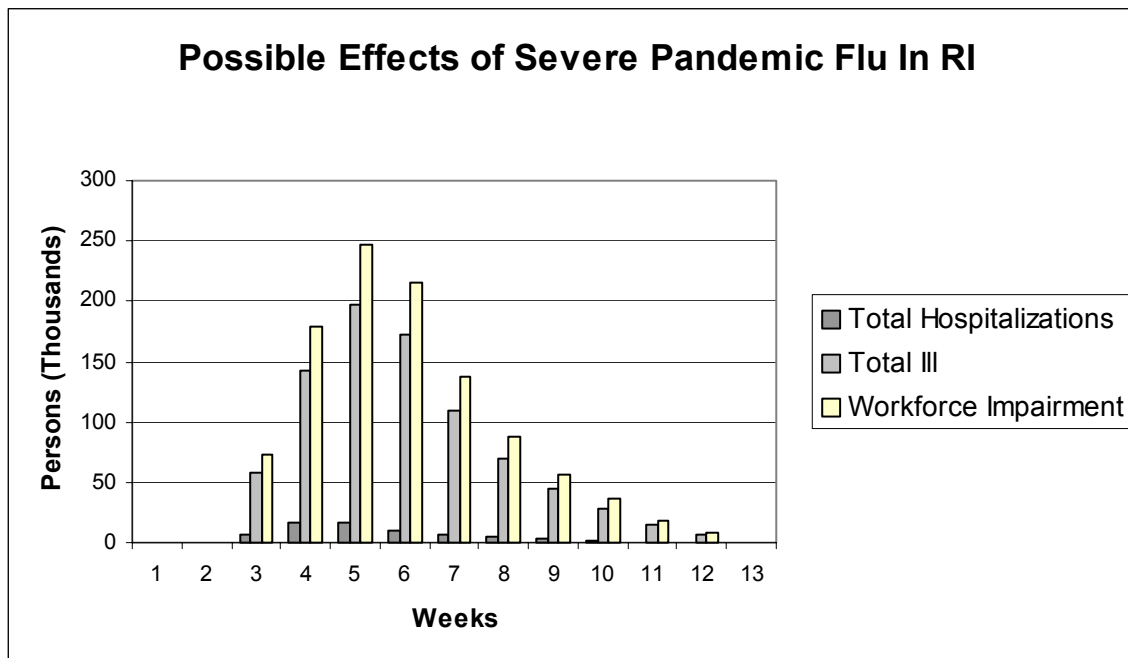
voluntarily, and some will find it difficult to remain open with reduced workforce and fewer customers. The State will meet with faith-based organizations to discuss how they can assist other partners in pandemic response activities such as disseminating information and providing help to populations made more vulnerable by pandemic flu conditions. Colleges and universities with out-of-state students will cooperate with federal and state governments to advise their students either to remain on campus or return to their home states.

Public and private buildings that would ordinarily be used for education or commerce will be converted to care facilities for sick individuals who need medical supervision, or who can no longer be cared for at home. The State will coordinate the donation of other private resources for distribution to medical treatment centers, as well as the deployment of non-medical personnel whose place of business has closed and who choose to volunteer in care facilities or in the provision of other essential services.

If travel restrictions are imposed by federal and/or state governments, the normal flow of goods and supplies in and out of Rhode Island will diminish. This may result in shortages of food, fuel, and other necessities for a prolonged period of time. Individuals will be asked to conserve their own supplies, and help neighbors and friends when their supplies run low. It may be necessary to implement emergency management plans for distributing goods.

Figure 1 illustrates the projected numbers of persons absent in the workforce, ill, and hospitalized in each week of the pandemic. These numbers assume that each person ill will result in 1.25 persons absent from the workforce for two weeks (due to illness or taking care of sick family members), illness lasting two weeks, and hospitalization lasting one week.

Figure 1.



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Section III. Goals for Pandemic Flu Response

Four goals guide the State's planning for pandemic flu response. Although the components of the plan may change with new information, these goals will remain the same.

Goal #1: Educate, inform, and empower the public before and during a pandemic.

Historically, Rhode Islanders have helped each other in times of emergency, and the same will be true during a pandemic. Public information is necessary to coordinate this mobilization of support.

Goal #2: Slow and prevent disease transmission.

Based on the experience of past pandemics, many people who become ill will seek medical care. It will be a challenge for the health care system to treat all sick individuals at once. Community-based interventions to slow and prevent disease transmission, such as postponing activities that bring large groups of people together, can help lead to better outcomes from the health care system.

Goal #3: Provide needed medical care.

The health care system is the cornerstone of Rhode Island's response to pandemic flu. Timely and effective health care treatment will reduce the number of people ill or absent from work due to caring for a sick family member.

Goal #4: Continue operations of essential services in government and the private sector.

The social and economic impact of pandemic flu has the potential to cause prolonged disruption, delay, or inconvenience in service delivery. With appropriate plans in place that anticipate pandemic flu conditions, the operations of essential services in government and in the private sector can continue.

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Section IV. Emergency Response Strategies for Pandemic Flu

Each of the following strategies for preparing and coordinating a response to a pandemic flu event supports the three goals of informing the public, slowing and preventing the spread of disease, and continuing operations of essential services. All four strategies apply to all components of the state's pandemic flu response (Section V).

A. Continual testing and revision of statewide plans

Emergency planning is an iterative process. This report is based on the most current information we have as of December 2005. Rhode Island's Statewide Pandemic Flu Working Group will continue to update pandemic flu plans as the federal government updates its guidance to states, as Rhode Island coordinates its plan with neighboring states, and as State agencies, cities, towns, and local businesses learn from testing their plans with local communities and other key partners.

B. Coordination with the federal government

Because pandemic flu will be an international and national event, Rhode Island will rely on federal agencies such as the U.S. Department of Health and Human Services (DHHS) and U.S. Department of Homeland Security (DHS), and national organizations such as the Association of State and Territorial Health Officers (ASTHO), to provide guidance to states on issuing policies during a pandemic that are consistent across states. In turn, Rhode Island officials will inform the development of these policies based on local conditions. Dr. David Gifford, Director of the Department of Health, has recently been appointed to serve on ASTHO's Pandemic Influenza Advisory Committee. One policy that will be coordinated is the prioritization list for receiving any available vaccine or anti-viral treatment.

The Centers for Disease Control and Prevention (CDC) currently monitors international outbreaks of influenza in animals and humans. The CDC provides daily updates to the Department of Health on disease activity worldwide and nationwide. When a pandemic flu strain emerges and arrives in the U.S., the CDC will closely monitor and track its spread based on data from the states. The Department of Health contributes local data from health care providers to these surveillance activities, and will continue to work with the federal government and local health care providers in all pandemic phases to ensure the timely delivery of updated information to all parties.

The federal government currently has plans to purchase courses of anti-viral treatment, if available, for states to distribute (see Table 4). Rhode Island will work with federal agencies and Roche, manufacturer of Tamiflu, to obtain antivirals as they become available at a cost shared by state and federal government.

Section IV. Emergency Response Strategies for Pandemic Flu

Table 4: Supplies of anti-viral treatment for the United States

	Courses of treatment to be purchased by federal government for entire United States	Percent of cost borne by federal government	Percent of cost borne by states
	44 million	100%	0%
	37 million	25%	75%
Total	81 million	66%	(Variable depending on amount purchased by each state)

C. Regionalization within the State

Rhode Island is already regionalized to coordinate local responses to emergency events, as evidenced by existing local emergency planning committees, emergency medical service regions, and city and town mutual aid agreements. Because the health care system will be on the front lines during a flu pandemic, the Department of Health and all ten acute-care hospitals are planning new health care regions that coincide with established regions for medical and non-medical service delivery (see **Error! Reference source not found.** and map in Attachment A). Based on these regions, hospitals in Rhode Island are undertaking a comprehensive analysis of resources within their regions in order to identify alternate care sites that may be used to address steep increases in demand for acute-care services during a pandemic flu event. Hospitals will coordinate the deployment of health care personnel and non-medical volunteers to deliver care at these sites and at other health care facilities. Additionally, hospitals will work with RIEMA and other volunteer organizations in order to deploy equipment and physical resources that are essential for the delivery of mass care at alternate care sites.

Table 5: Health care service regions and proposed coordinating hospital

<i>Health Care Service Regions (from North to South)</i>	<i>Hospital</i>
▪ Burrillville, North Smithfield, Woonsocket	Landmark
▪ Cumberland, Lincoln, Central Falls, Pawtucket	Memorial
▪ Glocester, Smithfield, Johnston, North Providence	Fatima
▪ Foster, Scituate, Cranston	Roger Williams
▪ Providence	Rhode Island
▪ East Providence, Barrington, Warren, Bristol	Miriam
▪ Jamestown, Portsmouth, Middletown, Newport, Tiverton, Little Compton	Newport
▪ Coventry, West Warwick, Warwick, West Greenwich, East Greenwich	Kent
▪ Exeter, North Kingstown, Richmond, South Kingstown, Narragansett	South County
▪ Hopkinton, Westerly, Charlestown, New Shoreham	Westerly

RIEMA is also developing regional Emergency Operations Centers (EOCs) that will coordinate with these health care service regions to assure the fair and efficient distribution of non-medical goods and services in each region during a pandemic flu event. These regional EOCs will manage resources within their regions first, and call to the statewide EOC for additional assistance as needed.

Section IV. Emergency Response Strategies for Pandemic Flu

D. Public-private partnership to mobilize resources for response

The cooperation and coordination between the Department of Health and Rhode Island's health care providers to develop health care service regions is one illustration of a public-private partnership used to mobilize resources for an efficient and fair response to a pandemic flu event. The extraordinary cost of supplies, equipment, and personnel needed to treat and care for people infected with pandemic flu, and to support the psychosocial needs of first responders and other medical and non-medical care providers, must be borne jointly by federal and state government and commercial insurers, businesses, and health care providers in the private sector. (For some cost estimates, see Table 6 below and Attachments C and D.) Similarly, the effort to disseminate public information during a pandemic flu event depends upon partnership between private sector media outlets (to keep news sources open) and state agencies (to develop public health messages.)

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Section V. Key Components of State Response

The key components to the Pandemic Flu Emergency Response Plan are introduced in this section. In the next section, the major statewide response activities in each phase of the pandemic are categorized under each of these key components.

A. Activation of emergency operations plans

A basic tenet of emergency planning is to build on the strengths of existing systems. Thus, State agencies that are responsible for sections of the State Emergency Operations Plan (SEOP) are proposing changes to those sections where necessary to plan for a response to pandemic flu conditions (see Attachment B for a list of those sections and lead State agencies). Additionally, a Pandemic Flu Annex has been developed to incorporate information on a pandemic flu hazard into the SEOP. The Annex describes how the Basic Plan of the SEOP may be modified for a pandemic flu event. Future versions of the Pandemic Flu Annex will include a discussion of legal issues that may arise during a prolonged public health emergency such as a flu pandemic. Legal counsel from the Governor's Office and other state agencies will resolve questions regarding the legal basis for public health actions, due process during an emergency, and the appropriate delegation of authority in times of workforce shortages, among others.

B. Surveillance of indicators to inform emergency response

Rhode Island currently conducts surveillance of flu activity in animals and humans in the state. The Department of Environmental Management monitors rates of disease and mortality among animals in order to implement animal disease plan and/or animal disaster plans as necessary, but there are no cases of bird flu in Rhode Island as of December 2005. The Department of Health reports information on human infection of seasonal influenza to the CDC. Should the pandemic influenza virus arrive in Rhode Island, surveillance activity would increase in intensity as cases of new virus infection in humans are reported. The State's coordination of assistance and activation of emergency responses will be informed by the most timely and accurate data available on disease status in animals and humans.

C. Health care system response

The delivery of health care services will be a cornerstone of the statewide response to pandemic flu, because efforts to slow disease transmission and mitigate the effects of disease will have implications for continuity of operations in other sectors. To this end, many partners in the health care industry, such as community health centers, nursing homes, physicians, and hospitals will be involved in planning the health care system's response. The Department of Health and hospitals have jointly determined that hospitals will coordinate health care in each of their service regions during a pandemic. Hospitals will coordinate the organization of health care personnel, non-medical personnel, equipment, and supplies in institutions or alternate care sites where they are needed. The goal of this effort is to manage the flow of patients into and out of health care facilities, and to deliver care fairly and efficiently. The provision of behavioral health care will also be crucial to addressing the

Section V. Key Components of State Response

psychosocial needs of the population during and after a pandemic, and will be coordinated through health care service regions as well.

D. Public information

The State has developed an additional section of the State EOP that addresses how the Department of Health, RIEMA, and other State agencies will work with the health care system and private sector businesses to disseminate clear, credible, and timely information to the public – before, during, and after it arrives in Rhode Island. Specific efforts will be made to reach populations that do not access mainstream media sources. The State will make information lines available to the public to consult with information specialists on matters relating to pandemic flu.

E. Continuity of operations in private and public sectors

RIEMA has trained State agencies on developing continuity of government and continuity of operations plans in case of a pandemic flu event, and has also provided similar guidance to cities and towns. The first version of these plans will be submitted by February 1, 2006. Staff from the Pandemic Flu Working Group has begun to conduct training on continuity of business plans with local media outlets as well. As the federal government and national organizations issue new guidance, this training will continue to reach additional private sector businesses and organizations. These plans for continuity of operations identify, among other things, the appropriate cross-training required to provide essential services and emergency response with a reduced workforce.

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Section VI. Major Response Activities By Pandemic Period

The world is currently in a Pandemic Alert Period. Rhode Island's pandemic flu planning and response activities for Inter-Pandemic and Pandemic Alert Periods are occurring now, as they are a regular part of general emergency preparedness. The response activities for the Pandemic and Post-Pandemic Periods are summarized here from current pandemic flu plans.

A. Inter-Pandemic Period and Pandemic Alert Period

- No new virus in humans or detected in very few humans with little or no human-to-human transmission.

A.1 Emergency operations

In the Inter-Pandemic and Pandemic Alert Periods, emergency response plans for a pandemic flu event are tested regularly and revised accordingly. Ethicists and legal counsel vet newly developed and updated plans. Plans are updated with new guidance from federal agencies and national organizations. State agencies update the State EOP as needed based on new information.

RIEMA leads state agencies in planning and exercising parts of the State EOP that have been modified for a pandemic flu response. These agencies have identified where they may need to add or redirect planned activities in order to help slow the transmission of pandemic flu, preserve functioning of basic infrastructure during a pandemic, and/or prioritize resources in order to meet needs that arise from pandemic flu conditions such as supply shortages or reduced service workforce. RIEMA also prepares plans for staffing the statewide Emergency Operations Center (EOC) and Joint Information Center (JIC) in the context of high absenteeism among trained workers. RIEMA organizes and tests the effectiveness of standing up regional EOCs with local emergency planning partners to coordinate resource deployment within newly-developed health care service regions and provide the statewide EOC with information about the local situation.

Local and national ethicists convene to inform any plans to prioritize resources during a pandemic flu emergency. The products of their consultation and community discussion are incorporated into all aspects of planning for a pandemic flu emergency across public and private sector organizations.

Legal counsel from the Governor's Office and state agencies review statute and clarify safeguards for individual rights during a pandemic flu event, and draft legal documentation necessary for implementing components of emergency response.

A.2 Surveillance

In the Inter-Pandemic and Pandemic Alert Periods, the Department of Environmental Management (DEM) and the State Veterinarian conduct surveillance activities in wild and domestic animals statewide. These surveillance activities identify any animal in Rhode Island infected with a new subtype of influenza, and are coordinated with counterparts in

Section VI. Major Response Activities by Pandemic Period

Connecticut, Massachusetts and other federal agencies to detect "early warning" signals anywhere in the region. DEM Management also participates with federal agencies to develop and operate under plans to manage an outbreak of influenza in wild and domesticated fowl. DEM monitors mortality associated with an influenza virus in commercial flocks, wild birds, and mammals, implements its animal disease plan and/or animal disaster plans accordingly. The implementation of these animal plans is necessary to contain outbreak of infection in domestic and wild birds and mammals, in order to reduce the risk of animal-to-human transmission of disease.

The Department of Health tracks cases of human influenza in Rhode Island and contributes to the CDC's National Influenza surveillance efforts. Physicians report influenza-like illnesses weekly, and laboratories throughout the state report any positive results of influenza from culture testing. When a long-term care facility, school or other congregate environment observes three or more cases of laboratory-confirmed influenza-like illnesses, this is considered an institutional outbreak and is reported to the Department of Health. The Department of Health uses these surveillance efforts, as well as information from federal agencies like the CDC, to monitor trends in influenza infection that would indicate the arrival of a pandemic.

In Pandemic Phase 5 (the last phase of the Pandemic Alert Period), the Department of Health requests that clinicians in the state report unusual symptoms or consequences of severe respiratory illness and other influenza-like illnesses among patients. The Department of Health notifies clinical providers via fax of the presence of a new influenza virus, and asks providers to screen all patients with influenza-like illness for any recent travel history or exposure to ill persons with a recent travel history, especially travel to places where the new virus has been confirmed. Providers test all non-seasonal cases of suspected influenza, focusing on travelers and those with occupational exposure to poultry.

A.3 Health care response

In the Inter-Pandemic and Pandemic Alert Periods, all segments of the public health, behavioral health, and health care system (in both public and private sectors) conduct preparedness activities to plan and exercise the health care response in the case of a pandemic flu event. These activities include steps taken to address the needs of populations made especially vulnerable in a pandemic, such as persons who have frequent medical appointments for chronic conditions and need medications refilled often.

The Department of Health and hospitals plan and test the activation of health care service regions in which hospitals will organize health care delivery. Emergency preparedness professionals at the Department of Health work closely with the hospital or hospitals in one proposed health care service region to test plans for opening extra beds on the hospital campus while also using schools and municipal buildings as alternate care sites. Lessons learned from this test are applied to ongoing planning efforts within other health care service regions to estimate staffing and supplies needed from combined health care resources within the region used in deployment to hospitals and alternate care sites. Hospitals work with the

Section VI. Major Response Activities by Pandemic Period

Department of Health to identify and resolve legal and regulatory barriers to providing the maximum amount of quality care to Rhode Islanders during a flu pandemic.

Officials from the Department of Health and hospitals jointly develop statewide budget estimates for the cost of health care medication and supplies needed during a pandemic flu event. The Health Insurance Commissioner works with health insurance plans in Rhode Island to discuss private sector contribution to meet this need. All costs incurred to support emergency response to pandemic flu will be shared by the private sector and federal, State, and local governments.

Table 6 summarizes the estimated cost of health care and other emergency response activities related to pandemic flu incurred before and during a pandemic flu event. These projected estimates of expenditures assume that all personnel, supplies, and equipment will be available. More detailed information on how these cost estimates were derived is available in Attachments D and E.

Table 6: Estimated cost of health care and emergency response before, during, and after a pandemic flu event in Rhode Island (as of December 20, 2005)

	Inter-Pandemic and Pandemic Alert Periods	Pandemic Period	Post- Pandemic Period	Total
Type of cost				
<i>Planning and exercise activities</i>	\$1,000,000	\$5,520,000	\$885,000	\$7,375,000
<i>Healthcare at hospitals</i>	\$0	\$540,000,000	\$0	\$540,000,000
<i>Personnel at alternate care sites</i>	\$0	\$14,881,000	\$0	\$14,881,000
<i>Equipment at alternate care sites and other medications</i>	\$ 66,322,720	\$5,312,558	\$0	\$71,635,278
<i>Laboratory test kits</i>	\$248,000	\$0	\$0	\$248,000
<i>Case investigation and surveillance</i>	\$0	\$360,000	\$120,000	\$480,000
<i>Mental health support</i>	TBD	TBD	TBD	TBD
<i>Death management supplies and personnel</i>	\$305,900	\$2,308,950		\$2,614,850
<i>Transportation of supplies</i>	\$0	\$1,044,000	\$11,500	\$1,055,500
<i>Communications</i>	\$17,500	\$ 4,453,200	\$0	\$4,470,700
<i>Education and training</i>	\$200,000	\$150,000	\$0	\$350,000
<i>Patient information telephone support</i>	\$0	\$200,000	\$0	\$200,000
<i>Security for alternate care sites</i>	\$0	TBD	\$0	TBD
Total	\$68,094,120	\$573,973,208	\$936,500	\$643,410,328

The Department of Health also coordinates pandemic flu planning efforts with neighboring states Connecticut and Massachusetts – particularly in the area of distributing any available

Section VI. Major Response Activities by Pandemic Period

vaccines or antivirals. In particular, uniform prioritization lists for pharmaceutical distribution are implemented across all states.

First responders such as Emergency Medical Service (EMS) personnel and fire departments train to take the proper precautions to take when treating individuals infected with pandemic flu. These first responders develop protocols outlining steps to protect against infection disease, such as vehicle decontamination and the use of personal protective equipment (PPE). Additionally, EMS providers review alternate transport plans during a flu pandemic, in the case that hospitals open alternate care sites in their health care services regions. All first responders review plans to assure that other emergency care needs will be addressed even during a pandemic flu event.

To develop and exercise plans for meeting the high demand for behavioral health care services predicted during a pandemic flu event, the Department of Mental Health, Retardation, and Hospitals (MHRH) meets with its staff in the Behavioral Health Disaster Response Network (BHDRN), community agencies, and licensed facilities MHRH develops materials to educate and train health care personnel who are likely to be most affected by a pandemic flu event, e.g. hospital personnel, community health centers staff, visiting nurses, funeral directors, and medical examiner's office staff. MHRH conducts training for health care audiences during the Inter-Pandemic and Pandemic Alert Periods, including information on stress management and personal self-care during the event and psychological first aid principles for victims and their families.

A.4 Public information

In the Inter-Pandemic and Pandemic Alert Periods, the Department of Health and RIEMA educate the public about pandemic flu, what individuals can do to slow and prevent the spread of the disease, and what the State is doing to prepare. The Department of Health updates these coordinated messages as new information emerges on the status of pharmaceutical prevention and treatment options and effective methods to reduce the risk of infection. The Department of Health develops and tests its Special Communications Populations public education strategy in order to ensure that public health messages during a pandemic flu emergency reach all Rhode Islanders regardless of language or disability. The Department of Health works with local media outlets to plan for continuity of operations under reduced workforce conditions. These local media sources include network, cable, and radio stations; daily, weekly, semi-weekly, and monthly newspapers and magazines; and web-based media outlets.

In Phase 5 of the Pandemic Alert Period, when human to human transmission becomes more common, the Department of Health intensifies its communication to the public about pandemic flu, its symptoms, and possible measures to prevent its transmission. Multi-lingual materials on pandemic flu are distributed, and telephone information lines are monitored and expanded when necessary. The Department of Health conveys important messages through media conferences in order to answer common questions from the public, such as "What do I do if someone has flu symptoms?", "Should I cancel my travel plans?", and "Should I send my children to school?" The media is monitored for unintentional misinformation and rumor

Section VI. Major Response Activities by Pandemic Period

about pandemic flu. The Department of Health also sends health alerts to hospitals, providers, and municipalities, and implement plans for Special Communications Populations.

A.5 Continuity of operations

In the Inter-Pandemic and Pandemic Alert Periods, workplaces develop and/or modify contingency plans to implement during an outbreak of pandemic flu in Rhode Island. These workplaces, including the State, conduct cross-training of employees as necessary to assure that emergency and regular tasks are completed. In December 2005, RIEMA began to train state agencies on planning for continuity of operations under pandemic flu conditions. State agencies, as well as cities and towns, are expected to complete continuity of operations and continuity of government plans by February 1, 2006. State union leadership also met with members of the Pandemic Flu Working Group in December 2005 to discuss cross-training and other ways that union membership can prepare for a pandemic flu emergency, including redeployment of positions as necessary during a pandemic flu event.

Energy and utility businesses review and exercise their emergency operations plans. These plans anticipate workforce shortages due to strikes or other conditions, and consider the possibility of rationing in case of such an emergency. Other private sector businesses (large and small) that provide essential goods and services, such as food distributors, banks, health insurance companies, and telecommunication companies, develop plans based on federal guidance disseminated in December 2005. The Pandemic Flu Working Group works with essential infrastructure providers in the private sector to review contingency plans in place.

Colleges and universities are major employers in Rhode Island, and are also charged with the supervision of many on-campus students who are more susceptible to outbreaks of contagious disease due to their congregate living arrangements. During the Inter-Pandemic and Pandemic Alert Periods, the post-secondary education sector in Rhode Island joins statewide pandemic flu planning efforts and prepares continuity of operations plans that address the needs of students and the community during a flu pandemic.

Faith-based organizations and houses of worship develop plans to respond to community needs during a pandemic. These organizations may mobilize congregations to provide volunteer support to medical facilities or organize home care support for their members.

B. Pandemic Period

- Increased and sustained transmission of the new influenza virus is observed in the general population.

B.1 Emergency operations

Once the arrival of a pandemic is declared – either on the basis of state or national surveillance – RIEMA activates the Incident Command System in the State’s Emergency Operations Center (EOC) to coordinate the escalation of statewide response activities according to the scope and severity of the disease and its transmission (see Attachment C). Community-level interventions to slow and prevent disease transmission begin within the first

Section VI. Major Response Activities by Pandemic Period

two weeks that the pandemic flu virus appears in Rhode Island. All state agencies participate in emergency response, either as primary or support agencies, according to the Emergency Support Function plans in the State EOP (see Attachment B). RIEMA activates regional EOCs as necessary, in which local community resources are applied to local community needs. The central State EOC communicates with each regional EOC, and deploys available resources in one part of the state to make for lack of resources in another part of the state when necessary.

The Joint Information Center (JIC) broadcasts important messages regarding infection control measures and other public health education. Businesses, schools, and providers of critical infrastructure services receive messages from the EOC and the JIC regarding recommendations to close facilities and reduce congregating activities. The EOC and JIC operate for as long as pandemic flu conditions pose a threat to the health and safety of all Rhode Islanders.

The statewide alert and warning system that interconnects RIEMA and officials from public safety, public health, state transportation offices, hospitals, and municipalities is activated regularly in the Pandemic Period. This system (the RITERN Network) allows tactical and emergency communications to take place across first responders and from the EOC to critical health care providers. Personnel at alternate care sites set up in schools or municipal facilities use RINET-muni, another application established for emergency communication, to access email and video conferencing between sites.

B.2 Surveillance

Once a pandemic has been confirmed, the Department of Health's surveillance activities shift towards defining parts of the population at high risk of infection and more severe complications, and then targeting resources to those groups. The Department of Health gathers information from hospitals and other health care providers on morbidity and mortality resulting from infection, and disseminates key findings back to the health care community for application to clinical care. The Department of Health tracks the efficacy of any available vaccines and antivirals. The Department of Health shares all data nationally and regionally through the CDC.

B.3 Health care response

The health and medical care response is organized in the EOC according to the Department of Health's Pandemic Influenza Plan (the most current version is available on pandemic flu page of Department of Health website, www.health.ri.gov.)

Hospitals, physicians, community health centers, nursing homes, and other health care providers activate the organization of health care service regions. On their own campuses, hospitals set up surge (extra) beds. All health care facilities segregate patients who are infected with influenza from those that are receiving care for other conditions. All health care facilities implement an emergency set of "standard operating procedures."

Section VI. Major Response Activities by Pandemic Period

In health care service regions, hospitals set up alternate care facilities at municipal facilities such as local schools (in consultation with the Department of Education to balance schools' use for other activities.) Hospital staff organize physicians, nursing homes, community health centers, and other health care providers in each region to provide triage services and outpatient treatment where possible. Hospital staff use volunteers from organizations like the Rhode Island Chapter of the American Red Cross to provide auxiliary support for non-medical tasks at hospitals and alternate care facilities.

If anti-viral treatment for pandemic flu is available, distribution of anti-viral medications is an important component of the health care system's response. Retail pharmacies would sell all inventories of anti-virals back to the Central Pharmacy, and the State would publicize the centralization of anti-viral assets to reduce public pressure on retail pharmacies. Antivirals, as well as any available vaccine, would be released to hospitals for treatment of health care workers and "first responders" (police, fire, and rescue personnel), according to strict, statewide protocols. If supply is adequate for the entire population, the State's existing Medical Emergency Distribution System (MEDS) plan is activated.

MHRH activates the Behavioral Health Disaster Response Network (BHDRN) of over 450 trained behavioral health responders to mitigate psycho-social stressors on first responders, health care workers, sick individuals, and caregivers in a pandemic flu event. These trained responders are assigned to staff hospitals, community health centers, and alternate care facilities and provide support to personnel and patients; State agencies like the Department of Health (including Medical Examiner's Office) and RIEMA who are coordinating response activities; public information telephone lines; and support for funeral directors and families of the deceased.

B.4 Public information

During the Pandemic Period, official spokespeople from the State disseminate messages through the JIC on local conditions, such as school and work closings, availability of food and fuel, status of the health care system, and guidance on travel and participating in congregated activities. Messages are coordinated with neighboring states and the federal government. Staff at the JIC monitor media messages for misinformation and clarify as necessary. Local and national media outlets deliver information to individuals about how to reduce risk of infection and care for themselves and others.

B.5 Continuity of operations

State agencies, cities, towns, and private organizations use information from the JIC and the EOC to determine when continuity of operations plans should be implemented. In turn, these public and private sector organizations inform the State and regional EOCs about any changes they make in the delivery of their goods and services, so that the EOC can coordinate mutual aid where necessary and disseminate relevant messages to the public.

Section VI. Major Response Activities by Pandemic Period

C. Post-Pandemic Period

- Return to Inter-Pandemic Period, when no new influenza virus subtypes have been detected in humans.

C.1 Emergency operations

Once infection of the new influenza subtype subsides in the population, the beginning of the Post-Pandemic Period is declared on a State or national level. The Emergency Operations Center (EOC) closes, and staff from the EOC reviews their work during the Pandemic Period in order to apply lessons learned to a revision of the State EOP and pandemic flu plans.

C.2 Surveillance

In the Post-Pandemic Period, the Department of Health reviews health care data in order to identify the characteristics of the pandemic, such as whether certain groups faced higher rates of infection, morbidity, or mortality than others. The Department of Health uses this data to evaluate the efficacy of recommendations made to the public about self-care and actions to reduce risk of infection. If vaccines or antivirals were available during the pandemic, the Department of Health estimates their effectiveness in the pandemic. This evaluation informs future planning efforts for managing a pandemic flu emergency.

C.3 Health care response

The Department of Health and hospitals evaluate performance of health care service regions and apply lessons learned when revising emergency plans. All observations, opinions, and suggestions of personnel involved are recorded and synthesized as part of this process. Documentation for services and processing for any reimbursement available is also part of the health care system's recovery efforts in the Post-Pandemic Period. Health care providers, first responders, volunteer organizations, and the State plan steps towards financial recovery after the pandemic.

Behavioral health care professionals from MHRH and the health care system de-brief with health care workers, first responders, volunteers, and families that provided care and treatment for sick individuals. MHRH monitors the general resilience of the community, and provides support for survivors through written publications, community presentations, and telephone support lines.

C.4 Public information

Once the Post-Pandemic Period has been declared, public information delivery focuses on helping the population understand the consequences of the pandemic and prepare to adjust to the "new normal" that will be established. Regular methods of communication, such as the pandemic flu website, will be updated with links to informational resources that will guide the population through long-term recovery. Staff that participated in crafting and disseminating messages through the Joint Information Center (JIC) at the EOC will review lessons learned

Section VI. Major Response Activities by Pandemic Period

to apply to revised emergency communications plans. The JIC will disband, but trusted spokespeople will remain available to give health care advisories as needed.

C.5 Continuity of operations

Public and private sector organizations assess the status of their workforce and re-prioritize tasks as necessary to adjust to Post-Pandemic Period conditions. Services resume slowly.

Section VII. Ongoing Efforts

A. Stage I of Pandemic Flu Planning: November 1, 2005 – December 20, 2005

Since November 1, the Pandemic Flu Working Group completed the following activities (some of which were summarized above) to increase Rhode Island's level of preparedness for a pandemic flu event:

- Staff from the Pandemic Flu Working Group briefed all State agencies that maintain a section of the State Emergency Operations Plan (SEOP) on assumptions for emergency conditions during a pandemic flu event.
- On the basis of that briefing, those State agencies have begun to modify or expand the SEOP as necessary to ensure that existing emergency response plans address the specific requirements of pandemic flu conditions.
- Directors Gifford and Warren briefed emergency management officials from the cities and towns on pandemic flu.
- RIEMA disseminated guidance for preparing plans for continuity of operations and continuity of government during a pandemic flu event to cities and towns; drafts of those plans will be submitted by February 1, 2006.
- Director Gifford briefed the Governor's Cabinet on the need for continuity of operations and continuity of government plans to be in place in every State agency.
- RIEMA trained State agency officials on December 15, 2005, on preparing plans for continuity of operations and continuity of government during a pandemic flu event; drafts of those plans will be submitted by February 1, 2006.
- Members of the Pandemic Flu Working Group met with union leadership and secured agreement that cross-training among state employees is a prudent step in preparing for a pandemic flu event.
- The Pandemic Flu Working Group's Communications team began to train local media outlets in developing continuity of business plans on December 14, 2005.
- The Department of Health updated its most current version of the Pandemic Influenza Plan (for health and medical services) according to new guidance from the federal government.
- The Department of Health met with local acute-care hospitals and together devised health care service regions in Rhode Island for joint use in planning the organization of public health and health care services during a pandemic flu event.
- The Department of Health met with infectious disease experts in Rhode Island to estimate the need for and cost of medical care equipment and supplies during a pandemic.
- Director Gifford briefed members of the Primary Care Physician Advisory Committee about pandemic flu planning efforts.
- Directors Gifford and Warren met with Rhode Island's federal delegation, DHHS Secretary Michael Leavitt, and pandemic flu experts from the CDC and NIH, to incorporate new information on pandemic flu into Rhode Island's response plan.

Additionally, the Pandemic Flu Working Group produced five products:

- This summary report
- Version 1 of the Pandemic Flu Annex to the State EOP

Section VII. Ongoing Efforts

- An updated version of the Department of Health's Pandemic Influenza Plan (as lead agency for ESF-8 in the EOP, Health and Medical Services.)
- Updated versions of other state agencies' pandemic influenza plans that build on their ESFs in the EOP.
- A Pandemic Flu website with information for the public and emergency planners about pandemic flu.

B. Stage II of Pandemic Flu Planning: December 21, 2005 – onward

The Pandemic Flu Working Group recommends that the following activities take place in Stage II of Pandemic Flu Planning:

Engage additional partners in planning a pandemic flu response. The state officials that serve on the Pandemic Flu Working Group identified strategies that should be implemented statewide in a pandemic flu emergency, but private citizens, businesses, community organizations, city and town governments, and colleges and universities will play a role in responding to the health care and essential service needs of Rhode Islanders during a pandemic. These partners should be added to the Pandemic Flu Working Group, and this group should meet quarterly. Expanded membership of this group will ensure that all sectors have plans for continuity of operations during a pandemic flu. This group will oversee coordination and consistency across public and private sector preparedness efforts.

Work intensively on plans in one health care service region. Hospital leaders and emergency planners have met with the Department of Health, and they support plans to create health care service regions for which Rhode Island's acute-care hospitals will organize the equitable and efficient delivery of health care services during a flu pandemic. Working intensively with all physicians, community health centers, nursing homes, and other health care providers in one health care service region will enable hospitals and emergency planners to work out more details of how a health care service region will operate in order to apply those lessons learned to ongoing planning efforts.

Support cities, towns, state agencies, and businesses in developing plans for continuity of operations during pandemic flu conditions. Both public and private organizations will need to prioritize tasks and reorganize standard operating procedures when half of their workforce is absent for periods of two weeks or longer. The expanded membership of the Pandemic Flu Working Group will allow for coordination across continuity of operations plans developed in the public and private sectors.

Address legal questions before pandemic flu arrives in Rhode Island. The Pandemic Flu Working Group asked state agencies and hospitals to identify statutory and regulatory issues that would interfere with the implementation of their emergency response plans revised to address pandemic flu conditions. Additionally, the public has raised questions about the preservation of individual rights during a pandemic flu emergency. As state agencies, cities, towns, and others plan and exercise their

Section VII. Ongoing Efforts

pandemic flu response, an inter-departmental group of state agencies' attorneys, led by legal counsel from the Governor's Office and Department of Administration, should review and answer all legal questions that arise in a manner that is transparent and accountable to the public.

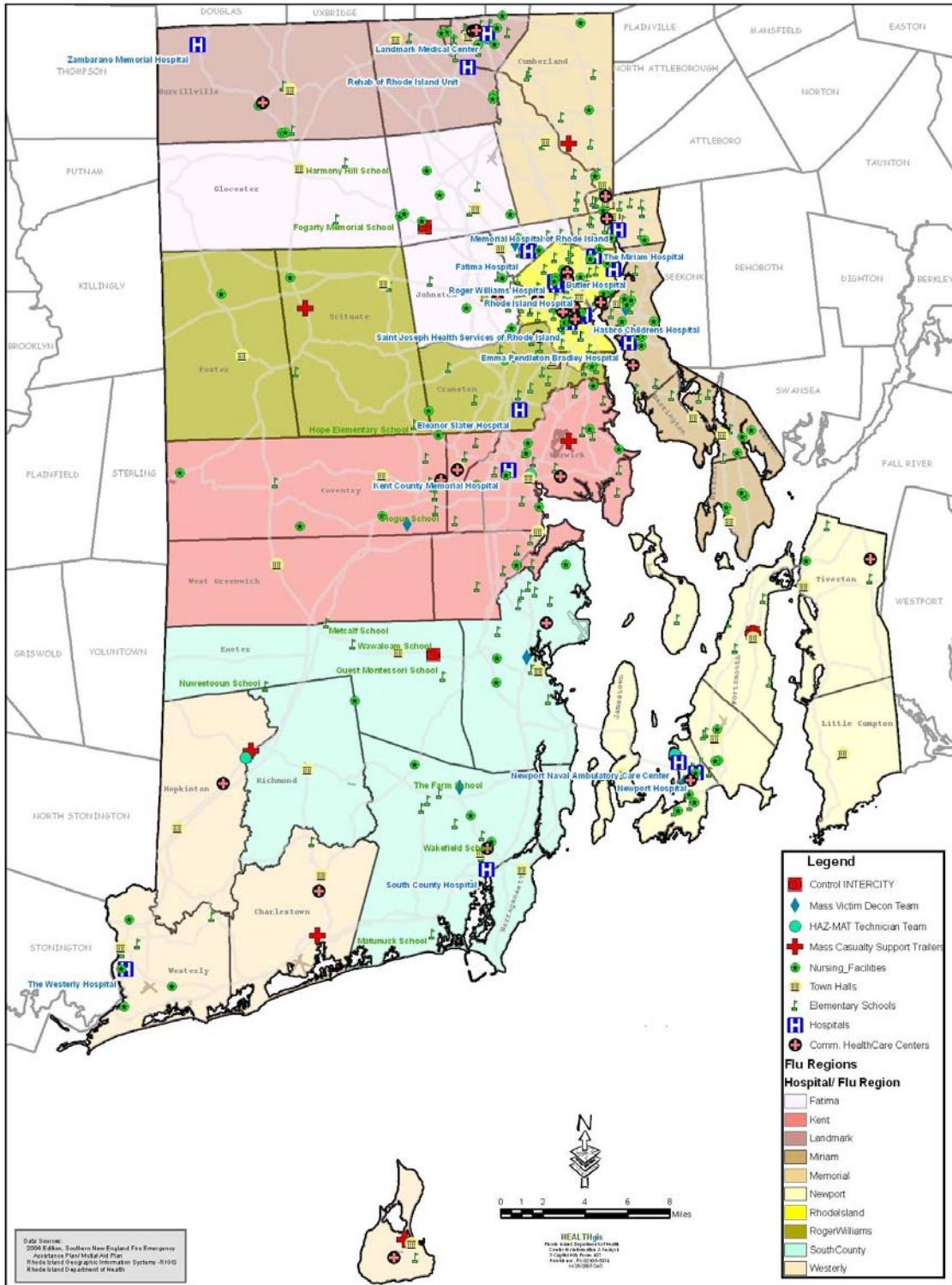
Convene local medical ethicists to advise the prioritization of populations that would receive vaccines and/or anti-viral treatments (if available), as well as determine a system for distributing other limited supplies equitably.

Exercise emergency response plans and continuity of operations plans developed by private and public sector organizations on an ongoing basis.

Secure investment of public and private resources in preparing for a pandemic flu event. These resources will be applied to the development and exercise of plans across all governmental and non-governmental organizations in the state. They will also be applied to purchasing equipment and supplies in preparation for a pandemic flu event.

Supporting documents

Attachment A: Proposed Health Care Service Regions

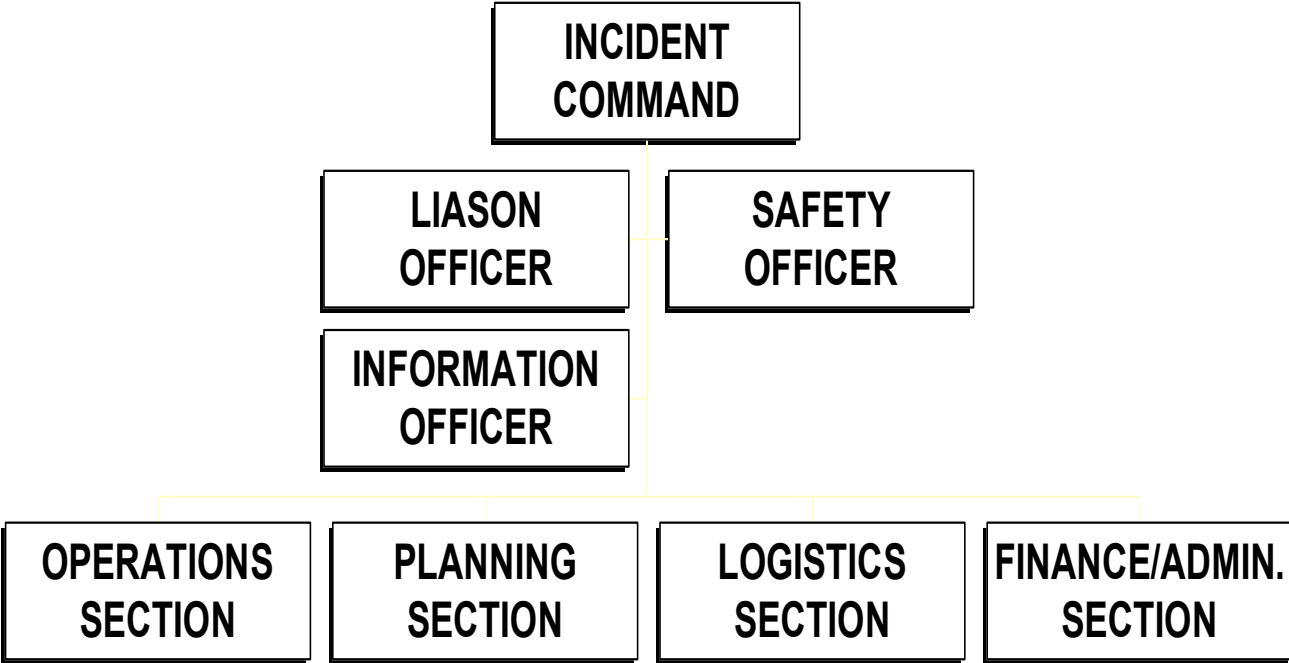


Attachment B: Participating State Agencies

Each state agency is reviewing sections of the State EOP that address the area for which it will be the primary coordinating agency in an emergency response to identify modifications, if any, needed to address a pandemic flu emergency. These sections are called Emergency Support Functions and are appendices to the State EOP.

Emergency Support Function (ESF)	Agency Updating Section
1 Transportation	Department of Transportation
2 Communications	Department of Administration
3 Public Works and Engineering	Department of Transportation
4 Firefighting	Emergency Management Agency
5 Information and Planning	Emergency Management Agency
6 Mass Care	Emergency Management Agency
6A – Social Services (NEW)	Office of Health and Human Services
7 Resource Support	Department of Administration
8 Public Health and Medical	Department of Health
9 Search and rescue	Rhode Island State Police
10 Hazardous Material	Department of Environmental Management
11 Food and Water	Emergency Management Agency
12 Energy	Department of Administration
13 Security and Law	Rhode Island State Police
14 Military Support	Rhode Island National Guard
15 Behavioral Health Services	Department of Mental Health, Retardation and Hospitals
16 Animal Care	Department of Environmental Management
17 Volunteers & Donations	Emergency Management Agency
18 Private Sector (NEW)	Emergency Management Agency
19 External Affairs (NEW)	Interagency Team with Governor's Office

Attachment C: Incident Command System



Attachment D. Projected Costs of Pandemic Flu in Rhode Island: Pre-Pandemic, Pandemic, and Post-Pandemic (as of December 15, 2005)

	Planning & Exercising	Equipment/ Medications	Personnel	Lab	Communications	Death Management	Case Investigation / Surveillance	Transportation	Education & Training	Patient information	Law Enforcement Support	Mental Health Support	Healthcare Cost	TOTAL COST
Pre-Pan Flu	\$1,000,000	\$66,322,720	\$0	\$248,000	\$17,500	\$305,900	\$0	\$0	\$200,000	\$0	\$0	\$0	\$0	\$68,094,120
Pan Flu	\$5,520,000	\$5,312,558	\$14,981,000	\$0	\$4,453,200	\$2,308,950	\$360,000	\$1,044,000	\$150,000	\$200,000			\$540,000,000	\$574,329,708
Post-Pan Flu	\$855,000	\$0	\$0	\$0	\$0	\$0	\$120,000	\$11,500	\$0	\$0			\$0	\$986,500
	\$7,375,000	\$71,635,278	\$14,981,000	\$248,000	\$4,470,700	\$2,614,850	\$480,000	\$1,055,500	\$350,000	\$200,000	\$0	\$0	\$540,000,000	\$643,410,328

PLANNING & EXERCISE

Pre - Statewide Tabletop Exercise x 2 @ \$125,000 each DOH planning = 3 DTEs @ \$80k/FTE Hospital Planning = 17 hospitals x 0.5 FTE x 60K/FTE

Pan - DOH Staff = 150 FTE x \$60K/FTE x 0.5 years Hospital Planning = 1 FTE @ \$60K/FTE x 0.5 years

Post- DOH Staff = 20 FTE x \$60K/FTE x 0.5 years Hospital Planning = 0.25 FTE @ 60K/FTE x 0.5 years

EQUIPMENT

Pre - ACS Fixed Equip = \$297,500 ACS Patient Equip = \$3,097,516 Gloves = \$16,053,400 Masks = \$10,651,804 Meds = \$24,425,000 Gowns = \$11,797,500

Pan - Food & Nutrition = \$3,192,000

Post - \$0

PERSONNEL

Pre - \$0

Pan- ACS Healthcare Professional Staffing = \$14,881,000

Post - \$0

LABORATORY RESPONSE

Pre - DOH Lab Supplies H5 PCR kits = \$48,000 Rapid Flu Kits 10,000 kits @ \$20/kit = \$200,000

Pan - \$0

Post - \$0

COMMUNICATIONS

Pre - Laptops for DOH EOC = 10 x \$1500 = \$15,000 Walkie-Talkies for ACS = 10 per site x 10 sites x \$25/radio = \$2,500 ACS Signage = \$35,000 Develop non-print media: \$6,500

Pan - Public Health Hotline = 22 staff x 24/7 coverage x 0.5 year = \$3,746,700 DOH Media 3 FTE @ \$60K/FTE x 0.33 years = \$60K Emergency Comms 13.5 FTE @ \$60K/FTE x .25 years = \$267,300

Fax Communications with Healthcare Providers = \$5,500/month x 0.33 years = \$22,000 Translate materials = \$30,000 DOH Printing = \$300,285 Distribute materials \$160,000

Post - \$0

Attachment D, continued: Projected Costs Pandemic Flu in Rhode Island: Pre-Pandemic, Pandemic, and Post-Pandemic

DEATH MANAGEMENT

Pre - Supplies = \$305,900
 Pan - Autopsies / Body Handling \$2,308,950
 Post - \$0

CASE INVESTIGATION / SURVEILLANCE

Pre - \$0
 Pan - DOH 12 FTEs @ \$60K/FTE x 0.5 years = \$360,000
 Post - DOH 2 FTEs @ \$60K/FTE x 1 years = \$120,000

TRANSPORTATION

Pre - \$0
 Pan - Body Transport 7000 x \$135/body = \$945,000 ACS Supply Transport 10 FTEs x \$30k/FTE x 0.33 years=\$99,000
 Post - ACS Breakdown 10 FTEs @ \$30k/FTE x 2 weeks = \$11,500

EDUCATION / TRAINING

Pre - Development of CD-ROM & DOH Webcast = \$100,000 Train-the-Trainer Program for Infection Control, etc. = \$100,000
 Pre - Just In Time Training Coordinators 5 FTEs @ \$60K/FTE x 0.5 years = \$150,000
 Post - \$0

PATIENT INFORMATION

Pre - \$0
 Pan - Phone Bank Staff for Patient Calls 10 FTEs @ \$40k/year x 0.5 years = \$200,000
 Post - \$0

LAW ENFORCEMENT

Pre - \$0
 Pan - TBD
 Post - \$0

MENTAL HEALTH

Pre - \$0
 Pan - TBD
 Post - TBD

HEALTHCARE

Pre - \$0
 Pan - Estimated Cost for Hospitals to create surge capacity, including increased staffing and patient acuity = \$540,000,000
 Post - \$0

Attachment E. Projected Health Care Costs of Pandemic Flu in Rhode Island (as of December 15, 2005)
 Projections assume that all equipment and personnel will be available in a pandemic.

STATE OF RHODE ISLAND		DEPARTMENT OF HEALTH			15-Dec-05		
PANDEMIC FLU COST PROJECTION DATA							
ALTERNATIVE CARE SITE (ACS) SUPPLIES & EQUIPMENT							
ACS FIXED SUPPLIES (By Patient Types)							
	# per ACS	# ACS facilities	# Needed	Cost Per Unit	# Days	Cost Per Wave	Pandemic Cost
Cots (T&R, IVF Patients)	35.00	10	350	\$38.00	n/a	\$ 13,300	\$13,300
Cots (INT Patients)	100.00	10	1000	\$235.00	n/a	\$ 235,000	\$235,000
Pillows (T&R, IVF, INT)	135.00	10	1350	\$3.50	n/a	\$ 4,725	\$4,725
Blankets (T&R, IVF, INT)	135.00	10	1350	\$13.50	n/a	\$ 18,225	\$18,225
O2 Regulator (Per ACS)	21.00	10	210	\$125.00	n/a	\$ 26,250	\$26,250
						\$ 297,500	\$297,500
ACS PER PATIENT SUPPLIES (By Patient Types)							
	# per ACS	# ACS facilities	# Needed	Cost Per Unit	# Days	Cost Per Wave	Pandemic Cost
O2 Cylinder (25% INT) 1 PER/PT/DAY	21.00	10	210	\$100.00	60	\$ 1,260,000	\$2,520,000
O2 NRB Mask (10% INT) 1 PER/PT/DAY	8.00	10	80	\$2.00	60	\$ 9,600	\$19,200
O2 Nasal Cannula (15% INT) 1 PER/PT/DAY	13.00	10	130	\$0.50	60	\$ 3,900	\$7,800
Bed Pan (INT) 1 PER/PT/DAY	83.00	10	830	\$3.50	60	\$ 174,300	\$348,600
Emesis Basin (IV, INT) 1 PER/PT/DAY	108.00	10	1080	\$0.50	60	\$ 32,400	\$64,800
IV Fluids (IV, INT) 2 PER/PT/DAY	108.00	10	216	\$2.00	60	\$ 25,920	\$51,840
IV Tubing 2 PER/PT/DAY	108.00	10	216	\$2.10	60	\$ 27,216	\$54,432
IV Extension Set 2 PER/PT/DAY	108.00	10	216	\$1.19	60	\$ 15,422	\$30,844
						\$ 1,548,758	\$3,097,516
ACS FOOD & NUTRITION							
	# per ACS	# ACS facilities	# Needed	Cost Per Unit	# Days	Cost Per Wave	Pandemic Cost
Oral Rehydration Solution (T&R, IVF, INT) 2 PER/PT/DAY	466.00	10	4660	\$1.25	60	\$ 349,500	\$690,000
Patient Food (IVF, INT)	108.00	10	1080	\$15.00	60	\$ 972,000	\$1,944,000
Staff Food	31.00	10	310	\$15.00	60	\$ 279,000	\$558,000
						\$ 1,600,500	\$3,192,000
ACS HEALTHCARE PROVIDERS							
	# FTEs per ACS /day	# ACS facilities	# Hours Per ProviderType / Day (#FTE x 12 hrs)	Cost Per Unit	# Days	Cost Per Wave	Pandemic Cost
ACS - T&R MD/PA/NP	2.50	10	250	\$75/hr	60	\$ 1,125,000	\$2,245,000
ACS - RN	2.50	10	250	\$30/hr	60	\$ 450,000	\$900,000
ACS - IVF / INT MD	4.40	10	440	\$75/hr	60	\$ 1,980,000	\$3,960,000
ACS - IVF / INT RN	21.60	10	2160	\$30/hr	60	\$ 3,888,000	\$7,776,000
						\$ 7,443,000	\$14,881,000
HOSPITAL HEALTHCARE COSTS	Current Avg Operating Cost Per Bed	Total # Inpatient Surge Beds Needed	Adjusted Cost Factor	Cost Per Bed	# Days	Cost Per Wave	Pandemic Cost
	~ \$2,500	1200	1.5	\$3,750.00	60	\$ 270,000,000	\$540,000,000

Attachment E, continued. Projected Health Care Costs for pandemic flu in Rhode Island (as of December 15, 2005)

MEDICATIONS					# Days	Cost per Wave	Pandemic Cost
	# patients	Avg Cost per pt	# Needed	Cost per Unit			
Antiviral Medications (75% total patients)	200,000.00	\$50				\$ 10,000,000	\$20,000,000
Probenecid (75% total patients)	112,500.00	\$5				\$ 562,500	\$1,125,000
Antibiotics (20% total patients)	30,000.00	\$30				\$ 900,000	\$1,800,000
Antipyretics (100% patients)	150,000.00	\$1			5	\$ 750,000	\$1,500,000
						\$ 12,212,500	\$24,425,000
GLOVES					Cost per Unit	Cost Per Wave	Pandemic Cost
	# patients	# per patient / day	# Days	# Needed			
Gloves (T&R - ACS)	75,000.00	4	n/a	300,000	\$0.25	\$ 75,000	\$150,000
Gloves (T&R - Primary Care)	50,000.00	4	n/a	200,000	\$0.25	\$ 50,000	\$100,000
Gloves (IVF - ACS)	15,000.00	16	1	240,000	\$0.25	\$ 60,000	\$120,000
Gloves (INT - ACS)	25,000.00	30	5	3,750,000	\$0.25	\$ 937,500	\$1,875,000
Gloves - EMS	8,160.00	8	1	3,916,800	\$0.25	\$ 979,200	\$1,958,400
Gloves - NH	10,000.00	20	60	12,000,000	\$0.25	\$ 3,000,000	\$6,000,000
Gloves - Hospitals	3,900.00	50	60	11,700,000	\$0.25	\$ 2,925,000	\$5,850,000
				32,106,800		\$ 8,026,700	\$16,053,400
				2,359,500	\$2.50	\$ 5,898,750	\$11,797,500
MASKS					# Days	Cost Per Wave	Pandemic Cost
	# per 300 beds	Total # beds needed	# Needed	Cost per Unit			
N95 Mask - Hospital	4,000.00	~3900	52,000	\$0.58	60	\$ 1,809,600	\$3,619,200
Surgical Mask w/ Face Shield - Hospital	4,000.00	~3900	52,000	\$0.80	60	\$ 2,496,000	\$4,992,000
						\$ 4,305,600	\$8,611,200
ACS					TOTAL # Needed (# per day x 60)	Cost Per Wave	Pandemic Cost
	# per MD / day	# per RN / day	TOTAL # per day	Cost per Unit			
N95 - ACS	2 x 69	2 x 241	620	\$0.58	37,200	\$ 21,576	\$43,152
Surgical Mask w/ Face Shield - ACS	4 x 69	4 x 241	1,340	\$0.80	74,400	\$ 59,520	\$119,040
					111,600	\$ 81,096	\$162,192
PRIMARY CARE SITES					TOTAL # Needed (# per day x 60)	Cost Per Wave	Pandemic Cost
	# per MD / day	# per RN / day	TOTAL # per day	Cost per Unit			
N95 - Primary Care	2 x 69	2 x 241	964	\$0.58	57,840	\$ 67,094	\$134,188
Surgical Mask w/ Face Shield - Primary Care	4x 69	4 x 241	964	\$0.80	57,840	\$ 92,544	\$185,088
					115,680	\$ 321,830	\$643,660
EMS					TOTAL # Needed	Cost Per Wave	Pandemic Cost
	# per EMT / day	# EMTs Per Vehicle	# EMS Units	Cost Per Unit			
N95 - EMS	4	2	340	\$0.58	163,200	\$ 94,656	\$189,312
Surgical Mask w/ Face Shield - EMS	8	2	340	\$0.80	326,400	\$ 261,120	\$522,240
					489,600	\$ 355,776	\$711,552
NURSING HOMES					TOTAL # Needed	Cost Per Wave	Pandemic Cost
	# RN / day	# Patients / RN	# Patients	Cost Per Unit			
N95 - NH	2	10	10,000	\$0.58	120,000	\$ 69,600	\$139,200
Surgical Mask w/ Face Shield - NH	4	10	10,000	\$0.80	240,000	\$ 192,000	\$384,000
					360,000	\$ 261,600	\$523,200
						Cost Per Wave	Pandemic Cost
SURGE CAPACITY / ADDITIONAL HEALTHCARE COSTS FOR PANDEMIC FLU						\$ 312,353,610	\$624,707,220