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University of Houston  
Pandemic Influenza Plan  
2017-2018

Revised: July 2017

**Table of Contents**

RECORD OF CHANGES.....3

RECORD OF ANNUAL REVIEW.....7

AUTHORITY .....8

PURPOSE.....8

SCOPE.....9

EXPLANATION OF TERMS.....9

SITUATION AND ASSUMPTIONS .....13

CONCEPT OF OPERATIONS .....16

ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES .....19

DIRECTION AND CONTROL .....24

READINESS LEVELS .....27

    Level IV: Normal Readiness.....28

    Level III: Increased Readiness.....28

    Level II: High Readiness .....28

    Level I: Maximum Readiness .....29

PLAN DEVELOPMENT AND MAINTENANCE.....29

REFERENCES .....30

ATTACHMENTS .....31

    Attachment 1 – UH Health Center Pandemic Influenza Disease Plan .....32

    Attachment 2 – Pandemic Stages (WHO and CDC) Information from the Texas Medical Center Pandemic Influenza Preparedness and Response Guide .....40

    Attachment 3 – Pandemic Severity Index/Community Strategies .....43

    Attachment 4 – Executive Operations Team (EOT) - Member List .....46

    Attachment 5 – Emerging Health Issues Advisory (EHIA) Group Member List .....47



**RECORD OF CHANGES**

**The University of Houston**

**Pandemic Influenza Plan**

<b>Date</b>	<b>Page/Section</b>	<b>Description of Change</b>	<b>Entered By</b>
7/10/14	Throughout	Changed "Emergency Management Bureau (EMB)" to the "Office of Emergency Management (OEM)"	K. Boysen
7/10/14	Throughout	Changed "Emergency Health Advisory Board (EHAB)" to "Emerging Health Issues Advisory (EHIA) Group"	K. Boysen
7/10/14	1/Cover Page	Updated year and added revision date	K. Boysen
7/10/14	3/Record of Changes	Added new "Record of Changes" table format	K. Boysen
7/10/14	6/Acronyms	Added "FEMA"	K. Boysen
7/10/14	8/Definitions	Added "University Relations/Communications" to the EHIA Group definition	K. Boysen
7/10/14	8/Definitions	Revised the Health Authority definition to include the various key and local agencies.	K. Boysen
7/10/14	11/Situation	Updated "How does Seasonal Flu differ from Pandemic Flu?" Table from Flu.gov	K. Boysen
7/10/14	13/Concept of Operations - General	Updated FEMA training link	K. Boysen
7/10/14	13/Concept of Operations - General	Added "The Health Center may review and seek guidance from local, state or other health authorities."	K. Boysen
7/10/14	14/Concept of Operations - Prevention	Added "d. Promote protective measures like hand-washing and respiratory etiquette during flu season."	K. Boysen
7/10/14	15/Concept of Operations - Response	Added "University Relations/Communications" to Letter F.	K. Boysen
7/10/14	16/Assignment of Responsibilities - EMT	Removed "as determined by the EMB" on Letter B.	K. Boysen
7/10/14	43-44/Attachments	Updated all 3 figures	K. Boysen
7/10/14	43/Attachments	Deleted "Attachment 3: Plan Distribution List" since the plan is posted on the web	K. Boysen

7/10/14	46/Attachments	Updated EHIA Group Member List	K. Boysen
7/10/14	47-48/Attachments	Deleted "Attachment 6: UHEOC Structures" due to same information provided in the EMP	K. Boysen
10/24/14	Throughout	Added page numbers to document	K. Boysen
10/24/14	Throughout	Remove "student" in "UH Student Health Center"	K. Boysen
10/24/14	9/Definitions	Removed "The University of Houston health authority, for purposes of this document is the UH Health Center" from the "health authority" definition.	K. Boysen
10/24/14	14/Concept of Operations (General)	Added "chaired by Chief Physician; Added "serves in a health advisory role for the university" Added "This role includes interpreting guidance from public health authorities and recommending actions to be taken or implemented at the University of Houston."	K. Boysen
10/24/14	19/ Assignment of Responsibilities – UH Health Center	Letter "a." changed to "Serve in a health advisory role for the University. This advisory role sits with the Governing Body of the UH Health Center (chaired by the Chief Physician). This role includes interpreting guidance from public health authorities and recommending actions to be taken or implemented at the University of Houston."	K. Boysen
12/6/14	9/Definitions – "Health Authority"	Revised with input from General Counsel; Removed "Key health authorities include the City of Houston Health and Human Services Department, Harris County Public Health and Environmental Services, and the Texas Department of State Health Services." Added "The public health authority for the University of Houston is City of Houston, Emergency Medical Services Director, Dr. Perse or the current local public health authority for the City of Houston."	K. Boysen

12/6/14	25/Direction and Control – “Coordination with the Public Health Authority”	<p>Revised with input from General Counsel; Removed “Both the City of Houston Health and Human Services Department (COHHHSD) and Harris County Public Health &amp; Environmental Services (HCPHES) have statutory responsibility for the oversight and coordination of the public health response and recovery activities during a pandemic influenza or other public health incident. The University will attempt to adhere to guidance provided by local public health authorities, when possible.”</p> <p>Added “The public health authority for the University of Houston is City of Houston, Emergency Medical Services Director, Dr. Perse or the current local public health authority for the City of Houston. The City of Houston Health and Human Services Department (COHHHSD) serves as a key resource in preparedness and coordination of the public health response and recovery activities during a pandemic influenza or other public health incident.</p>	K. Boysen
12/17/14	6/Definitions – “Health Authority”	Revised with edits from General Counsel to read “A physician appointed under Section 121.021 of the Health and Safety Code to administer state and local laws relating to public health within the appointing body’s jurisdiction.”	K. Boysen
11/24/15	22/ Assignment of Responsibilities	Changed name from “Office of International Studies and Programs” to “Learning Abroad”.	C. McKeathen
12/3/15	31/Attachment 1	Updated Attachment 1 with revised “University of Houston Health Center Pandemic Influenza Disease Plan”	C. McKeathen
12/10/15	Throughout	Changed any reference to the “Emergency Management Team (EMT) to reflect the new name and group called the Executive Operations Team (EOT).”	K. Boysen
12/10/15	45/Attachment 4	Updated Attachment 4 “Executive Operations Team” Member List	K. Boysen
6/17/2016	22/ Assignment of Responsibilities	Updated Learning Abroad section to include students studying abroad as well as exchange students in responsibilities verbiage.	C. McKeathen
6/28/2016	Throughout	Updated name of agency from “City of Houston Health and Human Services Department” to current name of “Houston Health Department”	K. Boysen

7/28/2017	Throughout	Updated the name of the emergency notification system to approved branding name “UH ALERT.”	C. McKeathen
7/28/2017	Throughout	Changed “Department of Public Safety” to “Department of Campus Safety” when appropriate to reflect current university departments.	C. McKeathen
7/28/2017	Throughout	Changed “University Relations/University Communications” to “University Marketing, Communications and Media Relations”.	C. McKeathen
7/28/17	14/Situation	Updated the table titled “How does Seasonal Flu Differ from Pandemic Flu?” to the current content on the CDC’s website.	C. McKeathen
7/28/2017	18/Organization and Assignment of Responsibilities	Added reference to MAPP 06.01.02, Business Continuity Planning	C. McKeathen
7/28/2017	30/Distribution of Planning Documents	Updated to state that the UH Office of Emergency Management is responsible for distributing planning documents accordingly, and that a “public” version of the Plan will be posted on the UH OEM website.	C. McKeathen
7/28/2017	47/Attachment 5 – Emerging Health Issues Advisory (EHIA) Group Member List	Updated list to show current membership	C. McKeathen

**RECORD OF ANNUAL REVIEW**

**The University of Houston  
Pandemic Influenza Plan**

<b>Date</b>	<b>Review facilitated by:</b>
7/10/2015	K. Boysen
12/10/2015	C. McKeathen
6/28/2016	C. McKeathen
7/31/2017	C. McKeathen

## **AUTHORITY**

This plan has been approved by the Associate Vice President for Campus Safety and Security and was developed by the UH Office of Emergency Management (OEM) in the Department of Campus Safety. During a response to pandemic influenza, the direction of local, state, or federal public health authority may alter the strategies that are outlined in this plan.

This plan falls under the authority outlined in the UH Emergency Management Plan which outlines how any emergency is managed on the University of Houston Campus. This emergency response planning is based on the National Incident Management System (NIMS), a standard model throughout the United States and the Incident Command System (ICS), the management structure adopted by first responders at UH. NIMS contains flexible and functional positions for each critical operation of the University during any emergency.

## **PURPOSE**

The purpose of the University of Houston Pandemic Influenza Plan is to provide guidance in preparing for, identifying, and responding to pandemic influenza that affects the University of Houston. The objectives of this plan are to reduce the morbidity, mortality, and social and economic disruption caused by an outbreak of influenza on the students, staff, and faculty of the University of Houston community. This plan provides a framework for pandemic influenza preparedness and response activities and serves as a foundation for further planning, drills, and emergency preparedness activities.

Pandemic influenza will pose unique and long-standing challenges not common to other disasters. The goal of pandemic influenza preparedness and response is to limit the spread of the virus; to minimize serious illness, hospitalizations, and death; to sustain critical infrastructure; and to minimize social disruption in Texas as a result of pandemic influenza.

The priorities of UH during a disaster are for the protection of lives, assets, valuable research processes, property, and the environment. The overall objective is to respond to emergency conditions and manage the process of restoring University academic, research programs and special services.



## SCOPE

This plan is limited to preparedness and response for the UH campus. The Pandemic Influenza Plan serves to provide the basic structure and guidance to planning and coordinating, monitoring and assessment, prevention and control, UH Health Center response, communications, and public education.

It is important to note that while the plan focuses on influenza, it is also intended to serve as the template for responding to large-scale outbreaks of other highly infectious respiratory diseases, even if some prevention measures or response tactics may change due to the nature of a particular disease such as Severe Acute Respiratory Syndrome (SARS).

## EXPLANATION OF TERMS

### A. ACRONYMS

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AAR	After Action Report
ACHA	American College Health Association
CDC	Centers for Disease Control and Prevention
EHIA	Emerging Health Issues Advisory
EHLS	Environmental Health and Life Safety
EOT	Executive Operations Team
FEMA	Federal Emergency Management Association
HC	Health Center
HR	Human Resources
ICS	Incident Command System
NIMS	National Incident Management System
OEM	Office of Emergency Management
SHRL	Student Housing and Residential Life
TMC	Texas Medical Center
UH	University of Houston
UHEOC	University of Houston Emergency Operations Center

## B. DEFINITIONS

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1. **Antigenic Drift:** These are small changes in the virus that happen continually over time. Antigenic drift produces new virus strains that may not be recognized by the body's immune system. This process works as follows: a person infected with a particular flu virus strain develops antibody against that virus. As newer virus strains appear, the antibodies against the older strains no longer recognize the “newer” virus, and reinfection can occur. This is one of the main reasons why people can get the flu more than one time. In most years, one or two of the three virus strains in the influenza vaccine are updated to keep up with the changes in the circulating flu viruses. So, people who want to be protected from flu need to get a flu shot every year.
2. **Antiviral medication:** A medication that may prevent or inhibit the growth and reproduction of viruses and is used to treat or prevent disease in those exposed or at risk of exposure.
3. **Catastrophic incident:** For purposes of the National Response Plan (NRP), describes any natural or manmade occurrence that results in extraordinary levels of mass casualties, property damage, or disruptions that severely affect the population, infrastructure, environment, economy, national morale, and/or government functions. An occurrence of this magnitude would result in sustained, national impacts over a prolonged period of time and would immediately overwhelm local and state capabilities.
4. **Control measures:** Actions necessary to prevent and control the spread of communicable disease include but are not limited to immunization, detection, detention, restriction, disinfection, decontamination, isolation, quarantine, chemoprophylaxis, preventive therapy, prevention and education. Chapter 81 of the Texas Health and Safety Code allows control measures to be imposed on individuals, property, areas, or common carriers.

5. **Emerging Health Issues Advisory (EHIA) Group:** A group of individuals representing the UH Health Center, Office of Emergency Management, Environmental Health and Life Safety (EHLS), Student Housing and Residential Life, International Student and Scholar Services, Learning Abroad, Learning and Culture Center, University Marketing, Communications and Media Relations, and the College of Pharmacy who make recommendations to the EOT regarding health related concerns for the university as well as during health related incidents.
6. **Health authority:** A physician appointed under Section 121.021 of the Health and Safety Code to administer state and local laws relating to public health within the appointing body's jurisdiction. A local health authority has considerable power that allows the health authority to investigate suspected incidents and outbreaks of communicable disease, and to initiate control measures as indicated. Establishing, maintaining, and enforcing quarantine in the health authority's jurisdiction is one of the local health authority's explicit legal duties. Non-compliance with a health authority's written order can subject an individual to court-ordered management. The public health authority for the University of Houston is City of Houston, Emergency Medical Services Director, Dr. Persse or the current local public health authority for the City of Houston.
7. **Isolation:** The separation and restriction of movement of people with a specific communicable disease to contain the spread of the disease. People in isolation may be cared for in their homes, hospitals, designated health care facilities, or other dedicated facilities.
8. **Outbreak:** A sudden increase in the number of cases of a specific disease or clinical symptoms.
9. **Pandemic Influenza:** A worldwide outbreak of a novel (newly emerged) influenza virus causing sudden, pervasive illness that can severely affect even otherwise healthy individuals in all age groups. Pandemic influenza occurs infrequently and at irregular intervals and has the potential for substantial impact resulting in increased morbidity and mortality, significant social disruption, and severe economic costs. To assist in international planning and response

activities, the World Health Organization has defined periods and phases of a pandemic influenza (see Attachment A: Pandemic, Phase Chart, World Health Organization, 2005).

10. **Point of Care Testing Rapid Flu A and B:** A nasal swab sample provides immediate results and rapid diagnosis of Influenza A&B.
11. **Quarantine:** Separation and restriction of movement of well people who may have been exposed to an infectious agent and may be infected but are not yet ill. Quarantine usually occurs in the home but can be in a dedicated facility or hospital. The term quarantine also can be applied to restrictions of movement into or out of buildings, other structures, and public conveyances. In addition, specific areas or communities may be quarantined. The Centers for Disease Control and Prevention (CDC) also is empowered to detain, medically examine, or conditionally release people suspected of carrying certain communicable diseases at points of arrival in, and departure from, the United States (U.S.) or across state lines.
12. **Strategic National Stockpile (SNS):** National repository of antibiotics, chemical antidotes, antitoxins, antiviral medications, vaccines, life-support medications, intravenous-administration and airway-maintenance supplies, and medical or surgical material for use in a declared biological or chemical terrorism incident or other major public health emergency.
13. **Surveillance:** Systematic collection, analysis, interpretation, and dissemination of data regarding a health event for use in response actions to reduce morbidity and mortality. The objective of surveillance is to effectively guide action efforts locally, statewide, nationally and internationally.
13. **Viral shedding:** The expelling of virus particles from the body. Virus shedding is an important means of disease transmission.
14. **Wave:** A period of time, usually six-to-eight weeks, characterized by the beginning of illness in a population, escalation of illness over time to a maximum number of people infected, then slowing infection rates. A wave is followed by a period of normalcy. Pandemic influenza is expected to have two or three waves.

## SITUATION AND ASSUMPTIONS

### A. SITUATION

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A significant and recurring risk to the university is that of pandemic influenza. Influenza, also known as the flu, is a disease that infects the respiratory tract (nose, throat, and lungs). Influenza usually comes on suddenly and may include fever, headache, dry cough, sore throat, nasal congestion, and body aches. Although the seasonal flu is not usually fatal, complications can arise. The seasonal flu kills an average of 36,000 U.S. citizens every year, sends some 200,000 to the hospital, and causes countless lost days of school and work.

Pandemic influenza occurs when a novel influenza virus appears that causes readily transmissible human illness against which most people lack immunity. During the 20th century, there were three such pandemics, the most notable of which was the 1918 Spanish influenza responsible for 20 million deaths throughout the world. A new strain of influenza, resulting from antigenic drift, is the form of pandemic disease most likely to affect the University of Houston.

The impact of an actual pandemic cannot be predicted precisely, as it will depend on the virulence of the virus, how rapidly it spreads, the availability of vaccines and antivirals, and the effectiveness of medical and non-medical containment measures. When pandemic influenza occurs, many people will become ill and may die from the virus or complications. One can only become immune to infection after natural infection or after receiving an effective vaccination. In addition, animals may also be susceptible to the novel influenza virus and may carry, spread, or serve as an intermediate host of the virus. Experts predict that a highly virulent strain of pandemic influenza would disrupt all aspects of society and severely affect the economy.

## How does Seasonal Flu Differ from Pandemic Flu?

Seasonal Flu	Pandemic Flu
Happens annually and usually peaks between December and February	Rarely happens (three times in 20th century)
Usually some immunity built up from previous exposure and influenza vaccination	Most people have little or no immunity because they have no previous exposure to the virus or similar viruses
Certain people are at high-risk for serious complications (infants, elderly, pregnant women, extreme obesity and persons with certain chronic medical conditions)	Healthy people may be at increased risk for serious complications
Health care providers and hospitals can usually meet public and patient needs	Health care providers and hospitals may be overwhelmed. Alternate care sites may be available to meet public and patient needs.
Vaccine available for annual flu season. Usually, one dose of vaccine is needed for most people	Although the US government maintains a limited stockpile of pandemic vaccine, vaccine may not be available in the early stages of a pandemic Two doses of vaccine may be needed.
Adequate supplies of antivirals are usually available	Antiviral supply may not be adequate to meet demand
Rates of medical visits, complications, hospitalizations and death can vary from low to high CDC estimates that flu-related hospitalizations since 2010 ranged from 140,000 to 710,000, while flu-related deaths are estimated to have ranged from 12,000 to 56,000.	Rates of medical visits, complications, hospitalizations and death can range from moderate to high Number of deaths could be much higher than seasonal flu (e.g. The estimated U.S. death toll during the 1918 pandemic was approximately 675,000)
Usually causes minor impact on the general public, some schools may close and sick people are encouraged to stay home Manageable impact on domestic and world economies	May cause major impact on the general public, such as travel restrictions and school or business closings Potential for severe impact on domestic and world economies

[www.flu.gov](http://www.flu.gov)

### B. ASSUMPTIONS

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1. Seasonal influenza vaccination may or may not offer some level of protection against a novel pandemic influenza strain.
2. It is highly unlikely that the most effective tool for mitigating a pandemic (a well-matched pandemic strain vaccine) will be available when a pandemic begins.

3. The time from a candidate vaccine strain to the production of the first vaccine dosage could be six months or more.
4. Once vaccine is available, it may take five months to produce an adequate supply of vaccine for the entire U.S. population (currently production capacity is approximately five million doses per week).
5. Two doses of vaccine administered 30 days apart may be required to develop immunity to a novel virus.
6. There is a limited supply of antiviral medications. Antiviral distribution to states will occur through the Strategic National Stockpile.
7. Non-medical containment measures will be the principal means of disease control until adequate supplies of vaccines and/or antiviral medications are available.
8. The novel influenza virus may initially be spread by animals to people in Texas, or by people entering the state and already contagious with the virus.
9. Multiple waves of illness are likely to occur - each wave may last six to eight weeks.
10. Pandemic influenza may severely affect even otherwise healthy individuals in all age groups, and will limit or degrade the response capabilities of all levels of government.
11. Persons who become ill shed virus and may transmit virus up to one day previous to the onset of illness. Persons who are ill may shed virus up to five days after onset of illness.
12. Systematic application of disease control measures can significantly reduce the disease transmission rates with accompanying reductions in the intensity and velocity of pandemic influenza.
13. Control and monitoring of pandemic influenza will involve many state and federal agencies, not just those associated with public health activities.
14. Some individuals may not believe the reality of the threat posed by a pandemic influenza incident, and may take actions counterproductive to the government process to quarantine, control and treat infected people with the disease. Health education will be needed on multiple levels and at multiple points to achieve full cooperation.
15. Over the course of the pandemic, up to 50 percent of the work force may be absent due to illness, caretaking responsibilities, fear of contagion, loss of public transportation, or public health control measures.
16. The health impact of a pandemic event will be great. Up to 25-35% of persons may become ill in a major pandemic influenza wave. Rates of influenza-related hospitalizations and deaths

may vary substantially. Estimates based on past pandemic influenza events indicate that 0.01-8% of the population may be hospitalized and 0.001-1% of the population may die.

17. There will likely be critical shortages of health care resources such as pharmaceuticals, vaccine (once developed), staffed hospital beds, health care workers, mechanical ventilators, morgue capacity, and temporary refrigerated holding sites.
18. Pandemic influenza will severely affect local and state economies, as well as intrastate, interstate, and international travel and commerce.
19. Pandemic influenza may result in long-term and costly emergency response operations.
20. Pandemic influenza may cause stress and/or emotional trauma.
21. Disseminating timely, consistent, and accurate information to public and private sector stakeholders, the media, and the general public is one of the most critical facets of pandemic influenza preparedness and response.

## CONCEPT OF OPERATIONS

### A. GENERAL

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1. The University of Houston conducts emergency response operations using the National Incident Management System (NIMS) and the Incident Command System (ICS) models. NIMS and ICS provide a consistent nationwide mechanism designed to assist all government, private sector, and nongovernmental organizations in working together during incidents when necessary. More information and education regarding NIMS and ICS can be found at the Federal Emergency Management Association's (FEMA) Emergency Management Institute (EMI) website at <http://training.fema.gov/EMI/>.
2. The Governing Body of the UH Health Center (chaired by the Chief Physician) serves in a health advisory role for the university regarding pandemic influenza. This role includes interpreting guidance from public health authorities and recommending actions to be taken or implemented at the University of Houston. The UH Health Center may review and seek guidance from local, state or other health authorities.



## **B. ACTIONS BY PHASES OF EMERGENCY MANAGEMENT**

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### 1. Prevention:

- a. Update and maintain the UH Pandemic Influenza Plan.
- b. Collaborate with individual UH departments to create their own pandemic influenza response plan.
- c. Promote seasonal flu vaccinations.
- d. Promote protective measures like hand-washing and respiratory etiquette during flu season.

### 2. Preparedness:

- a. Educate students, faculty and staff regarding personal protection or mitigation strategies including seasonal influenza vaccination, respiratory etiquette, and responsible use of antiviral drugs.
- b. Utilize pandemic influenza surveillance and testing at the UH Health Center.
- c. Direct persons with flu-like symptoms to the UH Health Center for point of care testing for Influenza strains A and B.
- d. Conduct training and awareness campaigns to educate students, staff and faculty on symptom recognition and infection control measures.
- e. Develop and disseminate pandemic influenza related public information campaigns for travelers who may have visited potential pandemic influenza affected areas.
- f. Ensure a communication system is established and maintained throughout a pandemic influenza response.
- g. Conduct tabletop exercises to implement pandemic influenza plans and test response procedures.
- h. The Emerging Health Issues Advisory (EHIA) Group will meet regularly to coordinate planning activities for pandemic influenza.

### 3. Response

- a. Activate the UH Emergency Operations Center (UHEOC), if necessary.
- b. Continue enhanced communication and surveillance activities.

- c. As available, distribute antiviral medications, vaccines and medical supplies to address UH needs.
- d. Activate law enforcement entities to assist in pandemic influenza control measures and maintenance of social order.
- e. Continue to educate citizens about personal protective strategies and population level interventions that may be initiated during a pandemic within their community.
- f. Develop and disseminate public service announcements, utilizing University Marketing, Communications and Media Relations, and the Joint Information Center (JIC), for release to the media concerning pandemic influenza outbreak.
- g. The Emerging Health Issues Advisory (EHIA) Group will meet more often to coordinate response activities and determine recommendations related to the pandemic influenza emergency.

#### 4. Recovery

- a. Obtain all critical documents, information, and paperwork from all officials regarding emergency and disaster declarations.
- b. Prepare and submit documentation for any requests for emergency and disaster assistance to local jurisdiction, State, FEMA or other appropriate entity.
- c. Develop an After Action Report (AAR) to evaluate responses and outcomes to initial waves of the pandemic to determine best practices.
- d. Prepare a follow-up EHIA Group meeting to determine strengths and areas of improvement related to the planning, response and recovery.
- e. Prepare for additional pandemic waves.

## ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

### A. ORGANIZATION

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The University of Houston will refer to Center for Disease Control and Prevention (CDC), state and local guidance during a public health emergency. The UH Health Center acts as the university's health authority and will work closely with the Executive Operations Team (EOT) and the UH Office of Emergency Management (OEM) to aid in planning and decision making during a pandemic influenza.

### B. ASSIGNMENT OF RESPONSIBILITIES

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1. General:

All UH colleges, divisions and departments are responsible for the following tasks:

- a. Ensure business continuity plans (BCP), per MAPP 06.01.02, Business Continuity Planning, are developed that ensure essential university functions can continue during a pandemic influenza incident.
  - b. Ensure personnel are clear on their roles and responsibilities if pandemic influenza is suspected or confirmed.
2. The University President will:
- a. Authorize a cancellation of classes or a campus closure, if necessary.
  - b. Provide overall direction of the response activities of all departments with support from the Assistant Vice President for Campus Safety & Security, Chief of Police and the Director of Emergency Management.
3. Executive Operations Team (EOT) will:
- a. Meet regularly with the Office of Emergency Management (OEM) in order to determine next steps for planning and/or response functions.
  - b. Help facilitate an effective response by mobilizing needed resources.

4. UH Health Center will:

- a. Serve in a health advisory role for the University. This advisory role sits with the Governing Body of the UH Health Center (chaired by the Chief Physician). This role includes interpreting guidance from public health authorities and recommending actions to be taken or implemented at the University of Houston.
- b. Work closely with the UH Office of Emergency Management (OEM) to develop a plan for a potential pandemic influenza event.
- c. Coordinate with the OEM during a potential pandemic influenza event. In addition, the HC Director, Chief Physician, Chief Nurse, or an experienced staff member designee will report to the EOC to act as the Medical Liaison, if requested.
- d. Coordinate university recommendations with the TMC, local and state public health authorities' guidance. In the event that the public health guidance differs, the HC will defer to the recommendation of the local level public health authority.
- e. Coordinate and Chair the Emerging Health Issues Advisory (EHIA) Group which meets routinely and more frequently during a health related emergency.
- f. Meet with the EOT in the event of a potential pandemic influenza event and discuss recommendations.
- g. Conduct point of care testing for influenza strains A and B. Further subtyping will be completed at an outside lab.
- h. Offer seasonal flu vaccines to UH students, faculty and staff. In the event of a new influenza strain, the HC will follow guidance provided by the local public health authority regarding priority and vaccine administration.
- i. Train HC staff with an annual review of protocols, policies and procedures.
- j. Educate HC staff regarding infection control measures, HC Emergency Plan and HC Pandemic Influenza Plan.
- k. Maintains records and documents suspected and confirmed cases during a pandemic influenza threat.

5. Emerging Health Issues Advisory (EHIA) Group will:

- a. Meet regularly during each summer, fall and spring semester to collaborate in planning and other preparedness activities.

- b. Meet more frequently in the event of pandemic influenza threat or other health-related emergency.
  - c. Be chaired by UH Health Center Chief Physician.
  - d. Collaborate in planning, response and recovery activities related to the health-related emergency.
  - e. Determine possible recommendations to the UH Health Center regarding response activities in the event of a pandemic influenza incident.
6. Office of Emergency Management (OEM) will:
- a. Activate the UHEOC, if needed.
  - b. Monitor the status of the current pandemic influenza in conjunction with the UH Health Center.
  - c. Coordinate with University Marketing, Communications and Media Relations in order to keep UH students, faculty, and staff informed of the current situation.
  - d. Help facilitate educational information regarding infection control measures, and symptom recognition.
  - e. Assist University Marketing, Communications and Media Relations as needed with sharing information regarding any campus closings or class suspensions to UH Campus Community.
  - f. Assist in planning next steps for preparedness and/or response.
  - g. Determine potential actions and/or resources to mitigate the impact from pandemic influenza.
  - h. Participate in the EHIA Group.
  - i. Meet regularly with the EOT to discuss the status of the pandemic influenza, and to promote planning and response functions.

7. Office of University Marketing, Communications and Media Relations will:
  - a. Provide updates to the campus community regarding a pandemic flu threat and communicate protective measures recommended by local public health authorities.
  - b. Respond to media inquiries.
  - c. Draft updates and any campus closure notices, as needed, in order to post on the UH ALERT website ([www.uh.edu/emergency](http://www.uh.edu/emergency)) and the UH homepage ([www.uh.edu](http://www.uh.edu)).
  
8. Student Housing and Residential Life (SHRL) will:
  - a. Work closely with the UH Office of Emergency Management (OEM) to develop a plan for a potential pandemic influenza event.
  - b. Formulate plans regarding the quarantining of infected individuals by identifying potential areas to be used for quarantining.
  - c. Coordinate with the OEM during a potential pandemic influenza event.
  - d. Provide information to residential students regarding infection control measures, and best hygiene practices.
  - e. Assist with parent concerns.
  - f. Report suspected illnesses to internal SHRL staff.
  - g. Consult with UH Health Center regarding students who become ill and if advised, direct them to the UH Health Center.
  - h. Activate plans to quarantine residential students who are ill in conjunction with local health department guidance.
  - i. Participate in the EHIA Group.
  - j. Train SHRL staff on hygiene practices and symptom recognition.
  - k. Identify essential staff.
  - l. If campus is closed, ensure support of individuals remaining on campus including international students.

9. UH Dining Services (UHDS) /Auxiliary Services will:
- a. Develop internal protocols for segregation of food supply chain from general population.
  - b. Consult with EHIA Group and SHRL to create protocols for processes designed to facilitate a safe and effective means of food distribution for those afflicted.
  - c. UHDS Dietician to consult with Health Center to craft appropriate menus.
  - d. Work with SHRL during events to ensure complete coverage of those afflicted.
  - e. Consult with OEM to provide for provisioning for emergency management teams.

10. Center for Students with DisABILITIES will:

- a. Communicate emergency information regarding a pandemic flu threat or campus closure to students registered with Center for Students with DisABILITIES.

11. International Student and Scholar Services will:

- a. Coordinate with the University in order to relay information to international students concerning the prevention and preparedness measures as well as the University's response related to a pandemic flu threat.
- b. Communicate health education information through the International Student and Scholar Services website and listserv. In addition, flyers and brochure will be posted in the reception area and bulletin board in the office.
- c. Consult with UH Health Center regarding students who become ill and if advised, direct them to the UH Health Center.
- d. Assist with visa-related requirements in the event that an international student needs to drop one or more classes.

12. Learning Abroad will:

- a. Consult with UH Health Center regarding students abroad or returning students who become ill and if advised, direct them to communicate with the UH Health Center.
- b. Communicate information to students going on learning abroad programs about a potential pandemic flu threat, if needed.
- c. Recommend incoming and outgoing exchange students receive a flu shot as a preventive measure.

- d. Communicate health education information to all exchange students and students going abroad through the Learning Abroad website and listserv. In addition, flyers and brochures may also be distributed, if needed.

## DIRECTION AND CONTROL

### A. GENERAL

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1. Direction and Control procedures will be flexible and adaptable to all pandemic influenza periods and phases as defined by the World Health Organization (WHO), the CDC as well as guidance provided by local public health authorities.
2. The President of the University retains authority for making decisions affecting the University. All decisions to be made should be based on federal, state, and/or local recommendations/mandates and applicable best practices of other institutions. These decisions may include issuing travel advisories, suspending mass gatherings (including classes), suspending research, suspending normal university operations, and resumption of university operations.
3. The UH Health Center serves as the health authority for the university and is responsible for making recommendations to the UH Administration.
4. UH OEM is responsible for supporting departments in implementing their respective all-hazards and pandemic influenza plans as needed. OEM will support departments in accessing information and guidance. In addition, OEM will encourage all UH departments to maintain open and frequent communication with OEM to improve coordination related to a pandemic flu event. OEM will coordinate with departments to share situational awareness.



## **B. INCIDENT COMMAND SYSTEM – EMERGENCY OPERATIONS CENTER INTERFACE**

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1. The UHEOC may or may not be physically activated during an influenza pandemic. If social distancing measures are in place, administration may decide that the physical UHEOC will not be staffed. However, the UHEOC will be activated in concept as stated in the UH Emergency Management Plan (EMP).

## **C. DECISION MAKING**

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The priorities of decisions may change as the situation evolves.

1. Cancellation of Special Events
2. Cancellation of Classes
  - a. The decision whether to suspend classes—or when to suspend classes—will be the most difficult and critical decision that the University leadership may make during a pandemic event. These decisions will be made and implemented based on information received from various entities including University departments/units, county, state, and national authorities, and other advisories gathered during the pandemic event.
  - b. The following decision points are only a guide to the decision-making process and may not be the only considerations. As the pandemic unfolds, new information may provide alternative choices.
    - i. Decision Points
      1. Transmissibility
      2. Morbidity
      3. Mortality
      4. Geographic spread
      5. Proximity of confirmed cases
      6. City of Houston Health Department and Harris County Public Health & Environmental Services (HCPHES) recommendations
      7. Closing of K-12 public schools
      8. Closing of Houston area colleges and universities

9. Rising employee absenteeism
  10. Assessment of stakeholder's risk perception
3. Initiation of Telecommuting
  4. Suspension of Research
  5. Cancellation of University Operations
    - a. The decision whether to close the University —or when to close— will also be a difficult and critical decision that the University leadership may make during a pandemic event. This policy decision will be made and implemented based on information received from various entities including University departments/units, county, state, and national authorities, and other advisories gathered during the pandemic.
    - b. The following decision points are only a guide to the decision-making process and may not be the only considerations. As the pandemic unfolds, new information may provide alternative choices.
      - i. Decision Points
        1. Transmissibility
        2. Morbidity
        3. Mortality
        4. Geographic spread
        5. Proximity of confirmed cases
        6. City of Houston Health Department and Harris County Public Health & Environmental Services (HCPHES) recommendations
        7. Closing of K-12 public schools
        8. Closing of Houston area colleges and universities
        9. Rising employee absenteeism
        10. Assessment of stakeholder's risk perception
  6. Resumption of Normal Operations
    - a. Resumption of Normal Operations should be predicated on the recommendations of federal, state, and/or local health authorities. Other factors for university resumption should be:
      - i. Decreased morbidity and/or mortality rate
      - ii. Decreased rate/speed of disease spread

- iii. Other regional schools/school systems resuming operations
- iv. Transportation systems opening/increasing interstate travel
- v. Availability of sufficient faculty and staff to support resumption of classes and research

## **2. COORDINATION WITH THE TEXAS MEDICAL CENTER**

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1. Non-healthcare member institutions like UH can coordinate with TMC if desired to access resources needed to support their response activities.
2. Resource requests can be submitted to TMC via telephone through the TMC Police and Security Dispatch Center at 713-795-0000, by e-mail at [dispatchers@tmc.edu](mailto:dispatchers@tmc.edu), or by WebEOC, if activated.

## **3. COORDINATION WITH THE PUBLIC HEALTH AUTHORITY**

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1. The public health authority for the University of Houston is City of Houston, Emergency Medical Services Director, Dr. Persse or the current local public health authority for the City of Houston. The City of Houston Health Department serves as a key resource in preparedness and coordination of the public health response and recovery activities during a pandemic influenza or other public health incident.
2. In addition, the Texas Department of State Health Services (DSHS) plays a support role.

## **READINESS LEVELS**

The University uses a graduated emergency response approach to managing any incident and/or disaster. As the potential severity of the incident or the demand on University resources grows, emergency response and coordination activities will increase to meet the demands. UH organizes around four levels of readiness which provide a rapid method for mobilizing emergency response resources.

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#### LEVEL IV: NORMAL READINESS

- a. Maintain daily operations.
- b. Develop and maintain emergency plans.
- c. Conduct preparedness exercises and drills.
- d. Monitor regional flu information from the Department of State Health Services (DSHS) through the UH Health Center.

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#### LEVEL III: INCREASED READINESS

- a. Hold preliminary EHIA Group meeting to discuss possible pandemic situation and recommend potential responses.
- b. Coordinate with the City of Houston, Harris County and the State of Texas public health authorities.
- c. Appropriate campus officials and executives of the EOT will be briefed by the UH Health Center on the anticipated risk situations, and expected impacts.
- d. Provide information to the campus community on the disease and personal preventative measures practices by utilizing e-mail, posters, etc.
- e. Review emergency policies and procedures.
- f. Assess and maintain PPE. Ensure that adequate supplies are available for a possible pandemic flu event. Any shortages should be filled, if possible.

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#### LEVEL II: HIGH READINESS

- a. Continue to hold EHIA Group meetings to discuss pandemic influenza situation and recommend potential responses.
- b. Continue to coordinate and monitor the guidance of the City of Houston, Harris County and the State of Texas public health authorities.
- c. The UH Health Center will meet and advise the EOT in regards to the current pandemic influenza situation, as needed.

- d. Consider activating the UHEOC.
- e. Continue to provide information to the campus community on the disease and personal preventative measures practices by utilizing e-mail, posters, etc.
- f. Expand emergency public information activities through the University PIOs and the campus Joint Information Center (JIC).
- g. Notify personnel who are considered essential.
- h. If necessary, commence quarantining procedures in the residence halls.
- i. Consider the cancellation of UH special events.

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## LEVEL I: MAXIMUM READINESS

- a. Continue monitoring the guidance of the City of Houston, Harris County and the State of Texas public health authorities.
- b. Implement possible isolation and quarantine policies as directed by local public health authorities.
- c. Continue quarantine procedures in residence halls.
- d. If necessary, consider cancelling classes or closing campus.
- e. Coordinate any and all resource requests through the UHEOC.

## PLAN DEVELOPMENT AND MAINTENANCE

### A. PLAN DEVELOPMENT AND MAINTENANCE

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1. The UH Office of Emergency Management is responsible for developing and maintaining this plan. Recommended changes to this plan should be forwarded as needs become apparent.
2. This plan will be reviewed and updated annually.
3. Departments with assigned responsibilities in this plan must develop and maintain procedures for their responsibilities.
4. Changes to this plan will be notated on the Record of Change table.
5. This plan will be updated based upon deficiencies identified during actual emergency situations and exercises and when changes in threat hazards, resources and capabilities occur. In addition,

the plan will also be updated when any changes in laws, regulations, or policies that affect the contents or the significance of the plan are identified.

6. Changes to appendices must be conveyed to the UH Office of Emergency Management.

## B. PLAN DISTRIBUTION

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1. The UH Office of Emergency Management is responsible for distributing this plan accordingly.
2. In general, copies of this plan and its appendices should be distributed to those individuals, departments, agencies, and organizations tasked in this document.
3. Copies should also be set aside for the UHEOC.
4. A public version of this plan is posted on the UH OEM website.

## REFERENCES

Texas Medical Center. *Pandemic Influenza Preparedness and Response Guide*. November 2011.

The City of Houston Department of Health and Human Services. *Pandemic Influenza Preparedness and Response Plan, Appendix 3 to Annex H*. February 2006.

The State of Texas. *Pandemic Influenza Response, Appendix 7 to Annex H*. March 2007.

The University of Texas at Austin. *Infectious Disease Plan Annex*. January 2011.

United States Department of Health and Human Services and The Centers for Disease Control and Prevention. *Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States, Appendix 7 - Pandemic Influenza Community Mitigation Interim Planning Guide for Colleges and Universities*. February 2007.

United States Department of Health and Human Services and The Centers for Disease Control and Prevention. *Preparing for the Flu (Including 2009 H1N1 Flu) A Communication Toolkit for Institutions of Higher Education*.

## ATTACHMENTS

### LIST OF ATTACHMENTS

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1. UH Health Center Pandemic Influenza Disease Plan.
2. Pandemic Stages (WHO and CDC) Information from the Texas Medical Center Pandemic Influenza Preparedness and Response Guide
3. Pandemic Severity Index/Community Strategies
4. Executive Operations Team (EOT) Member List
5. Emerging Health Issues Advisory (EHIA) Group Member List

# **University of Houston Health Center**

## **Pandemic Influenza Disease Plan**



# APPROVAL AND IMPLEMENTATION

## University of Houston Health Center Pandemic Influenza Disease Plan

This plan is hereby approved for implementation and supersedes all previous editions.

Approved: Vanessa K. Tilney MD Date: 12/3/15

Vanessa Tilney, MD  
Executive Director & Chief  
Physician Health Center  
University of Houston

# Pandemic Influenza Disease Plan

## UH Health Center

### I. Purpose

The University of Houston (UH) Health Center (HC) must be prepared for emergency situations that occur in our facility, on our campus, in a widespread state, or national level. In order to be prepared, it is essential that the UH HC collaborate with the UH campus and community partners. The UH HC has kept the best interests of our patients and our staff in mind by making this plan.

### II. Explanation of Terms

#### A. Acronyms

ACHA	American College Health Association
CDC	Centers for Disease Control & Prevention
EHIAG	Emerging Health Issues Advisory Group
EH&S	Environmental Health and Safety
EOC	Emergency Operations Center
HC	Health Center
HR	Human Resources
NIMS	National Incident Management System
OEM	UH Office of Emergency Management
TMC	Texas Medical Center
UH	University of Houston

#### B. Definitions

Emerging Health Issues Advisory Group. A group of individuals representing the UH Health Center, Emergency Management, Environmental Health and Safety (EH&S), Student Affairs, and the College of Pharmacy who act as the health authority and make recommendations and report to the UH Office of Emergency Management in the event of a health related incident or threat.

Point of Care Testing Rapid Flu A and B. A nasal swab sample provides immediate results and rapid diagnosis of Influenza A&B.

### III. Preparedness and Response Activities

#### A. Decision-Making and Coordination

1. The HC will coordinate with appropriate local, State, and possibly federal, public health officials, and organizations to determine current medical and public assistance requirements.

2. The HC meets routinely and works closely with the UH OEM to prepare for a possible influenza pandemic event. The HC coordinates the EHAB which meets routinely and more often during an event.
- B. Surveillance and Triage
1. The HC will provide a consistent approach to the effective management of actual or potential public health or medical situations to ensure the health and welfare of its patients operating under the principles and protocols outlined in the National Incident Management System (NIMS).
  2. The UH HC is ideally situated and equipped to provide early warning to the university and the community about contagious diseases which might spread from an international site to the United States due to the large number of international students who arrive from and travel back and forth to their native countries. They may be the first to exhibit symptoms of an infectious disease with pandemic potential not yet evident in this community, state or country.
  3. The HC is a flu surveillance site for the City of Houston Health Department.
  4. Patients who present to the HC with flu-like symptoms will be immediately moved into an exam room and triaged accordingly.
- C. Clinical Evaluation of Patients (Testing)
1. Patients will be assessed by a health care provider and a determination will be made regarding testing and treatment, if needed.
  2. Point of care testing for strains of A and B of the flu will be available at the HC. Further subtyping will be completed at an outside lab.
- D. Human and Physician Resources for the HC
1. Staffing
    - a. All HC staff will be asked to be available for triage, assessment and support during a pandemic event.
    - b. In the event a HC staff member has flu-like symptoms, they will be asked to stay home.
  2. Equipment and Supplies
    - a. Maintain and keep supplies current.
    - b. Additional supplies are on hand for use in the event of an emergency.
- E. Education/Outreach, Training and Communications
1. The HC will follow the TMC, City, County, State and CDC's recommendations. If conflicting recommendations are given the HC will monitor all levels but defer to most local.
  2. Information will be disseminated to the University in collaboration with the OEM.
  3. Educational material is made available at the HC on correct hygiene practices, cold/flu prevention and pandemic events.
  4. HC staff has a yearly review of current protocols, policies and procedures for flu and pandemic events.

#### **IV. Health Care Systems, Antiviral Drugs and Influenza Vaccine**

- A. The HC has the seasonal flu vaccine available for all UH students, staff and faculty.

- B. In the event delivery of a new strain of vaccine is made available priority will be given to essential personnel and/or those recommended to be given priority per the CDC and City of Houston Health Department.
- C. Antiviral drugs will be made available as deemed necessary for treatment.

## **V. Infection Control**

- A. General Principles of Routine Infection Control
  - 1. Universal precautions are used at all times and the HC has a bloodborne pathogens exposure control plan (see attached).
- B. Standard Precautions
  - 1. HC staff will wash their hands frequently and in between seeing each patient.
  - 2. Hand sanitizers are located throughout the HC including wall mounted, portable and hand held.
- C. Respiratory Hygiene/Cough Etiquette
  - 1. Signs will be posted throughout the HC instructing patients on cough etiquette and respiratory hygiene.
  - 2. Patients presenting to the HC with cough and flu-like symptoms will be escorted to a room as soon as possible to decrease the possible exposure to other patients.
- D. Droplet Precautions
  - 1. The HC will follow TMC, City, County, State and CDC recommendations on the use of masks during a pandemic influenza event. . If conflicting recommendations are given the HC will monitor all levels but defer to the most local.

## **VI. Other Components of Infection Control for Influenza Pandemic**

- A. Staff Education
  - 1. HC staff are required to take a bloodborne pathogens class upon hire.
  - 2. HC staff are updated annually on infection control measures.
  - 3. HC staff are required to review the Emergency Plan and the Pandemic Influenza Disease Plan annually.
- B. Patient Transport—Appropriate transportation will be arranged.
- C. Cleaning, Disinfection and Sterilization—Patient areas are cleaned per our Cleaning of Patient Care Areas Policy (see attached).
- D. Patient Education—Patients are instructed on hand washing, cough hygiene and flu signs and symptoms.
- E. Visitors—Visitors will be triaged and referred out for care per our Visitor Policy (see attached).
- F. Health Care Workers with Influenza-Like Illness—HC staff will be instructed to stay home if they have flu-like symptoms.

## **VII. Readiness Levels**

### Level IV: Normal Conditions

- a. Maintain daily operations.
- b. Monitor information regarding global disease activity.

- c. Develop and maintain emergency plans.
- d. Work with OEM to educate University on University plans for possible pandemic events.
- e. Promote seasonal influenza vaccines.
- f. Continue surveillance of patients.

#### Level III: Increased Readiness

- a. Continue to work with OEM, City, county, State regarding possible pandemic situation.
- b. Provide background information on the disease and personal preventative measures.
- c. Review, revise, and exercise emergency policies and procedures.
- d. Assess the vulnerability of UH students, staff, and faculty.
- e. Assess that we have adequate supplies in place for possible event.
- f. Utilize e-mail, posters, etc. to promote prevention/protection practices.

#### Level II: High Readiness

- a. Governing body will meet with OEM to discuss the level of participation the HC will have during the event.
- b. Meet with OEM and the Emerging Health Issues Advisory (EHIA) Group daily/weekly and provide updates on the progression of the disease.
- c. Increase disease surveillance, providing timely updates to the City, County and State.
- d. Prepare staff for the HC's role during the event.
- e. Administer vaccines as directed by the public health authorities.

#### Level I: Maximum Readiness

- a. Coordinate with Emerging Health Issues Advisory (EHIA) Group to schedule health forums and Q & A sessions for staff, faculty, and students.
- b. Communicate closely with exchange programs, athletic events, and student groups.
- c. Trigger reporting mechanism for faculty, staff, and students.
- d. Modify campus events and schedules as needed.
- e. Notify University Departments (housing, transportation, etc.).
- f. Implement possible isolation and quarantine policies as directed by local government.
- g. Implement possible alternative work schedule policies per HR recommendations.
- h. Continue to keep in contact with city, county and state health departments.
- i. Provide regular updates to the city, county and state health agencies.
- j. Administer vaccines as directed by the public health authorities.

**VIII. Administration and Support**

**A. Reporting**

1. The HC will provide situation reports periodically to the EOC to communicate current conditions and resources.
2. Emergency notifications and updates will be communicated to UH HC staff and patients through the PIER system.

**B. Maintenance of Records**

1. Health and medical operational records generated during an emergency will be collected and filed in an orderly manner. A record of events must be preserved for use in determining the possible recovery of emergency operations expenses, response costs, settling claims, assessing the effectiveness of operations, and updating emergency plans and procedures.

**C. Documentation of Costs:**

1. Expenses incurred in carrying out health and medical services for certain hazards, such as biological accidents, may be recoverable from the responsible party. Hence, all departments and agencies will maintain records of personnel and equipment used and supplies consumed during large-scale health and medical operations.

**D. Preservation of Records:**

1. Vital health & medical records should be protected from the effects of a disaster to the maximum extent possible. Should records be damaged during an emergency situation, professional assistance for preserving and restoring those records should be obtained as soon as possible.

**E. Post Incident Review**

1. The effectiveness of the emergency response will be evaluated. Problems will be identified through feedback to and from the UH HC to the University, our staff and out patients. Opportunities for improvement will be discussed and incorporated into future pandemic plans.

**F. Exercises**

1. HC staff has a yearly review of current protocols, policies and procedures for flu and pandemic events.

**IX. Plan Maintenance**

- A. The HC Governing Body is responsible for maintaining, reviewing and updating this document annually.

**X. References**

City of Houston Department of Health and Human Services Pandemic Influenza Preparedness and Response Plan. February 17, 2006.

**XI. Attachments**

Appendix 1.....Educational Materials

Appendix 2.....Emergency Supply List  
Appendix 3.....Emergency Triage and Treatment Plan  
Appendix 4.....Emergency Triage and Treatment  
Policy  
Appendix 5..... HC Emergency Communication Org  
Chart  
Appendix 6.....HC Emergency Evacuation Drills  
Appendix 7.....HC Emergency Evacuation Procedures  
Appendix 8.....HC Emergency Notification Phone Tree  
Appendix 9.....Key Personnel an NIMS Training  
Appendix 10.....Limitations and Suspension of HC  
Services Policy

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## ATTACHMENT 2 – PANDEMIC STAGES (WHO AND CDC) INFORMATION FROM THE TEXAS MEDICAL CENTER PANDEMIC INFLUENZA PREPAREDNESS AND RESPONSE GUIDE

### **PANDEMIC STAGES**

According to the Centers for Disease Control and Prevention (CDC), pandemic influenza occurs when a new influenza A virus emerges for which there is little or no immunity in the human population. The virus then begins to cause serious illness and then spreads easily person-to-person worldwide. Characteristics of a pandemic influenza include rapid worldwide spread, overwhelming of healthcare systems, inadequate medical supplies, and economic and social disruption.

National and federal organizations have classified stages of pandemic influenza to better formulate guidance based on the impact of the virus. This section of the guide details these classifications.

### **WORLD HEALTH ORGANIZATION**

The World Health Organization (WHO) has developed a method for classifying the rate of worldwide transmission of an influenza virus. This method, known as the WHO pandemic phases<sup>1</sup>, identifies six phases of an influenza pandemic across three pandemic periods.

### **INTER-PANDEMIC PERIOD**

- **Phase 1:** No new influenza virus subtypes have been detected in humans. No viruses circulating among animals have been reported to cause infections in humans.
- **Phase 2:** No new influenza virus subtypes have been detected in humans. However, an animal influenza virus circulating among domesticated or wild animals is known to have caused infection in humans, and is therefore considered a potential pandemic risk.

### **PANDEMIC ALERT PERIOD**

- **Phase 3:** An animal or human-animal influenza reassortment 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. Limited human-to-human transmission may occur under some circumstances (for example, when there is close contact between an infected person and an unprotected caregiver). However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

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<sup>1</sup> “Stages of a Pandemic”, Centers for Disease Control and Prevention, accessed August 5, 2011, <http://www.cdc.gov/flu/pandemic/phases.htm>



- **Phase 4:** There is verified human-to-human transmission of an animal or human-animal influenza reassortment virus able to cause community-level outbreaks, but is generally seen in small clusters. The ability to cause sustained disease outbreaks in a community marks a significant upward shift in the risk for a pandemic. Any country that suspects or has verified such an event is encouraged to consult with the WHO so that the situation can be jointly assessed and a decision made by the affected country if implementation of a rapid pandemic containment operation is warranted. Phase 4 indicates a significant increase in risk of a pandemic but does not necessarily mean that a pandemic is a foregone conclusion.
- **Phase 5:** There are larger clusters but human-to-human spread is still localized, suggesting that the virus is becoming increasingly adapted to humans but may not yet be fully transmissible (substantial pandemic risk). While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

## **PANDEMIC PERIOD**

- **Phase 6:** There is increased and sustained transmission in the general population in multiple countries.

## **UNITED STATES GOVERNMENT**

The Department of Health and Human Services and CDC work closely to plan for, respond to, and recover from emerging disease outbreaks, including pandemic influenza. While these efforts are constantly evolving, the national strategy is based on three (3) pillars<sup>2</sup>:

- **Preparedness and Communication:** Activities that should be undertaken before a pandemic to ensure preparedness and the communication of roles and responsibilities to all levels of government, segments of society, and individuals.
- **Surveillance and Detection:** Domestic and international systems that provide continuous situational awareness to ensure the earliest warning possible to protect the population.
- **Response and Containment:** Actions to limit the spread of the outbreak and to minimize the health, social, and economic impacts of a pandemic.

## **FEDERAL RESPONSE STAGES**

In addition, the federal government has identified response stages in the United States that correlate to the WHO phases. These stages are detailed in the graphic below.

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<sup>2</sup> More information is available at <http://www.flu.gov/professional/federal/index.html>

Figure 3-1  
Federal Response Stages

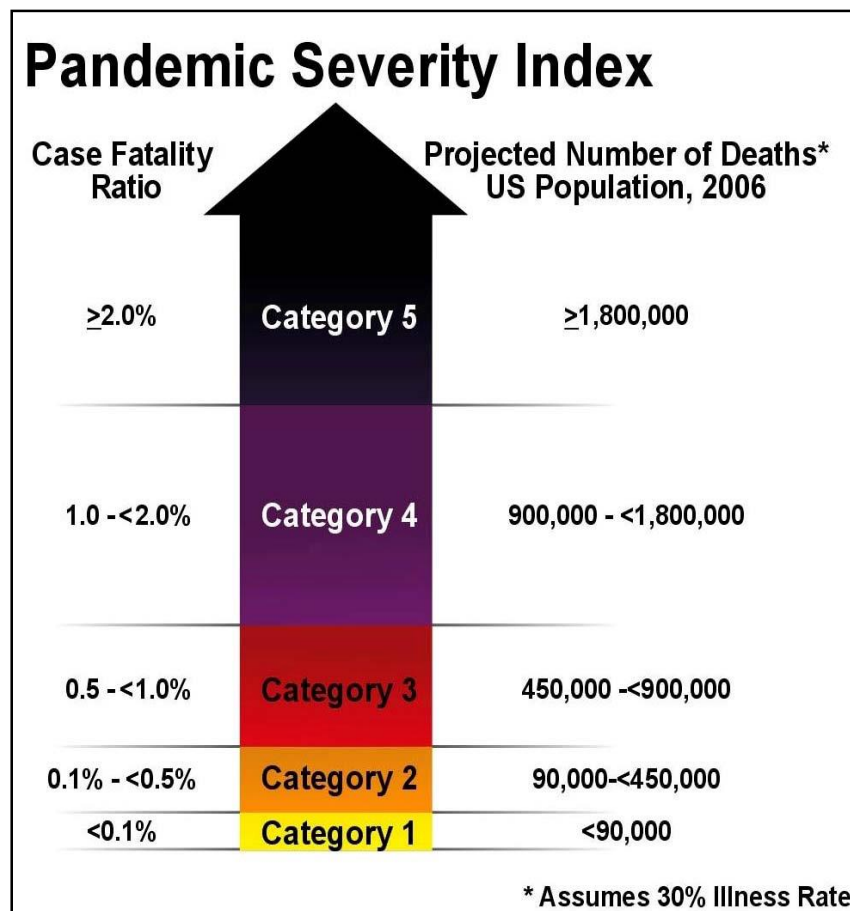
PANDEMIC INFLUENZA			
WHO Phases		Federal Government Response Stages	
<b>INTER-PANDEMIC PERIOD</b>			
1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human disease 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.		
<b>PANDEMIC ALERT PERIOD</b>			
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).		
<b>PANDEMIC PERIOD</b>			
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

<sup>3</sup> National Strategy for Pandemic Influenza, Implementation Plan, Homeland Security Council, May 2006

**PANDEMIC SEVERITY INDEX**

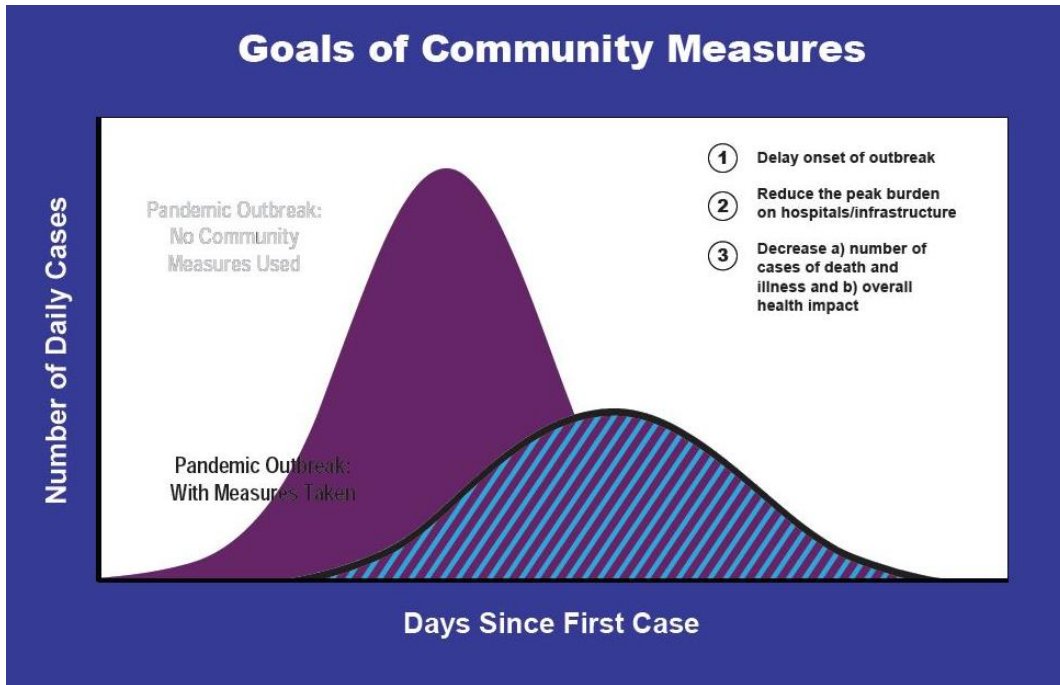
The CDC has developed a method for classifying the severity of a pandemic in the United States, known as the Pandemic Severity Index (PSI). The PSI tool classifies the impact of a pandemic in five categories. The PSI is used to develop guidelines on community-level measures that could be used during an influenza pandemic to reduce the spread of infection. To help authorities determine the most appropriate actions, the guidelines incorporate a pandemic influenza planning tool for use by states, communities, businesses, schools, and others. It can be difficult for the CDC to accurately depict the severity of an evolving pandemic in real time. The WHO and CDC guidance will be further refined by the local public health authorities to provide guidance that best meets the needs and priorities of the jurisdictions’ population.

Pandemic Severity Index<sup>4</sup>



<sup>4</sup> “Community Strategy for Pandemic Influenza Mitigation”, Centers for Disease Control and Prevention, Accessed August 19, 2011, <http://www.flu.gov/professional/community/commitigation.html#app7>

## Goals of Community Measures



## CDC Recommended Interventions by Pandemic Severity Index Categories

### Home and School

### Community Strategies by Pandemic Flu Severity (1)

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 contacts and community mixing	Generally not recommended	Consider: ≤ 4 weeks	Recommend: ≤ 12 weeks

CDC Recommended Interventions by Pandemic Severity Index Categories

Workplace/Community

<b>Community Strategies by Pandemic Flu Severity (2)</b>			
<b>Interventions by Setting</b>	<b>Pandemic Severity Index</b>		
	<b>1</b>	<b>2 and 3</b>	<b>4 and 5</b>
<p><b>Workplace/Community</b>  <b>Adult social distancing</b></p> <p>–decrease number of social contacts (e.g., encourage teleconferences, alternatives to face-to-face meetings)</p> <p>–increase distance between persons (e.g., reduce density in public transit, workplace)</p> <p>–modify, postpone, or cancel selected public gatherings to promote social distance (e.g., stadium events, theater performances)</p> <p>–modify workplace schedules and practices (e.g., telework, staggered shifts)</p>	Generally not recommended	Consider	Recommend
	Generally not recommended	Consider	Recommend
	Generally not recommended	Consider	Recommend
	Generally not recommended	Consider	Recommend

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ATTACHMENT 5 – EMERGING HEALTH ISSUES ADVISORY (EHIA) GROUP  
MEMBER LIST

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